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THE RAF IN THE POSTWAR YEARS

**DEFENCE POLICY
AND THE
ROYAL AIR FORCE
1956-1963**

T C G James



Ministry of Defence

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OFFICIAL AHB HISTORY - DEFENCE POLICY AND THE RAF 1956-1963

1. Enclosed are copies, as per distribution list, of the AHB official history entitled "Defence Policy and the Royal Air Force 1956-1963". As Sir Frank Cooper indicates in the foreword, the author Mr T C G James worked in the Air Ministry throughout this period, and having retired from the Civil Service in 1977 - his last appointment being AUS(P)(Air) - he joined AHB to write this account. We hope it will be read and studied with interest, not just as a history of the "Sandys Years" but also as a guide to the way in which policy decisions were - and still in many ways are - made and implemented.
2. Since many of the documents quoted from or referred to are still SECRET, the history has to bear the same classification, but we hope this will not inhibit its use unduly within the MOD and the RAF. Further copies are available on request to AHB, and recipients are welcome to suggest other branches or units to which copies could usefully be sent.
3. Unfortunately a certain number of errors escaped the editorial eye, and the more serious are mentioned in the errata slip enclosed with each volume. The other mistakes, some of them spelling errors and some caused by the word processor getting the better of us, do not affect the meaning and are therefore not listed.
4. Readers may be interested to know that work has now started on a sequel covering the "Healey Years"; the author is Mr A S Bennell, formerly Head of F6(Air).

H. A. PROBERT
Air Commodore (Retd)
Head of Air Historical Branch (RAF)

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FOREWORD

This history of the shaping of the Royal Air Force from 1956 to 1963 and the defence policies which affected it makes fascinating and absorbing reading. It starts with a relatively brief look at 1956 which puts on stage the main plays and players for the notorious White Paper of 1957. It ends with a look at 1963 which can be seen as the start of a different world. It centres, quite rightly, on the traumatic years from 1957 to 1962.

The lessons to be learned are many but, above all, the narrative needs to be seen and read in an historical context. Little more than a decade before had seen the end of World War II from which Britain had emerged still a major power. Even in 1957 - and in the aftermath of Suez - Britain was still a very considerable power with a substantial Colonial Empire, a near-global presence, and an apparent ability to exercise politico-military authority.

Even more relevant is that for a few years after the end of the World War II Britain was a scientific and technological power of the first order and had a vast industrial base to go with it. Moreover, she was endowed with some of the most fertile and distinguished scientists. One only has to recall the vast technological strides made during World War II, the long list of exceptionally distinguished scientists and the size and depth of the British aircraft industry which remained a world leader at least until the early part of this period. The influence of this background on policy and decision makers was great. It took many years to diminish as a result of overstrained resources, the advent of space, the rise of international competition and the end of empire.

It is important to mention these points to put the background in perspective and to emphasise - and re-emphasise - the often conflicting influences they exerted on the principal players of the period - whether they were politicians, senior members of the Services, administrators or scientists.

The British economy, battered in two World Wars and the recession between them, showed no signs of real, permanent, lasting recovery and growth. This increasingly placed a halter around the necks of all those involved with defence policy and planning even though the defence budget was consuming 7% or more of the gross domestic product.

To this must be added the exploding costs of new weapons and the enormous demands they placed on human as well as financial resources. One of the most striking facts related in the text is the blunt statement reportedly made by Sir William Strath of the Ministry of Aviation, during the debate about the future of Blue Streak and Blue Steel, that the resources of the Royal Aircraft Establishment and the Royal Radar Establishment were insufficient to achieve two marks of the Blue Steel stand-off bomb as well as the TSR2. ~~OVERSTRETCH WAS UNIVERSAL.~~

~~OVERSTRETCH WAS UNIVERSAL.~~

"The Wind of Change" was not blowing simply in Africa and elsewhere. It had many facets and was becoming coldly apparent in Britain itself.

Inevitably, the author has had to be selective. He has included much of the upper heights of defence policy and strategy and the response that the Air Ministry made to the many issues which were the subject of such fierce debate.

The picture that emerges is one of the Air Ministry and Air Council being under continuing heavy pressure and, to an extent, beleaguered and under siege. As against this, there can be no doubt that the problems themselves, though almost infinitely complex, were enormously exciting and stimulating. They brought out the best in people.

Many fascinating topics and insights emerge; for example, the extent to which the Prime Ministers of the day - and Cabinet Ministers - took a lasting and continuous interest in defence in most of its aspects; and the way in which the Cabinet Office in general, and the Secretary to the Cabinet in particular, persisted in seeking to resolve particular problems and establish longer horizons which could be regarded as realistic.

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It was perhaps the last period when much of the work that was set in hand actually started from the basis of seeking to establish *first* what were the right things to do - an approach which subsequently went out of fashion in Britain with the establishment of a much more comprehensive programming and budgeting system. It is a matter of real concern and interest to contemplate whether Britain was better served by this more widespread and broadly-based Ministerial interest than it is by the successive changes following the creation of a more monolithic and centralised defence organisation. But it is fascinating to see how successive Ministers of Defence must have become increasingly irritated by the influence of Service Ministers and Service Ministries who were, respectively, members of the Cabinet in their own right and possessors of the power of knowledge as well as the big battalions. Corners were fought hard. Fights went to the full 15 rounds. Differences were widely aired on the basis of straight partnership. The inevitability of further structural changes in the Ministerial set-up and in the organisation of the Ministries themselves becomes very self-evident from the narrative.

The real arguments were about matters of policy. Was a "trip-wire" strategy the right one for Britain and NATO? Should Britain have a deterrent? How should it be judged in terms of its capability? What type of weapons should equip it? What was it there to do? Was it independent? What was Britain's defence role overseas? How should it be undertaken? To what degree should each Service contribute? What were the true roles of the Royal Navy, the Army and the Royal Air Force? What kind of equipment did they need? Was the manned fighter doomed to extinction? Should Britain itself be defended - could it be?

Many other issues flow across these pages. Essentially the period was concerned with establishing, as far as possible a "trip-wire" strategy within NATO, reducing Britain's Forces on the mainland of Europe, searching for ways of sustaining a significant British role overseas, bringing conscription to an end and deciding on the types of weapons that would be required and the number that should be maintained in the Services.

The period is full of traumatic statements. For example:

"The overriding consideration is to prevent war rather than to prepare for it."

"The only existing safeguard against major aggression is to threaten retaliation with nuclear weapons."

"The effectiveness of the nuclear deterrent does not depend on superiority. It depends on the power to inflict on the aggressor a degree of injury which he is not prepared to accept."

"..... gradually to get away from the idea that each member nation (of NATO) must continue to maintain self-contained Forces which, by themselves, are not fully balanced."

"The manned aircraft is on the way out of the military picture."

What is remarkable is the number of policy issues and arguments which form the subject matter of so much of this history and which remain in the forefront of dissension today. It is likely that they will remain so for many years to come, for they are concerned essentially with Britain's role in the world, our relationship with other countries, and the role, tasks and equipment of the Armed Forces. For these reasons alone, much is to be learned from the history of the past.

The climax of this book is reached with the debate over the nature of the United Kingdom deterrent. Should it continue to be provided by manned aircraft with stand-off missiles - either British or American or both? Should it be transferred to the Polaris submarines? Should there be a mix between an underwater and the airborne deterrent?

The story is tragi-comedy. It ended on the stage at Nassau. There were fundamental differences between the British and American attitudes. There were midjudgments, not least by the United States in relation to the likely attitudes of France and West Germany to future Anglo-American co-operation. A number of Americans were not in favour of Britain having an independent deterrent for a variety of reasons including (mistakenly) the palpable nonsense that the United Kingdom, as an independent power, caused problems in the EEC and NATO. There was strong American pressure to strengthen Britain's conventional contribution to NATO. The differences were bridged by Harold Macmillan's relationship with President Kennedy, but it was a narrow bridge and the British Polaris Force (and other British Forces) were to be assigned to NATO. Independence was to be confined to 'Where Her Majesty's Government may decide that supreme national interests are at stake'.

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It was undoubtedly a period of change. It was undoubtedly also a seminal period as far as Britain was concerned, and certainly many illusions were shattered. It is much less clear that it was a period of decay in the Royal Air Force and this is not a judgment to which I would subscribe. On the contrary the Royal Air Force provided the deterrent throughout the period and its role overseas was a major and exciting one.

Inevitably, within a single volume, it is impossible to do justice to all the major influences that were at work. Quite rightly, tribute has been paid to the skill with which the Air Ministry, actively and positively directed and managed by the Air Council, dealt with so many of the management problems of time - realism was increasingly the order of the day, but surely more needs to be understood.

About the over-optimism (one almost tends to say arrogance) of the activists in research and development and the continuing gross under-estimation of difficulties, timing and costs of too many advanced projects, and the inability to deal with industrial pressures. There surely needs to be another book on these issues and an assessment of their full impact on the policies and practicalities of the day.

It is obviously not possible in a book of this kind to pay adequate tribute to the endeavours of the people who wrestled with the problems of these turbulent times. They were dedicated, hard-working, mature and experienced. Personalities probably had more influence on some of the decisions than did either the arguments, or their logic but rightly this cannot be fully reflected in this narrative. The impact and lessons of World War II were also pervasive influences - neither always for the best. What is true is the enormous amount of intellect and endeavour that was put into trying to resolve what one might almost term "the insoluble".

This history has been fortunate in that its author, Cecil James, was an admirable choice because he worked first as a Royal Air Force historian but he was, throughout this period, actively concerned as an administrator in the Air Ministry with many of the problems and involved closely with some of the more significant. His sympathies are clearly and rightly with the Air Ministry, the Air Council and the Royal Air Force, but he has been fair, sympathetic and generous to the views of others. He has allowed the facts to speak for themselves whilst gently drawing attention to some of the points that require comment. The Air Force Board's directive of writing a history "primarily intended for the education of decision makers and planners within the Air Force Department" has been achieved. In particular the methods, systems and procedures that were followed at the time are still highly relevant to the problems of today and much can be learnt by studying them - for they will be relevant to tomorrow as well.

FRANK COOPER
August 1984

AUTHOR'S FOREWORD

The years between 1956 and 1963 were remarkable for many developments in British policy. By the beginning of the period many of the peacekeeping tasks which post-war chaos had obliged Britain to shoulder had disappeared or been transferred to others. The austerities of the war and the early post-war period had been replaced by the increasing demands of a consumer society, with effects on social, economic and political life which affected Britain's ability as well as political will to maintain a world position. The need for a fundamental reappraisal of defence and foreign policies did not go unrecognised. To begin with, however, change was directed more towards the means by which the aims of policy could be achieved rather than the aims themselves. The emphasis in the first years of the period was on smaller conventional forces and greater reliance on nuclear deterrence, so as to reduce the costs of defence without abandoning any major commitment. But by the end of the period the process of dismantling the colonial empire was well under way and doubts were increasingly voiced about the security of the traditional overseas bases which had previously been considered crucial to the maintenance of a world role. The difficulty of keeping defence costs under control was an important, if not the only, factor in these developments. The cost in technical as well as financial resources underlaid the abandonment of a number of major weapon systems which was so marked a feature of the period. Nor did defence strategy, as either Britain or NATO perceived it, remain unchanged. This is the period when "trip wire" begins to be succeeded by "flexibility in response", reflecting a debate about how policies based on a capability for strategic nuclear retaliation can continue to be valid and credible.

All this had a major impact upon the Royal Air Force. At the start of the period the Service was beginning to build up the V-bomber force as a fully independent nuclear deterrent which, under the policy of the Defence White Paper of 1957, was to be the keystone of both the nation's security and its international standing. Successor systems were being planned, and though a supersonic replacement for the V-bombers was an early sacrifice on the altar of economy, as was a reduction in the size of the force, improvements in the V-bombers and their weapons as well as the development of a ballistic missile were expected to maintain the unique place of the RAF in defence policy. During these years, the V-bomber forces reached a high level of efficiency. Yet by the end of the period decisions had been taken which meant that the tasks for which it was created would become in large part the responsibility of the Royal Navy.

In January 1956 Fighter Command contained 55 squadrons with over 700 aircraft¹ and there were by early 1957 plans to introduce surface-to-air guided weapons (SAGW) into the air defence of Britain with more and better weapons to follow. By 1963 its strength was falling to the point where its disappearance as a separate Command was only two years away. Coastal Command, as the second arm of the RAF concerned with the direct defence of Britain, was not to suffer the same drastic reduction in capability, but not without a debate about its future in the RAF. In contrast, there were no doubts about the role and importance of Transport Command. Major improvements were made in its carrying capacity, in numbers as well as in quality of aircraft, in line with a policy of a smaller but more mobile Army. Delays in achieving these improvements and doubts about certain features of the re-equipment programme are an important part of its history during the period but in general terms policy for Transport Command presented relatively few difficulties.

Turning to the overseas Commands, the most obvious developments were in Germany. In January 1956 the main operational strength of the RAF in Germany comprised 280 day fighters/ground attack aircraft, 34 light bombers, and 35 fighter/reconnaissance aircraft. By 1963 this had been reduced to some 100 aircraft. Changes elsewhere overseas were not so remarkable. RAF squadrons were deployed throughout the period in the Mediterranean area, the Middle East and the Far East, with some improvements in capability. On the other hand, the Suez base had ceased to be significant even as the period opens, and there were withdrawals from airfields in Jordan and Iraq in 1957 and 1958 which reflected the declining British presence in the region. The structure of British defence arrangements overseas showed relatively little change, on the face of it. The triumvirate of regional pacts - NATO, SEATO and the Bagdad (later

¹ 578 aircraft in regular squadrons and 143 in the day fighter squadrons of the Royal Auxiliary Air Force.

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CENTO) Pact - continued to be its politico/military foundation. At a different level of organisation, change is most obvious in the Middle East where the comprehensive command arrangements of 1956 become two separate tri-Service Commands based in Cyprus and Aden, reflecting that feature of the strategic picture, the Middle East 'air barrier', which was to have important practical as well as policy implications for the exercise of air power. It is for a similar reason, namely the risks to the unrestricted movement of supplies and personnel through India and Ceylon, that Gan moves during the period from being a gleam in the eye to an important and effective staging post.

These are only some of the features of the period affecting the RAF operational Commands and underlining its historical importance to the Service. Similar points could be made about the supporting structure of the RAF. This is the period when the RAF was obliged to come to terms with the abolition of National Service. Under the pressure of economy, RAF Commands and Groups at home were abolished or amalgamated, and large numbers of stations were closed. Recruiting and training policy, branch and trade structures for officers and airmen, careers and conditions of service, levels of supplies and reserves, are only examples of areas where the imperatives of economy in manpower as well as money led to radical change.

It would be wrong to ascribe all the problems of RAF and other defence planners to the need for economy. The pace of technological advance, the high cost of responding to it, uncertainty about some important aspects of defence policy itself, and the limits which Britain's relations with her Allies imposed on the government's freedom of action, were other contributors to a period of immense difficulty - a difficulty which was essentially one of managing and harmonising ends and means. Nevertheless, those who were involved, whether Ministers or military and civil staffs, would probably identify the shakiness of the budgetary foundations of defence as the biggest single problem. Defence plans are at risk at any time if budgetary expectations are disappointed; they are particularly vulnerable when technological advance is both expensive and takes time to be translated into new weapons and equipment. The essential needs of defence management are simply stated: the development of new weapons, indeed the whole business of organising and maintaining a fighting Service in modern conditions, requires the allocation of reasonably assured resources over periods of up to ten years or more. But the realities of political life, at any rate in a democracy in times of comparative peace, mean that defence is scarcely likely to avoid contributing to whatever economies in public expenditure may be called for. The problem then is how and to what extent savings are to be made. The period from 1956 is accordingly one of almost continuous debate about choices and priorities. Government, by one definition, is about choices - between and within particular areas of activity. In this sense, none of those who laboured in the defence vineyard during this period could be surprised that the harvest was often disappointing, though it would be too much to expect those who tended the grapes to applaud when a promising bunch was prematurely cut down. This is not to say that defence policy would have been a straightforward and uncontroversial business if the British economic performance had been better. The interlocking strategic, political, and technological problems of the period were daunting even for so powerful a country as the United States. But in the case of Britain, the effects of budgetary uncertainties were notably severe because there was little room for manoeuvre or insurance against the consequences of wrong decisions or disappointed expectations. Loose purse strings, Lord Tedder once said with truth, make for loose thinking; tight purse strings, however, do not guarantee the contrary.

For much of the period the need to maintain a military presence worldwide as well as to play a major role in NATO, while not beyond argument, was a key feature of national policy. The changes that were taking place within the colonial empire and Commonwealth were held to be consistent with the expectation, or at any rate the hope, that influence could continue to be brought to bear both East and West of Suez. Thus, as a generalisation, the period was one which saw little change in the objectives of British defence commitments outside Europe. What changed was the resources to meet those commitments; and while not all was for the worse (in a number of respects RAF capabilities for overseas tasks more than kept pace with the needs) it is outside Europe that the mismatch between ends and means is most notable. Efforts to maintain a position in the Middle East and in Cyprus; operations in the Oman and on the Aden/Yemen frontier and, towards the end of the period, in Malaysia; the dilemma involved in conceding independence to colonies or protectorates without losing at any rate a contingent capability

for military action; fulfilling a useful role, not without a recognised ambivalence, in CENTO and SEATO - these and other anxieties were a consequence of the continuing role as a world power which the government wished to play. If the keynote of this aspect of policy can be simply expressed as peacekeeping on the Commonwealth and world scene the practicalities and attendant expense of fulfilling the role were increasingly difficult.

The concern about overseas problems did not mean that NATO and European defence were underrated. It is possible to trace in Defence White Papers over the period a changing emphasis between, in broad terms, Europe and the world role. It is also true that the major economies in forces committed to NATO that were a feature of the 1957 Defence White Paper were in part justified as necessary if Britain was to meet her commitments outside NATO. But this was more a matter of striking the right balance, against the need for economy, between European and worldwide commitments than of selling NATO short. The value of the avowedly most important feature of defence policy, the nuclear deterrent, was seen, certainly by the government if not consistently by all the Chiefs of Staff, as two-fold: to enable Britain to play a part in the wider world as well as to maintain a solid front in Europe. Both roles were equally important, though how long this equivalence could continue was a question more frequently asked by the beginning of the sixties.

The 1957 Defence White Paper is not to be understood as a statement of new and radical policy, swiftly arrived at and rigorously imposed in the few short months between the departure from office in January 1957 of Sir Anthony Eden and Mr Head and their replacement by Mr Macmillan and Mr Sandys, and its publication in the following April. Much of what emerged in the White paper was already in embryo; the inherent issues of the size, shape, roles and capabilities of the three Services had been under discussion in 1956 and even earlier. The general characteristics of the problem were clear - a big reduction in the manpower of the Services, a smaller but still substantial reduction in planned defence expenditure but with no significant alteration in defence commitments. The key issue to be settled was equally clear. This was the balance between the nuclear deterrent available to the West and supporting conventional forces. It was recognised in London that there were limits, arising from Britain's place in NATO as well as from its non-European interests, to the extent to which security could be achieved by nuclear capabilities. Political as well as military realities set limits to the logic of nuclear deterrence. The argument accordingly was about balance: in terms of the NATO slogan of sword and shield, how strong should be the conventional shield and how sharp the nuclear sword. This was no easier to determine when, as was the case in London and elsewhere in the western world, there was controversy about the permanent reliability of nuclear deterrence, the variety and purposes of nuclear weapons and the circumstances and consequences of their possible use. The fact was that the formulation of defence policies to cover a wide spectrum of threats and commitments presented a taxing challenge in intellectual, political and practical terms. The relatively simple arithmetic of pre-war strategic and military problems no longer sufficed. This no doubt explains the growth during the period of the new trades of defence analyst and nuclear 'theologian'. To use the jargon, the modalities of defence had become extremely complicated, though perhaps not to the extent that the analysts believed. There was scope for genuine differences of view. What will succeed in deterring war, at any rate between groups of major powers, is not to be answered in advance or once and for all, even by those whom one seeks to deter. Probability not certainty is the name of the game.

The British response to the problem of balance between the nuclear and the conventional varied during the period from the mid-fifties. There was a developing situation. Insofar as the broad objective was to maintain a significant position as a world power Britain can be said to have failed to find the right answer; and the question arises whether if different and less expensive choices had been made, particularly of force structures and capabilities, the outcome might have been different. Academic historians who have written about the period usually conclude that Britain's effort to make an important contribution to both European and worldwide security was bound to fail in the absence of a continuous and solidly based improvement in her economic performance. The economic factor may not be a wholly adequate explanation; domestic and international social and political trends enter in as well. Nevertheless, it is clear that what primarily moved the government to the key defence decisions of 1956 and 1957 was the belief that economic performance had to be improved if an important world role was to be sustained. The nuclear dimension of defence, in its significance for British and Western security and also for the methods which the Soviet Union might employ in future to achieve its global objectives, was seen as providing

the opportunity for economies in defence which would make a major contribution to economic progress without any sacrifices in national security or international influence.

In the nature of things, a broad appreciation of this kind threw up a range of practical issues. Those that were perceived in the last months of Sir Anthony Eden's time as Prime Minister and the early months of Mr Macmillan's succession are dealt with in the first three chapters. But some general points have to be made here. One is the extreme difficulty of identifying and analysing all the factors and their consequences bearing upon decisions which amount to a major re-shaping of national policy. At the time in question, 1956 and 1957, it was, for example, understandable that a substantial reduction in the manpower allocation of the Services should be important to Ministers and that their concern should focus on the acceptability of doing away with National Service. The debate on this was in the event determined by Ministers against the advice of the Chiefs of Staff. The significance is not so much that the government did not take this advice as that the decision was essentially one of political judgement which had indeterminable consequences - on the balance between defence commitments and resources and, hardly less important, on the effect on future defence budgets of recruiting and maintaining all-volunteer forces in the buoyant economy which was one of the objectives of government. The example illustrates one of the difficulties of reaching decisions in the British system where political exposure is continuous, political considerations correspondingly acute, and decisions are often reached in terms of political necessity or advantage with no certainty that the consequences will turn out to be manageable. Obviously, the soundest decisions are likely to be those which by deliberate process have reduced the area of future uncertainty to a minimum. This, however, demands time as well as talent, and time is often the scarcer commodity. The pace of events and the large number of separate yet interlocking problems that defence policy presented, and still presents, will be apparent. But it is important to bear in mind the limitations on the capacities of those involved; by any token, they were quite exceptionally busy and harassed people. Mr Macmillan claimed no more than that "successive Ministers of Defence and their professional advisers struggled nobly with their tasks."²

A second general point, particularly important to the RAF, is the stress that the government's defence policy laid on reducing the resources devoted to research and development. Coupled as this was with a greater reliance on nuclear weapons, expensive new projects needed the support of a battery of convincing arguments. And as the period saw major advances in aerospace technology the challenge to clarity of thought about future requirements was particularly severe for the RAF. There is a general impression that the period is more notable for projects abandoned or replaced by others less worthy than for those successfully brought into service. However justified this may be, the historian is presented with a daunting task in reflecting faithfully the considerations which determined equipment programmes and their modification under the impact of events of various kinds. Moreover, in this important area, selection is inescapable. The extent and variety of the equipment requirements of a modern Air Force are such that even a work aimed at informed readers must concentrate on the most important features of the RAF equipment programme.

Selection is unavoidable in another sense. The immensity of official archives confronts all who seek to write seriously about the processes of modern government. Within the Air Ministry in 1957 the Air Staff alone included over 120 officers above the rank of squadron leader. Their output in terms of memoranda, minutes and records of meetings can be imagined. The Air Council and its Standing Committee in that year met formally on more than 60 occasions and addressed themselves to some 150 memoranda. The Chiefs of Staff Committee met on average twice a week and the Defence Committee of the Cabinet once a fortnight. These do not comprise all the bodies whose decisions determined or affected RAF policy and plans. Other Ministerial and official committees under Cabinet Office, Ministry of Defence or Air Ministry authority were part of the decision-making process. Some of these are identified in the narrative but not all can be found a place in a work which seeks to describe the development of policy rather than to form an administrative history.

The closest attention has to be paid to the records of the top tier of the defence establishment: the Air Council within the Air Ministry and, to an even greater extent, the Chiefs of Staff Committee, the meetings of the Minister of Defence with the Chiefs of Staff and the Service Ministers, the Defence Committee of

² Pointing the Way, p.250

the Cabinet and other meetings of similar authority under the chairmanship of the Prime Minister. No work could make any claim to being a useful record of the development of policy unless it reflected the workings of this top tier and traced the decisions at that level which affected the RAF. But a work based only on top tier records would hardly suffice. One reason is the somewhat stylised nature of its records. Minutes of meetings of, for example, the Defence and Chiefs of Staffs Committees are written according to a procedure, long established and well understood, which clearly records decisions but does not aim at reflecting or attributing the full range of discussion. No meeting of Ministers or senior staffs, however decently civilised and courteous in their dealings with one another, could be quite so rational and dispassionate as the records of their deliberations normally have them appear. Convictions, motivations and purposes can often only be discovered when these formal records are illuminated by evidence from other sources. Here the 'Private Office' records of Ministers and, where relevant, Chiefs of Staff, are the minimum that has to be examined if the dry bones are to live. These reflect fully all the views on the many aspects of RAF policy which were expressed by the Air Staff and others involved. There has to be an emphasis on the key documents and issues, and on those decisions which crucially determined the size, structure and roles of the RAF. While it would not be enough to rely on the records of top tier bodies it would be no less misleading to regard all the varieties of staff opinion as part of the data for assessing the merits of what was finally decided. In conditions as difficult as those of the period under review, when the way ahead for the RAF was often unclear and open to argument, there is the inherent likelihood that voices will not be heard or, if heard, will not be acceptable in those quarters which matter most. For many features of policy that are approved there is usually a different proposal that is rejected. Indeed, no staff organisation worthy of the name should discourage free and argumentative thinking, at any rate during the process of reaching decisions. It could well be true, to take what may or may not be a hypothetical illustration, that the inadequacies of the BLUE STREAK weapon were perceived by a member of the Air Staff long before its cancellation was seriously considered. But this would only have a place in this narrative if it was expressed at those levels which bore important responsibilities for decision or advice.

In a memorandum for Ministers in June 1956 which marked the formal beginning of the review of policy which culminated in the Defence White Paper of 1957, the official authors were quite clear on one point. This was that Britain had been trying to do too much and that she must concentrate on essentials. This would be equally sound advice for this particular narrative; accordingly, a definition of its scope and of the kind of reader to which it would be addressed had to be made at an early stage. To quote from the Air Force Board directive, "the history is primarily intended for the education of decision-makers and planners within the Air Force Department, from Board level to Wing Commander and equivalent, to show in some depth what the Air Council was trying to achieve, what constraints and factors were operating, and how the RAF was shaped, and to indicate the kind of opportunities taken or missed." To assume such a readership simplifies certain minor problems. Much more can be taken for granted about the organisation of the Air Ministry and of the RAF itself, and about knowledge of service terms and similar "technical" matters than would be the case if the work was directed at the general public.

The original intention of the Air Force Board was to allot three years to the task. It has taken five. It soon became clear that even a substantially longer period would not suffice to produce a narrative covering the whole of the period with the authority and depth that, at least as an aim, attaches to Official History. In any case, the desired concentration, as far as general defence policy is concerned, on those aspects which most affected the RAF meant, and was recognised beforehand as meaning, that less than justice might be done to associated naval and military problems. To this difficulty can be added that of validating, with the precision that would be necessary in an official history, all the factors and constraints that bore upon NATO policy; the problem here being one of access to documents as well as one of time and space. It is therefore necessary to set down the limits to the narrative; its aim is to describe:

- a. The purposes and roles for which the RAF was equipped and deployed during the period, against the background of the appreciated threat.
- b. Sufficient of UK and NATO strategy and policy to provide the setting for RAF policy; similarly, sufficient about the interaction between Government defence policy and the size, shape and equipment of the RAF (including financial, industrial and technological constraints) to show the problems at Air Council level.

- c. The relationship, as it affected policy at Air Council level, between operations and the equipment, deployment and management of the RAF.
- d. The management problems which arose in manning, training, deploying and accommodating the force.

The emphasis upon the central place of the Air Council will be readily understood. The Air Council's deliberations, formal and informal, expose more comprehensively than those of any other body the issues affecting the RAF during the period. But this is not to say that the Air Council was the only or, in some areas, even the most important focus of policy. On many important matters it was a body reacting to decisions taken elsewhere, though only rarely was it (or its appropriate member) uninvolved in such decisions. To the extent that the narrative deals with the proceedings of other bodies, this is necessary in order to give the context in which the Air Council operated. Several chapters accordingly deal mainly with the activities of the Defence Committee and the Chiefs of Staff Committee and on British relationships with NATO.

The three questions of most importance to a historian are what, why and how? There will be little in the following chapters that will alter existing perceptions of the answers to the first question. This is because public documents such as Defence White Papers are reliable enough as a record of important decisions affecting all the Services. These also help to answer the second question, though they will leave something still to be said. Where they have little to contribute is in respect of the third question. How issues emerged, how they were processed and presented within the government machine and how the consequences of decisions affected management, in particular of the RAF - these are among the questions to which this book seeks to provide at least some of the answers.

Although commissioned by the Air Force Board the responsibility for the work, for its accuracy and judgments, rests with the author. At an early stage the question of consultation with those still alive who had played a major part in decision-making had to be faced. Some such consultation has taken place but usually where there was doubt about the adequacy of the documentation. In general it has seemed right to rely on the advice of a distinguished senior officer, to the effect that what matters is not what those involved say now but what they said and did when in office. This is not to decry the value of oral history; but this lies chiefly in those areas where written records are scanty or do not exist. In any case, at an interval of nearly twenty years from a complex series of events memory cannot be infallible.

When so much help has been willingly given by numerous members of the Ministry of Defence and the Cabinet Office, acknowledgements by name are invidious. Nevertheless, particular thanks are due to Mr P J Hudson, a former civilian member of the Air Force Board, who read the whole of the manuscript and made many helpful suggestions; to Group Captain E B Haslam and Air Commodore H A Probert, who as successive Heads of the Air Historical Branch gave unstinted support to the project; to Miss Marjorie Parks of AHB, herself a former member of the old Air Ministry, who typed the manuscript; and to Mr Denis Bateman of AHB who saw the work into print.

CHAPTER 1

PRELUDE TO CHANGE : ANALYSIS OF THE PROBLEM

Introduction

By any token, the Defence White Paper of 1957 (Cmd 124) was an important document of state policy. There is room for argument about the extent to which the policy it described was innovatory and about whether the principles which underlay the policy was applied too rigorously or not rigorously enough. But there is no doubt that, as a statement of government policy, it had been awaited with an expectancy, in Britain and elsewhere, which marked no similar post-war document. If only by the interest and controversy it inspired, these expectations were justified in the event. The threat from nuclear weapons, particularly thermonuclear weapons, which the White Paper described in apocalyptic terms yet with an insistence that these nevertheless offered the best hope of avoiding global war, led to much parliamentary and public debate on the morality as well as the effectiveness of the White Paper's policy.

The intention to abolish National Service by virtually halving the uniformed strength of the Services was generally recognised as ending a period of some twenty years in which most of the country's young men could expect to gain experience in one or other of the Services. This had been part of the price, willingly paid on the whole, first for national survival and later, after the defeat of Germany and Japan, for playing a largely inescapable part in re-establishing world order and security. Coming, as the White Paper did, only a few months after the Suez operation, there were those who saw in it a recognition that Britain's role in the world was likely to be reduced. If this was not conceded in the White Paper itself it was unmistakeably clear that the keynote of future policy was to be a re-ordering of the national defence effort in terms which recognised the profound significance of nuclear weapons and the need for Britain to improve her economic and financial strength by measures which included reducing the resources allotted to defence.

For the Services themselves the impact of the White Paper differed. The Royal Navy was least affected by the decision on National Service but there was uncertainty about its future role. The Army had to face major reductions in total strength and thus the difficult and unpalatable task of disbanding or amalgamating large numbers of units. But the Army's tasks, within and outside Europe, remained; it simply had less with which to meet them. The Royal Air Force was the most curiously placed. Certainly it seemed in no danger of being undervalued; indeed, the Prime Minister and his most senior colleagues regarded it as the custodian of the most important component of military strength.¹ Such argument as Ministers allowed themselves was about the size and equipment of the V-bomber force, not about the need for it. On the other hand, the logic of nuclear deterrence, coupled with foreseeable developments of both offensive and defensive guided missiles, was widely interpreted as the beginning of the end of the manned aeroplane.

If then the 1957 White Paper was a major event, what should not have been all that surprising was its detailed content. The Churchill government that was formed in October 1951 had inherited a heavy defence and rearmament programme as well as an overstretched economy; and successive Defence White Papers up to and including that of 1956 registered developments of policy which sought to achieve a better match between defence expenditure and economic capabilities.² The 1954 White Paper (Cmd 9075) contained one of the early public recognitions of the potential impact of nuclear weapons on defence policy. But if the announcements that high priority was to be given to building up a force of modern bombers with atomic weapons, that there were to be reductions in the size of the Army, and that the growth of the nuclear deterrent made wars such as that in Korea less likely, were all significant, so was the emphasis on the heavy burden of defence on the national budget and balance of payments.

¹ In his memoirs Sir Anthony Eden said that Marshal of the Royal Air Force Sir William Dickson was appointed the first Chairman of the Chiefs of Staff Committee (on 1 Jan 1956) because "the RAF must play an increasingly important part in our military scheme of things in future" (Full Circle, p.375).

² Early in this period of a more austere approach to the management of the RAF the Permanent Under-Secretary of the Air Ministry pointed out to a restive Service colleague that the Secretary of State for Air, besides being a peer and a distinguished soldier, was a chartered accountant.

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The 1955 White Paper used scarcely less grim language than its successor in 1957 about the effects of thermonuclear weapons; and, to mention another strand which was woven into later policy, it drew attention to the greater risk, as a consequence of nuclear weapons, of aggression by infiltration and subversion rather than direct military attack.

Sir Anthony Eden succeeded Sir Winston Churchill in April 1955. There had been a so-called Radical Review of defence policy in 1953; nevertheless, he invited a further review on which a good deal of work was undertaken but which was suspended in November 1955. The Defence White Paper published in February 1956 (Cmd 9691) has to be regarded as an interim document, reflecting old policies but also indicating ways in which new policy might develop. The roles of the forces were set out in these terms:-

- a. They must make a contribution to the Allied deterrent commensurate with our standing as a World Power. This means not only building up and maintaining a nuclear stockpile and the means of delivery, but also contributing to the maintenance of NATO's defensive effort by land, sea and air.
- b. They must play their part in the cold war. By their mere presence they can contribute to the stability of the free world and the security of overseas territories whose peaceful development may be threatened by subversion whether overtly Communist or masquerading as nationalism.
- c. They must be capable of dealing with outbreaks of limited war should they occur.
- d. They must also be capable of playing their part effectively in global war should it break out. They will have to include support to the civil authorities.

It is clear from the White Paper and elsewhere that these roles were to be understood as an order of priority. It is equally clear that preparations against a global war (including substantial investment in civil defence), even though this was the last of the four roles, continued to have an important and therefore expensive influence on the Services' programmes. This is not to say that separate ranges of equipment were regarded as necessary for the separate roles defined in the White Paper; some capabilities were obviously relevant to more than one role. But what continued to concern Ministers, notably Mr Macmillan as Chancellor of the Exchequer and Sir Walter Monckton³ as Minister of Defence as well as the Prime Minister, were the budgetary and economic implications if the Services were to continue in anything like their existing size and shape. The White Paper traced these implications under the headings of Economic Factors, in terms which, while expressed in generalities, exposed the government's main problem of reconciling national security with economic success. There were several aspects to this, which the White Paper mentioned. There was the effect of defence production on the export and investment performance of the British metal industries (nothing was said about the exports of the arms industry). There was the employment of scientists as between research and development for defence and civil industry; and also between manpower in the Services as a whole and the rest of the working population. Service manpower was planned, at this date, to be reduced from nearly 800,000 in April 1956 to 700,000 by April 1958. Nothing was said in the White Paper about the possible abolition of National Service or of replacing it by some more selective arrangement; neither would have been consistent with strengths as high as those currently planned for 1958. But the need to build up the regular element of the Services, the better to cope with the more complex equipments that would be coming into service, was emphasised. To encourage regular recruitment, improved pay from April 1956, particularly for those who committed themselves to longer engagements, was announced in a separate White Paper.

The 1956 Defence White Paper made no claim that the review of defence in which the government had been engaged had reached definite conclusions. At most, an approach to a new policy was outlined, the main features of which would be the RAF contribution to the nuclear deterrent, smaller but better equipped forces and in general a defence effort that would not overstain the economy. A recognition that at least some of the defences of the past had been outmoded was contained in the announcement that the

³ Sir Walter Monckton succeeded Mr Selwyn Lloyd as Minister of Defence in December 1955. His biographer says that "his brief was to devise a method by which the figure of £1500M spent annually on defence could be substantially reduced." (Walter Monckton by Lord Birkenhead Weidenfeld, and Nicolson, 1969).

Coast Artillery was to be disbanded (Anti-Aircraft Command had been disbanded earlier), and there were a number of changes in the role and organisation of the Territorial Army. But no defence commitments or any of the principal roles of the Services were formally abandoned; and no estimate was presented to Parliament of what could be regarded as a tolerable level of future defence expenditure.

The 1956 Policy Review

a. **Origins.** Ministerial unease at the trend of defence expenditure took some weeks to take the form of collective action. Mr Macmillan, the Chancellor of the Exchequer, was determined to reduce public expenditure, particularly on defence. The Prime Minister, while not disagreeing with the objective, was equally determined to pursue it by orderly process rather than an imposed solution based on arbitrary judgements of the resources to be allotted to defence. He minuted Mr Macmillan in February 1956⁴ in terms which may have been an implicit rebuke: "We ought to establish first what are the right things to do; it is at a later stage that we should consider how much of them we can afford. This has always been considered to be the right method of dealing with the problems of defence expenditure. It has also considerable advantage for the Chancellor of the Exchequer himself. He does not then get himself committed at too early a stage to defence policy." No action was taken at this stage and on 20 March Mr Macmillan tried again, this time in a joint minute with Sir Walter Monckton to the Prime Minister.⁵ They expressed their concern at expenditure on defence measures which in some important respects were little more than a facade. They called for a "reappraisal at the highest level of the whole basis on which our defence policy should rest", and proposed that as a first step a group of senior ministers should meet for a general discussion on such questions as:

Is the defence of the United Kingdom in global war a feasible proposition?

If the answer is no, what changes ought logically to be made in present arrangements for defence?

What were the impediments to a statement by the Government of their intention to make these changes? What would be the effect of opinion at home and abroad, with special regard to allies?

Assuming the indefensibility of the United Kingdom and that the paramount interest was therefore to prevent global war, on what scale should there be a British contribution to the deterrent and for what reasons?

What were the vital interests in peacetime and by what means could these best be safeguarded (Middle East oil was cited as an example)?

For what situation, short of global war, was it necessary to be prepared?

What economic advantages would be gained by recasting defence policy?

The minute went on to mention the importance of the National Service issue because the relevant Act would expire at the end of 1958, and also the need to face up to the question of home defence where costly measures of civil defence, including food and oil stockpiling, were currently in hand. It ended by regretting the difficulty of finding time for Ministers to consider together even such basic matters of policy and asked the Prime Minister to set aside two or three days (possibly a weekend at Chequers) when appropriate Ministers could meet.

Despite this somewhat desperate appeal for action it was not until early June that Ministers were to meet. The time was not wholly wasted. The staff organisation supporting the Chiefs of Staff was engaged on a number of studies which could be relevant to any fundamental reappraisal of defence policy; as far as the RAF was concerned, the Air Staff was developing its thoughts on the size and composition of the V-bomber force and the air defence of Britain; and not least important,

⁴ Cabinet Office M52/56 of 24 February.

⁵ This minute was later circulated as a Policy Review Committee paper (PR(56)2 of 4 June 1956).

Sir Norman Brook, the Secretary of the Cabinet, had not been idle. In anticipation of Ministerial needs he had collected a small group of officials "who are preparing a paper on the essential objects of British policy today - political, military and economic." He informed the Prime Minister of this action in a note of 1 May 1956, significantly at a time when Mr Macmillan was again pressing for action.⁶ The group was drawn from the Treasury, Foreign Office and Ministry of Defence and its labours were completed by the end of May.⁷ It worked outside the normal Whitehall machinery; there was no consultation with the Chiefs of Staff who only learned of what was afoot in the middle of May and were not pleased.⁸ The position of the Chiefs of Staff, as the professional military advisers to the government had not been formally prejudiced, as was to be apparent when they received copies of the official paper from Sir Norman Brook on 6 June. This contained no specific proposals for changes in the size and shape of the Services or in the existing defence programmes. Even so, it placed the Chiefs of Staff in a position of reacting to, rather than initiating, a view of the future which had serious implications for the Services as well as for broad strategy and policy. There is no doubt that the somewhat secretive way in which the paper was prepared was deliberate and reflected a view of more than one Minister and of a number of very senior officials that the Chiefs of Staff organisation was not the best instrument for fundamental reappraisal of policy. The method the Prime Minister chose to adopt was to form a small committee of the most senior Ministers under his chairmanship, inviting other Ministers and the Chiefs of Staff to attend when the business before the committee required it. The Policy Review Committee (PRC), as it was termed, began its work on 6 June.

The PRC met frequently before the end of July. In that time it considered memoranda covering most major aspects of defence and also a number of papers on the British economic position and prospects at home and overseas. Most of the issues that were to be dealt with in the Defence White Paper of 1957 were exposed. The political constraints working against radical changes and the tactics considered necessary to minimise political risks are also apparent from the records of the PRC. As events turned out, the PRC was unable to complete its work with the finality and in all the detail that the Prime Minister had intended. This was largely due to the impact of the Suez situation. The PRC met for the ninth time on 25 July, the day before the Egyptian government announced the nationalisation of the Suez Canal; it did not meet again until 18 December. By that time Sir Walter Monckton had been replaced as Minister of Defence by Mr Antony Head (who was also to leave office in January 1957) and the Prime Minister was unwell and within a few weeks of resignation. Some of the impetus and drive of the summer activity of the PRC was lost because of this delay, and what was soon to be Mr Macmillan's administration had to come to conclusions about defence policy in a much shorter time than had been envisaged when the PRC began its work.

⁶ A particular and public commitment of the Chancellor at this time was to make savings of £100M in the civil and Service estimates for the 1956/7 financial year. He was looking to defence to find most of this sum.

⁷ The officials concerned were Sir Richard Powell of the Ministry of Defence, Mr D R Serpell of the Treasury, Mr G L McDermott, Foreign Office, and Mr R C Chilver of the Cabinet Office (to which he had been seconded from the Air Ministry).

⁸ An exchange of letters in May between Lord Mountbatten, who was CNS at this time, and the Minister of Defence is interesting. CNS wrote on 17 May on behalf of the Chiefs of Staff, saying that they had heard that "some form of committee is being set up to advise the Government on the general policy to be followed in the future. It would seem that such a wide survey of policy must include the defence aspect and we are gravely disturbed that our constitutional responsibilities to advise the Government are being by-passed". He went on to request that General W G Stirling of the Ministry of Defence should be given a watching brief with the official group so that he could keep the Chiefs of Staff informed. Sir Walter Monckton took some time to reply. His eventual letter of 29 May was generally soothing but made it clear that there were broad aspects of national policy which Ministers alone would consider before there could be an examination of how more detailed policies, including defence, might be affected. (Air Historical Branch (AHB) ID3/11/19).

b. **Composition and Scope.** The terms of reference⁹ of the PRC were as broad as they were brief. They were "to consider..... what adjustments should be made in Government policy in view of changes in the methods, if not the objectives, of the Soviet Union. This review, which will take account of our own economic and financial circumstances, will cover changes in domestic and overseas policy and adjustments in our defence programme". The committee, under the Prime Minister, consisted of the Lord President of the Council (Lord Salisbury), the Chancellor of the Exchequer, the Foreign Secretary (Mr Selwyn Lloyd) and the Minister of Defence. It was to "lay down the broad lines on which the review of policy and programmes should be undertaken, and will receive and consider reports on progress made with the review". In the event, Mr R A Butler, the Lord Privy Seal and Leader of the House of Commons, also attended most meetings as did the Service Ministers and the Chiefs of Staff.

Much of the early work of the PRC was devoted to discussion of the main aspects of defence policy: the nuclear deterrent, NATO strategy, the size of the UK contribution to NATO, home defence, Fighter Command, the role of the Navy, National Service and the size of the research and development programme for the Services. To begin with there was a general debate in which broad principles and concepts were argued. A programme of work, requiring the production of detailed memoranda, only emerged after these early meetings, and was circulated by the Prime Minister early in July. It covered all the matters mentioned above and also commissioned papers on the forces required for limited war and internal security, military and non-military measures in the Middle East and Far East, the medium range ballistic missile, and Treasury papers on the economy. The intention was to complete the committee's work by the end of July. Early meetings of the PRC were mainly without benefit of papers but one memorandum was discussed by the PRC at its first meeting: this was PR(56)3, the paper produced by the group of officials set up by the Secretary of the Cabinet.

c. **The Problem Analysed.** The official memorandum was brief for the ground its title claimed to cover, which was The Future of the United Kingdom in World Affairs; and in some twenty pages it sought to analyse the British position and make recommendations about national objectives. It was designed to concentrate the minds of Ministers on essentials, which were set out in these terms:-

Two main factors call for a review of the United Kingdom policy -

- (1) The external situation confronting us has changed. The hydrogen bomb has transformed the military situation. It has made full-scale war with Russia or China unlikely. And conventional forces, though still of great importance in some situations, have become a relatively less important factor in world affairs. The Russians have recognised this change, and they are adapting their actions to it. While their objectives may remain unaltered their methods of attaining them are changing. We must modify our own tactics accordingly.
- (2) It is clear that ever since the end of the war we have tried to do too much - with the result that we have only rarely been free from the danger of economic crisis. This provides no stable basis for policy in any field. Unless we make substantial reductions in the Government's claims on the national economy we shall endanger our capacity to play an effective role in world affairs. Only thus shall we be able to find the means to place our economy on a stable basis and to counter the new forms of attack with which we are being confronted.

The tone of this quotation is typical of much of the memorandum. There was naught, or very little, for anyone's comfort: "on the basis of present policies and commitments actual and potential, we have no prospect of being any more free from strain and crisis than we have been since 1945". On the economic front, which the memorandum first considered, the maintenance of the international value of sterling was stated to be a matter of life or death. The need to improve the country's financial reserves; divert very large resources to the increase of investment in productive industry; reduce personal consumption; review (with the aim of reducing) social investment policies - these and other radical measures to improve the British competitive position were identified and argued.

⁹ PR(56)1.

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The political acceptability as well as the practical scope for action on these lines is outside the limits of this narrative. There were, however, important links between the analysis of the world situation and that of national political and military objectives, which formed the second part of the memorandum. There was the obvious general connection, arising from the need to reduce public expenditure and so release resources to productive industry, and a more precisely stated need to reduce expenditure overseas in the interest of an improved balance of payments.

A change of direction in Russian methods was seen as a major factor in the analysis; the ends were the same but the means would be by economic and political pressure rather than direct military challenge. A report by the Joint Intelligence Committee (JIC),¹⁰ which the Chiefs of Staff had seen, was included in the memorandum. This concluded that both the Russian and Chinese leaders wished to avoid war and that, not least because of the nature of nuclear war and because the Russians were doing well enough in the cold war, global war was unlikely in the next ten years. The JIC were confident that active preparations for war involving mobilisation would be detected in advance but if there were an attack against the West it was more likely to be a surprise attack by aircraft and ballistic missiles with little warning of aircraft attack and none if missiles were used. They drew attention to the rapid growth of the basic industries of the Soviet bloc and the continuous improvement of its armed forces and their equipment; this trend "must be most carefully watched". As is the nature of balanced reports, the JIC appreciation contained points which advocates of different policies towards Russia could claim in support. What mattered most to the officials who had written the PRC memorandum was the JIC's view that if the West maintained its strength and cohesion war was unlikely. Accordingly they saw an opportunity, as well as a need, to reduce British defence burdens; the Russians were only re-directing their efforts "because the deterrent is working". The essence of the matter was put like this:-

Our problem is to decide how best we can take advantage of the situation in order to reduce the great strain and risk to which our present military burdens are subjecting the United Kingdom, and to release resources in order to counter the new form which the Soviet threat is taking; and to do so without weakening those factors which have made war unlikely, namely, the deterrent and the cohesion of the West.

The problem was examined under three heads: the possession of nuclear and thermonuclear weapons and delivery systems; military measures in the United Kingdom and Europe; political, financial and military measures in other areas. Much the shortest of these three sections of the memorandum was that dealing with nuclear weapons; understandably so, because there was no serious doubt about their importance or about the need for Britain to have a deterrent capability of her own.¹¹ Several advantages were perceived in possessing weapons which were altogether different from other forms of military power. One was that if Britain made a worthwhile contribution to the deterrent the Americans would be the more likely to help to defend British interests generally. Otherwise, they could not be expected to defend those interests where their own were not involved, or where there was a conflict of interest. As a development of this view (which in some respects was not justified by later events and in any case is curious in view of the extreme importance which the memorandum elsewhere placed on maintaining an identity of interest with the United States) there was the general prestige which nuclear capability would bestow:-

If we possess these weapons the Americans will be prepared to pay attention to our opinions in a way they would otherwise not. The same applies to our standing in the eyes of other countries, such as Germany. And our lesser potential enemies, such as Egypt, will feel that we might, if pushed too far, use nuclear weapons against them.

¹⁰ JIC(56)21(FINAL), 1 May 1956.

¹¹ Discussion among the Chiefs of Staff during 1956 reached no definite conclusion about the size of the British nuclear force and at least one of the Chiefs went on record to the effect that strategic nuclear deterrence might be left to the United States. This is dealt with in pp 19-20. It remains true that when the policy review got under way, a combination of practical measures, such as orders already placed for V-bombers and the testing and production of nuclear weapons, and political commitment had taken the government a long way down the road to a substantial nuclear capability.

Finally, it was contended that a British contribution to the deterrent would mean a much stronger position from which to negotiate the reshaping of NATO policy which was seen to be necessary if conventional forces were to be reduced. How large that contribution should be and what nuclear and thermonuclear capacity would be needed were recommended for study. Three recommendations concluded the section on military measures in the United Kingdom and Europe: studies were called for of, first, the development of a new NATO strategic concept designed to adjust the level of NATO forces to the new political situation; secondly, the method by which adoption of this new concept could best be achieved; and thirdly, expenditure on the defence of the United Kingdom, including home defence.

The path by which these recommendations were reached disclosed problems as much as solutions. The departure point was the very large proportion of the £1500M annually being spent on defence that was tied up in conventional forces to defend Europe and Britain against Russian attack. It was in this area that there was the greatest scope, so it was affirmed, for reducing military demands on the engineering industry, manpower, technical and scientific resources and foreign exchange. If it rested solely with the British, but always provided that the Russians did not think that the deterrent could be neutralised, there could be economies in what the memorandum termed "the contributory deterrents"; nor was it worth making heavy sacrifices under the heading of civil defence to improve the chances of survival in a war which would mean the destruction of nearly everything worth preserving. But it was recognised that these possibilities could not be determined by Britain alone. Most of the forces in which economies seemed to be called for were assigned to the North Atlantic Alliance; even civil defence was covered by Alliance policy and under its scrutiny. Moreover, there was a treaty obligation under the Paris Agreement of 1954¹² to maintain forces on the Continent at the existing level, and their reduction or withdrawal required the consent of the contracting Powers. The way ahead, as the authors of the memorandum saw it, required the government to take the initiative:-

Accordingly, the solution, if we are to make the reductions that are essential and at the same time to maintain the cohesion of the West and North American involvement in Europe, is to work for the adoption of a new strategic concept by NATO as a whole. We must avoid unilateral reductions unrelated to any common strategic concept, which would be liable to set off a general landslide that would end in the disintegration of NATO and North American withdrawal from Europe. And we need more than a general agreement that the present scale of conventional forces can be reduced. We must not allow the feeling to develop that everything but the deterrent is now a facade. The new strategic concept must be one that can be interpreted in terms of lower but militarily definable force levels, and a planned and coherent Allied effort. The form which this new concept might take is a matter for consideration by the Chiefs of Staff in the first place. It might perhaps be based mainly on the idea of the "plate glass window" or "trip-wire".

This view cannot be criticised for lacking a sense of responsibility to the Alliance. And it outlined a rational approach to NATO strategy which was designed to achieve safety with economy.

The British position outside NATO was next reviewed. The Middle East was seen as increasingly a political rather than a military problem, with the vital security of oil supplies for Europe depending more on the friendly co-operation of the producing and transit countries than on the British military forces deployed in the area. But it was recognised that the scope for reductions in military expenditure was much less than in Europe. Indeed, membership of the Baghdad Pact could lead to new expenditure. Egypt, with which Saudi Arabia was bracketed, with good reason at the time from the British point of view, as a "trouble maker", and the potential air barrier in the Middle East to the movement of British forces, were regarded as adverse factors. Nevertheless, the memorandum

¹² These agreements were reached by the Western European Union powers and, in political terms, were the price paid by the United Kingdom government for the consent of the other WEU countries to the rearmament of the German Federal Republic to prescribed levels. The British commitment was to maintain in West Germany four divisions and a tactical air force of the size (over 400 front-line aircraft) obtaining at the time. This could be modified if the changes maintained equivalent fighting capacity; there was also provision for review on economic and financial grounds.

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proposed a base by base review of existing forces, except those in the Persian Gulf, to see what economies could be made. The main features of the policy to be pursued in future were seen as:-

- (1) Support of the Baghdad Pact but with enhanced emphasis on its political, economic and social aspects. American involvement was essential and it would be in that direction that the Middle East members of the Pact should be encouraged to look for military equipment. The British military contribution should be as limited as possible and while the need for some facilities in Libya, Jordan and Cyprus was admitted, it was considered that the present scale of forces could be substantially reduced. The Suez Canal base, already moribund, should be finally vacated as soon as possible.
- (2) While the Middle East should be regarded as the most critical theatre politically, non-military methods of maintaining influence should be given more attention, including improvements in police and local security forces and counter-subversion.
- (3) American and British policies should be harmonised as far as possible.

In the Far East, a similar approach was proposed. A clear interest was displayed in minimising British military involvement in the South-East Asia Treaty Organisation. The United States was seen as the power offsetting China and it was implied that Australia and New Zealand could do more to promote the stability and security of the area. Britain should concentrate on a more vigorous and effective peacetime policy rather than on preparations for war; and the memorandum recommended, as it had done for the Middle East, a study of each existing military base or facility, clearly hoping that there could be substantial reductions in the size of existing forces in Malaya and Singapore when the internal security situation had further improved (the Malayan Emergency was rapidly coming under control at this time). Some of the potential savings would be well spent in publicity, trade promotion, technical and economic assistance in British and other territories in the region to counter the Communist trade and cultural drive.

The tour of the world horizon, leaving aside the scope for minor economies in the West Indies and Antarctica, ended in Africa - "an area of great potential danger [where] we know that the Communist bloc have plans for subversion throughout the Continent". There were only small British forces stationed in the African colonies and the action recommended was mainly in terms of administrative, economic and technical effort, together with the familiar trio of police, intelligence and counter-subversion. To borrow a phrase from the future, 'hearts and minds' was the emphasis. But if the military aspect of African security was not directly addressed in the official paper it was being given attention elsewhere.¹³

The final section of the memorandum dealt with Presentation and Timing. Some of this was not directly significant for defence policy. A good deal of attention was paid, for example, to making financial arrangements with the United States which would release resources for a bigger programme of colonial development. On the military side, briefly and with no air of conviction, an approach to Commonwealth countries for help, in particular in South-East Asia, was recommended. The most immediate need was seen to be to convince the United States, in the first instance, that a redirection of defence effort, not just by Britain but by the West generally, was called for because the Russian threat was changing in character; and that this redirection should be based on a revised strategic concept. There was concern that a British initiative might be misunderstood, in the United States and elsewhere. The reaction might be that the British motive was to ease economic difficulties and safeguard living standards at the expense of security. The point was driven home thus: "It will therefore be essential that our "package" should contain recognisably firm action on the internal front. If the only area in which any real saving is made is defence, it will be impossible to argue our case convincingly, and we shall have little or no chance of getting others, such as the United States, to come in to share the burden." As to timing, the keynote was urgency. The various recommended studies would have to be completed quickly, and at the latest by December 1956. The American Presidential election in November and the usual December meeting of NATO Ministers in mid-

¹³ See p.10 below.

December were dates to take into account. But what officials saw as most important was the consideration that would have to be given in December to the Service Estimates for 1957/58. To end with this point was a reminder, after the global tour of commitments and capabilities, that the administrative and parliamentary process at home was inescapable and that the object of the exercise was economy.

The memorandum as a whole amounted to a formidable appraisal of formidable problems and of how these might be approached and contained, if not in all respects solved. It was a more comprehensive paper, particularly because of the inclusion of economic and financial sections, than the Chiefs of Staff organisation would have been competent to produce. The essential issues had been exposed in a way which would have been more difficult to achieve by more orthodox methods, and certainly not as rapidly. It was in any case no more than a basis for discussion of broad policy, which it duly led to.

d. **Initial Reactions.** What Ministers and, when they were shortly brought into the discussions, the Chiefs of Staff individually and collectively thought of the official memorandum is most relevant to the history of the efforts in 1956 to construct a new defence policy. The first reactions of the Air Staff are, however, interesting and of some significance. These were proffered to CAS (Sir Dermot Boyle) within a day of his receipt of a copy of the memorandum. This was generally welcomed as following the line of thought which had been current in the Air Staff for the last year or so. Two major points were made. The first was that, assuming the official memorandum would be the basis for a revision of defence policy, this would not be achieved by 'horse trading'; instead the commitments to be met in order to implement the new policy should first be established, followed by decisions on which elements of each Service were needed to meet those commitments. The second point was that the Air Staff agreed with the proposed approach to the security of Europe and the United Kingdom and the need for a new strategic concept for NATO but this was not accepted in Whitehall: "the Naval Staff have moved some way towards doing so, but the General Staff certainly do not". A number of points of "less substance" were made: reducing military bases overseas could lead to losing military advantage without corresponding political gain; the proposals to improve non-military measures overseas were warmly supported but a fire brigade in the form of adequate troops and air transport was necessary; the emphasis in the memorandum on the need for economy elsewhere as well as in defence was applauded. Finally, there was a danger of over-reliance on the Americans: "We have first to convince the Americans that our policy is right and is the best for the West as a whole, and that we are doing all that can be expected to help ourselves. We may find it even more difficult to get overall American agreement to our new concept for Europe than to get such agreement within Whitehall."

As a first reaction, these views were not unworthy. But by the time they were expressed the senior Ministers comprising the PRC had already met,¹⁴ without the Service Ministers and Chiefs of Staff, and reached some conclusions about both future policy and some of the areas of defence where particular studies were needed. They did not discuss economic objectives or the measures to improve economic performance recommended in the official memorandum. Their starting point was defence expenditure in Europe; there seems to have been a fly cast by Sir Walter Monckton who is recorded as saying that major savings in the Middle East and Far East could only be made if there was total withdrawal and Britain became a wholly European power. Ministers concentrated on NATO as the area where the big economies had to be made: "The United Kingdom was at present making a disproportionately large contribution to NATO.... Our forces in Europe were comparable with those of the Americans: the contributions of other European countries were very much smaller. The percentage of our national income spent on defence was much higher than in most other European countries".

The key to both a revised policy and the savings which would flow from it was seen to be a new strategic concept for NATO as a whole. Much time was spent on how this might be achieved. The Chiefs of Staff must be brought in on the military aspects: careful tactics would be needed to sell

¹⁴ PRC(56)1st Meeting, 6 June 1956.

any new concept to other WEU and NATO powers, particularly one that meant a smaller British contribution to European defence; there was no confidence that NATO's own military staffs would grasp the nettle. Yet delay would be most unpalatable so, despite the possible political risks, British decisions on force reductions and consultation with Allies would have to go ahead together. Specifically, the Foreign Secretary and the Minister of Defence were invited to consider how the withdrawal of an armoured division from Germany could best be negotiated (a reduction in the RAF in Germany was not mentioned but it is clear from other records that this was not expected to be so awkward, politically or militarily). As for the non-NATO commitments, Ministers' views broadly accorded with those of the official memorandum, and the recommended studies of possible military savings and also of improved non-military measures were approved. The only new point was an expression of interest in developing a base in East Africa, a subject on which studies were already in hand as a result of discussions in the Defence Committee in April.

Whereas there was no indication of where Ministers hoped to achieve reductions outside NATO or of the structure and capabilities of the forces for non-NATO tasks, some important if preliminary views were expressed about forces in Europe. First, the deterrent was discussed. The size of the V-bomber force would probably have to be decided on political and economic grounds. Whatever that might be, bomber and nuclear weapon production would have to be harmonised; and the future characteristics of the deterrent would need to be studied. On this last point, there was concern about the cost of developing a British ballistic missile, especially as the Americans were now some four years ahead with similar weapons;¹⁵ it might be better to concentrate on developing a supersonic bomber, with the added advantage that this would be useful to civil aircraft development. The Minister of Defence was asked to take these and a number of other points into account and to report to the PRC. The Minister of Defence was also looked to for papers on home defence policy and the Air Defence of the United Kingdom (ADUK) on which Mr Macmillan in particular called for an entirely fresh approach.¹⁶

No other specific force studies were commissioned at this stage but some preliminary points were made which indicated Ministerial expectations or opinions. Reductions in the Navy were given some emphasis since, as the record of the meeting reads, "the fleets maintained by the NATO countries appeared at present to be designed to enable the West to fight a long war against prolonged Russian resistance at sea". The Army contemplated on the Continent was envisaged as not exceeding two divisions and possibly only one. The existing Canberra force, with its atomic as distinct from thermonuclear capability, received a favourable mention. One of the arguments was that an initial reaction to Russian aggression might be with atomic rather than thermonuclear weapons but what appears to have been the more important point was that the Canberra force, rather than "atomic artillery", would be the main British contribution to the nuclear striking power of NATO.

e. **Major Issues.** No definite conclusions were reached at this first meeting; further discussion of policy for the defence of Western Europe was left for a future meeting which the Chiefs would attend. The areas for study had, however, been exposed:-

¹⁵ The record of the meeting says that the Americans had originally intended to concentrate on long-range and short-range missiles, leaving medium-range missiles for British development. They had later changed their minds and put massive resources into the Thor and Jupiter projects (not mentioned by name in the record).

¹⁶ After a meeting of Cabinet Ministers on 31 May (GEN 514/2nd Mtg) Mr Macmillan circulated copies of the notes he had before him at the meeting. These included the view that the sensible, though difficult, decision for the government was the abolition of Fighter Command. He recognised that to do this immediately would be to put too great a strain on the RAF, the aircraft industry and the public. Nevertheless, he thought that the Hunter and Javelin should be the last aircraft for home defence and that the introduction of a more advanced fighter should depend on the case for its deployment overseas or with the Navy. Following the logic of the indefensibility of Britain, the notes envisaged a review of SAGW and AAGW programmes. For good measure, a reliance on the Conway engine for V-bombers and the abandonment of the Olympus 6 was mentioned (AHB ID6/RD 1956/2).

There was an urgent need for a new strategic concept for NATO: the goal would mean difficult negotiations but preparation to reduce the British contribution to NATO should go ahead.

Studies should be made of those aspects of defence most clearly affected by the new concept. These were the size, nature and future of the nuclear deterrent and the extent to which ADUK and other military as well as passive measures for home defence should be maintained.

Reduced naval and army contributions to NATO needed to be defined.

Memoranda on future force requirements, and certain other aspects, for Middle East and Far East security, were required. (The PRC was clear that the time had come to withdraw the small British forces still in Korea and Japan).

In Africa, the question of a base in Kenya and counter-subversion measures should be studied.

Ministers recognised that further progress could not be made without the advice of the Chiefs of Staff. But to ensure as far as they could that this advice was directed to the broad objectives which they wished to achieve a document setting out the underlying assumptions was issued by the Prime Minister in these terms:¹⁷

The main threat to our position and influence in the world is now political and economic; and our policies should be adapted to meet that changed situation.

The period of foreign aid is now ending, and we must now cut our coat according to our cloth. There is not much cloth. We have to find means of increasing by £400 millions a year the credit side of our balance of payments.

In our defence programmes generally we are doing too much to guard against the least likely risk, viz the risk of major war, and we are spending too much on forces of types which are no longer of primary importance.

Our political and military objectives are (a) to avoid global war and (b) to protect our vital interests overseas, particularly access to oil. Attempts to secure these objectives are likely to fail unless we maintain North American involvement in Europe; maintain a large measure of identity between the interests of America and Canada and our own and develop closer co-operation with those countries; maintain the cohesion of the Commonwealth.

There was no open argument about these assumptions, from any quarter. But their translation, as far as defence was concerned, into revised force structures for each of the Services and appropriate manpower and equipment programmes to support those structures, was an altogether more complex and controversial business. Much work was to be carried out in the next four weeks on the studies commissioned by Ministers. At this point it is appropriate to see what was the British military view of the world scene.

Views of Chiefs of Staff

The Chiefs of Staff Committee had been much concerned for many months before the Policy Review began at the prospect of reduced resources for a range of commitments which showed few signs of diminishing. The broad purposes and priorities of defence policy to which they were committed were those set out in the 1956 Defence White Paper but no general formulation could do justice to the extent and variety of the military problem or adequately reflect the challenges presented to the Chiefs of Staff either as a group or as heads of their individual Services. The appointment of a Chairman of the Chiefs of Staff Committee in January 1956 meant that some of the load of work could be shared, particularly in representational duties at the international level; and from that time on the Committee has to be regarded as a quadrumvirate. Looking at the Committee as the highest level of military command, what emerges from the record of their proceedings is the extent to which non-NATO situations demanded their

¹⁷ PR(56)11 of 15 June 1956. This did not reach its final form for some days after the first PRC meeting. A reference to the importance of maintaining and improving the British position in the cold war was added later.

attention. What follows is a summary of the current overseas commitments followed by an account of the problem of UK and European defence, including the size and nature of deterrence, as seen by the Chiefs of Staff.¹⁸

a. **Middle East.** The Middle East (including the Mediterranean) - described in PR(56)3 as "the most critical theatre politically" - presented much the most worrying situation. A memorandum which the Chiefs of Staff commissioned from the Joint Planning Staff early in 1956 and submitted to the Defence Committee in the summer¹⁹ after discussion in which the Foreign Office had been much involved was notably realistic about the difficulties. The framework of treaties and formal agreements affecting security in the Middle East consisted of the Baghdad Pact (Turkey, Iran, Iraq, Pakistan and the United Kingdom), the Anglo-Jordan Treaty and the Tripartite Declaration of 1950 by which the United States, the United Kingdom and France in effect guaranteed the 1948 armistice lines between Israel and the Arab States. There was also the series of mainly nineteenth century agreements under which Britain was the protecting power for the various small states in the Gulf and South Arabia. The Baghdad Pact was regarded as a favourable factor, particularly as the United States were tending towards its support. The treaty with Jordan, however, was becoming more of an embarrassment than an asset. The dismissal of Glubb Pasha in March 1956 was as offensive from the British point of view as it was undeserved. There was much concern that Jordan might come under effective Egyptian control, with results that would weaken Iraq's position as a member of the Baghdad Pact and entail withdrawal from the RAF airfields at Amman and Mafraq in Jordan. The loss of Mafraq, which was capable of mounting bomber operations in support of the Baghdad Pact - nuclear strike was seen as the main component of the assistance which could be offered - was a particular worry. Nevertheless, since Mafraq was useful but not essential for operations of this kind and since the possibility of being required to honour the Anglo-Jordan Treaty if Israel attacked Jordan was one which the Chiefs of Staff contemplated (and necessarily planned for) with no enthusiasm, a withdrawal from Jordan was not by mid-1956 considered a disadvantage in military terms. Possible military action which the Chiefs of Staff regarded with even less enthusiasm was assistance to Israel, under the Tripartite Declaration, if there was Arab aggression.²⁰ Such other favourable factors, besides the Baghdad Pact, as the Chiefs of Staff could perceive were the emergence of Turkey as a reliable ally, the collaboration of Iraq and Iran with the West and the inclusion of Greece and Turkey in the North Atlantic Alliance.

On the debit side were numerous developments, many bearing on the bases supporting the British position in the Middle East; hence the withdrawals from Palestine, the Suez base and the Sudan were mentioned as was the expensive problem of maintaining an efficient base in Cyprus at the same time as dealing with the EOKA rebellion. But at least as important were the political and economic developments: the rise of Arab nationalism and particularly the emergence of an Egypt which, with Syria as a junior partner, was so far confining its aggressiveness to politics and propaganda but could, with the aid of arms supplied by Russia, exercise its physical ability to close the Suez Canal; the use of the United Nations by Arab countries as an anti-colonial platform; the enormous flow of money into the Middle East through oil royalties and its misuse by Saudi Arabia "for wholesale bribery and corruption" - these were disadvantages affecting the reliability of Middle East oil which had become crucial to the British economy. It had also become more important to the American

¹⁸ A comprehensive indication of the concerns of the period is given in the list at Appendix A of the main memoranda formally considered by the Chiefs of Staff Committee in 1957. Appendix B lists the memoranda submitted to the Cabinet Defence Committee in 1957/58.

¹⁹ DC(56)17.

²⁰ This view occurs frequently in the COS records. It was, for example, strongly expressed by Lord Mountbatten at COS(56)24th Meeting on 28 February 1956, when it was agreed that "the Chiefs of Staff should now state as clearly as possible to Ministers the effect which such action [ie against the Arab States] would have on our oil interests, the safety of our nationals in the area, the Baghdad Pact and on our whole position throughout the Middle East." The Ministerial response verged on the magisterial; the Chiefs of Staff were instructed to continue contingency planning in the context of the Tripartite Declaration because of the serious risk of Egyptian aggression against Israel. Ministers at this stage were assuming that any action would equally involve the United States (no mention was made of France).

more important to the American economy and the Chiefs of Staff deplored the fact that competitive commercial interests, as well as Zionist influence in the United States, were endangering Anglo-American harmony in the area. It is worth noting, as some offset here, that for the greater part of 1956 Anglo-American staff talks had been taking place, with the aim of co-ordinating military action if the two countries had to respond to either Arab or Israeli aggression.²¹

The deterioration in the British position was seen to be most marked in terms of bases from which the Services could operate to deal with whatever contingency might arise - from the rescue of British citizens to major operations. Leaving aside the most serious possibility - aggression by the Soviet bloc against a Baghdad Pact country - the view of the Chiefs of Staff was that the government would only risk war to secure supplies of oil, to secure the continued use of the Suez Canal, or in accord with a United Nations resolution. What was appreciated was that a base in other than sovereign territory was only useful in modern conditions if, as their memorandum to the Defence Committee put it, "our forces..... would not be under constant pressure to evacuate". So, base by base, the Chiefs of Staff made their proposals:-

No reliance should be placed on the Suez base.

Jordan's value was now more political than military.

The maximum use should be made of Malta, despite its inadequacies for Army training.

Cyprus was particularly important as a means of providing quick support for the Baghdad Pact; continued sovereignty was necessary for at least ten to fifteen years.

Libya was important for its training and air movement facilities but there were no illusions about indefinitely stationing British forces there.

Iraq should be strongly supported, because of its membership of the Baghdad Pact and for its airfield facilities.

Aden would be needed "for as far as we can see".

Finally, the Gulf was crucial - "in a different category from other Middle East areas" - because the small states there relied on British patronage for stability and an independent existence. Even so, it did not necessarily follow that British forces should be permanently stationed there, though a continuous naval presence would be needed.

The concern to avoid difficult internal security situations is clearly apparent, and the general approach of the Chiefs of Staff was approved by the Defence Committee in July 1956.²² In other words, maintaining British influence in the Middle East by a carefully and, as it was believed, realistically articulated base structure was confirmed as a feature of defence policy. Much attention was given, however, in 1956 to one important aspect of the policy: the ability to move within and through the Middle East area in circumstances in which over-flying the littoral countries of North Africa and the Levant might be difficult, even impossible. There was a clear need for RAF aircraft to be capable of moving (with useful loads of equipment and passengers) into the Middle East, if only by the long northern route through Turkey and Iran, and onwards to the Far East either by that route or one across Central Africa. Associated problems were the possible need for stronger forces in Aden and Kenya, south of the air barrier, and for assured facilities, linking Central Africa and South Arabia, in Somaliland. Here, as early as 1956 there was a prospect of independence but the Chiefs of Staff recorded their view that in the event the²³ minimum strategic rights, including transit by air, should be retained.

²¹ These talks were under the control of the US Joint Chiefs of Staff and the Chiefs of Staff Committee. They made useful progress except that the Americans were unwilling (because, they said, of constitutional obstacles) to accept the kind of arrangements for single command of joint forces which seemed sensible to the British. Even so, there is a striking contrast between a situation in which the two countries were making contingency plans for joint action and the antagonisms which developed over the Suez operations later in the year.

²² DC(56)6th Mtg, 10 July 1956.

²³ COS(56)1st Mtg, 13 April 1956.

b. **Far East.** The strategic situation in the Far East presented fewer difficulties. The economic importance of the region was self-evident; exports of rubber and tin from Malaya were amongst the healthiest features of the sterling area. Politically and militarily, UK interest was registered by membership of the South-East Asia Treaty Organisation²⁴ and by the ANZAM arrangement with Australia and New Zealand for the defence of Malaya. The threat to the region, as the Chiefs of Staff saw it, was more one of subversion and infiltration than military aggression, though they accepted the possibility of limited war if Thailand or Laos came under Communist control. Even in those circumstances, the air threat to Malaya and Singapore from the Chinese Air Force was not rated highly but the possibility necessitated contingency planning for the move of Commonwealth forces to southern Thailand. The essence of British defence policy was therefore to strike the right balance of military investment; sufficient to be credible to allies (and the Chiefs of Staff were more than once told by the Commonwealth Relations Office of a feeling in Australia that British concern over the defence of Malaya left something to be desired) and thus ensure Australian and New Zealand contributions to the defence of the area, but not so much as would frustrate reductions in the strengths of British forces in Malaya and Singapore as they stood in 1956. Even so, the concept of a Commonwealth Strategic Reserve in the Far East,²⁵ which was being realised in 1956, involved at this stage a substantially bigger British contribution than that provided by Australia and New Zealand.

Possibilities of reduction were present for the military reason that success in the Malayan Emergency seemed to be imminent, and in any case developments in internal security methods had by now made for very substantial improvement in efficiency;²⁶ and for the political reason that the independence of Malaya was already under negotiation. At the same time, under the pressure of economy, the Chiefs of Staff were envisaging the reduction of the contribution of all three Services to the Hong Kong garrison. This was to prove a contentious issue for some time to come, but although there were to be variations in detail in the size of the forces in Hong Kong the Chiefs of Staff and Ministers scarcely wavered in their view that Hong Kong could not be defended against direct Chinese attack and that the military presence to help in maintaining confidence within the colony and to assist the police in emergency had to be distinctly smaller than the local government and military authorities considered necessary. Behind this view was an exercise of judgement of the local risks but also a recognition that the response to military aggression, as distinct from subversion, in South-East Asia depended largely on the United States. If the nuclear deterrent was effective against Russia there was no less reason to assume that it would be effective against China. Significantly, the British Military Adviser to SEATO at this time was the Commander-in-Chief, Far East Air Force

²⁴ SEATO effectively came into being in February 1955, when its first Council meeting was held in Bangkok. The constituent countries were Australia, France, New Zealand, Pakistan, the Philippines, Thailand, the United Kingdom and the United States. It was formed as an urgent counter to the success of the North Vietnamese in Indo-China, marked most notably by the French defeat at Dien Bien Phu.

²⁵ The three Governments approved the concept towards the end of 1955. Its primary role, to quote from the agreed directive, was "in accordance with the purposes of the South-East Asia Collective Defence Treaty, to provide a deterrent to further Communist aggression in South-East Asia. Within this role it will form part of the forces required for the defence of the Federation of Malaya and Singapore and of the sea communications in the Malayan area against further aggression". The naval commitment to the Reserve was small - normally two destroyers of the Royal Navy and three from the RAN and RNZN but substantial additional forces from the Royal Navy in particular were expected to be available when necessary. The Army contributions were in the ratio of approximately two British units to one Australian or New Zealand. The RAF as against the RAAF/RNZAF contribution - the whole force amounting to the equivalent of 15 squadrons with a range of roles - was in the same proportion.

²⁶ In a review of the position in Malaya at the end of 1955, the Director of Operations, Malaya reported that "Supply drop operations by the Valetta forces, coupled with troop lifting and casualty evacuation by Pioneers, have combined to multiply the number of troops and police deployed on productive jungle patrols by a factor of not less than four" (COS(56)333). He spoke in similar terms of the value of helicopters.

at this time was the Commander-in-Chief, Far East Air Force (CINCFEAF). But the 'sword and shield' concept of NATO applied as well in the Far East. This point was taken in a memorandum by the JPS which the COS Committee considered in February 1956.²⁷ It was agreed that although overt aggression was not the most immediate danger plans to meet it were urgently needed in order to allay the fears of the smaller Asian powers; "the confidence which such plans can create is perhaps the most important single factor in the cold war". This view was consistent with the attitude of the Chiefs of Staff to military commitments under the Baghdad Pact. The Chiefs recognised the need for plans for conventional defence but laid down the principle that broad strategy should be based on the assumption that nuclear weapons would be used; and they were opposed to committing British forces to specific SEATO plans until the consequences of a nuclear-based strategic concept had been identified. There was, however, a difference of emphasis in the military significance of the Baghdad Pact and SEATO. Baghdad Pact planning, as the Chiefs of Staff saw it, was regarded as part of total planning for defence against aggression by Russia. A limited war affecting the Baghdad Pact area but not the main NATO position was thought unlikely whereas a limited war against China, not directly involving Russia, was conceivable; and it was in this context that nuclear weapons were regarded as crucial for offsetting the inferiority of the SEATO powers in conventional forces. The Chiefs of Staff held to the view, against that of Sir Robert Scott (Commissioner-General for South-East Asia 1955-59), that Russia would not intervene in support of Chinese aggression even if the Chinese were in danger of losing. RAF nuclear support of SEATO raised the question of the airfields from which nuclear strikes could be launched. At the time when the Policy Review was taking place in London independence for Malaya was foreseen for 1957 and the terms of a defence treaty were under discussion. Whether Malaya would join SEATO and what her attitude would be to the use by V-bombers of an airfield in Malaya was far from certain. Singapore's early independence was also a strong probability, with misgivings on the British side about conceding full sovereignty for reasons which included the risk of restrictions on the use of its base facilities.²⁸ These uncertainties were not to be resolved for some time.

c. **Air Movement.** Reductions in the garrison forces in the Far East in each of the different contexts - a contribution to SEATO, the direct defence of Malaya and Singapore, and the garrison of Hong Kong - demanded an effective reinforcement capability. The prospective Commonwealth Brigade, based in Malaya, somewhat eased the problem but in 1956 contingency plans existed for the movement of, in certain circumstances, a full division of the Strategic Reserve in the United Kingdom to Singapore, and at no time less than an infantry brigade group. Within these maximum possibilities were other plans such as the movement of some five hundred technical specialists to Singapore to maintain essential public services in the event of a major strike. Similar plans existed for movement of reinforcements to deal with possible emergencies in the Middle East and Africa. But for reasons of scale and distance the determinant of the size and composition of the air transport force was the needs of the Far East. The problems were two-fold: routes and lift capabilities, with the associated problem of adequate tactical air transport to support incoming reinforcements. The significant action in this area which was taken by the COS Committee in 1956, and later reflected in the policy set out in the Defence White Paper of 1957, was to set up a special committee under Admiral Bingley²⁹ to report on both the strategic and tactical requirements for air transport.

Concurrently, the particular difficulties on the air route to the Far East were being tackled. There could be no assurance that the consent of the governments of India and Ceylon would be given for the movement of emergency reinforcements either for SEATO or internal security purposes, as distinct from routine movements of personnel and equipment. The political implications of either type of emergency could be unacceptable to two governments which, if generally friendly,

²⁷ JP(56)44(FINAL) considered at COS(56)23rd Mtd, 25 February 1956.

²⁸ COS(56)35th Mtg, Confidential Annex, was one occasion during this period when misgivings of this kind were expressed.

²⁹ This Committee was set up in July 1956 "to examine and report on the shape, size and composition of the air transport force needed to support all three Services in cold and limited war." Rear Admiral A N C Bingley was DCNS(Air) at the time; his committee consisted of representatives from each Service department.

were also neutralist. An alternative route across the Indian Ocean had been planned in the Air Ministry several years earlier but an attempt in 1954 to enlist the collective support of the Chiefs of Staff had not succeeded. Nevertheless, the necessary surveys to determine the physical possibilities had gone ahead. Firm decisions, specifically to build an airfield on Gan in the Maldives with supporting signals facilities, were to be taken in the context of the Policy Review. A policy of smaller resident forces in the Far East clearly demanded a secure route for the quickest possible movement of reinforcements.

The Nuclear Deterrent and its Implications

During the weeks preceding the Policy Review and as the PRC got down to its task in June and July, the Chiefs of Staff discussed the nuclear deterrent at great length at a number of meetings, including one which Field Marshal Montgomery attended.³⁰ They were also in touch with General Gruenther, the Supreme Allied Commander Europe (SACEUR); he with his designated successor, General Norstad, visited London for talks with the Chiefs of Staff and Ministers more than once in the second half of 1956. Although British defence policy embraced a wide range of matters outside NATO, nuclear deterrence - its possibilities, limitations and implications - was the key issue for any major changes in the roles and size and structure of the Services. The basic contention, expressed in PR(56)3 and explicitly accepted by British Ministers, was that "the hydrogen bomb has transformed the military situation". Hence the need - recognised by Ministers and the Chiefs of Staff - for a new strategic concept for NATO. But there were important differences of view about related issues. These can be traced in the process by which the Chiefs of Staff Committee eventually produced for Sir Walter Monckton a memorandum on NATO Strategy and Level of Forces.³¹ This was commissioned at one of the early meetings of the PRC when, in parallel with a decision to prepare a note for the US and Canadian Governments on a new strategic concept, Sir Walter Monckton was invited to prepare a military brief for use when the new concept was discussed with other NATO nations. The PRC recognised that the British alone could not properly put forward detailed force plans for NATO as a whole but it was expected that a rationale could be convincingly argued, with indications of the basis on which new and lower force levels could be justified. This at any rate was how the Joint Planning Staff interpreted their task when, under the usual procedure, they were required by the Chiefs of Staff to produce a draft.

The resultant JPS paper³² was first considered by the COS Committee at a meeting on 29 June. The paper recapitulated the by now familiar arguments for NATO relying more heavily on nuclear deterrence and less on conventional forces. Parts of it the Chiefs of Staff thought were excellent; others went too far, at any rate for CNS and CIGS (Sir Gerald Templer). The JPS saw a continuing need for the Striking Fleet under the Supreme Allied Commander Atlantic (SACLANT) because of its nuclear capability but apart from the RN contribution to this force they saw no need for other RN forces to be allotted to NATO. More generally, the new concept meant that whole classes of ships in the NATO navies would not be needed; and the JPS went on to say that "such wholesale dismantling of NATO agencies might prejudice one of the United Kingdom's main aims, namely to preserve the alliance. The presentation of the naval implications will therefore need careful consideration." On land, whereas the existing NATO forces were required for "sustained operations", under the new concept they would only have to conduct operations for a sufficient period to prove aggression and deal with local infiltration. Some air defence, strike and reconnaissance forces should continue to be available to SACEUR and under his direct command; and the JPS stressed the need for an effective early warning system as a vital part of the primary nuclear deterrent.

Up to a point, the JPS reported in radical terms which were consistent with the policy that Ministers believed NATO should adopt. But there was also obscurity and ambivalence in the memorandum to which the attention of CAS was drawn before discussing it at the COS Committee.³³ He was warned that

³⁰ Lord Montgomery was Deputy Supreme Allied Commander Europe (DSACEUR) at this time. He met the Chiefs of Staff on 6 July (COS(56)66th Mtg).

³¹ COS(56)271, 13 July 1956.

³² JP(56)120 (FINAL) discussed at COS(56) 63rd Mtg.

³³ Brief for CAS by ACAS(P), 28 July 1956 (AHB ID3/30/10 Pt 1).

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while the Naval Staff were in general agreement with the Air Staff they were tending to argue that the structure of NATO naval commands must be retained "for political reasons" and that CNS might therefore launch a strong attack on those paragraphs envisaging big reductions in NATO maritime forces. The differences between the Naval and Air Staffs on the one hand and the General Staff on the other were, however, thought to be more fundamental. The General Staff did not accept the "deterrent and trip-wire concept" and questioned the need for a significant British contribution to the deterrent. In particular, it was believed that the General Staff would interpret the memorandum as still requiring relatively large ground forces with their own nuclear capability and able to fight a full-scale land battle. CAS was told that a clear exposition of the new concept, by the Air Staff, had been accepted by the Naval Staff for incorporation in the memorandum but that this had been vetoed by the War Office Director of Plans. It was suggested, with a hint (or a hope) that CIGS might prove not so "ultraconservative" as his staff, that CAS might try to get his colleagues to accept the rejected paragraphs.³⁴ However, when the COS Committee met on 29 June neither Lord Mountbatten or Sir Gerald Templer accepted the logic of the JPS memorandum. Their restiveness under the pressure of the PRC is also apparent; as CIGS has recorded, "the Chiefs of Staff were being pushed into a dangerous position by being forced for economic reasons into the hurried acceptance of a concept which they were not sure about". Lord Mountbatten accepted that preparations for global war should have the lowest priority but if these were to be dropped entirely the Admiralty would have to be absolved of its traditional responsibility for safeguarding seaborne supplies. He thought it possible that a limited war could spread gradually without the moment being reached when Governments would decide to use nuclear weapons; in those circumstances a Russian submarine offensive would be a major threat unless NATO had an adequate anti-submarine organisation. He was concerned as well about the political consequences of big reductions in NATO's maritime strength; "the abolition of SACLAN and COMCHAN might in themselves bring down NATO". CIGS agreed with CNS about the maritime aspect. He accepted that direct Russian aggression in Europe would be met with a nuclear response, which was why aggression was unlikely to take this form. But there were other possibilities, such as aggression by proxy against West Berlin, where it was inconceivable that a nuclear response would be appropriate. In saying that for the first time the possibility had to be considered of a limited conventional war in Europe involving all three Services his implicit concern - as was soon to become clear - was the consequences of nuclear parity between the opposing alliances.

There was no discussion, beyond the Berlin possibility, of the circumstances in which limited war on sea or land might occur, or of the options open to NATO to contain and halt this type of aggression if NATO conventional forces were substantially reduced. CAS reminded his colleagues that the real issue was about large conventional forces; these were required under the present strategic concept but had not been achieved, nor was there any prospect that they would be. In this respect, as well as in the obscuring of inter-Service disagreement on strategic policy, he agreed that the JPS memorandum would not do for submission to Ministers. It was at this point that he handed round the previous Air Staff amendments. The Foreign Office representative (Lord Hood) at the meeting entered a plea for urgency, on economic grounds and because of the considerable feeling throughout NATO that the present concept of strategy was unrealistic.

Further work on the military brief was obviously necessary and the Chiefs of Staff agreed to meet in private for this purpose. They were due to meet Lord Montgomery a week later, which they saw as an opportunity to find out how SACEUR would react to radical British proposals. Lord Mountbatten moved quickly to put his own position on paper. Before the end of the day he had sent a brief but powerful memorandum on exclusively naval issues to his two colleagues; and on the following day he circulated another and broader paper which was intended to be sent to the Minister of Defence. This was compiled from the original JPS memorandum, the paragraphs which CAS had handed round, and his own views. The War Office made their contribution a few

³⁴ Much of these paragraphs was eventually used in COS(56)271 (see pp 17-20) but somewhat in the selective way in which the Devil is reputed to use Scripture.

³⁵ Sir William Dickson was convalescing after an operation during this period and took no part in these discussions.

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days later. Two unsuccessful attempts were made by Major General Stirling (Chief Staff Officer to Sir William Dickson,³⁵ the Chairman of the Chiefs of Staff Committee) to reconcile these various the Chiefs of Staff Committee) to reconcile these various drafts,³⁶ and yet others which were produced as the Chiefs of Staff struggled with the problem. The meeting with Lord Montgomery on 6 June, while important in some respects (for example, Lord Montgomery's ideas were eventually to lead to the formation of the Allied Command Europe (ACE) Mobile Force), merely provided arguments for each of the two schools of thought into which the Chiefs of Staff were tending to divide. An exchange of personal letters between CNS and CAS fared no better; and exceptionally in the history of the Chiefs of Staff Committee it was agreed that the differences would have to be formally exposed to the Minister of Defence.

The submission³⁷ to Sir Walter Monckton took the form of a short covering note agreed by the three Chiefs of Staff with two annexes, one by CNS and CIGS and a separate one by CAS alone. Its interest and importance lies not just in those matters on which the Chiefs of Staff were agreed and those where they disagreed, nor in how Ministers reacted to it; it lies as much in the permanence of the issues themselves. The subsequent history of NATO, as well as British, defence policy largely consists of the extent to which those issues were faced, and the controversies which they aroused.

The covering note stressed the agreement of the three Chiefs of Staff on the validity, in what was termed "the foreseeable future", of the nuclear deterrent as a means of preventing both thermonuclear war and lesser forms of war in Europe. It also stressed the importance of maintaining the North Atlantic Alliance. But the fundamental point of disagreement was clearly exposed. As the note put it, CAS believed that even when East and West achieved nuclear parity the deterrent would remain valid and would do so as long as each side was capable of inflicting an unacceptable degree of damage on the other. He did not believe that the Western Powers would be prepared to allow Western Europe to be overrun without using their most effective weapon. He pointed out that if the Russians began a war with conventional weapons, or one in which nuclear weapons were used only to a limited extent, they would be surrendering a trump card which they already held, namely the initiative.³⁸ CNS and CIGS, in contrast, believed that when a period of nuclear parity arrived it would not be justifiable to base British defence plans on the assumption that the United States would use nuclear weapons unless her own immediate safety was threatened. In such a situation there would be a grave danger of Russia seeking to achieve her aim through a war by proxy which might well develop into a war in Europe with conventional weapons. There was a good deal of common ground in the development of the differing point of view. All were agreed that:-

The existing NATO strategy was proving extremely expensive and some reappraisal was needed.

The success of SACEUR's current plans (and those of NATO maritime commanders) depended on rapid reinforcement. This was unlikely to be possible on any significant scale in the chaotic conditions of nuclear attack.

Although SACEUR's nuclear capability was not part of the primary deterrent it should be retained, together with air defence, reconnaissance and early warning support. It was also a common assumption (and CAS seems to have accepted it without argument) that SACEUR's ground forces should eventually have their own nuclear capability.³⁹

NATO had built up a position of confidence and cohesion, which must be maintained. A change in the concept of defence, to quote words which CAS used, "must be put over in such a way that the NATO defence organisation is not put in jeopardy".

³⁶ AHB ID3/30/10 pt 1 contains all these papers.

³⁷ COS(56)271 of 12 July 1956.

³⁸ The current view of the JIC was that although the Russians were thought to be anxious to avoid war, if they moved against NATO it was likely to be by surprise attack with all the weapons available to them. The COS Committee approved this paper (JIC(56)53(FINAL)) at COS(56)43rd Mtg, 24 April 1956.

³⁹ "Obvious nonsense" was ACAS(P)'s comment to CAS about the implication that ground forces would only need air support until they had built up their own atomic capability.

CAS's most important deduction from his view of nuclear deterrence was the need to maintain its credibility - by having sufficient nuclear weapon carriers, whether manned aircraft or missiles, and an adequate defensive system to ensure the means of counter-attack. Plans for other forces, however, should be revised on the basis that they would not contribute significantly to the deterrent or to operations in a global war, though he recognised the need not to reduce conventional forces and the essential command structure to a level which could affect the cohesion of NATO. Dealing with the principles for assessing the level of conventional forces (and this, as much as, if not more than the question of the permanent validity of nuclear deterrence, was what divided him from his colleagues) he identified three tasks: to deal with local infiltration, aggression by proxy, and to enable aggression to be identified. His attitude to NATO's maritime forces was the same as that expressed in the JPS paper which had run into trouble in the COS Committee.⁴⁰ As for land forces, these would only be required to conduct operations for long enough to prove aggression and deal with local infiltration; political as much as military considerations would need to be taken into account, such as an acceptable ratio between West German and East German forces and between West Germany and other NATO countries.⁴¹ CAS recognised that the NATO supreme commanders would have to examine the precise forces required, once a new political directive had been agreed, and that national contributions would need political decision. In general, however, he had made his position clear: nuclear deterrence opened up the possibility of major economies in NATO's conventional forces.

It was equally clear that CNS and CIGS had serious doubts about this trend of thought, which most Ministers appeared to share. Their position was thus more sensitive than that of CAS, and in the process in which their submission to Sir Walter Monckton took shape changes can be perceived which tended to obscure their real objectives. Thus, there was less about the importance of maritime forces to Britain as well as NATO (no doubt because this presupposed a war of some length); less too about what one draft described as "the temporary easement" which American nuclear preponderance had secured. Nevertheless the submission brought out clearly enough the view that the prospective nuclear balance demanded caution in reducing NATO's conventional forces; so much so that, since the West could not in practice compete with Russia in conventional arms, "East/West disarmament should be pressed forward as a matter of great urgency."⁴² In the meantime, NATO maritime forces should be retained, though some reduction in their level might be acceptable, and land forces should be so organised that they could be expanded if no progress on disarmament had been made before the era of nuclear parity arrived. Finally, CNS and CIGS stressed the point that they had confined themselves to policy for NATO and had taken no account of Commonwealth and world wide responsibilities.⁴³

On the face of it, the clear issue of the permanence of nuclear deterrence was presented to Ministers. What is, however, surprising is that the CNS/CIGS views included nothing about a contribution by the RAF to the primary deterrent. If there was one aspect of defence policy to which Ministers were committed it was this; and it was patently relevant to the situation in which CNS and CIGS saw such great danger - nuclear parity and the possible unwillingness of a US Government to use the deterrent for the defence of Western Europe. The omission is to be understood in terms of the size of the V-bomber force. The identity of view of all the Chiefs of Staff on the need for SACEUR to have a nuclear strike capability assumed

⁴⁰ Pp.16-17.

⁴¹ CAS did not develop this point but the current intention was an eventual West German army of 12 divisions, with a substantial tactical air force; and there were obvious political objections to such a force significantly exceeding the size of SACEUR's other national forces. On the other hand, the prospective German contribution was one of the factors which British Ministers saw as justifying a reduction in the British contribution to ACE. The size of the force and its implications for conscription were being strongly debated in the Federal Republic at this time.

⁴² The immense obstacles which were already being met in disarmament discussions that were taking place at this time perhaps justify the Air Staff reaction that this particular point was "a smoke screen" (ACAS(P) to CAS, 11 July 1956 - AHB ID3/30/10 Pt 1).

⁴³ The significance of this point, certainly for CNS, was that the size of the Services was determined less by NATO than their world wide responsibilities, including in the case of the Navy the traditional task of protecting seaborne trade. At COS(56)63rd Mtg. he said that even a decision to drop all preparations for global war would not greatly influence the currently planned shape and size of the Navy.

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that this would include the Canberra bombers in Bomber Command and 2nd TAF assigned to SACEUR. Outside NATO there was less precision at this time about how nuclear support would be provided for Baghdad Pact and SEATO allies; nevertheless, the nuclear dimension was important here as well as in NATO. In short, Government policy required the provision of a range of British nuclear capability from kiloton to thermonuclear weapons, carried by Canberras and V-bombers. That CNS and CIGS were unwilling to come out clearly in support of this policy can only be explained by their reluctance to be committed to a particular scale of investment in the deterrent, at any rate until a clearer picture of the resources to be allotted to defence as a whole had emerged from the Policy Review. This interaction is apparent from a meeting of the COS Committee on 17 July 1956⁴⁴ at which memoranda on the Size of the Deterrent and the Air Defence of the UK V-Bomber Bases⁴⁵ were discussed. Both papers had been called for by the PRC; the first was submitted as an Air Ministry paper, the second by Sir Frederick Brundrett, the Chairman of the Air Defence Committee⁴⁶ and Chief Scientific Adviser in the Ministry of Defence. The detailed arguments of these two papers are better considered in the context of their subsequent discussion in the PRC. The point at this stage is that CIGS in particular registered doubts about the prospective cost of a British deterrent force and suggested that the likelihood of global war would not be increased if the UK made no contribution to the primary deterrent. He quoted excessively high costs for nuclear weapons and had to be corrected by Sir Frederick Brundrett. CNS questioned whether the force could not be confined to Valiants; here too Sir Frederick Brundrett supported CAS with strong arguments for making those improvements in weapons and aircraft which would keep the deterrent effective.

Worries about deterrent costs were compounded by doubts about the value, as well as cost, of the air defences recommended for the defence of the V-bomber airfields (and also USAF Strategic Air Command (SAC) bases) in Britain. The report of the Air Defence Committee envisaged a force of fighters declining in step with improvements in early warning radar, command and control, air-to-air guided weapons and fighter aircraft, the minimum force being one of 200 front-line aircraft. But whether there could ever be adequate warning, whether the chief danger was attack by ballistic missiles rather than aircraft, and whether the wide dispersal of V-bombers was not a better assurance than direct defence, were some of the questions raised by CNS and CIGS. Much of this was reasonable discussion of an inherently difficult problem. The underlying difficulty facing the Chiefs of Staff in their collective capacity is, however, apparent from the recorded conclusions of the meeting. These were to the effect that the COS Committee could not reach a view on the deterrent and air defence forces in isolation from the whole comprehensive review of policy being undertaken by the government. The same difficulty applied to a number of other studies which the PRC had commissioned, such as the role of the Navy and the size of the forces required to meet non-NATO commitments. The Chiefs of Staff accordingly agreed that "they should represent this situation to the Minister of Defence with a proposal that they should be given a manpower ceiling, and if necessary a financial ceiling also, for defence which was consistent with economic realism. They would also like an indication of the commitments which might be relinquished. The Service Ministries could then be instructed to make proposals for the size and shape of forces which could fulfil the reduced worldwide commitments within the given figure". While this no doubt reflected the concern which at least two of the Chiefs of Staff felt at the way events were moving it was in effect asking the PRC to suspend its activities. The plea was bound to fail⁴⁷ and to the extent that Ministerial pressure was soon to be relaxed the Suez crisis was largely accountable.

British Ministers recognised that their intention to revise existing NATO strategy would be affected by reactions in the United States and other NATO nations. Nevertheless, the reactions of the PRC to the specific point on which the Chiefs of Staff were disagreed are important. These emerged at its meeting on

⁴⁴ COS(56)70th Mtg.

⁴⁵ COS(56)269 and COS(56)262.

⁴⁶ The Air Defence Committee was a sub-committee of the Chiefs of Staff, with representatives from the three Service Departments and MOD.

⁴⁷ Sir Norman Brook minuted the Prime Minister on 19 July: "the Chiefs of Staff are saying, 'Tell us what we are expected to do and how much money we can have and leave the rest to us.....' I do not think this would do."

19 July 1956⁴⁸ at which the Service Ministers and the Chiefs of Staff were present. The point of disagreement was represented by Sir Walter Monckton as one on which the Chiefs of Staff required political guidance. In remarks made in the context of nuclear parity, he said that the choice lay between being prepared to be the first to use the thermonuclear weapon in a war in which the Russians attacked with conventional superiority or trying to match the Russians in conventional forces, which he doubted was within the capacity of the West. A wide range of possibilities was discussed, from a paralysis of will over the prospect of a thermonuclear exchange to inevitable escalation, once serious aggression had begun, to the use of atomic weapons with no certainty that the process would stop before thermonuclear weapons were used. The formal conclusions were not, and could hardly be, a final determination of the disagreement. It was recorded that British defence policy should be firmly based on thermonuclear and atomic weapons not only to deter aggression but to deal with aggression if it should be launched; and that no attempt should be made to maintain even the structure of forces not required under the concept. But the record went on: "This is not to say that the present decision could not be reviewed at some future date when the time of thermonuclear parity between the East and West approached." The Minister of Defence was thereupon invited to base the military brief for use in discussions within NATO on a passage defining the new policy included in a telegram which the Prime Minister had sent to President Eisenhower.⁴⁹ The first occasion for which this brief was to be prepared was a meeting in early August with Generals Gruenther and Norstad. But it was still the case that the size and shape of the British Services to implement the policy which Ministers wished to pursue were at this time a long way from being agreed.

Defence Resources

As things stood in July 1956, the PRC was poised to consider several issues, besides NATO strategy and the forces to apply it, which were crucial to the Services: the size of the RAF nuclear deterrent force and the related air defence system, naval economies and the future role of the Navy, and the forces required outside NATO for limited war. Yet in a situation in which there was little prospect of determining the composition of each of the Services by a rationale, agreed by the Chiefs of Staff, covering roles and equipments as well as commitments, the resources which the government was willing to devote to defence were a basic issue. There was less uncertainty about money than about men. Budgetary allocations to defence, at any rate on a short term view, were recognised as being limited to something less than the amount being currently spent. In the financial year 1956/57, in nett terms, the Defence Budget was nearly £1550M; expectations of American aid reduced this to £1498M. Leaving aside the possibilities of further aid and the extent to which the local costs of British forces in Germany might be met by the Federal Republic, arguments about future defence expenditure ranged in practice at this time over relatively small variations to an annual figure of not more than £1500M. How this would be allocated, in broad terms, between equipment and personnel turned in large measure, particularly for the Army and RAF, on decisions about the continuance of National Service.

The process of trying to determine what size of forces could be maintained by regular recruitment had begun in April 1956. At that stage the Service Departments estimated that the maximum regular recruitment that would be possible would sustain a Navy of 110,000, an Army of 200,000 and the RAF (the estimate was described as 'very tentative') 190,000. These estimates seemed much too high to MOD.⁵⁰ They meant recruiting about 50,000 volunteers a year, even on the very doubtful assumption

⁴⁸ PR(56)8th Mtg.

⁴⁹ Tel No 3247 of 18 Jul 1956. The passage dealing with conventional forces reads: "A 'shield' of conventional forces is still required; but it is no longer our principal military protection. Need it be capable of fighting a major land battle? Its primary function seems now to be to deal with any local infiltration, to prevent external intimidation and to enable aggression to be identified as such. It may be that it should also be capable of imposing some delay on the progress of a Soviet land invasion until the full impact is felt of the thermonuclear retaliation which would be launched against the Soviet Union." The main features of this message were agreed at one of the June meetings of the PRC and were the basis of the numerous consultations, through ambassadorial channels, that took place within NATO during July and succeeding months.

⁵⁰ Sir Richard Powell to Sir John Lang 3 May 1956 (AHB ID3/111/4A).

that each regular would serve for an average of ten years, which meant attracting nearly one in four of the young men who reached the age of 18 each year. About 300,000 seemed to the Ministry of Defence a more realistic target. As the current strength of the Services was some 770,000 (Navy 122,000, Army 405,000, RAF 244,000) reliance on regular recruiting would create the most formidable problems. It was clear that agreement should be sought on a sensible bracket of recruiting possibilities and numerous meetings between the Ministry of Defence, the Service Departments and the Ministry of Labour and National Service took place in the late spring and summer for this purpose. More detailed work in the Air Ministry suggested that the maximum size of an all-regular RAF would be about 125,000 (excluding officers and airwomen), which would mean big cuts in the front-line of operational aircraft: as Sir Maurice Dean, the Permanent Under-Secretary, put it, "What is most important is that we should not get into the position that, as a result of over-optimistic assumptions about the sort of forces that could be maintained without national service, a 'dash for freedom' is made over conscription, leaving us with commitments and not enough men."⁵¹

The PRC got down to the subject at its third meeting on 9 June. The dimensions of the problem seemed clear and, as far as most Ministers were concerned, carried some inescapable consequences. No Minister at this stage seems to have thought that commitments would be met with manpower of less than 450,000 or that more than 350,000 could be recruited for regular service. Substituting civilians for servicemen for certain tasks, computerised accounting, and greater use of air trooping were among the means by which economies might be made in service manpower but even the Chancellor of the Exchequer recognised that some form of selective National Service would be needed to bridge the gap. The Prime Minister alone is recorded as expressing the hope that commitments could be reduced to a level at which they could be discharged by regular forces alone. Nor was he deterred when further studies, under Sir Walter Monckton, appeared to confirm that 300,000 was the maximum regular element that could be recruited and that up to 500,000 would be needed to meet commitments. He conceded that Sir Walter Monckton had made a very powerful case but he did not believe that the nation would continue to accept, after 1958, National Service in its present form, unless the international situation worsened. As for changing the universal obligation of the National Service Act to one of selective service, his difficulty was that he could not see an acceptable method which the nation could regard as fair. A smaller total force than 500,000 and a larger regular content than 300,000 should therefore be the aim.

Of all the problems that the Policy Review exposed, the National Service issue proved the most intractable. The implications chiefly affected the Army and RAF. Even a Navy with a manpower of some 110,000, which the future fleet proposed by the Admiralty⁵² would have called for, was claimed to be sustainable without National Service; and all the indications in the summer of 1956 were that a Navy of that size would not be approved. Neither of the other Services could see any prospect of manning the forces currently planned unless National Service continued. Moreover, whether National Service was abolished or continued on a smaller scale, the rate of rundown to smaller forces constituted yet another problem. The arguments about different manpower levels for each of the Services, achieved at different dates and on various assumptions, involved a series of complicated studies by the Departments affected, including the Ministry of Labour, throughout the summer and autumn. These were not made less difficult by the absence of clear guidance from Ministers, absorbed as they were in the Suez crisis. In the circumstances, MOD could do little more than exercise its best judgement of what might be a reasonable allocation to the Services if Ministers eventually decided that National Service should cease. On the assumption that 370,000 (including officers and women) was the highest manpower figure that could be safely relied on, the Service Departments were asked for their reactions to a Navy of 90,000, an Army of 160,000 and RAF of 120,000.⁵² These reactions reflected consideration by the respective Service Boards and Councils and are consequently important, though it has to be remembered that tales of woe lose little

⁵¹ Note to Air Council members 1 June 1956 (AHB ID3/111/4A).

⁵² PR(56)32, 25 July 1956.

⁵² Correspondence between the MOD and Service Department Permanent Under-Secretaries Oct 1956 (AHB ID3/111/4A).

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in the telling. The Admiralty foresaw a fleet of about ninety fighting ships (which were identified by numbers and types); and went on to say that the Home and Mediterranean stations would be left pitifully weak and the South Atlantic and America and West Indies Stations would have to be abandoned. There would only be four frigates in the East though some could be maintained in the Persian Gulf. The War Office reported that, as against the five divisions and four brigades which could be supported by all-regular manpower of some 200,000, the equivalent of three divisions would have to be foregone: as only small savings would be possible in the Middle East, Far East and the UK, this would mean that the contribution to NATO "would be reduced to a token force of negligible military value". The Air Ministry left itself room for manoeuvre. It said that with 120,000 regulars, the front-line might be some 700 aircraft⁵⁴ but that precise numbers would depend on the composition and deployment of the force. This could not be worked out "until we can be given guidance as to the policy and strategy which HMG would adopt with the Armed Forces as a whole reduced to the levels which the abolition of national service would involve".

This was a fair and necessary position to take. All the studies which the Policy Review Committee had called for had been conducted; what was now needed was decisions. The problems, however, were formidable; the examination paper the PRC had set itself had proved immensely difficult and the answers depended to some extent on what Allies thought of them. And the Suez Canal was washing through the examination room.

⁵⁴ This compares with the front-line of about 1200 aircraft which the Air Council believed appropriate to the RAF tasks that might emerge from the Policy Review, for which the approximate manpower was estimated to be 200,000.

CHAPTER 2

PRELUDE TO CHANGE : POSSIBLE SOLUTIONS

Introduction

An identification of defence issues and the emergence of a Ministerial consensus on the need for a new strategy for NATO were the main results of the early stages of the Policy Review. The relationship between nuclear deterrence and conventional defence, as British ministers saw it, had been put firmly on the table for discussion within WEU and NATO. Conventional forces were coming under scrutiny in other countries besides Britain. There was certainly a trend towards smaller forces elsewhere in NATO, including the United States. Russia herself had announced large reductions earlier in the year.¹ Rising costs of military equipment, the need to meet demands for higher living standards by increased industrial and agricultural production, and the nuclear dimension were all factors behind a general move towards smaller but better equipped forces. The imperatives were particularly strong for Britain and had been discerned clearly enough at the outset of the Policy Review. In the nature of things, however, to decide on a change of direction in defence policy was only the first step: not an easy step to take but not the most difficult. Thereafter, the forces that existed had to be assessed in terms of their relevance to the new policy; any reductions (inevitably controversial and therefore politically sensitive) would have to be convincingly presented, the more so as the future health of the Services would rely more heavily, and possibly entirely, on voluntary recruitment; and, at the end of the line, defence commitments and the means of meeting them should be in reasonable harmony. This was the task which the PRC intended to complete before Parliament adjourned in the summer of 1956.

The July Meeting of the PRC

The areas where decisions were to be sought were described in a note which the Prime Minister circulated early in July.² Not all have a place in the history of defence policy but the full programme - in the order in which the various items were to be taken - indicates the range and nature of the interlocking issues:-

National Service	Non-military measures in the Middle
Home Defence	East and South-East Asia
New Strategy for NATO	Antarctica
Bombers	Relief Grants
Fighters for Air Defence	Treasury Reports on Economic and
Royal Navy	Industrial Measures
Forces for Limited War	Defence Research and Development
and Internal Security	Medium-range Ballistic Missiles
Military Facilities in the	Africa
Middle East and Far East	Review of NATO re-appraisal

The intention was to have a "round up and conclusion" at a meeting in early August.

Some indication has already been given of the discussions on National Service and a new strategy for NATO. The first of these questions, after a general but inconclusive discussion on 13 July, was remitted for study by a small group of Ministers under Lord Salisbury, supported by a group of officials. The essential points were the limits to voluntary recruitment and the least objectionable method by which National Service might be continued on a smaller scale if the forces finally decided upon were too large to be sustained by voluntary recruitment. Discussion of the new strategy for NATO shifted, temporarily at any rate, to the wider NATO scene with the dispatch of the Prime Minister's telegram of 18 July to President Eisenhower.³

¹ In May 1956 the Soviet Government announced reductions amounting to 1.2 million personnel, to be achieved by May 1957. In the previous year reductions of 640,000 had been announced. The detailed impact and significance of both announcements was conjectural and it was suspected in the West that some of the reductions were taking the form of civilianisation rather than effective disbandment.

² PR(56)16 10 July 1956.

³ Ch 1 p 49.

Defence and Deterrence. The next group of problems - the size of the V-bomber force, the air defences to protect it, and civil defence - were seen as closely related. Their discussion exemplifies the difficulties that the PRC encountered in reaching clear-cut conclusions. The picture that emerges is of Mr Macmillan urging the acceptance of the logic of deterrence, offset by a more cautious response by Sir Walter Monckton who was nevertheless, as his support of existing plans for the quickest possible build-up of the V-bomber force demonstrated, a believer in the need for a British nuclear deterrent. "If the only use of the fighters is to protect the bombers and perhaps to get three days flying before the whole Island collapses in disorder, what then is the use of Civil Defence?"⁴ - this was Mr Macmillan's application of nuclear logic. Sir Walter Monckton saw a different application. If the deterrent was to be credible there were some preparations which must be made, such as measures for the continuity of government, communications for defence purposes and air raid warnings, and the training of civil defence workers and associated military forces; "we should be undermining the deterrent if we were to deprive ourselves of those preparations without which all central command could come to an end and complete chaos would ensue the moment the first bombs fell."⁵ In any case he saw a need, in the interest of NATO solidarity, to maintain whatever standards were required by NATO policy. Making the necessary allowance for the tactics which Chancellors of the Exchequer and Ministers responsible for expensive areas of government alike adopt when pressing their claims, there was an important difference between the two points of view as each Minister tried to assess what needed to be done to demonstrate that the deterrent was credible - to both sides. While Sir Walter Monckton was willing to make economies in planned expenditure on civil defence, particularly in stockpiles of food and other commodities, he could be said to have carried the PRC with him on the essential point of policy. At its sixth meeting on 13 July what most moved Ministers collectively was a concern that the deterrent could be invalidated if no provision was made for the essentials of civil defence. Even so, no specific programme was decided; this was left until more progress had been made with the programmes of the three Services. Much of the expenditure fell outside the defence budget. Yet decisions in this area could not be indefinitely postponed because regular as well as reserve elements of the Army and the RAF were involved in existing plans for fire fighting and the maintenance of public order.

Air defence and the nuclear deterrent were subjects for the eighth meeting of the PRC on 19 July, when the Air Defence Committee and Air Ministry papers, which the Chiefs of Staff had deliberately neither endorsed or rejected, were discussed.⁶ The air defence paper was brief but closely argued, within terms of reference which were limited to the defence of the V-bomber force. It recognised the probability that the most serious threat would eventually be the ballistic missile. But the existing threat from the manned bomber would continue for at least another decade, and a fighter force was needed to deal with it as far out to sea as possible (powered guided bombs were already foreseen as a serious threat in the relatively near future). Without this, only about one-third of the V-bomber force could take off within the expected period of warning of attack. Securing as much time as possible for the use of the main bomber bases and dispersal airfields was the limited but, on the basis of the trip-wire concept, crucial objective.⁷ A front-line of 450 aircraft (compared with a current strength of 536) was seen as the minimum requirement for Fighter Command for some years ahead, falling to 300 by 1963 when some assistance from SAGW as well as improved fighters and air-to-air missiles (AAGW) was expected to be available, and to 200 at a later stage when an effective SAGW system had been deployed and further improvements had been introduced in both aircraft and AAGW. Discussion ranged widely from having no fighters at all (or SAGW, for that matter) to the additional value of a home-based fighter force for operations in Europe. But it is clear that Fighter Command was regarded as an area where substantial economies could be made on the principle, as Sir Walter Monckton put it, that "we must retain enough to show the Russians that our bomber bases are not wide open to attack. The size of the forces required to do this is not an absolute figure but one where we can take a calculated risk." This view was accepted by the PRC but no decisions were made on the recommendations of the Air Defence Committee about the future size and structure of the air defence forces. SAGW was considered, according to the record of the meeting, the least objectionable field for making savings.

⁴ PR(56)7 - Note by the Chancellor of the Exchequer. ⁵ PR(56)8 - Note by the Minister of Defence. ⁶ Ch 2, p 27. ⁷ For a fuller description of Air Staff thought about ADUK see page 33-34.

The PRC's response to the companion paper about the size of the V-bomber force was, on the face of it, no less indefinite. The paper argued for a V-bomber force of 200 aircraft⁸ (25 squadrons of 8 aircraft), as much on political as military grounds. It was explained that when the effects of unserviceability, dispersal and losses were taken into account, a force of this size was estimated to be capable of delivering about a hundred weapons on the chosen targets. Nothing was said about the location and nature of the targets, or about the types of weapons. There was little that could be said. The fact was that no arrangements had been made with SAC for allocation of targets, routes and other aspects of a properly co-ordinated strike plan. This was not concealed from the PRC; on the contrary American unwillingness to discuss these matters (as well as to make nuclear weapons available until British stocks were built up) was put down to uncertainty about the size and effectiveness of the British deterrent. At an earlier stage, NATO had been informed that the planned size of the force was 240. The reduction to the current figure of 200 had been explained as a substitution of Victors and Vulcans for the less effective Valiant but the paper argued that "any further reduction either in quantity or quality at this critical time would show beyond doubt that our defence policy is based not on new military thinking but on economic expediency". The Americans would regard a force of 200 as impressive, especially as all the V-bombers were superior to the USAF B47 aircraft and the Vulcan and Victor better in some respects than the B52. The paper went on to argue the need for quality in the force; its value for cold war and, because of its conventional capabilities, limited war purposes; and finally set out capital and running costs for forces of various sizes. These figures were intended to demonstrate that only relatively small savings would flow from a force even substantially less than one of 200 aircraft.

Once again, differences of view between Mr Macmillan and Sir Walter Monckton emerged. The Chancellor was in favour of a force as small as 120 aircraft, partly for reasons of economy but also because nuclear weapons production would not match a larger aircraft front-line. Accordingly, he favoured a slowing down in the rate of aircraft production. It is doubtful whether he had his facts right about nuclear production and any reduction in the planned rate of aircraft production would have produced savings of little significance. The Minister of Defence did not commit himself to the full force of 200; indeed, he proposed in effect that the final elements of the force should be left for later decision because they might not have much useful life before ballistic missiles became available. He thought that this argument could be defended in NATO whereas it would be difficult to explain a deliberate slowing of V-bomber production. No clear decisions were recorded but this at least left untouched the orders already placed for V-bombers. These amounted to some 256 aircraft - the full requirement of 91 Valiants and 164 of the 272 Victors and Vulcans that Air Ministry plans called for.

Other Issues

Even this modest progress towards determining what the Government saw as the keystone of the future structure of defence was not matched in other areas. The meeting at which the PRC considered air defence and the V-bomber force was held on 19 July 1956. The Committee next met on 25 July, when it discussed papers by the Treasury on economic objectives, agreeing that civil public expenditure should be given the same critical scrutiny as expenditure on defence but putting off any detailed examination until after the summer recess. Its intention was to continue the review of defence at a meeting on 27 July but on the day before the Egyptian President announced the nationalisation of the Suez Canal and the meeting was cancelled. What might have been decided if the meeting had taken place can only be speculative. But a review of the ground that was to have been covered is necessary. The issues were still there when Ministers found time to address them again towards the end of 1956; and on at least one important matter, agreement within NATO to a new strategic concept, some progress was to be made in the period when attention was concentrated mainly on the Suez crisis.

The time which Ministers had given themselves to reach decisions on defence can now be seen to have been much too short. Suez aside, nothing in the deliberations of the PRC suggests that the kind of conclusions on which the Service Departments could have based new patterns of expenditure and new force structures would have emerged by the end of the summer. Among the outstanding issues were the

⁸ The current Air Ministry plan also provided for two squadrons of Victors for photographic reconnaissance (PR) and a Valiant squadron for special duties.

role and size of the Navy, the size of forces required outside NATO, the ballistic missile programme and the future shape of research and development. Papers on the first two of these subjects had been produced but, consistently with their views on other major subjects but not all that helpfully, the Chiefs of Staff excused themselves from formally recommending forces of a particular character until they could see the defence programme as a whole. These papers were to have been considered at the PRC meeting on 27 July but no time had been found for discussion beforehand between the Chiefs of Staff and the Minister of Defence. Neither was much to his liking.

a. **The Navy.** It is clear from the early proceedings of the PRC that Ministers were assuming that the new strategic concept would permit big reductions in the Royal Navy.⁹ But how far could these go without damaging confidence at home or in NATO? Sir Walter Monckton saw the logical case for looking at the extent of preparations for anti-submarine warfare (ASW), the need for carriers and the size of naval reserve stocks. On the other hand, he thought it would be unfortunate to give the impression that the country could fight for only a few days. This might be avoided if the size of the Navy needed for non-NATO tasks was justifiably substantial; and he saw this as the essential point of the study on which the Naval Staff were then engaged. The same issues no less affected the future of the other Services; how far could the logic of nuclear deterrence be taken without loss of credibility and what were the most economical means of meeting commitments outside the NATO area?

The Admiralty memorandum on the Future Role of the Navy¹⁰ was one of the casualties of the cancellation of the PRC meeting on 27 July. In another paper¹¹ which would also have been considered at the meeting, Sir Walter Monckton said he was not satisfied that the Admiralty paper was consistent with his own approach. It is not difficult to see why. The proposed Fleet was based on what was claimed to be necessary for cold war and limited war purposes but showed only modest reductions, chiefly in minesweepers, compared with current plans. Such reductions in home waters as were proposed were partly offset by increased on overseas stations. The main concessions to the implications of a policy of nuclear deterrence were a substantial reduction in the size of the Reserve Fleet and the disbandment of the air squadrons of the Royal Naval Volunteer Reserve (RNVR). To say, as the paper did, that a clean sweep had been made of specialised global war forces was hardly likely to carry conviction, nor was the assertion that such economies as were proposed involved taking great risks. No estimate of the financial savings was given. The paper has to be regarded as an exercise in self-defence. It made some obeisance to the new strategic concept but in practice proposed no important alterations in the planned fleet; it could not be, and no doubt was not intended to be, helpful to Ministers who believed that economies could be made in NATO's maritime strength. As far as the RAF was concerned, it offered no new thoughts which bore upon the future of Coastal Command. If the Secretary of State for Air had spoken to the brief that was provided for his use at the cancelled meeting, he might well have made some enemies.¹²

b. **Forces for Limited War.** The Defence Committee of the Cabinet had given some thought early in July¹³ to the forces required in the Middle East and Far East. Peacetime garrisons were seen as being smaller in future but quickly reinforceable by air movement from forces based in Britain. A more difficult question was the size of the forces for limited wars which might occur in either region. To facilitate the definition of these forces two major emergencies were postulated - a war with Egypt in the Middle East and one with China in the Far East. The Chiefs of Staff had assumed for some time that the use of nuclear weapons, possibly confined to the kiloton range, would be unavoidable if a serious war occurred with China and that a British contribution to what would be a mainly American effort would have to be made, in the context of SEATO. They now

⁹ A general discussion on the role of the Navy took place at the third PRC meeting on 9 June 1956.

¹⁰ COS(56)289, circulated as PR(56)32. ¹¹ PR(56)25. ¹² The detailed criticisms are not important for the purposes of this chapter. But there were two points relevant to general defence policy: first, that the proposed Fleet was excessive for situations short of global war and, secondly, that to underwrite it would mean committing large resources at the ultimate expense of the higher priority needs of the deterrent (AHB ID6/RD 1956/7). Mr Nigel Birch was Secretary of State at this time. ¹³ DC(56)6th Mtg, 10 July 1956.

raised with Ministers the question of the use of nuclear weapons against Egypt. Their line of thought was this: on the assumption that any action against Egypt was Anglo-American, nuclear weapons would not be needed; if, however, the British alone were involved the quickest and most economical method of achieving Egyptian capitulation would be to use a limited number of kiloton weapons to neutralise the Egyptian Air Force. Otherwise, the war would be protracted and expensive. The Chiefs of Staff went on to draw a wider inference, of crucial importance to the size of the Services. If no assumption could be made about the use of nuclear weapons in any operations short of global war, it would be essential "to retain the ability to fight limited wars *either* with nuclear weapons *or* with conventional weapons alone".¹⁴ The Chiefs did not at this stage indicate in detail what forces a wholly conventional approach would require.

It would have been difficult for anything other than the Egyptian scenario to be used for the purposes the Chiefs of Staff had in mind. But it was not the easiest case to argue. The Defence Committee would not be drawn on the nuclear point, but neither would it accept that a conventional campaign, even without allies, would be all that difficult. A determined attack with conventional weapons, with V-bombers used to neutralise Egyptian airfields, should quickly lead to the overthrow of the regime.

It was obvious that more study was required of the size and shape of the forces for limited war, and the Minister of Defence was invited to prepare an assessment for the Policy Review Committee. The first step was a Chiefs of Staff memorandum¹⁵ based on a report by the JPS.¹⁶ Forces for the hypothetical single-handed war against Egypt were assessed under separate heads - with and without the use of nuclear weapons. Without nuclear weapons the main elements would be a naval task force centred on three carriers and two cruisers, sixteen destroyers, numerous minesweepers and support ships, and amphibious lift for a brigade group. The Army would need three divisions and a parachute brigade group. The RAF component included over twenty bomber and fighter squadrons and air transport sufficient to drop the parachute brigade group in two lifts from Cyprus and follow this up by delivering two infantry brigade groups into Egypt. In broad terms, only half these forces would be needed if nuclear weapons were used. Forces for a limited war with China were similarly identified in detail, with no variation in size since the use of nuclear weapons was assumed, but on an admittedly uncertain basis as no plans or force requirements had been drawn up by SEATO. The main elements of what, as the JPS paper put it, "might be regarded as a significant United Kingdom contribution" were a fleet of two carriers, three cruisers and twenty-four destroyers and frigates, two Army divisions and the Commonwealth Brigade, ten bomber and fighter squadrons, two maritime reconnaissance (MR) squadrons, with PR and transport support amounting to a further ten squadrons. These were very substantial forces. Moreover, the contingency of simultaneous operations in both regions had to be considered. The serious implications were not glossed over: "the combined demands of the two theatres on our strategic reserves and on our means of transportation would be very heavy and the movement of reinforcements from the United Kingdom to the Far East would be seriously delayed by having to circumvent the Middle East . . . it would be necessary to carry out a considerable degree of mobilization and to withdraw sizeable forces from those assigned to NATO." Nevertheless, it was concluded that from the military point of view plans should be made to fight both the wars assumed for the purposes of the study and that the sum of the forces required should be retained. That total was not the whole of the military requirement; other forces were needed for the deterrent and other purposes which could not be deployed in limited wars without taking too great a risk. It is not surprising that the JPS made the point that it was difficult to obtain approval of any study of requirements in a particular area when the three basic factors of manpower, money and commitments were all "variables". Whether they should also have made the point that the forces emerging from their study implied little or no reduction in the resources allotted to the Services is debatable. Insofar as their professional duty was to produce a military appreciation, they can be said to have carried out their task. But in not identifying other and smaller possibilities, with the risks involved, they had lost an opportunity to come closer to the minds of Ministers.

¹⁴ DC(56)18, 4 July 1956. ¹⁵ PR(56)33, 25 July 1956. ¹⁶ JP(56)125(Final), 18 July 1956.

c. **Research and Development.** Important decisions about future equipment were not taken during the Policy Review, but some indications emerged. A paper in July by the Minister of Defence¹⁷ included possibly the first indication to other senior Ministers of a possible USAF plan to base Thor missiles in Britain. However this might turn out, he remained in favour of continuing British work on ballistic missiles – on the medium-range missile in particular but also over a wider field because otherwise land and possible naval forces could not be kept up to date. In another paper by the Minister of Defence¹⁸ and one by Mr Maudling,¹⁹ the Minister of Supply, other trends of thought emerged. Both were agreed that the days of the interceptor fighter were numbered. The Minister of Defence thought that it would be of little value after 1965, and the Minister of Supply was opposed to continuing with a project²⁰ for a fighter to succeed what was at this time still termed the P.1 (the eventual Lightning). In what might or might not have been an unchallenged view if it had been discussed in the PRC, the Minister of Defence said that “most responsible military experts are of the opinion that, except for transport and reconnaissance functions, the manned aircraft is on the way out of the military picture.” What the two Ministers recognised was the need to set limits to the number of new projects of advanced technology and yet the numerous difficulties of relying on the United States, except possibly for the next generation of fighter aircraft and their air-to-air weapons. The Minister of Supply’s description of the disadvantages of procurement from America contained all the arguments that were to be advanced from time to time in the years ahead.

There was no opportunity for the PRC to consider this group of papers. By the middle of August Sir Walter Monckton was obliged to accept that it would be early October before the PRC could resume its discussions (in the event, it was not until early December). But he made a not wholly unsuccessful effort to keep up the momentum by laying down a basis for detailed planning from which the Service Estimates for the financial year 1957/58 might be compiled.

Provisional Plans

The programme of work which the Prime Minister had set out in early July was consistent with his dictum earlier in the year that “we ought to establish first what are the right things to do.”²¹ This subject-by-subject approach had produced numerous papers which were valuable in themselves. But it is clear that the proposals of each of the Chiefs of Staff – whether those, such as the forces for limited war, on which they were at least formally agreed or those, such as the future of the Navy and the size of the deterrent, on which they were in disagreement or could make no recommendation – amounted to forces of a size which could not be sustained by the resources which Ministers had in mind for defence. Given time, it might have been possible for Ministers to refine the individual bids and build up, block by block, the kind of defence structure that could be afforded. But the process would have been painful and potentially more controversial than that which the Chiefs of Staff proposed at one stage, namely that they would together submit a plan based on given levels of money and manpower. The block by block approach was certainly regarded by the Air Staff as extremely dangerous; “a decision on the size of individual slices before we know the size of the cake can only result in chaos and military nonsense.”²² The Chiefs of Staff themselves seem to have regretted the unrealism of the bid they had made for forces for limited wars.²³ In short, whatever the intense activity between the beginning of June and the end of July had achieved, it had failed to bridge the gap between the Ministerial and the military view of the future. The problem posed was undoubtedly difficult but the failure can be ascribed in some part to the inability of the Chiefs of Staff organisation to produce the radical options that the problem demanded. What was inevitable in these circumstances was that Ministers should exercise their own judgment of what was the right way ahead. The initiative was taken by Sir Walter Monckton in two memoranda to the PRC, which resulted in the issue of Government guidelines, early in August, for future planning.

¹⁷ PR(56)34, 26 July 1956. ¹⁸ PR(56)36, 27 July 1956. ¹⁹ PR(56)37, 28 July 1956. ²⁰ This was an aircraft to Air Staff Operational Requirement 329(OR329). ²¹ Ch.1, p.3. ²² Brief for CAS by ACAS(P), 24 July 1956 (AHB ID/RD 1956/57). ²³ Confidential Annex to COS(56)71st Mtg, 24 July 1956.

Sir Walter Monckton's approach was a nice mixture of caution and radical change.²⁴ He saw no prospect of a big reduction in current, as distinct from planned defence expenditure; stabilisation at some £1450 million a year compared with the current figure of £1500 million should be the aim. Such lower figures as had been mentioned would call "not for a Ministry of Defence but for a Disposals Board" and would do great damage. The views of allies, particularly the United States, had to be considered; "if America abandons Europe we are finished," and this was seen as a possibility if the most important of American allies went in for a massive reduction of its defence effort. He contemplated big reductions in Service manpower, coming down from 760,000 to 500,000 (including an Army of about 220,000) by April 1960, with possibly a small reduction thereafter (which would have still meant that some form of National Service would have to continue). He did not ignore the argument that there was no point in spending so much on defence as to wreck the economy. But he pointed out that this had been said in the years before 1914 and 1939, and he added: "I am not convinced it is necessary for us to take desperate risks with our future as a country in the interests of economy when for the last five years or so we have steadily been increasing our consumption, working shorter hours and investing increasingly in non-essentials". This was the cautious aspect of his approach. The radical aspect reflected the Ministerial consensus that had emerged from the proceedings of the PRC: big reductions in Fighter Command; the V-bomber force to go ahead but with its ultimate size still uncertain; the largest reduction of BAOR and RAF Germany that could be negotiated; the limitation of the Navy and Coastal Command to what was needed for situations short of global war; and an annual ceiling of £175M on research and development for defence. Overseas, where his emphasis was more political than military, improved internal security arrangements as well as non-military measures such as aid for development and education would be needed. Otherwise, the policy should be one of calculated risk, such as the assumption that limited wars would not occur simultaneously in the Middle East and South-East Asia. Similarly, it should be assumed that any operations against Egypt would be Anglo/American; if Britain had to act alone, tactical nuclear weapons might have to be employed, possibly by a demonstration over uninhabited desert. In other words, the Minister of Defence envisaged ^{smaller} ~~small~~ forces for non-NATO tasks than the Chiefs of Staff were contemplating. Overseas garrisons should be small, but quickly reinforceable from the Strategic Reserve at home; and he was in favour of developing a secure air route across the Indian Ocean.

The papers in which this outline of both the resources allotted to defence and a matching policy was described were not formally considered by the PRC. But they were given sufficient approval by the Prime Minister and Chancellor of the Exchequer to be embodied in a directive in the first week of August²⁵ in which the Minister of Defence required the Service Ministers and the Ministry of Supply to produce appropriate programmes. They were told to assume that the full occupation costs of the forces in Germany would have to be met from the defence budget; that Canadian aid through the NATO air training programme would cease; and that any continuance of American aid would be in relief of and not additional to the allocations of money. Not least important, at any rate in intention, was the instruction that no allowance was to be made for maintaining the structure of forces as an insurance against a change in strategic assumptions.

This directive is not to be understood as the culmination of the Policy Review. When the consequences of the assumptions had been identified, the Chiefs of Staff were to be asked for their views on the effect on general defence policy, including the effect on existing commitments. The last word would be with Ministers and on 9 August a meeting of Cabinet Ministers expected that the PRC would be able to resume its work early in October. The directive is, however, worthy of notice as a good example of a Ministerial policy instruction, for what it said and for what it did not say. It was precise about resources and a number of financial details; it was imprecise about most of the other considerations. It can, however, serve as an introduction to the current state of Air Ministry thought about the position of the RAF, as this had developed under the influence of its own view of strategic, operational and other factors and the pressures of the Policy Review.

²⁴ The relevant papers at PR(56)25 and PR(56)33. ²⁵ PR(56)41.

Position of the Air Ministry

The search for a defence policy, less expensive and more consistent with new weapons and capabilities, which had begun some time before the Policy Review of 1956, had accustomed the staffs of the Air Ministry to frequent changes in planning assumptions. Equally, however, the lengthening lead-time before new aircraft and weapons could come into service, and their effects on training, deployment and accommodation, put a premium on the reliability of long-term plans. Certainty was the ideal but uncertainty was the reality, with a correspondingly severe management problem of maintaining the key features of future plans even though resources were likely to be reduced during the period in which those plans would be maturing. The work of the Air Council and the staffs supporting its members²⁶ in 1956 is best seen as a reaction to the prospect of substantially smaller resources than would be required to sustain the Air Force as plans stood at the beginning of the year.

a. **General Plans.** The formal plan that existed early in 1956 for the size and shape of the RAF was recognised as being of little value. It had been produced in 1954 on a number of assumptions about future equipment, notably the rate of production of V-bombers, which had proved over-optimistic. Its financial implications had become no less unrealistic; about £580M would have been needed to finance the plan in its peak year, 1958/59, compared with current expenditure of about £480M. The pressure from the Minister of Defence, let alone the Chancellor of the Exchequer, in the early months of 1956 gave no hope that so big an increase would be acceptable to the government. What was clearly needed was a review of the RAF programme over the next ten years, based on austere assumptions about money and manpower.

The work fell mainly on the Air Staff and the civilian Air Staff Secretariat under AUS(AS).²⁷ The eventual outcome was a memorandum on the Future Size and Shape of the Royal Air Force²⁸ which VCAS submitted to the Air Council early in June, with a companion paper by PUS²⁹ on the all-important question of National Service. The Air Council was accordingly able to take a considered view of the RAF's future at the time the Policy Review began. It had taken three months for VCAS's memorandum to reach its final form. Staff papers were produced on each of the main elements of the RAF, beginning with the bomber and fighter forces and looking ahead to the period beyond 1965 for the good reason that equipment in service in the late sixties and beyond would have to be ordered and paid for in the costing decade from 1956. There was no inclination to dispute the broad priorities of defence policy set out in the 1956 Defence White Paper – first, an effective deterrent and then the requirements of cold war, limited war and finally global war. But it is clear from their working papers that the staffs concerned recognised that the numerous assumptions on which any comprehensive plan had to be based were in varying degree unreliable. What resources of money and manpower would be available was the major uncertainty, but the glass was no less dark on the nature of the threat from the Russian Air Force in future, the

²⁶ The membership of the Air Council during 1956 was:

Secretary of State for Air (S of S)	Mr Nigel Birch
Parliamentary Under-Secretary (US of S)	Mr Christopher Soames
Chief of the Air Staff (CAS)	Air Chief Marshal Sir Dermot Boyle
Air Member for Personnel (AMP)	Air Chief Marshal Sir Francis Fogarty
Air Member for Supply and Organisation (AMSO)	Air Chief Marshal Sir Donald Hardman
Permanent Under-Secretary (PUS)	Sir Maurice Dean
Vice Chief of the Air Staff (VCAS)	Air Chief Marshal Sir Ronald Ivelaw-Chapman
Deputy Chief of the Air Staff (DCAS)	Air Marshal Sir Thomas Pike
Controller of Aircraft (CA)	Air Chief Marshal Sir John Baker

CA was a Ministry of Supply post: Air Marshal G W Tuttle was acting DCAS from July and was formally appointed to the post in October.

²⁷ Mr R H Melville was the Assistant Under-Secretary (Air Staff) at this time. ²⁸ SC(56)16. ²⁹ AC(56)50.

effectiveness of Russian air defences, and the number and location of bases for the overseas deployment of the RAF. Even so, such differences as emerged during the working period were not so much over what the RAF could and should do as about the tactics to be followed in presenting the case. There was a genuine dilemma. The type of plan normally submitted to the Air Council was an executive document which, after approval, was distributed for a wide range of management purposes. From the planned number and types of squadron – the 'squadron patterns' – which was the heart of the plan, many things flowed: the numbers of officers, aircrews and airmen for the different branches and trades; training plans; accommodation and building plans; the procurement of equipment and the associated provision of spares. All the consequences of the plan had to be expressed in money terms; otherwise no judgment could be made of its realism. On the other hand, to produce the normal type of plan at a time of such uncertainty might involve much wasted effort and also restrict the room for manoeuvre. At one stage in the process of producing VCAS's memorandum, complete squadron patterns up to 1965 were prepared, with features which would have been startling to all but those who were aware of the current pressures. These included the reduction of the V-bomber force to 100 aircraft as the BLUE STREAK missile came into service; a cut of one-half in Fighter Command, with an even bigger reduction as the generation of fighter aircraft to succeed the Lightning came into service; a cut of two-thirds in the aircraft front-line in Germany; Middle East Air Force remaining at much the same strength but Far East Air Force reduced to little more than a token presence; and Coastal Command almost halved. Much of the plan was provisional and a number of options were identified, but taken as a whole it was a realistic and balanced response to the emergent strategy and to economic realism. Even so, it was decided that its appearance of precision was premature, and dangerous in the hostages it offered to fortune; instead of approving a formal plan the Air Council was invited to consider simply "the governing factors which will determine the sort of Air Force we need to develop over the next 10 years."¹⁰

If VCAS displayed caution over producing a costed 10-year plan he nevertheless submitted a paper with a number of radical, if general, concepts. Granted the agreed defence priorities but granted also the prospect of reduced resources for defence, he saw no escape from economising in forces for fighting large-scale limited wars and global war. An effective deterrent remained the "first pillar of our national defence policy"; if it stood, it constituted a sanction against the kind of limited war that might develop into global war as well as against global war itself. He conceded that British membership of the Baghdad and South-East Asian Pacts would not be credible without some military contribution; this would depend on the availability of bases and the facility with which they could be reinforced. Russian developments would undoubtedly include ballistic missiles, and accurate intelligence about their rate of development was important. He did not see this invalidating the deterrent; he did, however, see it as leading to an air defence system based largely on SAGW. He foresaw manpower as a more limiting factor than money, and it was on the assumption that National Service would be abolished that he outlined the kind of Air Force, appropriate to the strategic and economic realities, that could be manned. His gaze was focussed on the years towards the end of the decade and for some years thereafter.

The argument for the V-bomber force was based not so much on the need for an independent deterrent as on the need for a British contribution to a joint capability with the United States. From the growing ability of Russia to attack North America was deduced a relative reduction in American ability to deliver a decisive counter-blow before the United States were devastated; hence the need to maximise the immediate striking power of the total deterrent available to NATO. The familiar secondary arguments for a British deterrent were marshalled: its value in the cold war and for Britain's standing with her allies. The immediate aim should be a front line of 200 aircraft, including the three squadrons for reconnaissance and special duties which had hitherto been regarded as additional to the bomber force. But the paper showed some uncertainty about the long-term future of the force. That it should be improved within the limits of current technology was clear; the emphasis should be on improved marks of the Vulcan and Victor equipped with good electronic

³⁰ ACAS(P) to VCAS 11 May 1956 (AHB ID6/RD 1956/2).

counter-measures (ECM) and guided bombs. Equally, the development of a British ballistic missile to replace the manned bomber ought to be given the highest priority. The uncertainty lay in the step from the V-bomber force to the missile. VCAS was doubtful whether a gap could be avoided between the end of the useful life of the force and the availability of missiles. A more advanced bomber was needed to bridge the likely gap.³¹

Fighter Command was seen as primarily a contribution to the deterrent (a view which the PRC was soon to accept).³² Even on this basis the size and quality of force that would be needed to deal effectively with the Russian bomber threat would be excessively costly. On the other hand, the threat itself was changing; it would include ballistic missiles against which no effective defence would be possible, at any rate over the next ten years. But the change would be gradual. A "persistent and substantial" threat from Russian bombers would continue, and an organised air defence system including fighters and SAGW was needed to offset it. A mixed force of the two types of defence was envisaged, particularly up to 1965. Thereafter, VCAS looked to SAGW as the predominant element but even when this was possible manned fighters would still be needed to back up SAGW under jamming conditions and when concentrated attacks had exhausted missile stocks; to deal with bombers armed with guided bombs outside SAGW range; and to challenge unidentified aircraft in a period of emergency. All this was profoundly significant (and, as events proved, prophetic in some respects). The nature of the threat was changing to the point where effective defence, however defined, of the country as a whole was no longer practicable. Even the more limited aim of defending the deterrent bases against sustained attack was scarcely attainable. The only realistic aim, taking economic as well as military considerations into account, was to impose on the potential enemy sufficient of a problem as to make him question his ability to destroy the deterrent bases before their strike forces - bombers and, later on, ballistic missiles - could be launched. It is hardly surprising that the recommended conclusion was that the forces required to achieve this aim were "a matter for judgment rather than calculation". Looking to 1965 and beyond, VCAS's own view was that an acceptable fighter force for ADUK might be about 200 strong, at least half of which would be up-to-date all-weather fighters (implying a fighter to succeed the Javelin and Lightning) supporting a substantial deployment of SAGW.³³ The case for a component of day fighters was based less on their usefulness in ADUK than on their value for minor operations outside NATO.

A deterrent-based policy carried extremely important implications for 2TAF in Germany. On the crucial assumption that the purpose of NATO forces in Europe would be to function as a trip-wire, VCAS proposed that the existing and largely day fighter/ground attack force should be gradually transformed into a nuclear strike force, with supporting reconnaissance squadrons. A small force was in mind, of the order of sixty aircraft (in 1956 the 2TAF front-line was some four hundred aircraft) which would be Canberras at first, replaced by a new long-range strike/reconnaissance aircraft capable of operating from small airfields.³⁴ Such a force would be of greater deterrent value and more effective should deterrence fail.

Coastal Command would be even more affected by a consistently applied policy of deterrence. VCAS recognised that MR aircraft were useful in cold war and to reinforce the air transport force in emergency. For these purposes and because a small maritime force might be unavoidable for political reasons, a maximum force of some thirty Shackleton aircraft might have to be kept. At this time, Coastal Command included over seventy Shackletons as well as two squadrons of Sunderlands and two of Neptunes which the Air Council had earlier decided to disband.

If Bomber Command was seen as the main RAF contribution to the first of the national defence priorities, Transport Command was its response to the second - the maintenance of Britain's

³¹ AV Roe were in the early stages of work on this project (OR 330, second issue dated January 1956. ³² Page 26 above. ³³ SAGW plans at this stage envisaged a limited deployment of Stage 1 missiles (the eventual Bloodhound Mk I) beginning in 1958; a more extensive deployment of Stage 1½ missiles (Bloodhound Mk II) after 1962; with an eventual deployment later still of some 15 to 20 SAGW stations - what was termed Stage 1¾ - armed with a later generation of SAGW. ³⁴ This concept was to be part of the case for the issue in 1957 of OR 343, which led to the development of the TSR2.

position in the cold war – and should be given attention second only to the needs of the deterrent. With everything pointing to a much reduced Army, there would be a need for more mobility; and with the prospect of fewer reliable bases overseas and staging airfields as well as of greater difficulty in making assured overflying arrangements, the clear requirement was for strategic transport aircraft with better range and speed than the Hastings currently in service. This was not a new thought. The first order for Britannias had been placed in January 1956 after the abandonment of an earlier project for a purpose-built strategic air transport, the Vickers 1000. But the Policy Review was showing every sign of reinforcing the need. VCAS envisaged a force of thirty Britannias, all based at home in Transport Command, supported by the same number of Beverley aircraft for heavy and bulky equipment and for the tactical support of the Army. The Beverleys would be equally divided between Transport Command, MEAF and FEAF. A force of 48 helicopters, Pioneers and Twin Pioneers for short-range support would also be allotted equally between the three theatres. No provision was made for this kind of support for the Army in Germany. It was assumed that RAF garrison forces outside the NATO area would have to be reduced. V-bombers would have the necessary range to reinforce them, as would the Canberra and its successor. But uncertainty about staging facilities and overflying rights might well mean that short-range aircraft reinforcements would have to be provided from aircraft carriers. For the broad purposes of his memorandum, VCAS thought it sufficient to confine the garrisons in the Middle East and Far East to two squadrons each of day fighters, primarily for ground attack, and similar forces of strike/reconnaissance aircraft, with the air transport support already described.

The study would have been incomplete without some indication of the manpower and annual money costs of the kind of forces adumbrated. These were roughly estimated at between 160,000 and 170,000 personnel and about £510M. Both resource figures were higher than the likely allocation but, leaving aside the scope for administrative economies, VCAS hoped that the size and shape of the air force they might sustain would provide the pattern for any smaller force. His thoughts (they were scarcely detailed proposals) were well received by the Air Council.³⁵ Aside from the "considerable apprehensions" which Mr Birch is recorded as expressing about the suggestion of a mobile air striking force based on aircraft carriers, the general concepts were approved as a basis for future operational requirements. The Council also decided that it would be premature to produce a detailed plan and that VCAS's memorandum should not be circulated beyond Council members and the small number of Air Ministry staff who had been involved in producing it. The cards were being kept close to the chest until the kind of game to be played became clearer.

The Air Council's discussion of VCAS's memorandum had taken place in mid-June, at the beginning of the intense activity of the PRC which culminated in the directive issued by the Minister of Defence in early August. Looked at as an anticipation of what might or should emerge from the PRC it stands up well. But if the general concepts were consistent with those underlying the directive the real test would come when they were translated into a more precisely costed plan related to the resources allocated to the RAF. The Air Council's response to the Minister of Defence's directive was thus the next important stage.

It became clear during July that more work on costs had to be done if the Air Ministry was to react quickly and authoritatively to whatever emerged from the Policy Review. VCAS's memorandum had looked well into the future, and was no worse for that. But resources in the years immediately ahead were no less uncertain, and any major reductions that might be imposed would create problems demanding immediate management action, with financial implications for which the PUS would be responsible and personally accountable to Parliament. Against this background and without consultation (at any rate formally) with their RAF colleagues, PUS's staff undertook a study in July of the reductions in the size of the RAF that would be necessary if its budget was limited to £530M in each of the two years immediately ahead. Compared with the expected cost of existing plans, these assumptions about money meant that savings of over £40M and over £80M would be required in the two years in question. The authors of the study could see no way of avoiding big reductions

³⁵ AC 13(56)(SPECIAL) 15 June 1956.

in the planned front-line. The existing plan provided for 1660 aircraft in March 1958 and 1529 a year later (a reduction to be achieved mainly in 2TAF). The maximum force which PUS's staff considered achievable was 1286 and 1245 aircraft. By March 1960 the front-line was seen as 1079 aircraft compared with 1532 in the existing plan - a reduction from 144 to 109 squadrons.

b. **Air Council Views.** This study was the basis of the reply which the Air Council agreed to make to the Minister of Defence's directive of early August.³⁶ The question was clear enough: what kind of air force could be supported in the next two years on an allocation of £505M (possibly somewhat more) in 1957/58 and the same sum in 1958/59, with manpower of 200,000 reducing to 180,000, with the guidance about priorities and policy which the Minister of Defence had given and with no expectation that more resources would be available in later years?³⁷ The answer was important in several respects: for the kind of Air Force which was thought appropriate both to the new strategic concept and the resources allocated by the Minister of Defence; for difficulties of detail typical of those encountered in accommodating a complex programme within reduced resources; and for the implications, as the Air Council saw them, for NATO. The size and nature of the force can be quickly described. Bomber Command would be reduced from a planned force of 200 V-bombers and three supporting squadrons to 184 V-bombers and one reconnaissance squadron and one for special duties. Fighter Command would be cut from 480 to 300 fighters and the fighter squadrons of the RAuxAF would be disbanded. Coastal Command would be 67 aircraft strong and 2TAF 275. Transport Command alone showed an increase - from 68 to 86 aircraft. Outside the NATO area, MEAF would be reduced from 130 to 100 aircraft, and FEAF from 115 to 80 aircraft. The cuts amounted to a reduction of over 20% in front-line strength.

Even so, the cost of this force was estimated to be about £450M in 1957/58 and £525M in the following year; on the face of it, well above the Minister of Defence's allocation. The gap, however, was considered reasonable. American aid of nearly £40M was nominally available in the next two years, though whether this could be used was expected to depend on American political reactions to a smaller RAF. Moreover, it was the Air Ministry's experience over a number of years that the annual estimates of expenditure almost invariably exceeded actual expenditure mainly because of underspending on aircraft and equipment programmes.³⁸

The Air Council saw a number of potentially serious political and military implications in reducing the force so far and so fast. The reduction in Bomber Command - a requirement of the directive - was deplored because it could be interpreted by allies as inconsistent with the basis of policy on which the Government was seeking a reduction in conventional forces; "it is bound to reflect upon the sincerity of our policy". The Council was also concerned about Fighter Command. The Air Defence Committee's study, which the PRC had discussed in July, had contemplated a force of 300 aircraft only when improved SAGW defences had been deployed - in about 1963. To reduce to that extent by as early as 1959 would not preserve even the defensive facade which might cause the Russians to doubt their capacity to destroy the nuclear strike forces in Britain before they could take off. Nor would they be put to the trouble and expense of developing sophisticated weapons before they could contemplate an attack on RAF and USAF bases in England. Moreover, the sheer size of the reduction, compared with a Fighter Command of some 800 aircraft which had been planned in the early fifties, was thought to be too much for our allies to swallow. No critical comment was

³⁶ The memorandum embodying the results of the staff work during this difficult period, which also saw the beginning of planning for the Suez operation, was jointly submitted to the Air Council by PUS and VCAS as AC(56)79. It was considered on 13 September 1956 (AC(20)56) and revised in certain respects. ³⁷ Page 31 above. ³⁸ This problem continued to bedevil the annual estimates of equipment costs despite continuous efforts to make realistic allowances for underspending. The basis for the estimates was provided by the Ministry of Supply as the department responsible for aircraft procurement; and the failure to solve an admittedly difficult problem is one, though only one, of the reasons for Air Ministry dissatisfaction with the procurement system at this time and for most of the post-war period. It is noteworthy that Mr Maudling excused himself from continuing as Minister of Supply when Mr Macmillan formed his administration in January 1957 because he had come to disbelieve in the usefulness of a department of state interposed between customer and supplier.

made about Coastal Command - "an inevitable target for reduction"³⁹ - and the worry about a smaller 2TAF in Germany was not so much because of its military significance as because there seemed little prospect of inducing NATO to accept it. Otherwise, the Air Council was prepared to reduce 2TAF still further, believing that the existing force was not well structured for deterrence. Deterrence and the nature of war if deterrence failed also underlay the Air Council's assumptions for the calculation of war reserves. Here, some allowance was made against the possibility of limited war but, this apart, it was assumed that hostilities would not exceed thirty days, only a week of which would be at maximum rates of effort, and that the RAF front-line would waste away from the outbreak of war. (This policy for war reserves was consistently applied by the Air Ministry for a number of years; it came under challenge in 1963.)

The paper concluded with an explanation, again in terms of the new strategic concept, of the intention to disband the RAuxAF and most of the light anti-aircraft (LAA) squadrons of the RAF Regiment. Some difficulty in reaching the prescribed manpower targets was admitted and an account was given of the measures already taken, with more in prospect, to achieve greater economy and efficiency in the use of manpower especially in the training and support of the RAF. The Air Council had given this much attention during 1956 and was to give it still more in the year ahead.

The Air Council's response to the Minister of Defence's directive went a long way towards a commitment to a particular shape of future Air Force, the more so as there was nothing in the general approach which was inconsistent with the views of the PRC. Whether the size of the force would be satisfactory for its commitments was another matter. Here too, however, the comments of the Air Council were mainly political: "it will not be possible, as in recent years, to take radical decisions to reduce the defence programme without facing up to the external effects". The government was well aware of this.

NATO and the New Strategic Concept

Before the Policy Review began, British Ministers had recognised the importance of the reaction of public opinion at home and abroad to any proposals which would reduce defence commitments, especially the existing contributions to NATO. If such reductions could be claimed to be consistent with an agreed change in NATO strategy the political position of the government would be strengthened and there would be less risk of serious damage to the Alliance. The aim, as far as the British government was concerned, was the issue of a new directive which would both justify reductions and recognise that commitments outside NATO might mean the withdrawal, if only temporarily, of forces assigned to NATO. It was important to achieve this before the end of 1956. Otherwise, the process of economising in defence expenditure, both generally and in terms of the foreign currency costs of forces stationed in Germany, would be delayed. To move the NATO machine with the required speed was a task not underrated in London. Consequently, the period between June, when the first intimations were given to the US and Canadian governments of how the minds of the British Ministers were moving, and December, when the North Atlantic Council approved the terms of a new directive, was one of intense and sustained diplomatic activity. The obstacles that had to be surmounted were many and severe.

Possibly the most important of the political obstacles was the position of Federal Germany. The debate there about the rebuilding of her forces and the introduction of conscription was in full spate and crucial votes in the Bundestag were due to be taken in July. The plan for an army of 12 divisions and substantial naval and tactical air forces, all conventionally armed, might be prejudiced if it got abroad that formal NATO policy was likely to put more emphasis in future on nuclear weapons and that reductions in British and possibly American conventional forces were in the offing. The potential damage, at least to

³⁹ Sir Walter Monckton authorised the proposed reduction in Coastal Command before he left the office of Minister of Defence on 18 October 1956. This led to a joint plea from AOC-in-C Coastal Command and the Commander-in-Chief Home Fleet for at least one squadron of Neptunes to be retained, in what would otherwise be a wholly Shackleton force, because of its superior search radar. Sir Walter Monckton's successor, Mr Antony Head, ruled against this later in the year - to the satisfaction of Mr Nigel Birch who was anxious to avoid confrontation between the Air Ministry and Admiralty on air power at sea.

Dr Adenauer's personal position, would not be any less if it appeared that the changed policy resulted from prior Anglo-US agreement rather than from discussion within the Alliance as a whole. Yet unless it could first be established that Anglo-US agreement was possible there would be great risk to the solidarity of the Alliance; just as there were risks in unilateral British decisions to reduce their NATO forces, though this was what Ministers were determined to do, and to do it quickly. The diplomatic strategy adopted was to seek a sufficient measure of agreement with the US and Canada to open up discussion in the wider NATO forum.

The first reactions of the two governments were sympathetic.⁴⁰ The Canadian government was itself considering a reduction of its air forces in Europe, partly because of the need to strengthen North American air defence against what was seen as the growing threat from Russian long-range bombers. Mr Dulles first responded, according to the British Ambassador in Washington,⁴¹ by saying that the US administration had been thinking on very much the same lines: "no country, not even the United States, could contemplate sustaining two kinds of military establishment; one for nuclear and one for conventional war". The problem was when and how to make the necessary changes; and Mr Dulles was concerned that the British timetable might be too fast for the Americans as well as for Dr Adenauer. A Foreign Aid Bill was before Congress; the appropriation for NATO proposed in it was threatened; and if any hint were given that a new concept was being discussed Congress would be likely to cut the appropriation until they could see what the new concept meant. Other NATO nations were known to have similar problems. The Norwegian and Dutch governments would be embarrassed for domestic political reasons by force reductions at this time. The French would be suspicious of any changes which might lead to a preponderance of German land forces in NATO, with an added concern that greater emphasis on nuclear weapons could lead to a German claim to be supplied with, or even to manufacture, nuclear weapons which France herself did not possess. Leaks in the press in Europe and America as consultations continued during the summer added to the difficulties. Somewhat later, the developing Suez crisis and Russian actions in Hungary in November - events which were capable of different interpretations of their significance for NATO's position - further complicated the terms of the exercise which British Ministers had begun.

It is not necessary to trace in detail the diplomatic history of the British initiative. British aims were pursued with great skill and determination, notably by the Foreign Office staffs in Washington, Bonn and NATO as well as in London. Considering the pace of events, it is remarkable that only once did the Chiefs of Staff in London complain that the Foreign Office had failed to consult them on a point which they considered important.⁴² What has to be described, however, is the impact upon NATO military opinion and the indications which emerged of future problems affecting NATO's defence plans. A distinction has to be drawn between the political aspects of the concept which the Alliance was being urged to adopt and its translation into force strengths and capabilities. This emerged early in the consultation process, most obviously in the reactions of SACEUR and less notably, but in some respects just as significantly, in those of SACLANC.

By the summer of 1956, General Gruenther had served in NATO, first as Chief of Staff to General Eisenhower and then as SACEUR, for over five years. These had been the formative years and General Gruenther was entitled to much of the credit for the military progress of the Alliance. He was due to leave his NATO appointment and retire from the US Army in November, his designated successor being General Norstad of the USAF. To be faced in the last few months of his appointment with British proposals which at the least required careful handling and, at the worst, could seriously damage the Alliance, was the last thing he could have wished. It was Field Marshal Montgomery's view that he would be the greatest obstacle to the selling of the new concept; he was "really emotional about NATO"⁴³; he had great influence because of his appointment as well as his powerful personality, and perhaps scarcely less after his retirement. Certainly, the sympathetic if cautious reactions of Mr Dulles

⁴⁰ FO Tel No 2914 of 15 June to Washington contained the text of a British memorandum on a reappraisal of NATO military policy. Mr Lester Pearson, the Canadian Foreign Secretary, was in London at the time and was given a copy of the memorandum. These papers are in AHB(ID3/30/10(Pt 1)) which is the source of much of this section. ⁴¹ Washington Tel No 1389 to FO, 19 June. ⁴² Page 41 below. ⁴³ Minute, Gen Stirling to Chiefs of Staff 27 June 1956. UK Del Paris Tel No 102 to Foreign Office 30 June.

were replaced by a harder line in late June after a meeting in Washington with General Gruenther in which, according to the British Ambassador, Mr Dulles was routed.⁴⁴ Emotion and understandable concern to protect what had been created may have affected General Gruenther. At his first meeting with the Field Marshal to discuss the British proposals he rebutted the notion that a new directive was called for and made what was described as a savage attack on the British whom "as of now he hated".⁴⁵ The fact remains that as SACEUR he had a position⁴⁶ and a rationale for it which had to be reckoned with on its merits. This was that thermo-nuclear weapons had not significantly changed NATO's basic strategy, which was already founded on nuclear deterrence. The question that mattered most was how long resistance on land was required so that the strategic bomber offensive could take effect. He had no guidance on this point and had decided on a period of about 30 days; and for this purpose the necessary force on the Central Front would be 30 divisions and supporting air forces. Different assumptions could alter the arithmetic but, in any case, in his view while strategic bombers might win a war with Russia they could not hold Europe together. Hence his concern to avoid an over-emphasis on nuclear capability. This, accompanied by reductions in ground forces, could affect what he regarded as the essential contribution which Federal Germany could make to NATO's conventional strength, discourage the French, and in general lead to a weakening of will. He also had a similar concern to that of CNS and CIGS about the consequences of nuclear parity, though he agreed (at any rate in his discussions with British military authorities) that forces smaller than 30 divisions might suffice over the next five years if there could be certainty that the Russians dared not risk a thermonuclear war in that period. This, however, was his appreciation; that of SACLANC was different; and SACEUR deplored the failure of NATO leadership to produce a co-ordinated and consistent strategy for the Alliance.⁴⁷

There was a mixture of military and political considerations in SACEUR's views. He was in effect asserting that the credibility and solidarity of the Alliance depended as much on its ability to undertake a campaign as to mount a nuclear offensive. What was, and what should be, this ability were matters on which he was entitled to be listened to; but how far it affected credibility and solidarity was in the last resort a political issue. In what may have been an attempt to influence the political debate, a study of SACEUR's military requirements, originally planned to be completed in 1957, was accelerated and circulated in October 1956.⁴⁸ This was a detailed exposition of military policy, directed to the size and shape of forces that would be appropriate five to seven years ahead. The new concept, as argued by the British, was accepted up to a point. Nuclear operations would be decisive, and the period of violent, organised fighting would not exceed 30 days; what would then be the situation was unpredictable. This increased the emphasis on forces permanently ready for action, whereas reserve forces which could make no contribution within the thirty day period would be useless. In almost all categories of naval, land and air forces increases were proposed in what had hitherto been the target for D-day forces. The JPS in London not surprisingly doubted whether the necessary expenditure would be politically acceptable, at any rate to the majority of NATO countries. Altogether, their comments were severely critical, on the general theme that SACEUR's force goals represented excessive insurance (not least in assuming that the first phase would last as long as 30 days), and over-emphasised the contribution of his forces to the primary nuclear deterrent. The change of emphasis that SACEUR perceived in the roles of NATO air forces - substantial reductions in day fighters and conventional strike forces but more nuclear strike and reconnaissance aircraft - was, however, consistent with the views of the Air Staff in London. He stressed as well the need for all-weather fighters and more SAGW; here the Air Staff were assuming that most of the responsibility for air defence in continental Europe would be shouldered by other NATO air forces, including those planned for Federal Germany.

⁴⁴ Washington Tel No 1440 to Foreign Office 29 June 1956. ⁴⁵ UK Del Paris Tel No 103 of 2 July 1956. ⁴⁶ One expression among many of SACEUR's views is contained in the minutes of a meeting he attended in London on 7 August 1956 with Sir Walter Monckton and the Chiefs of Staff (COS(S)(56)4th Mtg). The narrative above is largely based on these minutes. ⁴⁷ At the meeting in London on 7 August General Gruenther expressed the view that the NATO Standing Group should move its headquarters from Washington to Paris. In the context he can be understood as deploring the separate Atlantic and continental approaches to the NATO mission. In the absence of a command structure embracing SACEUR and SACLANC, the next best thing was to move the Standing Group to Europe so as to expose it to continuous contact with the NATO Council of permanent representatives. ⁴⁸ The British analysis of this study is contained in JP(56)162(FINAL), which was considered by the COS Committee on 26 November (COS(56) 124th Mtg).

The formal view of the COS Committee was that SACEUR's proposals would perpetuate the political and economic difficulties which, together with the implications of nuclear weapons, had led the United Kingdom to propose a new concept of strategy. This was a statement of the obvious. The question which the Chiefs did not pursue to a conclusion was whether or not SACEUR's force goals were appropriate to the kind of political directive which British Ministers were trying to negotiate. Sir William Dickson, their Chairman (now back at duty), recorded his general agreement with SACEUR's military appreciation, though he doubted whether sufficient allowance had been made for the effect that strategic bomber forces would have on any major offensive against the NATO position. CNS confined himself to saying that it might be better to come into the open and admit that economic necessity was the real reason for seeking a reduction in British forces: a view which he thought was all the more valid because of the additional strains arising from the Suez crisis. That nothing had changed but the resources that could be allocated to defence was not, however, the view of British Ministers, and certainly not the view of the Air Staff.

A parallel study by SACLANT⁴⁹ at this time offered even less encouragement to advocates of economy. The situation at sea reflected, at least as much as that in Europe, future uncertainties and present dilemmas. SACLANT did not dissent from the view that if a general war occurred it would probably take the form of a surprise attack in which nuclear weapons would be used from the beginning. Assessed against that belief, the nuclear capabilities of the NATO Striking Fleet had a place in the armoury of deterrence; and the relevant considerations were those of management, such as the relative cost of seaborne systems offset by what might be their lesser vulnerability to pre-emptive attack, rather than their justification in terms of basic policy. What was more arguable in those terms was investment in some of the more traditional forms of sea power: in particular, for the protection of sea communications. A policy of fighting with what was available, for no more than thirty days, was no basis for larger escort forces. SACLANT could not, however, bring himself to ignore the possibility of a limited war, beginning without nuclear weapons but increasing in scope and intensity until either what he termed "a limited decision"⁵⁰ was reached or a general nuclear war developed. Unless the Russians themselves recognised this possibility, it was difficult to rationalise the remarkable growth in the Russian submarine fleet.⁵¹ SACLANT's conclusion was that his forces should be adequate for all types of war, and his statement of force requirements contained all the elements, including MR aircraft, appropriate to a defensive war at sea as well as to a nuclear offensive against Russian naval and air power. Inevitably, criticisms were voiced by the Chiefs of Staff, particularly of over-insurance in the protection of sea communications and of SACLANT's assumption that the NATO nations would continue to devote the existing proportion of their national income to defence. The point was made that even if this proved to be true, the increasing cost of new weapons must lead to smaller forces.

Resistance from both SACEUR and SACLANT was not the most hopeful setting for hammering out a new directive. The initial consultations with the US and Canadian governments in June were followed by wider consultations in other NATO capitals and several meetings in Paris of the Permanent Council of NATO, aimed at an agreement in principle that a new directive was required; but the British had begun the process and it was to the British that the rest of the Alliance looked to suggest its terms. To agree upon these, even in London, was not easy, and still more difficult in the Alliance as a whole. The development

⁴⁹ Admiral Jerauld Wright USN: he held the SACLANT appointment until 1960. ⁵⁰ See JP(56)173(FINAL) 16 November 1956. ⁵¹ The Chiefs of Staff puzzled over this question more than once during 1956. One suggestion had been that a huge submarine fleet would put Russia in an exceptionally strong position if an agreement was reached on general nuclear disarmament. There was an inherent contradiction in this speculation and it found little support. The thought that the fleet could effectively blockade Europe in a situation in which the Americans were reluctant to use thermonuclear weapons came somewhat nearer to practical possibilities. On the other hand, such an action could well be the first step towards general war, which the Russians were believed to be anxious to avoid. A discussion involving these two points of view developed between Lord Mountbatten and Sir Richard Powell at COS(56)89th Mtg. The size of the fleet - already some 500 strong in long-range submarines alone - could only be countered at sea by a far bigger effort than the Allies had achieved against the German U-boats at the peak of their success in World War II; and there was no prospect of the Alliance finding the necessary resources. Other forms of response had accordingly to be envisaged and SACLANT's plans in fact provided for attacks at source.

of the first British draft, which the Minister of Defence sent to the Chiefs of Staff in September, into what was proposed to the rest of the Alliance, and the development in turn of the final British draft into what was eventually agreed by the North Atlantic Council in December reflects the numerous interests and points of view that had to be reconciled, if possible.⁵²

Sir Walter Monckton's draft emerged largely unaltered from its scrutiny by the Chiefs of Staff; as it stood it would have been acceptable to the Air Staff. But there were important additions affecting and clarifying its implications. The importance of military commitments outside NATO was brought out more clearly. So was the economic dimension of defence; "overall defence expenditure must be kept at a level which will give the members of the Alliance the necessary margin of economic strength to compete with the Soviet threat in all its aspects, without endangering their economic stability which in itself is an essential element of their security". And whereas the original draft made no specific mention of a maritime mission (though one was implied), the need to identify Soviet aggressive intentions at sea, as well as on land or in the air, figures in the final draft. The most important of all the military implications was contained in the third paragraph which read:-

If ... the Soviet Government do commit an identified act of aggression against NATO territory it must be understood that the West would at once launch a full scale attack on Russia with thermonuclear weapons.

A later paragraph added that the atomic capability of NATO forces, over and above that of the strategic air forces, would be used in the event of aggression whether by Russia or her satellites.

In line with the agreed negotiating strategy, consultations were confined to begin with to the Americans. These went reasonably well. The impression that the British draft might have given of an automatic nuclear response to aggression (*ie* without a prior political decision) was corrected by a suitable change of wording. An American proposal to be more precise about NATO's maritime mission was given little change, without any consultation with the Chiefs of Staff. The Foreign Office informed Washington⁵³ that no wording would be acceptable if it implied that a Soviet naval offensive "would necessarily be dealt with exclusively or even primarily by naval measures on the part of NATO".

A draft was put before the NATO nations, as a British proposal, at a private meeting of the Permanent Council in Paris on 19 October. The cat had been mewing for some weeks and was now out of the bag, but it was to be another six weeks before the animal was presentable. Numerous drafting sessions were held in Paris, all involving reference back to governments. The pace was such that, in London, reactions to the drafting proposals of Allies were determined more by *ad hoc* meetings of Ministers and officials than by formal bodies such as the Defence Committee and the Chiefs of Staff Committee. Granted the British aims, the outcome was not entirely satisfactory, which meant that the implications of nuclear deterrence, at least as seen by the Air Staff, could not be said to have been fully accepted. In the directive as finally agreed, categories of aggression were identified against which a nuclear response would not necessarily be made; a strategy of ~~formal~~ defence on the Central Front was re-emphasised and a reference was made to the need "to protect and maintain sea communications as required" - a form of words which left much scope for different interpretations. No distinction was drawn between the long-range nuclear forces of SAC and Bomber Command and other NATO nuclear capabilities; and the British negotiators did not wholly succeed in obtaining a formulation which disposed of what was described as "the heresy that the strategic nuclear force and the conventional forces [with an atomic capability] are equal and complementary."⁵⁴ Here the concern of the Air Staff was to avoid keeping aircraft assigned to SACEUR at the same high (and hence expensive) standard of readiness as the strategic forces. In this and other respects the directive could be understood as giving more emphasis than necessary to conventional forces. On the other hand, it was recognised that the logic as well as the politics of the British position

⁵² Appendix C contains the text as it developed at different stages of consultation, and also a draft which Field Marshal Montgomery submitted with 'the general agreement' of SACEUR and General Norstad. This draft is of great interest but it was different in style and less helpful politically than the approach adopted in the official British draft, and was never put forward as a serious alternative. ⁵³ FO Tel No 4738 to Washington 12 October 1956. ⁵⁴ FO Tel No 675 to UK Del Paris 29 November 1956.

led at least in principle, to a wider availability of nuclear weapons – if only to those NATO nations who were willing to have them. The French reaction to this prospect for the German forces was exactly as expected.

At least as important as its military aspects were those paragraphs of the directive dealing with commitments outside NATO and with the economic position. There were difficulties with the Americans on the first of these points.⁵⁵ In the outcome, however, it was recognised that the demands of outside commitments on certain NATO countries (which would certainly include Britain and France) might lead to withdrawal of some of their forces. As for the economic point, the directive offered no easy way out for the British. The rising cost of new weapons was recognised, as was the need for economic stability. But to say, as the directive did, that “few, if any, NATO countries can be expected to make a substantial increase in the resources devoted to defence” was not the strongest peg on which to hang the reductions which were in mind. Indeed, as the directive neared finality, the risks involved in what had hitherto been the formal British position during the negotiations became apparent. That position was that revised force patterns for NATO should be worked out only after a new directive had been agreed. But since British Ministers were intent on reductions they would be in difficulty if these were not justified by the directive as finally agreed and interpreted by the Alliance. The risks had been foreseen and accepted but as the usual December gathering of NATO Ministers approached the Ambassador in Washington recommended⁵⁶ that the opportunity should be taken “to put the facts plainly” to American Ministers. The “facts” were of course the precise reductions in Europe which the government had in mind.

The Directive to the NATO Military Authorities approved by the North Atlantic Council on 13 December contained an analysis of Soviet intentions as well as the directive itself.⁵⁷ It can be seen in perspective as a recognition of the inability of the Alliance to match the full range of military capability of the Soviet Union and its allies. Despite its compromises, and the possibility of different interpretations, it represented the formal expression by the Alliance of a ‘trip-wire’ strategy, sanctioned by major nuclear retaliation at an early stage if war was not deterred. Viewed in this light, it also represented the first stage of the British solution to the domestic problem of defence expenditure and provided a point of departure for seeking agreement to the next stage, in which the British contribution to NATO in conventional forces would be reduced. Pre-occupation with the Suez crisis and the change of Minister of Defence in mid-October had meant, however, that the nature and extent of those reductions had not been decided with any precision. It was not until early December that Mr Head, the new Minister, was able to reach some conclusions on the problems which the Policy Review had left unresolved.

Last Weeks of the Eden Administration

Mr Head lost no time after his appointment in conducting a series of briefing meetings with the Service Departments. By the end of November he felt sufficiently confident of the lines along which the Services should be restructured that he sought the agreement of Mr Macmillan to a number of general proposals.⁵⁸ This was necessary to provide both a basis for financial planning and a brief which would guide what Ministers would say (but only “in the corridors” at this stage) about British force reductions at the meeting of the North Atlantic Council in mid-December. His minute to the Chancellor went little further than the ideas of Sir Walter Monckton earlier in the year: a big reduction in Service manpower; BAOR reduced from over 80,000 to 55,000 and the front-line of 2TAF halved; a substantially smaller Navy; and an Army of 200,000. It was on this basis that Mr Head, Mr Macmillan and Mr Selwyn Lloyd privately talked to their American colleagues – Mr Charles Wilson, Mr Humphrey and Mr Dulles. The

⁵⁵ There was a negative side to the American position insofar as they wished to avoid military planning by NATO for contingencies outside the NATO area as defined in the North Atlantic Treaty. But there may also have been a positive and (according to some British opinion) more sinister aim of circumscribing the British overseas role. It has to be remembered that discussions on the wording of the new directive were at a crucial stage in the immediate aftermath of the Suez expedition. ⁵⁶ Washington Tel No 2410 to Foreign Office, 4 December 1956. ⁵⁷ The Council kept a low profile in public about the significance of the directive. The usual communique merely said that “the Council approved a directive for future military plans, taking into account the continued rise in Soviet capabilities and the various types of new weapons available for NATO defence. The concept of forward defence in NATO strategy will be maintained.” ⁵⁸ Mr Head to Mr Macmillan, 30 November 1956 (Cabinet Office 19/10/205/2 Pt 1).

Council meeting also provided an opportunity for Mr Head to speak to SACEUR (by now, General Norstad) and SACLANT. He reported the American reactions to the Service Ministers, the Minister of Supply and the Chiefs of Staff at a special meeting on 18 December.⁵⁹

Mr Head said that American Ministers had been "sympathetic and understanding" (they were at this time concerned about their own expenditure overseas, and there was discussion of the kind of mutual aid that was eventually to lead to RAF manning of Thor missiles in Britain). SACEUR would not accept that there was a strategic justification for reductions but "he was not disposed to treat the news as a major catastrophe." SACLANT was "equally understanding but less easily reconciled". There were also discussions about avoiding Anglo-American duplication on research and development, and some useful talks with German Ministers about reducing the foreign exchange costs of British forces. There were limits to what could be said about British plans. Mr Head had effectively revived the Policy Review, after its four months in abeyance, and was seeking agreement to some detailed proposals. These were contained in a paper considered by senior Ministers, without the Chiefs of Staff or Service Ministers, at two meetings on 18 and 19 December.⁶⁰ Mr Head's proposals and the reactions of his colleagues were for practical purposes the legacy of policy which Mr Macmillan's administration inherited and developed in the first half of 1957.

The outline plan for the RAF was based on the Air Council's response to the directive issued by Sir Walter Monckton in August. Manpower - at a target date of April 1961 - was, however, much reduced - 155,000 compared with 180,000 - and there was no clear indication of the financial assumptions. But the main features of the force were similar: Fighter Command and 2TAF halved; what was described as a "small force of MR aircraft in Coastal Command or overseas"; a stronger Transport Command but contributions to the Baghdad Pact and SEATO restricted to small tactical air forces. The target for Bomber Command included a front-line of 184 V-bombers, and Mr Head proposed additional plans for the production of fissile material (U235): on the other hand, he intended to run down the Canberra element of Bomber Command. Reductions in BAOR were a consequence of a smaller Army of 200,000, comprising an equivalent of six divisions, including an infantry division and two brigades based in the United Kingdom as a strategic reserve. Mr Head stressed the importance of lightly armed forces which, with a strengthened Transport Command, could move rapidly to deal with internal security emergencies in the Commonwealth and elsewhere. He allocated 90,000 to the Navy's manpower, envisaging a smaller fleet because new construction would be expensive. He intended to retain two fleet carriers and a light carrier but there would be substantial reductions to the Home and Mediterranean fleets, and the South Atlantic, American and West Indies stations would be abandoned.

Mr Head's colleagues gave a guarded welcome to total service manpower of 450,000 (some 50,000 less than Sir Walter Monckton had had in mind), especially if, as the Prime Minister hoped, this level could be achieved by April 1960. The inference that some form of National Service would have to continue seems to have been accepted, Mr Head himself being in favour of a ballot; but no final decision was taken.⁶¹ Nor was one taken on other features of Mr Head's proposals. Mr Macmillan was currently wrestling with the economic consequences of Suez and wanted immediate economies so as to reduce defence expenditure in the next financial year. He continued to press, without convincing his colleagues, for a smaller V-bomber force - possibly no more than 100 aircraft - but he successfully argued for deferring a decision on more production of U235. Submarines and naval dockyards were also areas for larger savings, in his view. Mr Head secured sufficient authority to keep up the momentum, and the last action affecting

⁵⁹ MISC/M(56)195 (AHB ID9/1793/9) ⁶⁰ Mr Head's paper is in the Policy Review series as PR(56)45 of 14 December; the meetings were GEN 564/1st and 2nd. These papers are held in the Cabinet Office. The Prime Minister was in the chair and the other Ministers were Lord Salisbury, Mr Butler, Mr Macmillan, Mr Selwyn Lloyd and Mr Head. ⁶¹ Sir Norman Brook, who thought that Mr Head's general proposals were on the right lines, encouraged the Prime Minister to a favourable view of a ballot, despite misgivings which Sir Anthony Eden had previously expressed: "the political difficulties which have hitherto ruled this out are at least reduced by the fact that, with the numbers now proposed, only about one in five of those eligible would in fact have to serve" (Brook to PM 17 December 1956).

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the future of the RAF in a year which had presented far more problems of policy than of actual operations (despite the calls of the Suez expedition) was the issue of a directive by Mr Head on 21 December requiring the Air Ministry to propose a detailed pattern for the RAF which took account of the revised manpower ceiling of 155,000. This was called for by 16 January. As a Christmas present, it left something to be desired.

The necessary work, some of which was unavoidably informed guesswork, was completed in time for a report to the Minister of Defence to be considered and approved by the Air Council on 9 January 1957. Its relevance to RAF policy is best considered in the context of the impact of Mr Macmillan's administration, which was to be formed a few days later. Based as the report was on allocations to the RAF of some £500M a year for several years ahead and on manpower which assumed the continuance in some form of National Service, and knowing that Mr Macmillan, at any rate as Chancellor of the Exchequer, was far from convinced that smaller resources would not suffice, it is hardly surprising that the Air Council regarded their report as less than definitive. The broad shape of things to come had, however, emerged from the Policy Review, provided some consistency of government policy was maintained. Fighter Command and 2TAF in Germany had been identified for major reduction and reshaping. The policy of deterrence, as the Government were inclined to interpret it, and its consequences for defence priorities made this inevitable; and it was justified by the British interpretation of the directive which had emerged from NATO Council in December. It also followed that Bomber Command would have first call on the available resources. Air transport, both strategic and theatre, had become more important, because of revised policy - primarily the much smaller Army in prospect - and the practical need for long-range transport aircraft to be able to outflank the air barrier in the Middle East and India. Similarly, the long-range reinforcement capabilities of the V-bombers and Canberras were seen as some offset to the demands of economy upon the garrison air forces in the Middle East and Far East; and they constituted backing for the modest local support of the Baghdad Pact and South-East Asia Treaty which Ministers and Chiefs of Staff alike continued to regard as essential. Overall, no overseas commitments had been dropped, but reductions in the level of military support were in prospect and the RAF was seen as having a major part to play in offsetting their effect. So, despite the questions of detail which remained unanswered at the end of 1956, a framework of policy for the RAF had emerged from the Policy Review. The main area of uncertainty was the role the RAF would be expected to fulfil at sea. A diminished Coastal Command seemed to the Air Staff to follow logically from the new strategy but whether Russian submarine expansion was a fact that need not be taken too seriously or an enigma which had yet to be solved was far from clear; and no clearer as SACEUR and SACLANT were not at one in their view of the needs of deterrence and the possible nature of war if deterrence failed.⁶²

The future aircraft programme reflected the doubtful as well as the more certain areas of policy. Maximum development of the V-bombers as the chief means of deterrence, while not yet assured, seemed unlikely to be seriously obstructed; what was uncertain was the successor system to the V-bombers and especially whether another generation of strategic bombers should be introduced as well as the first generation of ballistic missiles. The introduction into service of what was to be the Lightning had been blessed by the Defence Committee⁶³ but with something close to an expectation that this would be the last fighter to be employed for ADUK - a view which the Air Staff, for all that they envisaged a mainly SAGW defence from some date in the sixties, did not share. The role of the day fighter, with its traditional ground attack capability, was seen as lying outside Europe but whether the present generation, represented by the Hunter, would be adequate had not yet been settled; the possibilities of a simpler 'colonial' fighter aircraft were still being considered. Within NATO the future appeared to be with the Canberra for strike and reconnaissance with a successor aircraft already taking shape, at least as a development project. Air transport presented some problems even though its role was solidly assured under the new policy. The Beverley was far from satisfactory as a heavy lift transport over long ranges and the need for a strategic freighter to complement the Britannia as primarily a long-range personnel carrier was beginning

⁶² The last meeting of the Defence Committee at which Sir Anthony Eden presided received a report from the Chiefs of Staff on the Russian submarine threat, on which the First Lord (Lord Hailsham) and Lord Mountbatten spoke in chilling terms. The Defence Committee did no more than "take note".

Bc (56) 7th Mtg 2 Oct 1956 when a joint memorandum by S of S
for Air and the Minister of Supply was considered. 44

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to be perceived. A replacement was required for the Valetta for general duties, particularly overseas; and while the Pioneer and Twin Pioneer were adequate as light fixed-wing transports firm decisions had still to be taken about future helicopters. There was no thought at this stage of an aircraft for maritime reconnaissance beyond the Shackleton Mk 3; the need in this area was better surveillance and detection equipment, and improved weapons.

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The following information was obtained from a review of the files of the Central Intelligence Agency, Department of State, and the National Security Council, and is being furnished to you for your information.

CHAPTER 3

DEFENCE WHITE PAPER 1957 : POLICY AND RAF PLANS

Introduction

The new Conservative government under Mr Macmillan came into office in mid-January 1957. The process of producing the annual Defence White Paper was to take until 4 April, nearly two months later than the normal publication date in February. The delay was significant. Mr Head's legacy to Mr Duncan Sandys, his successor as Minister of Defence, was not only incomplete as a plan for determining the future size and shape of the Services; it was to be deemed defective in one essential respect. It had been based on Service manpower of 450,000 (Navy 90,000, Army 200,000 and RAF 155,000),¹ which would have meant that National Service would continue to be necessary, albeit on some selective basis. The decisions to limit manpower to about 375,000 and to plan on the basis that National Service would be brought to an end, and the arguments beforehand about the consequences and acceptability of such a policy, were together a principal cause of delay in publishing the White Paper. There were other contributory factors. Whether or not the British Services were to become all-regular, reductions in the forces allotted to NATO had to be negotiated with the allies. The diplomatic consequences were ones which the government was not able to control to a timetable of its own choosing. The need to inform major Commonwealth countries as policy crystallized also took time. Moreover, Mr Sandys was determined to be the master not only of events but of the definitive statement of policy. To an unusual extent, the 1957 White Paper - certainly in its key passages - was his own work rather than an official draft ministerially approved. As the White Paper reached its final stages, more than one Cabinet meeting spent time on the details of drafting.

Arduous though the production of the White Paper proved to be (it went through at least ten revisions in proof form) many questions of important detail were left unanswered. The full effects of the intended restraints - of manpower in particular - had not been worked out. Some room for manoeuvre was in any case desirable to avoid if possible the charge from allies both within and outside NATO that Britain had presented them with a fait accompli. The visits that the Prime Minister and Mr Sandys were to make to the United States in 1957 and also, later in the same year, by Mr Sandys to Australia and New Zealand reflected the need to explain government policy and to modify it if the views of allies could be met without serious damage to essentials. Consistently with this kind of difficulty the White Paper claimed to be no more than an 'Outline of Future Policy'. At the same time, the trend of government thinking was set out in sufficiently clear terms as to be a major political commitment as well as a statement of strategy. The most obviously important feature - to bring National Service to an end - even though presented in the White Paper as an aim rather than an unqualified commitment was certainly regarded by the country as well as the Services as a fact of future life. All Service plans which succeeded the White Paper were based on meeting the requirement for all-regular forces; political realism left no alternative. Mr Sandys himself presented the White Paper as the basis of a 5-year plan.

What must be regarded as a decision determining the upper limits of one of the two prime resources, the other being money, had at least the merit of providing each of the Services with a more or less fixed manpower target. The White Paper was less precise about future money allocations. It claimed that major savings of over £200m would be made in 1957/58. The defence estimates for that year were £1483m before taking account of aid from the United States and receipts from Germany to offset British local costs; but for the economies in expenditure they would have come to £1700m. No forecast was made of future levels of expenditure, beyond saying that these could not be expected to decline to an extent comparable with the reduction in Service manpower. But the White Paper put defence expenditure in the context of the national economic performance: it had been reduced "to relieve the strain on the economy". It followed that defence expenditure was unlikely to be allowed to exceed to any significant extent the level of 1957/58 unless the international situation markedly worsened or the country's economic achievement substantially improved. With the settlement, within narrow margins, of future manpower levels

¹ Service manpower strengths can be expressed in different ways. The important figure, however, at this period is the number of "adult male uniformed UK personnel". The figures quoted are in this category.

money became the principal constraint on military and strategic planning, and attitudes to some of the questions outstanding from the White Paper were bound to be affected by this constraint as well as by their military content. The point was particularly important for the Royal Air Force because no final decisions had been taken by the time the White Paper was published on the size of Bomber and Fighter Commands, added to which was an uncertainty about the role of the Navy which the White Paper did not conceal but which, when resolved, was likely to have an effect one way or the other on plans for Coastal Command. Yet, money apart, the outstanding issues derived from strongly held and differing strategic views which, up to a point, were resolved for better or worse in the remainder of 1957 and 1958 but, in a longer perspective, continued to be a concern of such importance as to involve further changes of policy before the end of the 5-year period. Viewed historically, therefore, the 1957 White Paper is best considered not solely in terms of the significance with which it was viewed at the time but as an important stage in the development of policy over a longer period. Indeed, it can be regarded as the sketch of a British solution to the problems facing the alliances in which Britain was involved and equally to those aspects of security outside the alliances which were mainly a British responsibility. That the final picture, so far as there has been, or can be, any finality in defence policy, turned out to be somewhat different from the sketch is to some extent due to a failure to persuade allies, in turn reacting upon and in some respects reinforcing those in Britain who had never been convinced that the sketch was entirely on the right lines. But a second factor was that the total resources that the government was prepared to allot to defence (or, it can be argued, the allocation of those resources between the Services) turned out to be inadequate for the policy outlined in the White Paper. Hence the deep disappointments which the RAF in particular was to suffer in its re-equipment programme.

Defence White Paper²

a. **The Primary Deterrent and its defence.** Nuclear deterrence and its implications were the heart of the White Paper and parliamentary and public debate tended to concentrate on these aspects. The main considerations had not dramatically and suddenly appeared. As the White Paper put it, it had been clear for some time that nuclear weapons and "rocket weapons" had fundamentally altered the whole basis of military planning but it was only now that a comprehensive re-shaping of policy could be undertaken with the necessary degree of confidence. The inability to provide adequate protection for the United Kingdom against an attack with nuclear weapons was frankly recognised; if only a dozen bombers got through they could with megaton bombs inflict widespread devastation (references in earlier drafts to blotting out large parts of the big cities had been deleted). There followed the declaration that "the overriding consideration in all military planning must be to prevent war rather than to prepare for it". Simplifications of this kind are best treated with care and usually beg a number of questions but as a re-statement of the classical axiom, "vis pacem bellum parere", it had its point, which the White Paper proceeded to drive home: "the only existing safeguard against major aggression is the power to threaten retaliation with nuclear weapons".

The primacy of the United States as the protective power was recognised. In comparison, the contribution of Britain would be "modest" but the White Paper claimed "a wide measure of agreement that she must possess an appreciable element of nuclear deterrent power of her own". Kiloton weapons were already in steady production and a megaton weapon was soon to be tested and thereafter manufactured. The means of delivery would be the V-bomber force with the intention that this would be "supplemented" by ballistic missiles. And as the initial discussions with the United States in 1956 about the Thor IRBM had developed satisfactorily the White Paper briefly mentioned an agreement in principle for their supply. No information was given about the size of the V-force. The "modest contribution" was a guessing game, as far as Parliament and the general public were concerned. This was consistent with current security policy which forbade the publication of any details of RAF front-line strength.³ But in any case it was not until August 1957 that decisions were reached on the size of the forces. One point was, however, settled; the White Paper announced the

² Cmnd. 124.

³ This policy was to continue, with the exception of some information about the strength of the Air Transport Force, until 1975 when numbers of operational squadrons were given by role in the Defence White Paper.

cancellation of the project for the development of a supersonic bomber.⁴ What was clear from the White Paper and the memorandum accompanying the 1957/58 Air Estimates⁵ was that the continuance of the British nuclear deterrent as currently understood would depend on the successful development of powered guided bombs, insofar as the deterrent vehicles were to be aircraft, and on success with the BLUE STREAK⁶ missile.

Fighter Command was dealt with more in terms of what air defences would in future do than of what they would cease to do. Yet the implications were clear enough. Fighter Command would no longer be required to provide an effective defence for the whole country; it would concentrate on the defence of bomber airfields as an essential part of the deterrent. This, said the White Paper, would be a "feasible task". The missile component of ADUK was foreseen, without equivocation, as replacing in due course the manned aircraft: so much so that there was unlikely to be a requirement for fighter aircraft more advanced than the Lightning, and the White Paper announced that work on future fighter projects would stop. So to the decision to cancel the OR330 project - the supersonic bomber - was added the cancellation of OR329 which envisaged a true all-weather supersonic interceptor fighter, twin-seat and with a sortie duration of up to 75 minutes. In contrast, the logical development of SAGW capability to provide a defence against ballistic missiles was mentioned in the White Paper as was the importance of close co-operation on missile development with the United States; and the Air Estimates memorandum spoke of an intention to fit defensive missiles with atomic warheads. An effort was made in this memorandum to discourage the more extreme speculations about the manned fighter: this would "continue in service in the United Kingdom for a considerable time." But nothing was said about those tasks for which by common consent fighters would be needed at home even when the utmost possible reliance could be placed on SAGW; these were the interception of unidentified aircraft approaching British airspace in peacetime, and to support and reinforce fighter forces stationed overseas. All in all, the message was clear: the fighter aircraft was a declining feature of defence against the weapons and the means of delivery that would threaten Britain in the relatively near future.⁷ On the other hand, improvements would be needed, and were being made, in the control and reporting system, related to the requirements of SAGW and eventually to defence against ballistic missiles; and the system was being more effectively linked with early warning radars in the rest of SACEUR's area.

b. **Germany.** It was not to be expected that there would be any change in the intention to reduce the forces in Germany which had emerged from the discussions of 1956. This was the most important item of economy selected by the previous administration; it flowed from its strategic thinking and the need was compounded by the decision to end National Service. The halving of 2TAF, to be achieved as early as the end of March 1958, was duly announced in the White Paper. This reduction had not been easy to negotiate, either with the WEU allies or with SACEUR. The planned reduction of BAOR by the same date from over 80,000 to 55,000 men had been still more difficult; and the price of acquiescence, against the alternative of a rebuff from the WEU Council, meant that only the first stage of reduction - 64,000 - was announced in the White Paper. The announcement of the second stage (and not the last, if the government got its way) was left to the Defence White Paper of 1958. Nothing was said in the White Paper about these unfavourable reactions of allies or about the

⁴ Ch.2, p34.

⁵ Cmnd. 149.

⁶ Weapons and systems that were planned but did not come into service are identified in the narrative by capital letters.

⁷ The White Paper gave no indication of the state of Russian ballistic missile development. The current intelligence assessment (JIC(57)4(FINAL)) was that the Soviet Union would have a missile capable of use against Britain from launching sites in Russia by 1961. Moreover, by mid-1957 the first missile-firing Russian submarines were at sea. The first Russian Intercontinental Ballistic Missiles (ICBM) were expected to be deployed by 1962. The first "Sputnik" in October 1957 brought home to the general public the extent of Russian achievements.

negotiations leading to the new political directive which the NATO Council had approved in December 1956. But here and there, indications were given of the new approach, for example in the intention to introduce or improve atomic capability in both BAOR and 2TAF.

c. **Maritime Air Forces.** Another reflection of NATO policy, or lack of it, emerged in what the White Paper had to say about defence in the Atlantic. There were two broad possibilities, if deterrence failed. One was that a nuclear exchange would bring all hostilities to an end in so short a time that naval operations would play no significant part; the other was that the nuclear battle would not be decisive, in which event Atlantic communications would have to be defended against submarine attack. This was an over-simplification of what was, on any reckoning, one of the most difficult issues facing the Alliance but, within the limits of what was designed as a broad statement of policy, Mr Sandys made some effort to acquaint public opinion with the problem. He accepted that NATO had to maintain substantial naval forces and maritime air units, though Britain's contribution would have to be 'on a somewhat reduced scale'. What that scale should be was still one of the major uncertainties.

d. **Outside NATO.** As Mr Macmillan's administration was no more inclined than that of his predecessor to give up any political commitment overseas, and was even more determined to reduce defence expenditure, especially in terms of manpower, the White Paper followed a predictable line. The exclusively British responsibilities in the Middle East; those which had been accepted as a member of the Baghdad Pact; the SEATO and ANZAM commitments; and the need for colonial security - all these were confirmed. Smaller overseas garrisons and a smaller Fleet, which manpower and money constraints called for, were to be offset by an improved ability to despatch reinforcements at short notice; the White Paper emphasised the need to maintain a Central Reserve of army units in Britain and increase the carrying capacity of Transport Command. The rapidity with which the other RAF Commands at home could reinforce overseas garrisons was also emphasised, as was the intention to exploit naval mobility by shaping the Fleet round a small number of carrier groups one of which would usually be in the Indian Ocean. Happily, by the date of the White Paper the problem of a secure air route across the Indian Ocean had been sufficiently resolved for the construction of a new airfield on Gan to be announced.⁸ The agreement to hand over the RAF station at Negombo to the Ceylon Government, which was also announced, underlined the timeliness of the Gan decision.

e. **Research and Development.** The White Paper had little to say about projects for conventional weapons. The emphasis was on missile and nuclear weapons within a programme which was intended to be restricted to "absolutely essential" projects, thus releasing scientists and technicians for civil industry. This gap in information was filled to some extent in the separate memoranda accompanying the financial estimates for each of the Services; but a concern which was to prove particularly intractable in the aftermath of the White Paper was how to reconcile the broad research and development policy which it outlined with the claims of the individual Services.

f. **Reserve Forces.** The NATO strategic concept, as the government interpreted it, was reflected in what was said about reserve forces, especially the two Territorial Army divisions which had previously been earmarked as reinforcements for BAOR. The government gave notice that, subject to consultations with allies in NATO, these would be more appropriately allotted to home defence. The new concept underlay as well the reduced reserves planned for the other Services. The decisions to disband the flying squadrons of the RAuxAF (and of the RNVR) had been announced early in the life of the new government; the Air Council, for its part, had decided in the previous year that these squadrons would have to go.⁹

⁸ In the Air Estimates memorandum, paras 39 and 40. A colleague of the author recalls that HQFEAF preferred Diego Garcia to Gan.

⁹ See Ch 4.

g. **Manpower.** The all-regular manpower target of about 375,000, to be reached by the end of 1962, was not broken down into allocations to each Service. It represented an assessment of what could be supported by regular recruitment and, at one stage in the drafting of the White Paper, it had been expressed in terms of the proposed strength of each Service. To omit this from the published document was necessary and sensible. The argument about the recruiting needs and possibilities for each Service had not been settled; and adjustments between the Services could flow from decisions on outstanding major questions, such as the role of the Navy and the size of Bomber and Fighter Commands. Moreover, the difficulties the government was meeting within NATO could affect the manpower position. But no doubt was left in the public mind that a sustained effort would be made to reach the target. The reduction in strengths would have to be accompanied by administrative economies - in the Service Departments and the Ministry of Supply as well as in the training and support organisations of the Services. There was a hint of the drive to identify those support tasks that could be undertaken jointly by the Services or by one of them on behalf of all three, to which much effort was to be devoted in the years ahead. Nothing was said of any more radical reorganisation of the Services, even to the extent - as some had justifiably feared - of integration.¹⁰ What was less than clear was the effect of the policy on those currently serving on regular commissions or engagements. Work was well in hand within the Service Departments to determine the precise effect, both on numbers and ranks, but it was not until July that detailed schemes were announced. The White Paper could say no more than that some officers and non-commissioned officers would be surplus; they would receive fair compensation and be helped to find suitable civilian employment. An equally important concern was the effect of the new policy on recruitment. The White Paper set out in broad terms the essential features of the recruitment task, including the need to make conditions of service more attractive. Whether the Services would continue to attract sufficiently high numbers of the right quality in the light of what was described as "the biggest change in military policy in normal times" remained to be seen. The White Paper recognised a particular problem in the case of the Army. It expressed some confidence in the ability of the RAF to recruit in sufficient numbers, a view from which the Air Council did not dissent, though some difficulties were foreseen.

The Chiefs of Staff and the White Paper Policy

The three months between the formation of the new government in January and the publication of Mr Sandys' White Paper were an even more difficult period for the Chiefs of Staff than the previous summer when the Policy Review Committee had been meeting. This is partly explained by the time factor. As it was expected of the government, as well as being the government's own intention, that it would announce a less expensive defence programme, much had to be done at a pace which made for long hours and short tempers. That it proved impracticable to keep to the normal timetable for financial authorisations from Parliament (the needs of the Services in the 1957/58 financial year had to be met temporarily by Votes on Account rather than the approval of full Estimates) does not alter the fact that crucial decisions had to be reached over an excessively brief period.

¹⁰ One of the early drafts of the White Paper had referred to an examination of the case for "integrating" the Services. Integration did not necessarily mean amalgamation; nevertheless, writing to the Ministry of Defence on behalf of the Air Council, the Permanent Under-Secretary objected strongly to any passage on these lines. It was seen as highly damaging to recruitment, as adding intolerably to the burdens of the Service Departments at a time when they would be going through the throes of a major re-adjustment, as well as providing the Opposition with a means of embarrassing the government. The offending passage was dropped from the text of the White Paper but the episode did little for the standing of MOD and its political head with the Service Departments. When later in the year the Prime Minister commissioned a study of a larger role for MOD his clear statement that the separate traditions and esprit de corps of the three Services must be preserved can be regarded as an exercise in damage control. (Minute from PM to Minister of Defence 16 May 1957: MOD Folder MO 50/Pt 1). He committed himself in public during a debate on defence on 23 July, saying that there was "no intention of merging the three fighting services into a single defence force" (Hansard Vol 574, Col. 223).

The departure point was the directive issued by Mr Head. This was no more than a skeleton which each of the Service Departments was required to fill out; thereafter there was to be a comprehensive assessment of the results which the Chiefs of Staff could collectively submit to Ministers. This work was completed during January and the Chiefs of Staff met on 8 February¹¹ to put the finishing touches to a memorandum¹² to Mr Sandys. Based as this was on manpower of 450,000, whereas the response of Mr Sandys within a few days was to request a study based on manpower of 370,000, the force structures it set out are, from one point of view, of no more than academic interest. On the other hand, the strong views which the Chiefs of Staff were to express about the consequences of a smaller manpower allocation were based on their contention that a force structure appropriate to a strength of 450,000 was, as their memorandum put it, "the minimum consistent with our defence interest..... commitments could only be met by forces of this size if they are fully provided with the most modern equipment". This structure, and the strategic concept underlying it, accordingly has to be regarded as the best the Chiefs of Staff could collectively agree to, on terms which they could just about accept. They asserted that the extent to which the British effort could be reduced without shaking the solidarity of the alliances to which the country was committed required "a combination of political and military judgement".

Underlying the "450,000 force" was the concept of a three-tiered structure, the first consisting of the nuclear deterrent and contributions to NATO and other alliances, the second of the garrisons and naval forces involved in the cold war and the third of forces for overseas reinforcement. Its main elements, as these would be in 1962 at the end of the five year plan, were:-

Royal Navy	About 150 fighting ships, the core of the Fleet being four carrier task groups one of which would normally be refitting, with the others in home waters, the Mediterranean and the Indian Ocean.
Army	The equivalent of some 22 brigade groups: seven at home, seven in Germany (including an infantry brigade in Berlin), what amounted to two in the Mediterranean - Malta, Cyprus, Libya and Gibraltar - a slightly smaller force in the Arabian Peninsula and Kenya, and the remainder in Malaya and Hong Kong.
RAF	94 Squadrons: 32 in Bomber Command, 20 in Fighter Command, 7 (including a meteorological squadron) in Coastal Command, and 7 in Transport Command. Overseas, the force provided for 10 squadrons in 2 TAF, 7 in Cyprus, one in Malta, 4 in Aden and 7 in Malaya and Singapore. 6 SAGW stations in Fighter Command were allowed for.

The strategic thinking in the memorandum no more avoided ambivalence than did the December 1956 political directive which the NATO Council had approved. United Kingdom security was seen as dependent on the (by implication) equally important factors of the Allied Strategic Bomber Force and the continued cohesion of NATO, including the continuing involvement of the United States in Europe. In such terms, the principle was unexceptionable but, as had emerged in the 1956 discussions, problems of balance between the two factors remained to be solved. There was also scope for argument over the proposition in the memorandum that the diminishing number of bases and staging routes meant that air transport and air ferrying of operational aircraft could not wholly be relied on for the reinforcement of overseas bases.¹³ Consistently with this thought, which derived from the difficulty (though not the impossibility) of getting round the potential air barrier between Libya and Syria, the Chiefs of Staff dealt

¹¹ COS(57)11th Mtg.

¹² COS(57)34.

¹³ The Chiefs of Staff gave a firm reply to an invitation in mid-February from Mr Sandys to consider the need to retain the Fleet Air Arm as part of the long-term forces. This reply (COS(57)44) concluded: "there is a need to retain the FAA because it provides a means of applying or reinforcing air power in areas where other means cannot be efficiently or economically used. We consider that, in the strategic circumstances with which we are faced, the carrier is the most flexible and valuable unit of the Fleet and that, if economies in Naval forces have to be made, these ships should be the last to be reduced."

separately with force requirements in the Mediterranean area and those in the Arabian Peninsula and the Horn of Africa. In the Far East, Hong Kong was regarded as a problem of internal security and local confidence, not one of direct defence. There, and elsewhere in the Far East, reduced forces would have to be offset by flag-showing visits by the Navy and RAF and by improved capability to reinforce. While not formally abandoning the long-standing commitment to reinforce Malaya with a full division the Chiefs recommended that the local stockpile should be sufficient for not more than a single reinforcing brigade group. The general implications, so the Chiefs of Staff advised, would be that Britain could not engage without allies in a limited war of any significance; that land forces in particular would be in short supply for any such operations; and that contributions to NATO and other alliances would have to be reduced. There would be considerable risks, notably to the upper tier of the structure - the solidarity of the alliances. The Chiefs sought to drive the point home by a comparison of current British commitments to NATO and what could be done a few years hence by the "450,000 force". There is no reason to think that Mr Sandys was thereby alarmed. The Navy's contribution showed little change, save in the circumstances of prolonged war; the Army's peacetime contribution was less by one division, and Ministers had been determined for some time to make at least this reduction; and that of the RAF was only inadequate when measured against a 1957 front-line which the Air Council itself recognised as financially insupportable as well as unnecessarily large under any sensible strategic concept.

The fact was that the "450,000 force" was the result of such cuts in forces as each of the Service Departments thought acceptable. All existing weapons and weapon systems were assumed to continue, and by implication their subsequent replacements, which made it no easier to find economies in research and development programmes. Moreover, the Chiefs of Staff memorandum gave no estimates of the cost of the force over the years ahead. These had not been called for by Mr Head - to whose directive the Chiefs were formally responding - but the new Minister had made it clear soon after his appointment that he was anxious to make financial savings, and it was not difficult to see that a "450,000 force" contained the seeds of future financial difficulty. This is not in itself a criticism of the structure and capabilities of the force; if such a force was in the view of the Chiefs of Staff the minimum essential for national security they had a duty to recommend it, whatever its cost. But it is not surprising that Mr Sandys called for an examination of the implications of a smaller force. What consultation with other Ministers preceded Mr Sandys' request, which was made at a meeting of the Chiefs of Staff on 15 February,¹⁴ is not clear. In a Cabinet paper submitted in January¹⁵ Lord Salisbury had advised that a limited National Service intake would be needed until 1965, an opinion which Mr McLeod, the Minister of Labour, did not share. There is no record of discussion in Cabinet. National Service was, however, discussed at an informal meeting of Ministers at Chequers on 24 February, when Mr Sandys presented a review of defence plans which assumed that there would be no call-up after the end of 1960. The Defence Committee with the Chiefs of Staff present met a few days later¹⁶ but the record seems conclusive that the Chiefs of Staff case for a 450,000 force had not been put before it; indeed, at the Prime Minister's direction the Committee considered only the aim of achieving regular forces of 380,000 not later than the end of 1962. Nor were the considered views of the Chiefs on a smaller force put to the Defence Committee, meetings of which were conspicuously rare in the early months of the new government (after its February meeting it did not meet again until July). Mr Sandys was in a strong position, fortified as he was by a directive from the Prime Minister requiring him, as his first task, "to formulate, in the light of present strategic needs, a new defence policy which will secure a substantial reduction in expenditure and manpower";¹⁷ but there is no doubt that the Chiefs of Staff were gravely disturbed by what seemed to them a failure to use the normal arrangements governing their relations with and access to the Ministers most concerned with defence.

¹⁴ This meeting is referred to in the record of COS(57)13th Mtg. 18 February 1957.

¹⁵ C(57)1.

¹⁶ D(57)2nd Mtg. 27 February 1957.

¹⁷ This directive was issued by Mr Macmillan on 18 January 1957.

¹⁸ It would not be true to say that the working relationships of the Minister of Defence and the Chiefs of Staff broke down during the early months of 1957. But the determination of the Minister to set a manpower limit to the Services which would justify the abolition of National Service but which the Chiefs of Staff were unable to accept as adequate for their tasks led to tensions which exceeded those normally present between Ministers and their advisers.

The Chiefs of Staff met, within a few days of Mr Sandys' request, to consider their position, and produced a list of points for discussion with him.¹⁹ The provisional allocation of manpower was 75,000 to the Navy, 165,000 to the Army and 130,000 to the RAF; that for the Navy was soon to be increased to 80,000, and for the RAF to 135,000 giving a total of 380,000 ("about 375,000" was the target announced in the Defence White Paper). The Chiefs of Staff were adamant that 450,000 was the lowest acceptable figure; the lower figure would not be consistent with the continued policing and garrisoning of what they termed "our global commercial empire" or with any continuing liability to fight limited wars. They listed the areas where wars of this kind might occur - in both the Middle East and Far East; and said that if the forces were reduced in size it followed that commitments should be reduced as well. The Chiefs pointed out that the simplest commitment to shed would be the Far East but this would not be practicable because of Malaya's great importance for the sterling area. Nevertheless, they considered that the least damaging reductions would be outside NATO: specifically, a complete withdrawal from Hong Kong, reductions in Malaya and in the three Mediterranean bases - Cyprus, Malta and Gibraltar - though this would weaken the southern flank of NATO and support of the Baghdad Pact. Despite this emphasis on taking risks with the policing role, the Army's manpower allocation would mean that reductions would be necessary in BAOR beyond those already in mind. The Chiefs also made the point that defining commitments is one thing but the course of history is unpredictable.²⁰

A more detailed response from the Chiefs of Staff took a little time; and in a memorandum²¹ sent to Mr Sandys early in March they set out the size and shape of a 380,000 force. The Fleet - the "80" Fleet - would have to be structured round three carrier groups - home, Mediterranean and Indian Ocean - compared with the four possible with manpower of 90,000. There would be a commando carrier based in Singapore and an amphibious warfare squadron in the Mediterranean. Out of some 130 fighting ships, twenty less than the "90" Fleet, all but fifty would be based at home, though some would be deployed in the Mediterranean for training. The remaining ships - mainly destroyers and frigates - would be spread more or less evenly around the existing overseas stations: Persian Gulf, Far East, South Atlantic and America/West Indies. The Army likewise would have to reduce the number of fighting units. Its existing strength supported nearly 170 major units; the cut to manpower of 200,000 would have seen these reduced to 136; the further cut to 165,000 would bring the number down to 118. Under a feature of policy on which, at this stage, there was no disagreement, a useful strategic reserve of six brigades (not all deployable at short notice) would be stationed in Britain. Overseas but outside the NATO area an infantry brigade was allotted to Cyprus and one battalion each to Malta and Gibraltar; four battalions were equally divided between the Arabian Peninsula and Kenya; and the biggest theatre would be in Hong Kong - six major units - and Malaya where there would be two brigade groups, including Gurkha troops, and the British contribution to the Commonwealth Brigade. The idea of abandoning Hong Kong was thus

¹⁸ The basis of the Ministerial/COS relationship had been described in the 1946 White Paper on the Central Organisation of Defence (Cmd 6923): ".... On all technical questions of strategy and plans it is essential that the Cabinet and Defence Committee should be able to have presented to them directly and personally the advice of the Chiefs of Staff, as the professional military advisers of the Government. Their advice to the Defence Committee or the Cabinet will not, therefore, be presented only through the Minister of Defence"

¹⁹ COS(57)13th and 14th Meetings, 18 and 19 February 1957.

²⁰ This emphasis on the unforeseen and the unforeseeable was to be a recurrent theme in the years ahead, particularly as an argument in support of forces with a wide range of capabilities. It can also have a soporific effect on the making of awkward choices when resources are limited.

²¹ COS(57)47.

dropped²² but there was a more tenable supposition that the Army would have no forces in Libya by the target date of December 1962. In political terms, the most worrying of the consequences foreseen for the Army was a reduction in the strength of BAOR from 55,000, which was itself extremely unpalatable to Britain's allies, to 44,000.

The response on behalf of the RAF contrasted sharply with that of the other Services. Strength in front-line aircraft was not reduced significantly from that which had been regarded as supportable by manpower of 155,000. Instead, manpower savings in the training and support organisation were assumed, sufficient to reduce requirements to 140,000 and leaving some 5,000 still to be found. Sir Dermot Boyle argued that the gap could only be filled by reductions in Bomber and Fighter Commands, which would involve such serious risks that the question of further manpower savings was best left open. He might have added that an additional manpower bill for manning Thor had by this time become more than a probability; on the other hand, the Air Council was considering a number of radical schemes for manpower savings. On this uncertain basis the proposed structure of the RAF put forward to Mr Sandys showed only minor reductions of strength, in some Commands, to that proposed by the Air Council six months earlier, in reply to Sir Walter Monckton's directive of August 1956.²³ This had been solidly based on the emerging new strategy but had been recognized at the time as being something of a hostage to financial fortune. In this respect the prospects had not improved. The main elements of the force will by now be familiar but they are set out below; they represent the force targets which the Air Council considered appropriate to the policy which was outlined in the 1957 Defence White Paper.

Command	Squadrons
Bomber	23 medium bomber 4 light bomber 1 light bomber (special tasks) 3 long-range photo-reconnaissance (LRPR) 1 medium-range photo-reconnaissance (MRPR)
Fighter	10 all-weather fighter (AWF) 10 short-range day fighter (SRDF) 6 SAGW stations
Coastal	6 long-range maritime reconnaissance (LRMR) 1 meteorological squadron
Transport Command	2½ long-range 4 heavy freighter 1 light support
2 TAF	3 light bomber 4 MRPR 2 fighter-reconnaissance (FR)
Middle East	
Cyprus	4 light bomber 4 MRPR 1 transport (Beverley and Hastings)
Malta	1 LRMR

²² It would be easy to criticise the earlier inclusion of Hong Kong in a list of possible economies. The Chiefs of Staff were well aware that its abandonment would be ruled out on political grounds. But faced as they considered themselves to be with the prospect of inadequate resources they were bound to select those economies which would do least damage to the national military interest. Hong Kong, from this particular point of view, would be high on any list.

²³ Ch.2. p.37.

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Aden	1 day fighter/ground attack (DF/GA) 1 LRMR 1 transport (Beverley and Hastings) 1 light support transport
Far East	1 light bomber 1 MRPR 1 DF/GA 1 transport (Beverley and Hastings) 2 light support transport (1 fixed and 1 rotary wing) 1 LRMR

The modest strength of 2TAF is noteworthy because, as with BAOR, it would mean reductions in British forces based in Germany beyond what the allies were aware of. The absence of any provision for fighter aircraft in Cyprus appears to have been due to an instruction to that effect from the Minister of Defence.²⁴ The reduction in the fighter strength of FEAF from two squadrons to one was based on the assumption that the squadron in Hong Kong would be withdrawn.

The outline plans for a 380,000 force are not to be understood as recommendations from the Chiefs of Staff. They were no more than the answer to a particular question, and the Chiefs formally told Mr Sandys that "they did not alter our contention that [manpower of] 450,000 was the lowest figure we could accept on military grounds."²⁵ There were two further concerns: first, the effect of the new policy on the Services, to the point where the recruitment of sufficient regulars, which was essential to its success, would be doubtful; and secondly, on "the military authorities of our Allies". What was in mind here was allied reactions to the abolition of National Service. The Chiefs could have added that this was likely to be deplored by political as well as military opinion in NATO.

Mr Sandys was not to be shifted on the manpower issue. A face-to-face confrontation did not take place until 27 March,²⁶ only a few days before the Cabinet were to give final consideration to the text of the White Paper.²⁷ His position was, however, known beforehand through the intermediary activities of Sir William Dickson. Mr Sandys argued that, allowing for the greater efficiency and economy of all-regular forces, there was little practical difference between the capabilities of the 450,000 and 380,000 forces; Britain was bearing more than her fair share of the NATO burden and to reduce this would not determine whether or not a third world war would break out. He recognised that NATO forces, measured in military terms, were not sufficient for safety but he considered them enough to deter Russia from beginning a nuclear war because she could achieve her ends in other ways at much less risk, by subversion and probably more effectively by a commercial war. Counter-arguments were advanced by CNS and CIGS about the importance of the apparently narrow margin between the two sizes of force -an extra carrier group for the Navy and a larger contribution to NATO's maritime forces, and another 30,000 effective strength for the Army without which BAOR must be reduced. Mr Sandys made no comment on the naval aspects; and he appears to have regarded further reductions in Germany as a political rather than military issue. He agreed, however, that the White Paper should be so worded as not to give the impression that the

²⁴ Minute on Defence Review Costing Exercise 11 March 1957 (AHB ID6/RD 1956/7/3).

²⁵ Chiefs of Staff to Minister of Defence 15 March 1957 (COS(57)63).

²⁶ COS(S) (57)5th Mtg.

²⁷ Recorded in CC(57)28th Conclusions 2 April 1957. It was typical of the extraordinary way in which the White Paper was processed that Mr Sandys handed round a revised draft to his colleagues as they assembled.

reductions were based on any strategic advice from the Chiefs of Staff.²⁸ He also agreed with them about the crucial importance of improved strategic mobility.

CAS is not recorded as taking part in the debate of these broad issues. Much of what Mr Sandys said about the effectiveness of the deterrent and the risks that could be taken in NATO with conventional forces was in line with Air Staff thought. Moreover, the thrust of the advice CAS had been given beforehand by the Air Staff was that the 450,000 force was vulnerable to the particular objections which Mr Sandys made at the meeting. The Air Staff conceded that CIGS would reasonably argue for more manpower because this was the Army's most important resource; but it was resources as a whole - money and technical investment as well as manpower - that were supremely important, certainly for the RAF. CAS was advised that a much more effective Air Force could be supported by 135,000 men, an assured budget and no cuts in the associated R and D programme, than by 155,000 men with the same budget but with a reduced R and D effort. At least as significant an objection was to the memorandum (COS(57)34) in which the case for the 450,000 force had been argued. CAS's brief²⁹ described this as "an artificial document based on arbitrary figures laid down by Mr Head, and only agreed by the Chiefs of Staff in order to preserve a common front it is not a logically concerted paper which first establishes the essential strategic commitments and then estimates the forces needed to meet them." This last point reflected a growing concern in the Air Ministry that the new policy might not be thought through and applied with all the necessary rigour.

Air Council Reactions to the White Paper

a. **The future Air Force.** A directive from Mr Sandys similar to those put out by his predecessors in August and December of the previous year was issued as early as 22 February 1957. In the case of the RAF he required the Air Council to work out the structure and cost of the force over the five years from 1958/59 to 1962/63, and laid down a number of basic assumptions: by 1963 manpower would be limited to 135,000 adult males and, taking account of the WRAF and boys under training, to 148,000 all told; the front-line would be based on that proposed in response to Mr Head's December directive; and Thor would be deployed in Britain. The financial costing was to assume that there would be no cash aid from the United States and no allowance was to be made for any future increases in rates of pay and price levels. The difficulties of the task did not lie so much in determining the broad size and shape of the Air Force - these were clear enough from the numerous exercises carried out during the last nine months - as in expressing these in all the detail required for a reliable plan that could be defended against the kind of questioning to be expected from the Minister of Defence and his staff. After some months of intensive work, involving all the main branches of the Air Ministry as well as the Air Staff, a memorandum was produced in early June³⁰ for consideration by the Air Council. To describe this memorandum at some length is necessary, for a number of reasons: first, in order to show the range and depth of the implications of a major economy exercise; secondly, because the recommended force was that which the Air Council considered as appropriate as possible to the requirements of the new policy, though with indications of where the front-line might be reduced if this proved unavoidable; and thirdly, because the next few years were to demonstrate the difficulties of securing the capabilities of the recommended force and keeping these up to date, under pressure of various kinds.

²⁸ The Chiefs of Staff attached an importance to the precise wording of the White Paper which might seem excessive. According to the record of the final Cabinet discussion of the White Paper, to which they were invited, their main point was that the White Paper should make it clear that the cuts in the Services were dictated primarily by economic considerations and could not be justified on strategic grounds. They certainly held the view that a serious constitutional issue would arise if the impression were given that the economies were justified on military or strategic grounds and were therefore acceptable to the Chiefs of Staff. Whether the White Paper entirely avoided this is arguable but it would have come as a surprise if it had positively stated that cuts of such magnitude carried the full agreement of the Chiefs. General Norstad had taken a similar line over the British reductions in Europe. He was willing to be as helpful as possible provided these were argued from economic necessity and not as strategically justified.

²⁹ ACAS(P) to CAS, 20 March and 26 March 1957 (AHB ID3/120/9).

³⁰ AC(57)34, Note by VCAS and PUS entitled 'Policy Review'.

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The total front-line aircraft³¹ at the beginning of each of the financial years from 1958/59 onwards was set out as follows:-

	1.4.58	1.4.59	1.4.60	1.4.61	1.4.62	1.4.63
Aircraft UE	1261	1115	1109	990	986	986
SAGW Stations	-	1	2	5	7	13
Ballistic Missiles (Thor)	-	-	-	60	60	60

In the early years of the rundown of the front-line the Air Forces would still be relying to some extent on National Service manpower and also reducing the heavy overheads inherent in the National Service system. Consequently, there was no risk of a shortage of trained men in the first three years of the period. By the beginning of 1962, however, on what were considered realistic assumptions about the rate of regular recruitment, a shortage in trained strength of nearly 9000 seemed likely, rising to over 13,000 a year later. This gap was forecast after allowing for civilianising about 4000 uniformed posts and saving a further 5000 posts by 1963 through increased efficiency - and under each heading the savings were far from guaranteed. The figures underline the determination of the Air Council to economise in uniformed manpower in the interest of obtaining and maintaining the largest possible front-line strength. It was no less in that interest that the authors of the memorandum advised the Air Council not to reveal the manpower gap in the reply to be sent to the Minister of Defence. Moreover, the five year period of the costing was not sufficiently long to expose a further potential difficulty, taking the form of manpower but raising a problem of force structure. It would only be after the end of the period that the planned number of SAGW stations would be completed, which would involve a further demand for manpower. The question of where this manpower would be found did not demand an answer in 1957 but it was already apparent that one possibility was a reduction in the number of fighter squadrons in ADUK. Despite this cloud on the horizon, the Air Council decided to include twenty squadrons³² in Fighter Command, virtually the same strength as had been recommended by the Air Defence Committee³³ during the 1956 Policy Review and as proposed in the Chiefs of Staff memorandum to Mr Sandys on the 380,000 force.

The strength of the other RAF commands, as put to the Air Council, was likewise consistent with the COS memorandum. Costs were analysed in some depth. Estimates were provided of the number of aircraft and guided weapons that could reasonably be expected to be delivered during the costing period. These had been discussed with the Ministry of Supply but Air Ministry staffs had applied their own discount factor, based on past experience of forecasts and actual achievement, so as to arrive at a realistic costing of the equipment programme. Some savings possibilities were brought to the Air Council's attention. One such area was flying training where the costing was based on a larger entry of pilots and navigators than might be shown to be required when further work on what was, and continued to be, one of the key planning factors had been completed. Another area where modest variations in the normal planning assumptions could make a substantial difference to expenditure was the rate of flying effort assumed for the various elements of the force, coupled with the number of aircrews allotted to each aircraft (the aircrew/aircraft ratio). Some reductions in the normal rates and ratios were assumed in the costing but, as an example of the scope for further possible economy in the area, the Air Council was told that if the aircraft of the planned V-bomber force (which at this time was 184 UE) were flown for 25 hours a month instead of the assumed 31 hours about £3½m a year could be saved on fuel alone; and there would also be savings from a lower consumption of spares.

³¹ The term in use at this time for front-line equipment of squadrons was Unit Establishment (UE).

³² Air Staff papers at this time suggest that the seven Javelin squadrons in the planned force of 20 squadrons were already earmarked for disbandment in 1963/64 and that for some time thereafter the fighter element of the Command would be 10 squadrons of later marks of Lightning. This was not, however, a firm plan. It recognised on the one hand the likely inadequacy of the Javelin against the bomber threat of the 1960s; on the other hand, the Air Staff were anxious not to close any options in view of their suspicion that SAGW would enter service later than planned and possibly with a performance below specification.

³³ Ch.2, p27.

Fuel costs were given much attention. Despite a reduction in the planned front-line strength over the five year period of about 20% the RAF fuel bill was expected to increase by over 30% - from £48m to £65m a year. The explanation was simply the greater thirst of the new aircraft coming into service: a V-bomber consumed nearly three times as much fuel as a Canberra and a Lightning over twice as much as a Hunter. There was, however, one beneficiary (apart from the oil companies) - the Exchequer. The annual duty included in the estimated fuel costs at the beginning and end of the five year period was £28m and £40m. The Secretary of State for Air³⁴ made the obvious point very strongly to the Minister of Defence:³⁵ "this not only aggravates intolerably the burden of Air Votes, but gives a false impression to Parliament and the public of the money which is really going on the Royal Air Force". This was not in fact a new problem; and what Mr Ward was trying to do was to persuade the Treasury to make a change in the presentation of public expenditure which had been refused in the past and was to continue to be unacceptable.³⁶ The alternative approach was to replace AVTAG fuel by AVTUR, which carried a lower rate of duty. This had also often been considered but there were reasons for making no change.³⁷

Works services were another area where expenditure was not expected to fall, despite the smaller force. This was foreseen as remaining steady throughout the period at about £50m a year. Major projects included sites for Thor and SAGW, a guided weapons range in the Outer Hebrides, dispersal airfields for Bomber Command and improvements to Fighter Command airfields (to cater for the Lightning) and several airfields overseas, including the new airfield on Gan. There was little scope for economy in domestic accommodation. Much wartime accommodation was still in occupation; and where it continued to be required it had to be replaced or at least improved. And the stock of married quarters had to be increased and working and living conditions improved if the aim of an all-regular force was to be achieved.

As seen in the summer of 1957, the estimated costs of the proposed force contained some uncertainties but were not so large as to court rejection out of hand. There were possibilities of savings which had not been allowed for in the costing. The decision to reduce to a total strength of 148,000 by the end of the period (and to the target of 135,000 shortly after) from one of 230,000 at the beginning of 1957/58, made it possible to plan a faster rate of rundown than had earlier seemed necessary, with some useful savings in money. On the other hand, the lengthy review of fundamental policy, which by June 1957 had afflicted forward planning for a full year, had compounded the seemingly unavoidable delays in the delivery of equipment, especially new aircraft. Reduced expenditure in a particular year from this phenomenon of slippage had to be assumed to involve additional expenditure at a later stage, with no certainty that slippage would turn out to be self-balancing from year to year. Nuclear weapons were another area where reliable costing was difficult.

³⁴ Mr George Ward MP, who had replaced Mr Birch when Mr Macmillan formed the new government.

³⁵ Letter from S of S to Minister of Defence, 25 June 1957 (AHB ID6/RD 1956/7/3).

³⁶ To determine the real cost to the taxpayer of defence or any other major sector of public expenditure is extremely difficult. The gross cost of pay and salaries includes tax payments; the cost of equipment likewise includes various taxes, including duty on imported materials and finished articles. A burden peculiar to the Services is the health and education services provided for servicemen and their families, which if not financed from defence Votes would still involve public expenditure. A number of defence officials, including the author, have argued from time to time that the apparent costs of defence are seriously misleading, but it has to be admitted that the true costs are difficult to establish except by extra administrative effort which would itself cost money. Furthermore, it by no means follows that to establish the lower, true costs would mean the allocation of more resources to defence.

³⁷ Informed readers will know that aviation kerosene (AVTUR) is generally more expensive than aviation turbine gasoline (AVTAG). It is less inflammable in most conditions and is regarded by most experts as safer; and it has a higher heating value. In the 1950s, however, a NATO policy of standardisation on AVTAG had been adopted. The Air Staff would at this time have been willing to argue against this policy on the grounds that its practical value had diminished as a lengthy all-out war had become less likely, but it was decided to continue to conform to it. A further consideration at this time was that a switch to AVTUR would have increased the dollar content of the national fuel bill. Later, however, AVTUR was brought into use to a much greater extent, particularly by squadrons based in Britain.

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For security and other reasons the management of the nuclear weapons programme had been undertaken in the main by the Ministry of Defence, and the Air Ministry had to make more or less arbitrary assumptions about the costs which would fall to be met from Air Votes. It was with the proviso that "no precise measure of accuracy can be claimed for the costing" that VCAS and PUS informed the Air Council that the cost of the planned force would be as follows:

1958/59	1959/60	1960/61	1961/62	1962/63
£475m	£510m	£520m	£500m	£500m

The Air Council was warned that the figures were higher than either the Minister of Defence or the Chancellor of the Exchequer³⁸ would wish to see and that there would be strong pressure to reduce them.

The Council met to consider the VCAS/PUS memorandum on 14 June.³⁹ The costs of the proposed force were first discussed, and the uncertainties about their acceptability emerged only too clearly. In his directive of 22 February the Minister of Defence had expressed the hope that total defence expenditure would be no more than £1300m (at 1957 prices) by the end of the five year period; but forecasts from the other Service Departments and the Ministry of Supply, based on the forces outlined in COS(57)47,⁴⁰ produced, with a £500m estimate for the RAF, a total of £1390m. This made no allowance for improvements in pay and other conditions of service necessary to give the best chance of ensuring that all-regular forces could be achieved. For the RAF alone these were expected to cost between £15m and £20m a year. Nevertheless, at what was the opening stage of the planning process, the Air Council agreed that the proposed force should be put to the Minister of Defence with no significant changes in its front-line structure. Two economies proposed in the memorandum were not included. These were the disbandment of the RAF Regiment and the Airfield Construction Branch, as contributions to the economies needed to meet the RAF's manpower target. It was agreed that both measures should be specially discussed by the Air Council.⁴¹ Suitably edited, the memorandum to the Air Council was sent to Mr Sandys on 25 June accompanied by a letter from the Secretary of State.⁴² These serve as a basis for reviewing the framework of policy within which plans were currently being made for each RAF Command.

b. **Bomber Command.** By the middle of 1957 the V-bomber was still well short of its planned strength of 23 squadrons (184 UE). The main component was 7 squadrons of Valiants, with the first squadrons of Vulcan and Victor Mk 1 expected to be in service by the end of the year. Expansion to the full force of 23 squadrons was phased over three years and the proposed composition by 1961 was 3 squadrons of Valiants, 5 of Mk 1 Victors and Vulcans, 10 Vulcan Mk 2 and 5 Victor Mk 2. As Mk 1 aircraft were replaced by Mk 2, the Air Staff planned to convert Mk 1 aircraft into tankers though with some uncertainty about how many tanker squadrons could be afforded. A further use of Mk 1 Valiants was to replace the Canberras in Bomber Command hitherto assigned to SACEUR; SACEUR had by now agreed that 3 squadrons of Valiants would eventually replace 4 squadrons of Canberras and that, despite the smaller numbers (offset to a large extent because each Valiant would carry two kiloton weapons), the change would significantly improve the strike forces available to

³⁸ Mr Peter Thorneycroft.

³⁹ AC 14(57) Item 1.

⁴⁰ Pp. 54-57 above.

⁴¹ The Council later decided that both should be retained. The thinking behind the intention to disband the RAF Regiment is an example of an over-rigorous application of the logic of deterrence, and of a failure to appreciate the value of the Regiment if the RAF was to play its part in peacetime policing and internal security operations overseas, especially as the Army, which might otherwise have assumed the RAF Regiment's duties, was to be much reduced in strength. Similarly, second thoughts showed that the case for retaining the Airfield Construction Branch, mainly for abnormal tasks which would be difficult or impossible for civil contractors, was extremely strong.

⁴² AHB ID6/R.D. 1956/7/3.

him. This change was consistent with the intention to use Mk 1 V-bombers, whether or not formally assigned to SACEUR, against peripheral targets, leaving the more heavily defended and longer-range targets inside the Soviet Union to the later marks of Vulcan and Victor. It was consistent as well with the transfer of resources, in the interest of building up the V-force, from the Canberra force in Bomber Command; this, under the plan the Air Council sent to the Minister of Defence, was to be reduced to 4 squadrons by the beginning of 1960. To complement and support the strike force of V-bombers and Canberras the plan provided for 5 squadrons of V-bombers and Canberras for PR and special duties such as nuclear monitoring.

At this date, June 1957, Ministers had not endorsed a particular size of strike force. Important progress had, however, been made in Anglo/US co-operation. The disinclination of the American authorities to enter into combined planning, which CAS had reported to Ministers during the summer of 1956,⁴³ had since been overcome. These developments had been reported to the Chiefs of Staff by CAS in December 1956,⁴⁴ by which time he had received the text of a formal agreement which the US government was prepared to accept. This committed the US authorities to furnish the RAF with American atomic weapons in the event of general war and to co-ordinate the nuclear strike plans of the two air forces. It offered a basis on which detailed Anglo/US plans could be made, both between the RAF and USAF for strategic air operations and with SACEUR for operations primarily against targets important for defence against a land offensive. The new British administration moved with some speed to accept and ratify these arrangements: Mr Sandys wrote to this effect to the US Secretary of Defence, Mr Charles Wilson, on 30 January 1957, and the President and Prime Minister confirmed the agreement later at their conference in Bermuda in March. Thus, the emphasis in the Defence White Paper of 1957 on nuclear deterrence had a solid basis in agreed Anglo/American policy, though much remained to be done to express this in terms of agreed concepts of operations and plans for their execution as well as in the supply and storage of US weapons to supplement British stocks.

Agreement over the supply of nuclear weapons ensured that American kiloton weapons would be available for the RAF strike aircraft supporting SACEUR and that any shortage of British megaton weapons for the V-force could be made good.⁴⁵ But there was no weakening, at this stage, in the resolve of Ministers to have an element of nuclear capability that would be totally independent of US assistance. Indeed, the need for a means of deterrence independent of the United States is apparent in the attitude of Ministers to the Thor project. By mid-1957 arrangements for its adoption by the RAF had reached the stage at which the Air Council's June report to Mr Sandys could assume that 60 missiles would be deployed in Britain, as part of Bomber Command. From the outset of negotiations Ministers were exercised over the terms of control of the missile. They recognised that their American colleagues could reasonably insist on a veto on the operational use of the missiles fitted, as they would be to begin with, with American warheads; this was no more than the counterpart of the longstanding agreement under which United States bomber aircraft based in Britain could be operated only with the consent of the British government. But against the possibility that British warheads might be fitted, an attempt was made, without success, to persuade the Americans to agree that in those circumstances the British would have unrestricted control.⁴⁶ The episode underlines the intention of British Ministers at this time to maintain an independent British deterrent as

⁴³ Ch 2, p.27.

⁴⁴ COS(56)451 of 31 December 1956. Papers on the detailed staff work which led to the initial Anglo/US agreement are to be found in AHB ID9/240/16 Pt 3, ID6/R13A, Pts 1 and 4. COS Folder 8/33 Vol. 1 is also relevant.

⁴⁵ Looking ahead in 1957 it was estimated that about 40 British megaton weapons would be available by the end of 1960, by which time over 100 Mk 2 V-bombers were expected to be in service. A substantially larger number of kiloton weapons would have been produced.

⁴⁶ The issues are set out in the record of a meeting under the Prime Minister on 30 May 1957 (GEN 570/2nd Meeting). Mr Sandys thought that Mr Dulles and Mr Wilson had accepted the British proposition in discussion but a letter registering this understanding had not been acknowledged. The US authorities in any case had little long-term interest in Thor. They saw it primarily as a political counter to the missile achievements of the Soviet Union; and they were anxious to achieve the quickest possible deployment in Europe, despite its inadequacies as a deterrent weapon.

the means of deterrence moved from aircraft to the ballistic missile and also their interest in a less expensive option to the continued development of BLUE STREAK.

Whatever the future possibilities of deterrence by ballistic missiles, reliance on Bomber Command as an independent deterrent raised the question of what would be the optimum targets if, against the expectations, deterrence failed. While this might be a scenario of last resort (so much so that at least one of the Chiefs of Staff could bring himself to contemplate it only in retaliation for nuclear attacks on Britain) it was one that the Chiefs of Staff could not ignore, especially since so much concern had been expressed by CNS and CIGS at the possibly increasing reluctance of the United States to use its own strategic forces as Russian nuclear capabilities improved. The answer to the question, as the Air Staff saw it and as CAS put it to his colleagues during 1957,⁴⁷ offered little comfort to any who were inclined to underrate the realities of the British position: it was that the only target system the attack of which might foreclose Russian aggression was centres of population. The alternative of destroying Russia's nuclear capabilities would be an impossible task for Bomber Command alone. Successful attack of Russian ballistic missile sites would be difficult; there were several hundred potential airfield targets; and even the smaller number of airfields - between forty and fifty - which were fully developed and organised for long-range bombers could not all be destroyed. So when CAS's memorandum was sent to Mr Sandys, the point was emphasised that Russian cities were "the most effective target system for our limited resources".

The greater part of the memorandum concentrated on the still daunting but, it was hoped, more relevant question of the best use of the Anglo/American nuclear strike forces, operating under a co-ordinated plan. On this basis, the total resources were considered sufficient for comprehensive attacks on all major target systems; and those targets which had to be hit in a first strike if the war was to be finished quickly and damage to the NATO countries kept as low as possible were identified. In this category came bomber bases, missile sites and major transportation targets, as well as centres of population. Submarine bases appear to have been regarded as difficult targets; submarine communication centres might be more usefully attacked. Bomber losses of about 50% - this was Sir Frederick Brundrett's assessment - were likely (this was a higher loss rate than was currently assumed to be achievable against the Russian bomber force if it attacked Britain). Even so, the capabilities of the combined deterrent forces were such that there was no significant change at this time in the intelligence assessment that the Soviet Union was unlikely to embark on a course of action that would be bound to lead to global war.⁴⁸ In short, in 1957 the deterrent against global war was considered credible at the time and for the succeeding five years; developments thereafter were matters of speculation rather than reliable intelligence. Nor was there any reason to believe that the British element of nuclear deterrence would not be satisfactorily provided by the V-force, with Thor missiles becoming available in the second half of the period and, though more doubtfully, BLUE STREAK towards its close; and by 1961 the first mark of powered bomb - Blue Steel - was expected to be in service, offsetting the expected improvements in Russian SAGW defences. This was undoubtedly the view which Mr Sandys took, though he had battles still to fight on the precise size and composition of the V-force. He agreed as well with the Air Staff view that the V-force would be more effective if it could pose a threat from airfields outside Britain. Mafraq in Jordan, which had such a purpose, was no longer available by the summer of 1957,⁴⁹ but he was in favour of providing nuclear facilities in Cyprus and Singapore.

⁴⁷ COS(57)208, discussed at COS(57)72nd Mtg, 23 September 1957.

⁴⁸ An assessment by the JIC in September 1957 (JIC(57)62(Final)(Revise) is typical of intelligence appreciations at this time. Global war was considered unlikely. The Arab/Israeli situation continued to be worrying, and there were local dangers in South Arabia as well as the endemic problems of Kashmir, the Horn of Africa and Vietnam. But on the whole the world scene was relatively peaceful. Political instability, encouraged by subversion, rather than armed conflict, was the main threat.

⁴⁹ RAF units had been withdrawn from Mafraq and Amman by September 1957.

The basis for planning the build-up of Bomber Command, as seen in the summer of 1957, could thus be regarded as reliable. Difficulties of detail, unavoidable in any major programme, would no doubt arise but the strategic purpose of the bomber force seemed assured; its working relationships with the American strategic force and SACEUR could be developed with confidence; and its aircraft and equipment and the whole organisation behind the front-line squadrons, could be optimised for an identified range of operational tasks. Not least important was consistency of purpose between the Command and the Minister of Defence.

c. **Fighter Command.** The position of Fighter Command was in sharp contrast. Its star had been descending before the Macmillan administration came into office; and the concept under which it was considered part of the nuclear deterrent rather than a force to defend the whole of the United Kingdom had emerged from the Policy Review discussions of 1956. It was in keeping with all that had gone before that one of the early decisions of Mr Sandys was to cancel OR329 - the proposed all-weather interceptor - and at the same time cancel the SWALLOW research project on which Dr Barnes Wallis was engaged and reduce by half the current rate of expenditure into supersonic flight.⁵⁰ The Air Council accepted this decision without protest. CAS had reservations to the effect that cancellation of OR329 should not be taken to imply that an advanced fighter would never again be needed. Air Marshal Pike, the AOC-in-C Fighter Command, made similar observations in a report made in 1957 to the Chiefs of Staff. There were, however, a number of reasons why Air Ministry policy was to take the form more of a rearguard action to maintain a smaller Fighter Command than of a positive claim that air defence on a large scale was crucial to defence policy.

The determining belief underlying Air Ministry policy was one consistent with that of the government, namely that war, at any rate in the NATO area, was something to be deterred, not fought; that if deterrence failed there would be no avoiding rapid escalation to nuclear operations, which would be short-lived; and that in a situation where resources were scarce, priority had to be given to the bomber force as the prime means of deterrence. At the turn of 1956, in the context of reductions in the British contribution to NATO, the US Secretary of Defence had offered to transfer the aircraft and equipment of a complete wing of USAF fighters (F86D) to the RAF, an offer politely refused on the grounds that resources to man this force could not be spared.⁵¹ In the even more austere conditions which the new government was imposing, decisions about priorities were unavoidable if the books were to balance. Against the prior claims of Bomber Command and, to a lesser extent, of Transport Command more resources for Fighter Command could only have been found at the expense of overseas commands which themselves offered little scope for economy. Nor was there any inclination on the part of the Chiefs of Staff Committee to argue in favour of a strong Fighter Command, even though those who tended to play down the crushing effect of the nuclear dimension, and who therefore did not rule out the possibility of a conventional conflict with Russia, ought in logic to have been disturbed by the prospective decline of fighter aircraft. That this kind of consideration did not arise is a comment on the limitations of the horizon of the Chiefs of Staff as a collective body. It also indicates the strictly limited setting in which the fighter debate was conducted. The only issue that was addressed was the importance of the interceptor fighter for defence against nuclear attack; and it seemed clear to all concerned - Ministers, military staffs, civil servants and scientists - that the fighter must eventually become secondary to SAGW. The main consequential issue was how the changing balance between diminishing numbers of fighters and increasing SAGW capabilities should be phased. It was generally assumed that if problems of phasing arose which required the introduction of an interceptor to replace the Javelin the aircraft would be obtained from America.

Requirements for air defence outside Britain scarcely affected this line of argument. In 1957 2TAF was planned to be by 1961 a force without interceptor fighters. The fighter forces envisaged elsewhere for air defence were not large enough to justify the development of a new interceptor

⁵⁰ This decision was communicated in a minute from Mr Sandys to the Minister of Supply - now Mr Aubrey Jones MP - of 8 March 1957.

⁵¹ There is an indication in one of the briefs provided for Mr Macmillan's use at the Bermuda Conference in March 1957 that the US Government would have been willing to replace these F86Ds with F100s.

fighter; insofar as the peacekeeping role might require a new general purpose fighter - with the emphasis on ground attack rather than interception - the prospect was of adapting existing aircraft or of developing a relatively cheap 'colonial fighter'. In the terms in which the fighter question was considered in 1957 it would have been irrational to have continued with the development of a high-performance, all-weather interceptor fighter; its continuance could only have been argued on a combination of desirable research and an insurance against the unforeseen.

A new fighter was one thing; the size of the fighter force with its existing equipment and weapons under current development was another, and the Air Ministry defended its plans as best it could. The Air Council's June plan envisaged Fighter Command comprising by April 1963 seven squadrons of Javelins (112 UE) and thirteen of Lightnings (164 UE). SAGW defences by that date would consist of seven sites equipped with Stage 1 Bloodhound missiles and the first six sites of the successor Stage 1½ missile, for which a nuclear warhead was ultimately intended. The system would provide nearly 700 launchers and over 800 missiles. Beyond the five-year period, the prospect, though not yet a firm costed plan, was of the Javelin force wasting away as SAGW defences were further improved.⁵² This was to come under heavy attack before the end of 1957.

d. **Coastal Command.** The nine LRMR squadrons (67 UE) in Coastal Command at the beginning of 1957 were to be reduced under the Air Council's plan to six squadrons (36 UE) by 1960.⁵³ The case for this reduction was not argued when the plan was submitted to Mr Sandys; nor was the case against it when what was essentially the same plan had been embodied in the report on the 380,000 force which the Chiefs of Staff had submitted. But that there was concern in certain quarters over the extent of the reductions there is no doubt. SACLANT was told of it in the spring of 1957, which only served to strengthen the views against the extent of British reductions in maritime power which he had been expressing for some months. Lord Mountbatten, as CNS, had offered his support on more than one occasion in Chiefs of Staff discussion if the Air Ministry chose to make the case for a larger LRMR force. There was concern as well within the RAF; and the essence of the problem was expressed in an exchange of letters between the AOC-in-C, Coastal Command and CAS in March.⁵⁴

The C-in-C's departure point was his concern that an even smaller force was planned than had seemed likely as a result of the 1956 Policy Review (when, for example, the Air Council's response to Sir Walter Monckton's directive of August 1956 had assumed a Coastal Command front-line of over fifty LRMR aircraft). But the size of his force was not the C-in-C's sole concern; and his letter deserves to be quoted for what was at once a view of the maritime problem and a plea for an ordered study to be made of the resources to be devoted to it and how those resources should be allocated between various weapon systems:-

"..... what does disturb me is my growing conviction that we are not planning our maritime forces of the future to the correct balance. The Admiralty naturally are still primarily concerned with surface ships and carrier aircraft and unless some overall authority can really decide whether these are more important than long range maritime aircraft, I feel that there is a grave danger of Coastal Command whittling down to a completely ineffectual force to cope with the still increasing threat of the Russian submarine. The essential point is that the Atlantic lifeline needs to be protected and only a well balanced and efficient team of A/S ships, M/R aircraft and SSK submarines can hope to achieve this.

⁵² The Air Ministry memorandum to Mr Sandys (p.60 above) assumed that the Javelin force would be eliminated by 1964 'in phase with the build-up of SAGW'. The Air Staff were at this time envisaging a final total of 30 SAGW sites, each with 60 missiles. Four sites would be equipped with nuclear-tipped missiles but it is not clear whether these were to be additional to or included in the 30 sites. These assumptions had not in 1957 acquired the status of a firm plan.

⁵³ The plan also provided for a meteorological flight (5 UE Hastings) and a search and rescue (SAR) flight of 8 Whirlwinds. There was also a squadron of SAR helicopters (16 UE Sycamore) in Fighter Command at this time.

⁵⁴ AHB ID3/902/10 (Pt 2). Air Marshal Sir Bryan Reynolds was AOC-in-C. Coastal Command at this time, a post he was to occupy until 1959.

I presume that these new patterns of forces have been accepted at Chiefs of Staff level but I would ask whether in fact the Chiefs of Staff are adequately informed of what is required to fight the maritime war as a whole. To reduce the problem to simple terms -the threat today is estimated at being about three and a half times as great as in 1939 and just over twice as great as in 1945, and this makes every allowance for our better equipment today. This is, of course, on the assumption that the enemy submarine forces will either be deployed or in transit to their war stations on the outbreak of war.

I would have thought that before a decision to so drastically reduce our long range maritime aircraft was taken, a study would have been made by the Air Sea Warfare Committee. As far as I know this Committee which used to be headed alternatively by VCNS and DCAS has not met for two years. The fact that this Committee has not met for so long has I think also led to a lack of co-ordination in respect of, and decisions for priorities for development of weapons and search equipment required to fight the maritime war".

CAS's reply offered no comfort or encouragement:-

"I am sure you will realise that this has been done only after very considerable thought and as the direct result of ever increasing pressure to economize both in men and material. The White Paper on Defence which will be issued in the course of the next week or two will show you the background against which we have had to prepare our plans for the future Royal Air Force, and you will, I think, appreciate that the situation which the White Paper will paint is, from the point of view of the resources available to the Royal Air Force, even worse than that which existed when Plan L was approved by the Air Council.⁵⁵

We are, of course, entirely governed by the overall policy laid down by our political masters. While I do not want to anticipate the White Paper I think I can safely say that it will show clearly that global nuclear war would have catastrophic results for the United Kingdom, and that the tasks of our Armed Forces will be to play their part with our Allies in preventing war, in resisting aggression and in defending and preserving order in British colonies and protected territories. In terms of your Command this means, to put it bluntly, that it has a pretty low priority and that its size will virtually be the minimum which it is considered that we can get our NATO allies to accept. Similar considerations will govern the size of our naval forces designed specifically for global war. In fact, as far as the Navy is concerned, the emphasis will be on the part they can play in cold and limited war.

I realise you will find this letter disappointing and sympathize with your feelings which must be very similar to my own - I have spent much of the last year fighting to preserve the fabric of the Royal Air Force as a whole".

While a letter of this kind cannot be regarded as an ex cathedra pronouncement of policy, it reflected an Air Staff view of strategic priorities⁵⁶ which was by now deeply embedded, all the more so as it was believed to be consistent with that of the government itself. It is not surprising, therefore, that CAS saw no need to respond to the C-in-C's suggestion of a special study of the maritime problem. As far as the Air Staff were concerned, the size of Coastal Command would depend on what could be afforded when needs of higher priority had been met. Moreover, even if it had been financially practicable to do more for the Command, there was no prospect of providing forces adequate to fight successfully the war of attrition which would be required to counter a Russian submarine offensive; as another senior member of the Air Staff was to put it a few months later, "we cannot afford even in the whole of NATO to produce anti-submarine forces to match the threat and it seems to me that our only way of winning the next war is to avoid it altogether and only the worthwhile deterrent can

⁵⁵ Plan L - more precisely, "Provisional Plan L" - had been approved by the Air Council at its meeting on 9 February 1957. The front-line under this plan was that described at pp. 55-56 above. Its provisional nature lay in restricting the executive authority to maintain the prescribed force to a strictly limited period - for example, up to September 1960 for the provision of equipment.

⁵⁶ The reply to Air Marshal Reynolds' letter had been submitted in draft by ACAS(P) and was agreed with virtually no amendment.

achieve this."⁵⁷ But if this was the honest view of the Air Staff, it remained the case that the importance of NATO's capability at sea was still an area of disagreement and uncertainty within the Alliance, as indeed it was, as the Defence White Paper publicly admitted, within British defence circles. And as CNS, no less than CAS, regarded it as part of his duty to fight "to preserve the fabric" of his Service, it was not to be expected that the low priority which RAF policy accorded to maritime warfare would go unchallenged. The Air Staff were not blind to this risk, and realised that it could involve a challenge to deterrent strategy as they interpreted it; but they fought shy of taking an initiative over maritime forces which might bring the challenge to a head. Whether this was wise may be doubted; it was understandable in that consideration was urgently being given in 1957 to the future role and composition of the Navy, and the Coastal Command proposal for a special study of anti-submarine defence might have been ill-received as tending to delay. On the other hand, the outcome of the consideration of the future Fleet included a decision to give priority in the NATO sea areas to anti-submarine warfare; this decision was not based on recommendations of the Chiefs of Staff nor one informed by such results as might have flowed from a joint study of the best means of achieving the most effective anti-submarine capability that could be afforded - the issue which Air Marshal Reynolds had raised. The impression which was unfortunately made on those who were alarmed by the growth in the submarine threat was that the RAF, at any rate at its highest level, had no great interest in Coastal Command. The reckoning for this lay some distance in the future but it might have been avoided if the Coastal Command suggestion has been pursued.

e. 2TAF. The restriction of the RAF in Germany to a nuclear strike and reconnaissance force had emerged from the 1956 review. As things stood in the following year the implications had not been formally communicated to SACEUR or any other NATO authority for the good reason, from the British point of view, that this would only have compounded the difficulties that had already arisen over the plan to halve the 1956 front-line strength of 2TAF - some 400 UE reduced to 216 UE by as early as March 1958. The difficulties were primarily political (but with some practical aspects, such as the timings of withdrawal from RAF-occupied airfields), reflecting a concern, which German Ministers were not slow to express, at the effect of substantial British reductions on public opinion. Significantly, the WEU Council at a meeting in March 1957 had recommended to the North Atlantic Council a proposal by Dr Adenauer for a new review of Alliance defence policy,⁵⁸ including two questions which could have an important bearing on what size and composition of British forces should be stationed on the European mainland. One was the relationship between nuclear and conventional forces and weapons and, secondly, how current problems arising from the stationing of forces in other member states might be overcome. SACEUR himself was worried at what he considered the excessive rate of reduction of 2TAF in relation to the planned expansion of the German Air Force; and British Ministers were requested by their WEU colleagues to arrange for Canberra and fighter squadrons based in Britain to be detached to 2TAF under a regulated rotation scheme. Canberra rotations presented no difficulty as the Canberras of Bomber Command were seen primarily as a force for the support of SACEUR. Fighters were a different proposition, not because rotations would have been impracticable but because CAS would not countenance even short-term subtractions from a fighter force for ADUK which was planned to be severely reduced in size. Ministers did not press him to agree, though not so much for the reasons that were cogent to CAS as because of the implied acceptance of the view that continental air strength was being unduly weakened.⁵⁹

⁵⁷ AHB ID3/902/10.

⁵⁸ According to General Norstad, the German Government hoped that a further review would produce so overwhelming a case for retaining large conventional forces that Britain would not only refrain from making further reductions but would restore those already made (Note by Sir Richard Powell on talks with SACEUR in May 1957 - AHB ID3/303/7(Pt 1)).

⁵⁹ SACEUR had also proposed that part of the Army Strategic Reserve should be stationed in Germany. This too was turned down, after consideration by CIGS and Ministers.

Against this political and military background, any intimation to NATO in 1957 that the plan for 2TAF involved halving the 215 UE force would have been to court political trouble. German objections would have been particularly serious; for them, a force without interceptor fighters and concentrated on the nuclear strike and associated reconnaissance role would have been doubly wrong. Nothing was therefore said about the plan until some time into 1958 but equally no change was made to it. Thus, 2TAF was planned to run down by April 1961 to 10 squadrons (102 UE), comprising four of Canberra bombers (B(I)6/8), four of Canberras (PR 3/7 and PR 9) for medium-range photographic reconnaissance and two Swift (to be replaced by Hunters) FR squadrons. Such a force was consistent with the concept of deterrence as the Air Staff understood it and which British Ministers had attempted to embody, with less than total success, in the revised NATO political directive. But as with so many other features of the 380,000 force structure it had not been subject to any inter-service examination such as was open to the Chiefs of Staff to arrange. The plan carried a number of important implications. One was that its Canberra bomber component, while having a conventional as well as nuclear capability, was in no sense a force that could provide close support for ground forces conventionally engaged. For this kind of support, which could only be regarded as unimportant on a view of trip-wire strategy which was not shared by all the allies, BAOR would have to look elsewhere than the RAF. Similarly, 2TAF would be unable to make any contribution to air defence as part of NATO shield forces intended to discourage and if necessary counter any attack or probing incursion by conventional forces. On the other hand, as the Air Staff saw it, it made sense, granted the shortage of resources, to concentrate on providing a nuclear capability which at this stage was not possessed by the other European air forces in NATO. As planned, 2TAF could be regarded as an appropriate if unbalanced contribution to the air forces of ACE which, taken together, were balanced in their capabilities. The planned withdrawal of fighters is, however, notable because the United Kingdom remained formally responsible, to quote the directive to the C-in-C, 2TAF, "for the control of the western side of the border which previously formed the eastern boundary of the British occupational zone, and for dealing with the Soviet authorities on questions of incidents of an international character arising on that sector of the border."⁶⁰ However reasonable was a policy of reducing 2TAF in phase with the expansion of the German Air Force, it provided no answer to the question of how, without interceptor fighters, British responsibilities for the air control of part of the eastern frontier could be fulfilled.

f. **Transport Forces.** Air transport policy, as it had developed by 1957, embraced the transport forces in overseas Commands as well as those in Transport Command itself. Indeed, its scope was wider still since the total resources which could be called upon, without the use of emergency powers,⁶¹ for the maximum possible airlift included Shackletons of Coastal Command and the civil aircraft under charter for routine air trooping for all the Services. Both categories had been used in the movement tasks required by the Suez operation. The total resources available in mid-1957 for a major peacetime emergency comprised, allowing for routine unserviceability, some 20 Hastings, 10 Beverleys, 5 Comet 2's and 11 Valettas from Transport Command; 30 Shackletons from Coastal Command; and a further 29 civil aircraft diverted from routine trooping. Such a force had some obvious inadequacies. Its variety of types was inherently inefficient; it was in general technically inadequate; the Beverley was proving a disappointing heavy lift aircraft over long distances; and its medium range component of Valettas and civil Vikings could make little or no contribution to some of the more taxing contingency tasks. Overall, however, it had a substantial and reasonably flexible

⁶⁰ This responsibility derived from the immediate post-war arrangements made by the Occupying Powers for the control of Germany. It was one of the provisions for the rights and responsibilities of British forces in the Federal Republic of Germany that had been ratified in the Bonn Conventions of May 1952 and the Paris Agreements of October 1954. Copies of successive (and largely unaltered) directives to C-in-C 2TAF are in AHB ID3/907/5.

⁶¹ A range of emergency powers for mobilising the resources of the British civil air transport industry in war or grave national emergency was available under the Civil Aviation Act 1949 and the Army and Air Force Act 1955. A later statute, the Air Corporations Act 1967, has strengthened these powers in some respects.

capability,⁶² and provided a solid basis of experience and organisation for the future improvements in air mobility which were regarded as crucial to the success of the White Paper policy. The report of the Bingley Committee, set up by the Chiefs of Staff in July 1956,⁶³ coming as it did at the end of 1956, was a timely focus for the extent and character of these improvements. This report is notable not only for its substance but as one of the few attempts by the Chiefs of Staff at this time to produce an inter-Service answer to a question of future force structure and capability.

The Bingley Committee completed its task before Mr Macmillan formed the new government in January 1957. Nevertheless, its analysis of the air transport task and its recommendations for the future size of the air transport force showed an appropriate realism about the resources that were likely to be available. The report set out the ideal air transport requirements, though even these were based on a sober view of likely as distinct from theoretical tasks, and then proceeded to recommend what it considered could be afforded and at what risk. It assumed that the country would not become involved in limited war in more than one area at one time and accordingly defined the determining requirement as the ability to move specified forces from all three Services to the Far East within seven days. These were, for the Army, a spearhead brigade with its light equipment and a number of specialist reinforcements, which would require 54 Britannia sorties for the move to Singapore; for the Navy, a modest reinforcement of officers and ratings for the Far East Fleet, requiring 12 Britannia sorties; for the RAF, equipment and accompanying technical personnel to support the move of four V-bomber squadrons (or a force of similar size), requiring 34 Britannia sorties. Calculated on this "ideal" basis, a force of 64 Britannias would be needed to complete the task within a week. The Committee's view was that so large a force could not be afforded and proposed a force of half its size. This would be able to move about half the reinforcing elements of each Service within a week but would take up to a month to complete the task. The assumption that heavy equipment for Army reinforcements would be pre-stocked was important because this involved a change in current Army policy. The choice was made clear: pre-stocking would be expensive but much less than the aircraft that would be needed if smaller overseas garrisons were to be effectively and quickly reinforced.

A similar analysis was made of the air transport required to move reinforcements to deal with a serious internal security situation in the Far East, as distinct from limited war. If the latter contingency was ignored, the Committee estimated the required force as 26 Britannias. This allowed for part of the force to be retained for some of the normal transport tasks which it would not be sensible to abandon in an internal security emergency: air trooping, medical evacuation, operational exercises, support of GW and nuclear tests, VIP flights and numerous other occasional commitments. The Committee stressed the need for the earliest possible introduction of the Britannia as the only aircraft with the necessary range for strategic movement;⁶⁴ otherwise it accepted the need to make do with aircraft already in service or about to come into service. Apart from the requirement for 32 Britannias, the report argued the case for 48 Beverleys, 38 Twin Pioneers and 12 Bristol 192 helicopters (Belvedere) as the force needed for theatre transport tasks - tactical support and heavy equipment lift - allocated equally between Britain and the Middle East and Far East. The inadequacies of the Beverley were recognised, and until such time as a better aircraft became available the Hastings was considered an acceptable alternative for some of the Beverley tasks. A replacement for the Valetta, as a general purpose transport within theatres, was not expected to be in service until 1962 at the earliest.

⁶² Various combinations of force could be assembled, depending on the nature of the contingency. Over half the force could be available within three days and the whole force in just over a week.

⁶³ Ch 1, p.15.

⁶⁴ The Comet 2 had been in service in Transport Command since July 1956, and was doing well. But it was lacking in range and its useful life was expected to come to an end in 1960. In the event, like many other successful aircraft, it remained in service for non-standard tasks until well into the seventies.

Operating policy, as well as the capabilities of the air transport resources currently available, underlay what was a novel feature of the Bingley Committee's recommendations: only part of the total force should be within the RAF; the rest should be operated by a civil consortium. The Air Staff favoured a concept of military air transport designed to achieve a rapid response from a force of given size to any emergency demand that might be placed upon it. This postulated a mode of peacetime activity which continuously left something to spare for intensive operations, with crews trained to operate at the extremes of airmanship and thus needing an allocation of aircraft time and resources for this purpose. Such a concept was difficult to reconcile with the optimum performance of routine air transport tasks, air trooping in particular, where the test of efficiency is maximum use of the minimum number of aircraft. It was this difference which had led increasingly in the 1950s to the use of civil aircraft for most of the air trooping task;⁶⁵ yet such aircraft could in emergency be used to assist in the movement of reinforcements. The Bingley Committee had therefore to consider the extent to which the air transport force might in future be provided respectively by the RAF and civilian agencies. Clearly, theatre air transport forces had to be wholly military.⁶⁶ The question of how long-range, inter-theatre transport might best be organised turned on the Air Ministry's assessment of the size of Transport Command on the assumption that it was not used for regular trooping or any other routine task which would provide suitable tasks for civil companies. The Air Ministry's answer was two squadrons of Britannias (each of 8 UE). This was in fact the long-range component of Transport Command which had been in mind for some time and, as such, was related more to the re-equipment needs of Transport Command than to a precise assessment of the tasks which only a military air transport force could undertake. It was, however, acceptable to the Bingley Committee as a force of substantially improved capability which could fulfil all normal tasks demanding military as distinct from civil aircraft and many contingency requirements as well. The Committee took into account the objections to the use of civil aircraft and crews in the sensitive nuclear and GW area, including the transport support of the V-force and other front-line squadrons, and the difficulties that could be encountered in flying civil aircraft into airfields that might come under attack. Otherwise, there was much to be said for continuing to use civil aircraft for the bulk of the routine air trooping task; and it was on this basis that the Committee recommended that a civil consortium should be formed to operate up to 16 Britannias, making up the total of 32 aircraft which would meet the determining limited war contingency. The capital costs of the consortium aircraft would be raised by the operators and it was proposed that, in return, regular work for up to five years for a proportion of the aircraft would be guaranteed. The rest of the aircraft would be available for commercial work but on the understanding that the whole fleet would be available within seven days for a major peacetime emergency. Three Britannias (built to civil not RAF standards) already on order for use by the Ministry of Supply were seen as the first element of the consortium fleet.

The formation of a consortium and the proposal to divert to it the three MOS Britannias were to run into difficulties. Nevertheless, the Bingley Committee report, which the Chiefs of Staff endorsed in February 1957, registered some important and enduring necessities of air transport policy. One was the importance of a long-range component of high-quality aircraft for strategic movement, complemented by civil aircraft for much of the routine air trooping task; and another was integrity of control of the strategic air transport force and the air transport forces within overseas theatres.

This thorough examination of air transport forces was duly reflected in the Air Council's plan of June 1957. Transport Command was planned to have two squadrons of Britannias by April 1961 (by which time the Comet 2 was expected to be out of the line); it would also have three squadrons of Beverleys and two of Hastings (40 UE together) and a light support squadron of 6 Twin Pioneers.

⁶⁵ In 1954/55 14% of passenger movements by air for the three Services was undertaken by Transport Command, 86% by civil charter. In 1955/56 the Transport Command contribution had fallen to about 8%.

⁶⁶ The Committee recommended unequivocally that responsibility for theatre air transport should remain with the RAF, even for the light transport aircraft and helicopters which would be mainly engaged in supporting the Army in the field. This was in effect a judgment on a longstanding Army claim, though not one which had been pressed in recent years, to be given control of transport aircraft in combat zones.

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Pioneers. No provision was made for air transport in 2TAF but a Hastings squadron was allotted to Cyprus and another to Aden together with 12 Pioneers and Twin Pioneers. For FEAF the plan provided for a squadron of Hastings, 12 Belvedere helicopters and 12 Twin Pioneers. The total force differed only in minor detail from that recommended by the Bingley Committee; and just as plans for Bomber Command could be made and developed with reasonable confidence that military and political views would harmonise, so could those for air transport forces. But there were the inescapable problems of detail. The Air Council considered it necessary to discuss the choice of the Britannia as an aircraft which would have to remain in service in the long-range role for many years.⁶⁷ The options were set out by DCAS in April 1957 in a note for the Council.⁶⁸ The case for confirming the choice of the Britannia was strong because orders had already been placed for sufficient aircraft to form and support one squadron. Nevertheless, alternatives such as the Comet 4 and Vanguard were considered but with the clear conclusion that benefits of greater speed were more than offset by the all-round merits of the Britannia (in its strengthened RAF version) as a carrier of freight as well as passengers. A more debatable question was whether to add to the order already placed for Proteus-engined Britannias or to replace the Proteus with the Orion engine. Despite the usefully improved performance that might have been possible with the Orion - additional range of between 500 and 800 miles and some 50 knots improvement in cruising speed - it was eventually decided that the extra cost could not be justified. Extra range was not all that significant. When the development of Gan had been completed various operational route patterns were available through the Middle East and on to the Far East, all of them well within the capabilities of the Proteus-engined Britannia. To overcome what was considered, in 1957, the worst case of a barrier to air movement between Libya and Syria, there were a number of routes which promised to be politically secure and practicable for the Britannia and, though not without payload penalties, for other transport aircraft. Outflanking the barrier to reach the Gulf and Southern Arabia was possible either north and east over Turkey, Iran or Iraq, or west and south over Africa. The longest stage length on any of these routes was under 1700 nautical miles. The longest route involved a wide sweep to the west through Gibraltar, Dakar, Kano, across to Nairobi and thence to Aden and the Gulf.⁶⁹ But secure and efficient air movement from either East Africa or Southern Arabia to the Far East depended on Gan. Until its completion, and on the assumption that there would be political objections to using airfields in India and Ceylon, emergency reinforcement would be difficult and slow.⁷⁰ By the end of 1957 Gan had reached the stage at which the airfield was usable by aircraft up to the size of the Valetta, but it was not expected to be fully operational until 1960. Only then would the air transport route to the Far East, and any movement of reinforcing operational aircraft as well, be reasonably satisfactory. Moreover, a formal agreement with the Maldivian Government for the development of Gan had not yet been completed, as had been expected. Local politics, which were affected by the acceptability of projects such as Gan in a notably austere Muslim community, had delayed, and were to continue to delay, its conclusion. The eventual agreement, covering an initial term of 21 years, was not signed until 1965 even though the construction and operation of the airfield went ahead with the consent of the Maldivian authorities.

⁶⁷ AC11(57).

⁶⁸ AC(57)23. The decision to have a wholly Proteus-engined Britannia fleet was delayed until January 1958 after much time and effort had been wasted on misconceived claims for the advantages of the Orion engine.

⁶⁹ A longer route still - through Gambia, Sierra Leone, Ascension Island and South Africa - was possible, but as a last resort and only for long-range aircraft.

⁷⁰ The original Air Ministry plan for a secure Indian Ocean route involved the construction of an airfield at Coetivy in the Seychelles as well as at Gan in the Maldives. The Coetivy proposal was abandoned in 1960, to save money. How badly not only Gan but a modern long-range transport aircraft was needed is illustrated by the contingency plan to send five hundred specialist personnel to Singapore in the event of a serious industrial dispute. These were to be flown from Britain to Mombasa. Eight Hastings would then have flown 160 men to Singapore, via Mauritius and the Cocos/Keeling islands: the rest were to go by cruiser, taking ten days for the journey.

g. **Middle East Air Forces.** The air transport component of the RAF in the Middle East has been described in the section above. The remaining forces have to be considered in the two geographical areas, north and south of the air barrier, where British forces were already separately organised and controlled for day to day purposes, although full separation of forces in the Gulf and Aden from the parent Middle East Command was still some time ahead. This separation reflected some differences of purpose. North of the barrier the British bases in Libya, Malta and Cyprus supported forces whose main tasks were to assist in protecting the southern flank of NATO and to support the Baghdad Pact: those in Aden and the Gulf were there for more exclusively British purposes - the protection of colonial territories or dependencies or of states which looked to Britain for their security. Yet in strategic terms the separated forces had the same broad purpose of contributing to the general stability of the region, not least in the interest of guaranteeing oil supplies. Middle East security, as perceived by the British, has set different problems at different times. In the circumstances from 1957 onwards, the problem which the British government had set itself was to maintain security with smaller forces than previously at a time when the apparent dangers were greater and showed no signs of diminishing. One point became clear in 1957: the mounting of another operation in the Middle East on the scale of Suez would hardly be practicable once the Services were entirely manned by regulars.⁷¹ An alternative policy of minimum use of force was inescapable, but not entirely because only small British garrison forces would be available. Suez had seared the collective mind of the Chiefs of Staff who were disposed to agree with what General Keightley had written in his report on that operation, "world opinion has become a principle of war".⁷² Hence their frequent emphasis at this period on the need for the goodwill of local populations, the need - in Oman for instance - to improve the effectiveness of local forces, and the dangers of assuming that strategic facilities could be maintained in colonies after independence.

Altogether the Middle East presented a deeply perplexing picture in 1957. The only hopeful development was the signs that the United States, concerned at the post-Suez situation, was attempting to make a more positive contribution to the stability of the region. The Eisenhower doctrine, enunciated in January 1957 as a declaration of American interest and aims, was less than clear on what the United States would actually do in various possible contingencies;⁷³ but coupled with the political and practical support which the US Government was giving to the Baghdad Pact, it offered possibilities for the military as well as political co-operation so conspicuously absent at the time of the Suez operation.

North of the air barrier the Air Council's plan envisaged various forces. In Malta, one squadron (8 UE) of LRMR Shackletons was to be retained: nothing else - an under-strength squadron of Meteors (NF13) was still in Malta in 1957 but was planned to be withdrawn by April 1958. The Shackleton squadron's main task of reconnaissance and ASW operations was in support of SACEUR, day-to-day control being exercised through the C-in-C Mediterranean Fleet, but it was also used for detecting arms smuggling into Cyprus and was allotted two additional Shackletons to help it cope with what was a heavy burden for a single squadron. A much larger force was planned to be kept in Cyprus which had a triple strategic significance. First, it provided a base for a force of Canberras with kiloton weapons, which was seen as the most effective military contribution that Britain could make to the Baghdad Pact. Secondly, it added usefully to the directions from which V-bomber operations could be launched and thereby increased the defensive burdens of the Soviet Union and her allies. It

⁷¹ A question on this point was put to the Chiefs of Staff by Mr Sandys soon after he became Minister of Defence. Their answer was that "it would not be wise to say that an operation like Musketeer could be undertaken with an all-regular force of about 375,000". Mr Sandys did not challenge this view.

⁷² A consequential point that need not be pursued here, though it was one to which the Chiefs of Staff, and notably Sir Gerald Templer, repeatedly drew attention and on which they were never content, was the importance of non-military means of countering political aggression and subversion.

⁷³ The complexities of Middle East politics and alignments at this period are well described in Survey of International Affairs 1956-58 by Professor Barraclough.

was thus important to NATO as well as the Baghdad Pact, and this was reflected in the responsibility which fell to the RAF for operating NATO-financed radar facilities in the island. Thirdly, and in the more narrowly British interest, it still had an important place in plans to deal with numerous contingencies which could arise in the Middle East, both north and south of the air barrier. Without such an intermediate point between Britain and the Middle East larger garrison forces would have been necessary if the policy which the British government intended to follow in the region was to stand any chance of success.⁷⁴ The air forces planned for Cyprus matched, up to a point, the policy: four squadrons of Canberra bombers (32 UE), one for PR (8 UE PR9) and one squadron of Hastings (8 UE).

How far Cyprus would be a secure base was, however, a worrying question. In 1957, and until the Zurich Agreement of February 1959 between Britain, Greece and Turkey, the political future of the island was a major pre-occupation. As events developed in 1957, the beginnings of a solution began to emerge at the price, in Britain's case, of surrendering sovereignty over most of the island - a sovereignty which had become increasingly difficult to maintain, with no prospect of it becoming easier as the Army reduced to its planned strength. That full sovereignty should be retained was the consistent recommendation of the Chiefs of Staff Committee, on the argument that the facilities of the whole island needed to be controlled if it were to function as a major base from which operations of significant size could be launched. Ministers were not impressed by this (which in any case ignored the importance which the Chiefs themselves attached to local goodwill and co-operation), partly because the political imperatives were overriding but also because they saw that the military value of Cyprus was mainly as an air base. This was the consideration that determined the location and extent of the larger of the two sovereign base areas (SBA) - that at Episkopi which embraced Akrotiri airfield - envisaged in the Zurich Agreement. The decision to retain additional facilities at Nicosia, outside the Episkopi SBA, was inescapable, granted the size of garrison air force and the amount of air traffic that might be generated by the kinds of contingency envisaged elsewhere in the Mediterranean and the Middle East. Akrotiri and Nicosia, together with access to radar and other signals facilities elsewhere in the island, constituted adequate means by which Cyprus could play its part in the exercise of air power; they were a realistic compromise between the military ideal and what was politically negotiable. The second SBA at Dhekelia was needed to accommodate an adequate army garrison, primarily for internal security but potentially useful as the first echelon to deal with local emergencies elsewhere in the region. But it made increasingly less sense from 1957 onwards to continue to regard Cyprus as a base for a substantial Army in the Middle East. The appointment in 1960 of a RAF officer as Commander-in-Chief in Cyprus, as well as Administrator of the SBAs, was no more than a belated reflection of strategic priorities which had existed for some time.⁷⁵

An obvious lack in Cyprus, under the June 1957 plan, was fighter aircraft. To some extent the gap could be filled by rotating squadrons from Fighter Command. Plans to improve the airfield at El Adem in Cyrenaica, approved in 1957, were in part based on the need to facilitate the movement of fighters from Britain to Cyprus. But the Air Staff, on balance and despite the prospective reduction in total fighter strength, considered that there should be a resident squadron against a possible threat from Egypt and Syria as well as to enhance the security and credibility of the Canberra strike force. The issue was considered by the Air Council in November.⁷⁶ A final decision was not taken at that meeting but opinion was moving in favour of a resident squadron; and a squadron of Hunters

⁷⁴ Professor Barraclough argues (Survey of International Affairs 1956-58, p.215) that the importance of Cyprus had diminished after Suez because of the air barrier and that this was one reason for the efforts made in 1957 to find an acceptable political solution to the Cyprus problem. There is, however, no evidence that British Ministers attached less strategic value to Cyprus because of the difficulties of flying the direct route to Southern Arabia and the Gulf. These enhanced rather than diminished its importance.

⁷⁵ A COS memorandum annexed to a paper put by Mr Sandys to the Defence Committee in 1957 (D(57)25) said: "The RAF Commander in Cyprus will be the symbol of the British contribution to the Baghdad Pact. The Baghdad Pact plan hinges on offensive air action for which the largest contribution is supplied by the Royal Air Force. The single inter-Service commander should eventually be a RAF officer in the rank of Air Marshal".

⁷⁶ AC 27(57).

(16 UE) was in fact established at Nicosia by April 1958. An improvement in the radar cover provided by the RAF station at Cape Gatar (a second at Cape Greco was financed by NATO) was put in hand, with the unbudgeted expense offset by adopting a less ambitious plan for radar cover of Malta. There was no assurance of LAA defence; but there was a reasonable expectation of some SAGW defence later on. Thus the essentials of an air defence system for Cyprus were restored; that its fighter component could not in the event always be provided by a resident squadron was due to demands that arose elsewhere in the Middle East.

One further component completed the range of RAF capabilities in Cyprus. This was a larger than normal helicopter squadron (12 UE Sycamores) based at Nicosia, with most of its effort allocated to internal security and the rest to SAR. Its size represented the Air Ministry's response to a powerful appeal in 1956 from the Governor-General⁷⁷ for additional helicopters for what was to prove the crucial period of anti-EOKA operations in 1956 and early 1957, the success of which was an important factor in ending the political stalemate. Better though the prospects of peace seemed to be there could be no question of withdrawing this squadron. It kept its place in the Air Council's 1957 plan but somewhat reduced in size (7 UE).

Elsewhere in the Middle East the existing strength and deployment of the RAF in mid-1957 were earmarked for improvement in the 1957 plan. Aside from a flight of communications aircraft at Bahrein all squadrons were concentrated at Khormaksar in Aden Colony: two of Venoms, one of transport aircraft (Valettas) together with 6 Pioneers and 3 Sycamores, a half-squadron of Shackletons (capable of a wide range of support operations as well as maritime reconnaissance) and a communications flight. The Air Council planned to replace the Venoms with Hunters by April 1958 and the Valettas with Hastings by the same date.⁷⁸ There was also an arrangement (which came into effect in January 1958) for a Vampire squadron from the Royal Rhodesian Air Force to be stationed at Khormaksar from time to time. The light transport resources were to be increased to 12 Pioneers and Twin Pioneers. The total planned changes amounted to a modest improvement in capability, contrasting with the substantial reductions to be made in Fighter Command, Coastal Command and 2TAF in Europe. War affecting Europe was something to be deterred; war, if only at a low level, in the Middle East was only too likely. There had been incursions on the Yemen/Aden Protectorate frontier and trouble in Oman in 1955 and 1956. In the post-Suez situation the question was not whether further problems of this kind would occur but when and where. Oman provided the answer in June 1957 when armed opposition to the reigning Sultan was resumed.

In a region as large, inhospitable and under-developed as Southern Arabia as important a consideration as the size of the air force garrison was the availability of suitable airfields, for the movement of troops as well as aircraft - between Kuwait and Bahrein at the head of the Gulf to Aden at the southern entrance to the Red Sea, and between Aden and Kenya which was emerging in 1957 as an increasingly important base for the support of the Middle East south of the air barrier. The locations of existing RAF airfields in the Arabian peninsula were well suited to a policy based on minimum garrison forces and therefore demanding maximum mobility within the region.⁷⁹ Going anti-clockwise from Aden to Kuwait, the airfields at Riyan (Aden Protectorate), Salalah,

⁷⁷ Field Marshal Sir John Harding was Governor-General of Cyprus from October 1955 to October 1957. He personally made the case for more helicopters at a meeting in London with the Chiefs of Staff in June 1956 (COS(56)56th Mtg).

⁷⁸ In the event, it was to be January 1960 before the Venom was replaced. Some of the delay was due to trials in mid-1958 in which the Hunter, Gnat and Jet Provost were evaluated for their suitability as general purpose aircraft in the environment of Southern Arabia. The Hunter promised to be the best aircraft but further delay arose from a range of modifications needed to meet climatic and other operating conditions. The Hastings plan was also changed because the requirements for theatre transport, as difficulties developed in Southern Arabia in 1957 and 1958, were better met by a mixed force of Beverleys and Valettas.

⁷⁹ Airfields and landing strips for the close support of internal security operations were a separate problem. How this was solved during operations on the Aden frontier and in Oman is described in Air Chief Marshal Sir David Lee's book 'Flight from the Middle East' (HMSO 1977).

Masirah and Sharjah (Oman) and Bahrein, none at a greater distance from its neighbour than 350 miles, provided a convenient and flexible system of intra-theatre communications. Hargeisa in British Somaliland was also useful as a link between Aden and Kenya. Aside from Khormaksar and Bahrein, none of these airfields was capable of operating Hunters, but decisions to improve and lengthen runways could not be taken until the replacement aircraft for the Venoms in Aden had been determined. A decision was, however, taken by the Air Council early in 1958⁸⁰ to develop the airfield at Masirah, partly to improve its usefulness for operations in the Oman region but also to provide a high-quality airfield as a link in the Far East reinforcement chain.

In sum, the Air Force in the Arabian peninsula was in a reasonably satisfactory strategic position. The existing force provided a good range of capabilities, and airfields were suitably located to provide support for any reinforcements that events might call for. No changes were planned that would seriously weaken it; indeed, and consistently with the strategic importance of the region, some improvements were in prospect. Moreover, the special experience of the RAF in maintaining security in the conditions to be found in the region was reflected in its primacy in local command arrangements. In recent years the Army had become increasingly involved in the control of the Aden Protectorate and in assisting neighbouring rulers such as the Sultan of Oman. But Commander British Forces Aden was a RAF officer, an arrangement that was continued when British Forces Arabian Peninsula (BFAP), responsible directly to London, was first formed in April 1958.

h. **Far East Air Force.** The Air Council's 1957 plan involved a bigger impact on the resident forces in FEAF than on those in the Middle East. The main elements of the Command in mid-1957 comprised three squadrons of Venoms (one each in Hong Kong, Malaya and Singapore); three squadrons of Valettas in Singapore; the largest light transport force of any RAF Command - 28 Whirlwinds, 8 Pioneers and some of the last Dakotas still in RAF service; a substantial communications squadron; and the only remaining Sunderland squadron for maritime reconnaissance. The Royal New Zealand Air Force (RNZAF) contributed a Venom squadron, based at Tengah in Singapore. Even if the need for economy had not been so clamant a force so structured was bound to come under scrutiny because it reflected the special needs of the Malayan Emergency which by this time was almost over. What were seen as the determinants of the future were the size of the RAF contributions to the Commonwealth Strategic Reserve and to the air force on which SEATO could call. Australian plans to contribute a mixed force based at Butterworth in the north of Malaya limited the airfield accommodation available to the RAF. Moreover, Mr Macmillan's administration was no more inclined than that of Sir Anthony Eden to invest in the direct defence of Hong Kong.⁸¹ Air defence in particular was considered a waste of effort; and the withdrawal of the Hong Kong Venom squadron was an uncontroversial feature of the 1957 plan, at least in the London view. The most that was contemplated, or activated, after 1957 was the detachment of a token force of fighter aircraft from whatever was available in Singapore.

What sharply distinguished the Far East region from the Middle East was its greater political stability and less local hostility to the British presence. In 1957 negotiations were in train which, with relatively little difficulty, were to conclude the following year in the Anglo-Malayan Defence Treaty. Separately, an agreement on Singapore, providing for full internal self-government, was well in hand. This also came into effect in 1958 and gave the Services effective control and use of the base installations on the island. Internal security became the responsibility of the local governments,

⁸⁰ AC 8(58).

⁸¹ Hong Kong was outside the area covered by the South-East Asia Treaty: so any Chinese attack upon it exclusively would not have brought the treaty automatically into effect. Whether the United States would help in those circumstances was problematical. Some joint consultations on contingency plans took place at this time: indeed, an Anglo/American working group was agreed by President Eisenhower and Mr Macmillan at their Washington talks in October 1957. But no commitment to American action emerged from the subsequent discussions.

though not without contingent British assistance in emergency. In this respect the colonial territories in West Borneo and the close relationship with Brunei remained a British responsibility; and intelligence appreciations at this time showed awareness of potential trouble in these territories and on the Indonesian border. Nevertheless, the political developments culminating in the 1958 agreements enabled the emphasis to be shifted from responsibilities derived from sovereignty as a colonial power to those appropriate to a treaty relationship between friendly countries. RAF tasks reflected this change: air defence of Singapore and Malaya as part of the same purpose but also in support of SEATO; maritime reconnaissance; and airlift for forces within the theatre. The resident force envisaged in the Air Council's 1957 plan included a Canberra bomber squadron, providing some permanent strike capability in the theatre, supported by a half-squadron of Canberras for PR (a half-squadron of Pembrokes and Meteors was retained for various local PR tasks); one squadron of Hunters (16 UE), based in Singapore; one of Shackleton (8 UE) to replace the Sunderland squadron; one of Hastings (12 UE); a still substantial light transport force which was planned to be of two types only - 12 Belvedere helicopters and 12 Twin Pioneers - and some communications aircraft. Even with the RAAF and RNZAF squadrons the force was not impressive. It met little more than the commitment already made to the Commonwealth Strategic Reserve; and reinforcements would be necessary in any serious emergency. As early as March 1957 Mr Sandys agreed that SEATO should be told that FEAF would be reinforced by V-bomber squadrons - three squadrons were planned - in the event of aggression against the treaty area. The Commonwealth Prime Ministers' Conference in June was also told of this plan and of the intention to fly V-bombers to the Far East as a normal exercise to show the flag as well as demonstrate their reinforcement capability.⁸²

The Air Council encountered few difficulties in finalising its Far East plans. One problem was the location of the nuclear capabilities essential to a policy of deterrence to aggression from outside. There were arguments in favour of providing the necessary support facilities in Northern Malaya, some two hundred miles nearer than Singapore to the possible target areas; but there was no assurance that Butterworth, the only suitable airfield, would be available. Apart from the risk of overcrowding, once the RAAF plans for its use had been realised, there was no guarantee that the Malayan Government would agree to its use for nuclear strike operations if Malaya itself was not under attack.⁸³ On the face of it, facilities in Singapore, where there were no formal political restraints on their use, seemed the obvious answer. This was not assumed when the question was discussed by the Air Council in October 1957.⁸⁴ Despite the heavy expense, the possibility of extending an airfield in Borneo was considered as was acquiring facilities at a USAF base in the Philippines. The underlying worry was security of tenure in Singapore. On balance, however, and knowing that Mr Sandys was in favour of accepting the political risks, the economic and practical advantages of extending the runway at Tengah were regarded as overriding. Some of the cost, which covered the necessary nuclear storage and additional domestic accommodation for two V-bomber squadrons, was offset by a decision to base the planned Hunter squadron at Tengah rather than Seletar, where the runway would have had to be extended. PUS informed the Council that "the Ministry of Defence felt that the policy of deterrence and the maintenance of our influence in Malaya and Singapore required the deterrent to be seen". Seen it was to be in the years ahead, either through regular short-term visits by V-bombers from Britain or detachments for longer periods. The question of accommodation for a third V-bomber squadron was left open, though with the hope that if a third squadron was needed it could be accepted at Butterworth.

⁸² This policy for the use of V-bombers in the Far East is described in a memorandum by CAS to the COS Committee (COS(57)264).

⁸³ Britain had hoped that Malaya would become a signatory of the South-East Asia Treaty. This receded as negotiations continued on the Anglo-Malayan Defence Agreement, and was never to be realised. The diplomatic dovescotes fluttered in the summer of 1957 when Mr Sandys gave the impression, during a visit to Australia, that there would be no difficulty in launching nuclear strike operations from Malaya.

⁸⁴ AC 23(57) at which a memorandum on this subject by VCAS (AC(57)78) was considered.

The Air Council also addressed a second question, affecting the future equipment of FEAF but significant as well as an illustration of the way in which an apparently firm feature of equipment policy could become unexpectedly insecure. The acceptance of the Bingley Report and the acknowledged need for a substantial improvement in helicopter capability had together, by 1957, appeared to give the Bristol Belvedere an assured place in RAF plans. But DCAS was not convinced. He acknowledged that a better helicopter than the current Sycamore and Whirlwind was needed but had come to believe that the Sikorsky S.58 (the Wessex 1 when it later came into service in the Navy) had advantages over the Belvedere. His memorandum, setting out the case for each, was considered by the Air Council at a meeting in April;⁸⁵ and the memorandum and discussion so typically reflect the methods by which the Air Council reached conclusions on a major question of future RAF equipment that they are printed at Appendix D. The outcome was that the Belvedere remained in the Air Council plan, subject to confirmation by the DRPC, which was later received. In a situation in which the balance of military and financial advantage was difficult to establish, a decision against the Belvedere and in favour of an American-designed rival would have been difficult to defend, the more so as the Belvedere was well down the road to full development.

Conclusion

The future front-line strength of the RAF, in the Air Council's 1957 plan, amounted to about 100 squadrons with a UE of 990 aircraft - to be achieved by April 1961. It would be pointless to compare this force with the much larger force (though not in all respects more capable force) that was in being when Mr Macmillan became Prime Minister in January 1957. What is more significant is its close resemblance to the size and structure of the force adumbrated by the Air Council a year earlier.⁸⁶ The fact is that the process of reducing the RAF in size had begun well before 1957 and would undoubtedly have been given further impetus if the 1956 Policy Review had been completed while Sir Anthony Eden was Prime Minister. There are some grounds for the view that, in the event, the reduction of the Services might not have gone so far or been put through so quickly. But the imperative of manpower economy that determined the ending of National Service - one of the key decisions - was as important to Sir Anthony Eden as it was to his successor; and it is reasonable to conclude that he would have reached the same decision as Mr Macmillan. Moreover, in other respects besides National Service it is difficult to discern any substantial differences between what was emerging from the Policy Review of 1956 before it was effectively terminated and the policy set out in the 1957 White Paper. Both administrations perceived that to reduce defence expenditure meant reductions in the British contribution to NATO if the British position outside NATO was to be maintained. Both believed that these reductions were justified on strategic as well as economic grounds. To argue - as each did - that reduction in Europe would be offset by the growing strength of the British nuclear deterrent was much more than convenient negotiating tactics: nuclear capability was seen as the key to peace, or at any rate to avoiding global war, even if and when the Soviet Union achieved comparable capability. A second key, which it was hoped would keep the door locked against serious trouble outside Europe, was demonstrably improved mobility to underpin the reduced garrison forces which economy demanded. There were other important features of policy but these two - nuclear capability and improved mobility - were crucial to both the Eden and Macmillan administrations.

Measured against this policy, the Air Council could justifiably regard its 1957 plan for the RAF as an appropriate response, which is not to say that it was regarded as adequate in all respects: on the contrary, the Council was far from complacent. The escalating costs of new equipment were sufficient in themselves to put a question mark against the realisation of the plan. The risk that the plan would be vulnerable to economy was compounded by doubts about the wholehearted acceptance and application by the other Services, and indeed by NATO as a whole, of a deterrent-based policy. As the Air Staff saw the defence landscape, it contained too many features which would not be there, or would not be so prominent, if the new policy was properly applied; hence there was a risk that resources would be insufficient for those elements of the RAF on which the new policy depended for success. Against the counter-argument, of which something was heard during the 1956 Policy Review and more after the 1957 White Paper, that excessive resources were being devoted to nuclear forces, the Air Council could and did point to the relatively small proportion of total defence expenditure, and even of RAF expenditure, allocated to them.

⁸⁵ AC 9(57).

⁸⁶ Ch 2, pp. 36-37.

What is clear is that issues such as the allocation of resources between the different components of the RAF, or between the Services, were rarely illuminated by collective advice from the Chiefs of Staff, based on a thorough examination of all the implications of the policy that Ministers wished to pursue. Any serious student of the period must be impressed by the quality of much of the work of the Chiefs of Staff organisation: for example the objectivity of strategic appreciations, the comprehensiveness and detail of contingency planning and the firm control of operational activities. But on basic policy and its translation into force structures and capabilities the attitude of the Chiefs of Staff was essentially defensive: Ministers made most of the running. The Chiefs were in a difficult position. In their individual capacities as professional heads of their respective Services they were bound to try to limit the impact of new policy on their own Services and this almost inevitably made for an orthodox and less than forthcoming response at a time when radical thinking was called for.

As far as the RAF was concerned, the aims of policy were clear enough by the middle of 1957. The task thereafter was to achieve and sustain a force consistent with those aims in circumstances in which both manpower and money would be short. It is therefore necessary at this point to examine some of the management problems which had to be faced. These demanded as much thought and effort as had been devoted to the plan for the future structure of the RAF. The pressure could not be relaxed but if the verses at Appendix E are anything to go by the Air Ministry had not yet lost its sense of humour.

CHAPTER 4

DEFENCE WHITE PAPER 1957: PROBLEMS OF RAF MANAGEMENT

Introduction

The Air Council and its supporting Standing Committee constituted a working board for purposes of RAF management as well as general policy. Efficiently serviced, they were an effective administrative arrangement for ensuring that decisions were reached in a forum in which the interrelated aspects of policy and its consequences were represented. They were thus a co-ordinating and decision-making body, as well as the fount of authority for the Royal Air Force. Senior officers and civil servants were invited to their meetings whenever specially expert views needed to be given a hearing; this happened more frequently than usual in the period following the publication of the White Paper. Appendix F shows the main components of the departmental structure culminating in the Air Council.

The Council and Standing Committee met formally at least once a week in 1957 and reached decisions on a wide range of subjects. Some of these came up more than once during the course of the year; for example, a progress report on new weapons and equipment was submitted each quarter. Other questions — such as the design of uniforms, ceremonial occasions, the rebuilding of St Clement Danes as an RAF church — bore more upon the RAF as an institution than on its capabilities as a military force. What frequently determined the admissibility of subjects of this kind to the Council's agenda was political sensitivity; and if this was sometimes more akin to the parish pump than high policy it nevertheless derived from the Air Council's comprehensive responsibility for the well-being of the Service.¹ Even these parochial matters have their place in the complex and varied picture of a modern Air Force with, as was the case at this period, worldwide responsibilities, a full range of operational capabilities and a matching support structure. This was not a new situation but the problems which confronted the Air Council in the years immediately following the 1957 White Paper were aggravated by the multiplying effects of scarce resources, new and more technically advanced equipment and the special responsibilities which the new defence policy placed on the RAF.

The period was not one of significant change in the Whitehall organisation within which the Air Council had to operate. The Ministry of Defence, overseeing and to a substantial extent directing matters of general defence policy, was in a strong political position but remained a small department dependent on the Service Departments for much of its advice and support. Such organisational changes as were made strengthened the machinery available to the Minister of Defence but added little to his formal authority.² The efficiency and administration of the RAF continued to be the responsibility of the Air Council, though there were standing arrangements for joint consultation on matters where inter-Service uniformity was desirable or necessary, such as pay, allowances, standards of accommodation and conditions of service. The Principal Personnel Officers (PPO) and Principal Administrative Officers (PAO) Committees are examples.

¹ The range of subjects considered by the Air Council will be apparent from Appendix G which lists the memoranda formally submitted to the Council in 1957.

² The main changes, announced in July 1958 in a White Paper on the Central Organization of Defence (Cmnd 476) were, first, the formation of a Defence Board under the Minister of Defence consisting of the Service Ministers and Minister of Supply, the Chiefs of Staff, the Permanent Secretary MOD and Chief Scientist MOD; and, secondly, a change of status for the Chairman of the Chiefs of Staff Committee who became Chief of the Defence Staff, Sir William Dickson being the first appointment. There were also some changes in the arrangements by which the Chiefs of Staff collectively reported to Ministers. These changes were something of a mouse, considering the amount of attention that had been given to defence organisation in Whitehall; they were certainly far less radical than the Prime Minister and Mr Sandys had intended. The possibility of a more fundamental reorganisation, going as far as a unified Ministry of Defence, had moved the Air Council early in 1957 to set up a working party within the Air Ministry to examine the organisational principles of such a change. The working party concluded, with one dissident, that there was a prima facie case for it. Their report, which has considerable historical interest, is in AHB ID6/RD1957/5. A detailed description of the arguments for and against change which went on in 1957 and 1958 is contained in Ch IV of Mr C Wallworth's monograph, "The Impact of Financial Planning and Control on Defence Policies" (copy in AHB(RAF)).

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Not all the management problems which engaged the Air Council need be described: those directly arising from or aggravated by the new defence policy must be, as must those which bore upon the military capabilities of the RAF. Some themes can be identified without too much difficulty: they include the impact of policy on organisation and deployment particularly in Bomber and Fighter Commands; the challenge presented by technological advance, not least to technical management as well as training programmes for officers and airman alike; and, in all areas of management, the need to make economies in the interest of front-line strength. These themes are not distinct, and space does not permit as full a treatment as some might wish. But they can be discerned and are a guide to understanding what would otherwise be an excessively detailed picture.³ The scheme followed in this chapter, after describing first the redundancy problem which resulted from the new policy and then the first attempts of the Air Council to come to grips with the implications of an all-regular force, traces the effect of the Air Council's broad plan for the future size and shape of the RAF on the management areas for which members of the Air Council were responsible. Other schemes would be possible but the one chosen has the merit of reflecting the approach to management employed by the Air Council. The determinant effect — emphasised in an earlier chapter⁴ — of "squadron patterns" on plans for manning, equipping and accommodating the Service is an example of that approach in action.

Redundancy

One of the most urgent duties of the Air Council, as Mr Sandys' White Paper took shape, was to decide how to reduce the strength of the RAF from 228,000 in April 1957 to the planned figure of 148,000 in April 1962. Airmen were less of a problem than officers since the size of the National Service airmen entry could readily be reduced and the 1957 strength in regular airmen was in any case little more than would be needed in the planned all-regular force. In contrast, officer strength at the beginning of the 5-year period was over 25,000 and was planned to be reduced to about 21,000 by its end. Acquainting the Service with the dimensions of the redundancy problem yet at the same time allaying such fears as might be raised by speculations in the Press⁵ and elsewhere on the future of military aviation amounted to a formidable operation in public relations. The first steps were taken in March, and by the date of publication of the White Paper a letter approved by the Air Council was in the hands of all Commanders-in-Chief to help them to explain the extent and nature of the expected redundancies to their officers and airmen.

Detailed compensation terms for those leaving the Services prematurely were published in July; these were generally well received as fair and even generous, and special resettlement arrangements were made between the Service Departments and the Ministry of Labour. But uncertainty about the position of individual members of the RAF continued for some time because of the complexity of the task of producing a series of complementing⁶ plans for the 5-year period of the rundown, expressing these in terms of posts, ranks and trades related to the officers and airmen expected to be available. With all this was the further task of ensuring as far as possible that there would be satisfactory promotion and career prospects during the 5-year period and thereafter; this was important if the all-regular air force was to attract - and having done so, to retain - sufficient volunteers of the right quality. AMP was pressed hard by his Air Council colleagues to complete this difficult task quickly, one somewhat dubious consideration being that RAF redundancies

³ As a homely illustration of the complexity and variety of military management the author, at a time when he had responsibilities for civilian staff in MOD, used to tell new entrants that compared with the supply and maintenance organisation of any of the Services Marks and Spencer Ltd were 'the village shop'. Not long after, a prominent member of that firm was called in to advise on the future organisation of military procurement!

⁴ Ch 2, p33.

⁵ One of the sillier newspaper articles appeared in the News Chronicle on 10 April 1957. This said that the Cranwell cadets who had just graduated had no future in flying. A letter from MRAF Sir John Slessor in The Times on 11 April criticised the Press for its distorted reporting of the White Paper. Other opportunities were made or taken, in the Press and Parliament, to put the RAF future in perspective. What happened to those particular Cranwell cadets - No 69 Entry - is summarised in Appendix H.

⁶ "Complementing", ie the determination of the manpower needed for particular tasks, is here preferred to "establishment" - the traditional RAF term.

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should be announced before those of the other Services. This was rightly resisted and the three Services were informed at much the same time in September of the extent of the expected redundancies and how these were to be administered. There were inevitably differences of detail between the Services. In the RAF case the original intention had been to make all exits compulsory so as to have some control of the quality of those selected to leave. The arguments were nicely balanced but the political objections to what would have seemed an autocratic judgement were decisive, and the majority of redundancies in all three Services were of volunteers, though compulsory powers were available and were used in a minority of cases. There were also changes in an early plan to complete the programme of RAF redundancies within twelve months from the autumn of 1957. Uncertainty about the ultimate size of the Service, together with the inherent difficulty of estimating the manning requirements of each rank, branch and trade were arguments for spreading the programme over several years. In this respect, the Air Council's policy differed from that of the other Services and the decision to adopt it was not reached without argument within the Council. At the time of decision, up to 2000 officers and about 800 airmen were expected to be redundant, mostly nearing the end of their normal careers. In the event more than half were able to leave before the end of 1958, but the full programme was not completed until 1962.

Redundancy was to engage the attention of the Air Council from time to time in the post-1957 period but the essential decisions on how to deal with it had been taken by the end of that year. But the premature retirement or discharge of surplus officers and airmen only cleared the ground for tackling the wide range of problems associated with the efficient manning of the future RAF.

Need for Economy: Changes in RAF Tasks

The impact of the events of 1956 and early 1957 on RAF front-line strength has been described in the previous chapter. The pace had been such that not all the implications of the reduced front-line for the supporting structure of the Service could be identified and expressed in manpower and financial terms before the Air Council was obliged to put forward - as it did in June 1957 - what it is convenient to term the 100-squadron plan. But if many details remained to be considered one imperative was clear: major savings would have to be made in almost every aspect of organisation and support, otherwise even the 100-squadron plan was likely to prove too costly. Numerous studies of possible economies were made, over and above a close scrutiny of the costs involved in all proposals put to the Council. Two of these are specially important because they were directly commissioned by the Air Council. The first took the form of a committee on future service manpower requirements. This was set up as early as January 1957 and was known as the Spreckley Committee, after its chairman Air Vice-Marshal H D Spreckley. The second was led by Sir Folliott Sandford, a Deputy Under-Secretary in the Air Ministry, and dealt with Air Ministry organisation. Each was required to work quickly, and did so: the Spreckley Committee reported in April 1957 and the Sandford Committee, set up towards the end of 1957, in March 1958. Both committees took evidence from a large number of senior officers and officials; the Spreckley Committee, which had a wider range to cover, consulted outside business interests and also the USAF.

a. **The Spreckley Committee.** The short time allowed to this committee obliged it to concentrate on what it considered the key factors in supporting the 100-squadron force with a uniformed strength of no more than 148,000. It did not claim to have examined all the means by which savings might be made. Improved organisation, the substitution of civilian for service manpower, the use of civilian contractors for some of the work done within the RAF, and increased efficiency by means of techniques such as work study were the areas given most attention, for the good reason that by all the normal complementing standards a uniformed strength of 148,000 would be seriously inadequate to support the planned force. The committee was well aware of future uncertainties:

"the front-line to which we are working at the moment may have to be modified... our money allocation for future years is at best provisional... it is not certain that we shall in fact recruit [148,000]; there is also the possibility of arbitrary changes in our manpower allocation". This was realism and there were those who suspected that it would turn out to be prophecy as well. But the essential merit of the study, however defective its assumptions might prove, was put thus: "any change is worth making if it gives us either absolute manpower economy or financial saving without prejudice to the performance of the task, since it will enable us to increase the size of the front-line which we shall be able to support for a given sum of money. For example, a saving of 250 mechanics represents the

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annual amortized cost of a 'V' bomber". The Spreckley Committee's report⁷ to the Air Council deserves a fuller description than space will permit. Efficiency and economy had not suddenly become fashionable, and not all the possibilities exposed by the committee were new. But taken as a whole its conclusions were a challenge to the Air Council to think in radical terms about how the RAF could be most economically managed. Some of the recommendations were adopted; others were tried experimentally and then abandoned; some were applied on a smaller scale, or more slowly, than the committee proposed. In effect, a list of possible economies was produced which served as a guide for much of the effort to achieve greater economy that was to be necessary under the compulsion of financial restraint in the years ahead. The main features of the report were these:

Maintenance Command. This was seen as a prime candidate for reduction and re-organisation. If the new strategic principles were logically applied, equipment need not be dispersed over several locations so as to ensure its availability in a long war; "single point holding" would suffice. A number of depots could accordingly be closed and the two Groups currently supporting HQ Maintenance Command disbanded. Much smaller stocks of mobilisation equipment were called for under the new strategy, and little or no provision needed to be made for officers and airmen from home to man an expanded maintenance organisation overseas. Hence a majority of the Command's work force could be civilians, and any risk to efficiency from strikes and other industrial action should be accepted. The committee did not rate this risk highly, nor did the Air Council when it considered the point. In general, the proposals for reorganising the Command were accepted and put into effect. The expected savings amounted to over 5000 posts.

Technical Training Command. A question of organisation arose here, on which the committee could not reach a unanimous view. This was whether, as in Maintenance Command, the supporting Group headquarters — currently three but intended to be reduced to two — could be dispensed with. The number of officers and airmen receiving basic and technical training in the Command when the all-regular force had been achieved was expected to be about 14,000. Close supervision of their training would be necessary to ensure that what might be a relatively scarce commodity, the volunteer officer or airman, was not wasted; and it was argued that an intermediate level of control would be needed between training units and Command HQ. The Air Council agreed.

Civilianisation. In 1957 the Air Ministry employed about 110,000 civilians at home and abroad. The civilian proportion had been rising in Maintenance Command for some years past; about 40% of the instructors in Technical Training Command were civilians; and there were other areas, such as the RAF Record Office, where civilian staff were the majority. Leaving aside the Directorate-General of Works (DGW) and the Meteorological Office, which were wholly civilian organisations, the issue for the Spreckley Committee was how much more civilianisation was possible. It recognised that the process would be likely to go further if only because National Service was coming to an end, since the chances of getting enough volunteers to do the routine and sometimes unpleasant jobs on which some National Service airmen had been employed had to be regarded as slim. These ranged from "housekeeping" to the less demanding clerical duties. The committee recommended greater employment of civilians in a wide range of posts. Airmen should be concentrated as far as possible in "teeth" units, with civilians employed mainly in the "tail"; though even in operational areas some scope was seen for civilianising a proportion of the complement. Radio and radar technicians were examples. Increased civilianisation should be matched by an increase in supervisory posts, even though this would mean the surrender of officer posts by the RAF. The committee estimated that civilian substitution should be possible in over 4000 service posts by 1963. While this general approach was acceptable to the Air Council difficulties of detail were encountered, some due to the nature of certain posts, some to reluctance to accept staff who were not under military discipline, but

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AHB ID9/111/1 (Pt 3).

others for less defensible reasons.⁸ Moreover, the increasing tendency for the size of the Civil Service to become a political issue did not help the civilianisation process. Nevertheless, in what was a difficult and sometimes controversial area of management, the civilian proportion usefully increased as the rundown to an all-regular Service proceeded.⁹

Work under Civilian Contract. Some experience of the use of civilian firms for work normally done by the RAF had been accumulated before 1957. First and second line aircraft maintenance at two small units - the Fighter Command Communications Squadron and the Cambridge University Air Squadron (UAS) - had been undertaken well enough by this method. Its extension to similar units, of modest size and relatively uncomplicated tasks, was an obvious possibility. But a much more important experiment had begun in 1955 at No 4 Flying Training School, Worksop, where a contract had been made with Airwork Ltd to service and maintain the aircraft, motor transport and other equipment. A successful operation at a major flying training station, applied to similar units, could lead to excitingly big savings, not just in Service manpower but in money as well. The committee took evidence, considered the arguments, and produced a basis for policy: "there are, in general, greater objections to mixed Service/civilian manning where the civilians are employed by outside contractors than where the civilians are directly employed by the Air Ministry, since the conditions of service of the contractors' men are likely to be more strikingly at variance with those of airmen. Moreover, if work on a unit is put out to contract, then there will be some limitation on the mobility of that unit. As a rule, therefore, civilianisation by contract is best confined to those places where it is practicable to put to contract one whole block of work which impinges little, if at all, upon that part of the station run by the RAF, and is best limited to those units which are not mobile - in other words, non-operational units". The committee suggested that, if the Worksop experiment was judged sufficiently successful, conversion to contract servicing in Flying Training Command should be put in hand under a programme which it was recognised would have to be spread over a lengthy period. If to this was added a similar programme for units engaged in other kinds of non-operational flying, about 7,500 uniformed posts could be saved and costs would be halved.

These were controversial proposals. The Worksop experiment, as the committee itself conceded, had not yet proved itself. There had been faults on both sides. The Air Ministry's requirements had not been specified in the original contract as precisely as experience had shown to be necessary and too much had been expected of the contractor too quickly; on the other hand, the contractor could not provide a satisfactory service at the price he had quoted, inspection arrangements had been inadequate and there were cases of bad servicing. The contract had been amended in the light of this early experience (more than doubling the price) and the Air Council intended to review the contractor's performance on this revised basis later in 1957. In the event, the contract continued until Worksop was closed towards the end of 1958 as part of the contraction of Flying Training Command, the accommodation and facilities of the station being among the least satisfactory in the Command. This was no more than convenient: the truth was that the experiment was extremely unpopular in Flying Training Command for reasons which continued to influence the extent to which contract servicing was used in future as a method of cutting costs. Contract servicing and the training of young officers were held not to be compatible. There was more to this than flying training; it was essential that the whole environment of the station should make the right impression on those who were new

⁸ Engineering posts were amongst the most difficult to civilianise, for historical reasons affecting the general level of technical qualifications of the Air Ministry civilians working in this area. Civilianisation of posts in the equipment area, however, occasionally met with opposition on grounds that were arguably more emotional than real. It was said of one Director-General of Equipment, when he retired and took up a post as Secretary to an Anglican diocese, that he would be very shocked to discover that God had revealed himself as a civilian carpenter.

⁹ The most conveniently available figures showing the growth in civilianisation between 1957 and 1963 do not include the staff of DGW who were transferred from the Air Ministry when the Ministry of Public Buildings and Works was formed in 1963. On this adjusted basis RAF and civilian proportionate strengths were 74% and 26% in 1957 and 66% and 34% in 1963.

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to the Service. The allegedly slapdash attitude of contractor's staff to such things as cleanliness of equipment and workshops, and their easygoing relations with the pilots whose aircraft they were servicing gave quite the wrong impression. The whole arrangement made for friction between the station commander and the contractor. Faced with these arguments, but faced as well with the need to find economies, the Air Council did not repudiate the principle that contract servicing was suitable for general application at non-operational stations. Each case, it was recorded,¹⁰ should be considered on its merits. The fact remains that contract servicing was not again employed in a context similar to that of the Worktop experiment, though more contracts were entered into for servicing at UASs and communication flights.

Centralised Servicing. Even bigger economies were foreseen if centralised servicing was adopted throughout the RAF. The committee spent little time on this question, on which strong views were held on both sides, because it was already on the Air Council's agenda. It gave examples of savings already achieved and estimated that universal introduction before the end of the five-year rundown to the all-regular force would reduce the manpower requirement by up to 8,000 - mostly mechanics. The position in 1957, following earlier studies by an Air Ministry committee on aircraft servicing, was that Bomber and Fighter Commands continued to be convinced that first-line servicing should remain with squadrons. To centralise the task under station Chief Technical Officers (CTO) would be bad for squadron morale, deprive aircrew officers of training in leadership, and a serious disadvantage when a squadron had to move from its home base. The other flying commands at home saw no such objections, and the engineering staff at the Air Ministry were convinced of the need, producing startling examples of the greater efficiency and economy of centralised servicing. The Air Council proceeded with caution. It did not issue a direction to the unwilling Commands, where in any case trials of alternative servicing systems were in hand which had economy as the object without damaging squadron integrity. Progress in other Commands had been slow, and the Air Council thought that general introduction would be that much more readily accepted when success was apparent in one or more Commands. The subject has to be left at this point, with a continuing doubt about the contribution that centralised servicing would make to manpower economy.

Work Study As the Air Council was hopefully assuming that improved efficiency would reduce the manpower requirements of the all-regular force by about 5000 posts¹¹ the Spreckley Committee paid much attention to Work Study as a tool of management. The more enterprising sectors of British industry were by this time using Work Study on a big scale. It had been introduced in the RAF in 1956 but the need to set up an organisation under a Director of Work Study (DWS) at the Air Ministry, train officers and airmen as specialists in the various methods and techniques, and provide induction courses to educate RAF officers generally in the aims of Work Study meant that it was not until mid-1957 that means were available to achieve useful results. The Spreckley Committee recognised that as big an investment as some firms (ICI and Lyons were mentioned) were making in Work Study would not be justified in the RAF until there was greater assurance of good results. Moreover, it identified a difference between Work Study in the Service compared with industry. Whereas in the RAF the emphasis was on achieving greater efficiency with any manpower savings as a by-product, in industry the aim was more clear-cut and measurable - reducing the cost of the unit of production. The difference was significant and the Committee proposed that DWS should be given a directive to concentrate on those areas where the maximum manpower savings were likely at once to be achievable and necessary because they would be amongst the most difficult to man in an all-regular force: areas such as catering, the clerical trades and radar operators.

Overall, the Committee thought that the savings target of 5000 could be achieved if sufficient effort was applied and there was full co-operation from Commands and station commanders. In the event, progress to the target was disappointing. The Air Council reviewed results at intervals during 1958 and 1959, and it is clear from its discussions that Work Study in the RAF was hampered by a number

¹⁰ AC10(58). ¹¹ Ch 3, p58.

of difficulties, some of which were inescapable. Amongst these was the frequently changing nature of the tasks of stations and squadrons. Indeed, few areas in the Air Force displayed the relatively straightforward processes of industry. There were successes but it was significant that these tended to fall into two categories: the first was where the Work Study practitioners were called in to advise on an entirely new project (an example was the building of an extension to the passenger and freight section at Lyneham where useful manpower and money savings were achieved), and the second was where a specific and discrete function, such as the turn-round of a particular type of aircraft, could be analysed and studied on its merits (it was claimed that a Hunter turn-round team of 10 men - of eight different trades - had been reduced to 4 men). But Commands came under criticism for their reluctance to accept reductions in manpower complements even when these had been shown to be achievable. Commands tended to hang on to their allotted manpower especially when, as the run-out of National Servicemen got under way, shortages in a number of trades began to develop. It is difficult to avoid the impression that the Air Council at this particular period recognised that it was failing to put across the crying need for manpower economy to the extent that the circumstances demanded. AMSO, as the member of Council primarily responsible, had effectively lost hope by the end of 1958 of achieving the savings target allotted to Work Study. But those were the early days. Progress was bound to be slow at a time when the Service was undergoing major structural changes. The large and rapid contraction which was called for under the new policy, but accompanied by the introduction of much new equipment, was hardly the best time for hard-pressed commanders and their staffs to give the highest priority to Work Study. The Work Study gospel took time to be accepted but a sound organisation was established which achieved much if not all that, somewhat arbitrarily, had been expected of it; and the Service generally was becoming increasingly attuned to an austere approach to management.

WRAF Faced with the risk of unsatisfactory male recruitment, the Spreckley Committee and the Air Council were at one in hoping that the WRAF could play a bigger part in the all-regular force. In 1957 the strength of the WRAF was just over 4000. Greater reliance on women carried some disadvantages because average length of service was less than three years - a feature of WRAF service which altered little in the years ahead. But a large number of air force trades were open to women who indeed, were considered more suitable than airmen for certain duties - for example, as radar and air defence operators - and the Air Council would have been prepared to accept as many as 10,000 in the 148,000 force. The view of the Spreckley Committee was that 6000 was likely to prove the attainable limit. An Air Ministry attempt in 1957 to obtain equal pay for women in the Services was unsuccessful; and after a good response to begin with to improved but still unequal rates of pay introduced in 1957 WRAF recruitment returned for a time to a disappointingly low level. There was then a study, which the Spreckley Committee had favoured, of another potential source of recruitment: women and girls who might be willing to join the WRAF but not with the normal obligation to serve anywhere in Britain and overseas. As a result, a Local Service Section was formed early in 1959 with special conditions of service which allowed airwomen to live at home or in lodgings. Expectations were modest, not least because of the remote locations of many RAF stations. However, an improvement in WRAF recruiting in the later years of the decade, coupled with the reduction in total RAF strength, increased the proportionate contribution of the WRAF. Whereas in 1957 this represented less than 2% of total strength, by 1962, when the last National Service airmen were leaving, it had risen to 4% - nearly 6000 airwomen - which confirmed the Spreckley forecast.

Airmen - Entry and Trade Structure It was axiomatic that an all-regular air force would require major changes in policy for the entry, training and employment of airmen. For nearly 20 years the National Service system had guaranteed adequate numbers but the constraints, first of war and later of a maximum period of two years National Service, had limited the depth and range of training and subsequent employment that could sensibly be given. Hence the large number of trades in the RAF: no less than some 270, many restricted to a narrow range of skill. The Spreckley Committee concentrated on those aspects of the essential problem - how to attract a sufficient entry of good potential - which were most obviously within the competence of the RAF itself: a big increase (by over half) in the recruitment of boys and apprentices, especially since the high birth-rate

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of the early post-war years was by this time producing a large age-group of teenagers which would persist well into the 1960s: a new trade structure which would put the emphasis on wider and deeper skill - more fitters and fewer mechanics - and so reduce the number of trades and generally make for manpower economy; and more opportunity for serving airmen to be retrained as technical requirements changed. As a broad policy all this was acceptable. But it was not a comprehensive solution to the future manning problem and could not be achieved quickly. In particular, a new trade structure could not be introduced without much preliminary work of fearsome complexity, and it was not until 1964, and after much attention beforehand by the Air Council, that one was introduced.

Other Possibilities Some of the other economies proposed by the Spreckley Committee deserve attention, if only briefly, not only to present a fuller picture of its work but because, in some instances, they exemplify the inescapable conflict between ideal arrangements and those which were difficult to contemplate except in conditions of extreme austerity. In short, how far could efficiency or convenience be an acceptable casualty of economy. The answers suggested by the Committee in some cases stood the test of time, in others the Committee anticipated the future, in one or two the objectives of the Committee were secured by different methods. They included:

- (1) Abolition of Initial Training Schools (ITS) and the inclusion of this training in the syllabus of Flying Training Schools (FTS). The Committee merely put forward this possibility without a firm recommendation.
- (2) Elimination of Operational Conversion Units (OCU) with the operational training of aircrew becoming a task for front-line squadrons. The Committee recommended no change in existing policy but in effect put down a marker for its review if the front-line was reduced below a level which the Committee did not attempt to identify.
- (3) Elimination of Command Modification Centres.
- (4) Concentration of units on large stations and, within stations, the reduction of the number of messes (Halton at the time had no less than 10).
- (5) Reduction of so-called diversionary duties for airmen in technical trades: guard duties and combat training were examples. The issue involved was the extent to which the climate of the Service would alter for the worse if large numbers of airmen could make not even a pretence of being combatants.
- (6) Replacement of officers batmen by a money allowance - not the least controversial of the Spreckley proposals and one that was not effectively achieved until the 1970s. Consistently, the Committee drew attention to the scope for using labour-saving devices.
- (7) Greater use of the Air Ministry civilian constabulary in place of RAF Police.
- (8) Rationalisation of the strategic telecommunications of the three Services, a question already under inter-Service study.¹²

b. **The Sandford Committee on Air Ministry Organisation** The Spreckley Committee's work is best seen as a substantial contribution to a shopping list of economies that might be made in the support areas of the RAF. The same broad purpose of economy underlay the Sandford Committee, with the Air Ministry itself as the target. If the scope was less than in the RAF as a whole there was no less an incentive to economy, in part because of the understandable expectation that sacrifices within the Service should be mirrored in Whitehall and also because Ministers are more likely to gain political kudos by reducing the size of their ministries than by increasing them - a fact of British political life not all that consistent with a general tendency to demand more detailed and responsive administration from all sectors of government. That there could not be, and never had been, any

¹² This was being undertaken by the British Joint Communications and Electronics Board (BJCEB) which was considering the use of Cable and Wireless Ltd or similar agency for the technical maintenance of the Service networks. Rationalisation in this area was a slow process.

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valid ratio between the size of the Air Ministry and that of the RAF was no argument, in the post-White Paper climate, for leaving the Air Ministry alone. In any case, a review of its size and organisation was not only a political necessity; the British defence scene, and especially the organisation and use of air power, was changing so rapidly that the adequacy of the Air Ministry to carry out a steadily more complex task had to be examined. And precisely because the task was becoming more demanding, providing strong arguments for increases in staff in many parts of the Air Ministry, it was all the more necessary to see whether new disciplines could be imposed, priorities more clearly stated, and more efficient working arrangements introduced. Otherwise there was a serious risk that the Air Ministry would become scandalously large at a time when the size of the RAF was falling.

The Sandford Committee was composed of officers and officials serving at the time in the Air Ministry, and one AOC-in-C - Air Chief Marshal Sir Thomas Pike who was commanding Fighter Command and was to be the next CAS. Like the rest of the committee¹³ he had much experience of the Air Ministry and its workings. There were no members from industry or commerce, not because of prejudice - previous committees of this kind had included eminent businessmen and trades union officials - as because of the need for speed. As a generalisation, the value of the contribution that can be made by outsiders to this type of investigation depends on the time they can spend in learning about what is being investigated. Nor did the committee invite outsiders to give evidence, though it consulted widely within the RAF and Air Ministry. Insofar as many of the Sandford Committee recommendations were not acted upon, or only feebly pursued, they might have been more acceptable, or more difficult to oppose, if backed by distinguished opinion from outside Whitehall. On the other hand, the fact that in many respects the report was radical yet was the product of solid members of the Whitehall and RAF establishment indicates that the innovations it proposed were not irresponsibly recommended. The premature retirement of its chairman - to look after the finances of Oxford University - before its report was considered by the Air Council was regrettable. What makes the Sandford Committee worthy of attention is the philosophy of its approach as much as its particular recommendations. As a department of state the Air Ministry exemplified the contemporary bureaucratic problem of how to make and modify policy on the basis of adequate information efficiently obtained and presented by staffs which were bound to be large and difficult to control. Moreover, the Air Ministry had substantial executive as well as policy functions; it was the headquarters of one of the Services as well as a government department with relations with many other departments, Parliament and the general public. Also, defence is amongst the most wide-ranging of government activities - a microcosm of government. The regular attention that was given after 1945 to the best way of organising the defence function, while frequently triggered by the need for economy, reflected its inherent difficulty.

Early in its report¹⁴ the Committee dismissed the two extreme views of the functions and size of the Air Ministry: one, that it need be no more than a small policy-framing department, with the bulk of its executive and specialist functions hived off to subordinate formations; the second, that it was a direct product of the role assigned to the RAF by the government and of the parliamentary and financial system and that it could be changed only if there were changes in its task or in the structure and procedures within which it functioned. The first was regarded as erroneous because large blocks of executive work - largely financial but also to do with personnel - were undertaken as a headquarters function throughout the whole Whitehall system. If this objection might seem to beg the question of whether this was the only way of doing things, there was much force in a second objection, namely that the RAF was organised on a functional basis which meant that interchangeable resources of personnel and many types of equipment were best managed and allocated from a central point. The other extreme view was considered simply unacceptable because so many factors affecting work-load, size of staffs and methods and style of management were within the discretion of the Air Council to alter without prejudicing the Air Ministry's ability

¹³ In addition to Sir Folliott Sandford and Air Marshal Pike the committee consisted of Air Marshal Sir Owen Jones, Air Marshal Sir Gilbert Nicholls, Mr H T (later Sir Henry) Smith and Mr G S Whituck.

¹⁴ AC(58)38.

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to function as part of the machinery of government. It was accordingly to the internal economy of the Air Ministry rather than to changes in its essential functions that the Sandford Committee paid most attention.

The most striking feature of the development of the Air Ministry during and since the 1939-45 war had been the increase in the number of RAF appointments, nearly all filled by officers. At the height of the war RAF numbers showed a ten-fold increase compared with the position in 1939; civilian numbers had increased by less than three times. A ratio of 1:5 in Service and civilian strength had resulted and had continued throughout the post-war period. That there had been scarcely less than an explosion in administrative as well as technical complexity was undoubtedly true, and much of this was a fact of life which would not disappear. But how far it was self-generated by the staffs was a key question. This had to be tackled because nearly 1200 RAF officers were in Air Ministry appointments in 1957;¹⁵ there were also substantial numbers in the Ministry of Supply. Such a heavy investment in the Whitehall labour force, when total officer strength was due to fall to about 21,000 and, moreover, would have to be maintained by voluntary recruitment, cried out for reduction. But the need has to be seen in perspective. The best use of potentially scarce officers, particularly in the higher ranks (there were over 400 officers above the rank of squadron leader in the Air Ministry in 1958), as well as the more efficient conduct of business, was the object of the exercise rather than immediate savings in money. Costing as the Air Ministry did at this period no more than £10m a year, reductions in its staff could make a relatively modest contribution to easing the RAF's budgetary difficulties.¹⁶

The Sandford Committee's labours were summarised in some forty conclusions and recommendations; and it is necessary to describe and comment on only a few. The main theme was delegation of responsibility. Too much work was being done, and re-done to no good purpose, at too many levels: there should be "reductions in the scale of effort at present put into the performance of the basic task".

To give point to what would otherwise have been mere exhortation the Committee recommended that:-

- (1) It should be the aim to eliminate one supervisory level throughout the departments of the Service Members [of the Air Council] and to increase the span of control of supervisory staffs.
- (2) The use of the titles ACAS and Director-General should be discontinued, with a very few exceptions, and the title Director should in future be used to describe an officer of air commodore or air vice-marshal rank in charge of a well-defined area or field of responsibility.
- (3) Senior officers should only be interposed between directors and Members of Council where the burden of co-ordination falling on the Member of Council would otherwise be too heavy.
- (4) Similarly, deputy director posts (in the rank of group captain or air commodore) should only be interposed between branches and directors where the work load would otherwise be too heavy.
- (5) The aim should be to eliminate at least ten air rank and about forty deputy-director posts at present held by group captains.

⁽¹⁵⁾ There were fewer officers in the Admiralty (about 800) and War Office (about 1000). Differences of organisation in the three Services made direct comparison difficult but the appearance of things was against the RAF. On the other hand, the Air Ministry had fewer Service appointments at 2-star level and above than either of the other Service Departments.

⁽¹⁶⁾ Some qualification is necessary here because savings from personnel reductions are only achieved over a lengthy period sufficient, for example, for their effect to be realised in smaller numbers to be recruited and trained. The point is particularly important where reductions affect the size of the future aircrew training task.

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The Air Staff came in for rough treatment: "not well organised and is not fulfilling its proper role in relation to other parts of the Air Ministry and to Commands. It is urgently necessary to restore unity of organisation and doctrine to eliminate duplication of overlapping and effort". This kind of criticism was not well received and, since it bore upon the policy function, what lay behind it has to be described. The responsibilities of VCAS and DCAS were held to be not clearly defined. A number of ACASs had responsibilities to both VCAS and DCAS, though to whom was not always clear. There was a similar lack of clarity between the functions of ACAS(Policy) and ACAS (Operations). The appointment, in the recent past, of an ACAS for Air Defence had further confused responsibility for the key aspects of Air Staff policy. Among other features of the system which the Committee criticised was the diffusion of responsibility for training; and probably the most controversial of its recommendations was that DCAS should give up his responsibility for flying training and that AMP should become the single Member of Council responsible for training - technical and educational as well as for aircrew training. It is clear that the main argument that led the Committee to this conclusion was the need for DCAS to concentrate on operational requirements for aircraft, weapons and other equipment. Consistently with this crucially important task he would continue to be the member of Council to whom the Scientific Adviser to the Air Ministry (SAAM - not to be confused with Surface to Air Missiles) reported.

The Committee recognised that such a narrowing of the responsibilities of DCAS would add to those of VCAS. But provided sensible working procedures were introduced (and the possibilities were set out in some detail) the Committee saw this as a positive advantage; VCAS would become a true alter ego of CAS with a clear responsibility for the day-to-day activity of the Air Staff as a whole. As part and parcel of this philosophy, and in order to consolidate and clarify the arrangements for formulating Air Staff policy at the level below the Air Council the Committee proposed that the two appointments of ACAS(P) and ACAS(Ops) should be combined. This would have meant a large subordinate staff (there were over a hundred officers in the two areas) but the Committee saw no reason for this to continue if the principle of delegation was rigorously applied. This was stressed no less when the Committee turned its attention from the Air Staff to the other departments of the Air Ministry. Even PUSs department, which had been less affected by the administrative explosion, could make a useful contribution, to the extent of one two-star civil servant and up to six divisions at the next level.

There were features of the existing system on which the Committee could make no definite recommendations. To cut down the mass of paper work between Commands and Air Ministry was "highly desirable" but the best the Committee could recommend was that working parties should be set up to examine the problem. Nor did it have time to give as much detailed attention to junior staff as it had to higher levels of the organisation. These were embraced, however, in the proposal that a target should be set for reducing the size of the Air Ministry as a whole: 5% a year and not less than 25% by the key year, 1962, when the planned all-regular force was due to be achieved. Ground rules that would impose the necessary discipline were recommended. The final paragraph of the Sandford Report is worth quoting because it exposed both the main obstacle to a leaner and more efficient Air Ministry and the attitude of mind without which the obstacle would not be surmounted:

It may be thought that the general effect of our proposals will be to increase to an unacceptable extent the load falling on many senior members of the staff from Members of Council downwards who are carrying too heavy a load already. To this we would give the reply given to us by a number of witnesses: "If the load is too heavy, the remedy will lie in our own hands and it will be up to us to force the level of responsibility downwards".

There are difficulties in calculating the precise effect on the size of the Air Ministry of the impetus which the Sandford Committee tried to exert. Changes in accounting for staff and in function invalidate exact comparisons between the position in 1957 and in 1962 - the target year. Reduction there was, but by only about 9% compared with the 25% which the Committee considered achievable. The Air Council gave the whole subject much attention in 1958 and 1959,¹⁷ and indeed throughout the

¹⁷ AC 14, 18 and 26(58) and AC 5 and 9(59) are examples of Air Council discussions during this period.

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five-year period continued to keep an eye on what became known, with a touch of disparagement, as 'the numbers game'. Air rank posts - the popular political target - came down from 69 to 66: PUSs staff in comparable ranks was reduced by five. Reductions at these senior levels led to bigger reductions in supporting staff. What was most disappointing, at any rate to the Committee and to the Secretary of State for Air, was that little resulted from the Committee's radical proposals on the staff structure. The hoped-for elimination of one level of supervision was not achieved: the rigid hierarchy of ACAS (or Director-General), Directors, Deputy Directors and branch heads continued except in a few minor instances. DCAS was not relieved, and did not wish to be relieved, of his responsibilities for training; and although the post of ACAS(AD) was abolished the combination under one ACAS of both general and operational policy was strongly and successfully resisted. No significant delegation of functions to Commands was introduced. In general, the attitude of individual Air Council Members was that the current work load was too heavy for radical changes to be made. There was certainly too much to be done and too little time to do it; but the Sandford Committee's key point was that the situation would not improve unless methods of work were changed so as to require fewer staff. It seems fair to say that a more determined effort might have been made. Yet it is no less fair to say that the Air Council had at the time a formidable agenda of other issues which had more apparent importance for the economic management of the Air Force than the size of the Air Ministry

c. **Policy for Command and Group Organisation** With a substantially smaller RAF in prospect, changes in the organisational structure below the Air Ministry had to be considered. There was little scope for change overseas where the organisation was geographically based (unlike the functional organisation at home) and no bases were planned to be given up, with the exception of Ceylon. Some economies were nevertheless made in the three overseas areas - Germany, Middle East and Far East. By 1959 the two group headquarters - No 2 and No 83 - in RAF Germany had been disbanded, matching the substantial reduction in the size of 2TAF, as had the one group headquarters in MEAF. Following the same pattern, all RAF units in the Arabian peninsula were controlled from HQ BFAP in Aden. HQ FEAF was exceptional in having a subordinate group headquarters - No 224. This was needed because SEATO and other commitments could lead to operations elsewhere in the Far East that could not be efficiently controlled from Command HQ in Singapore. As these could be expected to involve the Australian and New Zealand squadrons in Malaya and Singapore a number of posts at HQ FEAF and HQ 224 Group were filled by RAAF and RNZAF officers.

It was the command structure in the United Kingdom that offered most scope for simplifying what was still essentially the system which had grown up during the 1939-45 war. It had altered to some extent in style as a result of the work of the Hollinghurst Committee in 1954¹⁹. In what was an important report this committee had argued for only three levels of management - policy (Air Ministry), executive management (Command Headquarters) and the operational unit (the RAF Station). Groups were considered unnecessary except in special circumstances: for example, where there was a substantial flying task to supervise or there were geographical difficulties (such as those just mentioned which justified a group headquarters in Singapore). Where groups were necessary their functions should be limited so as to avoid the evils of duplication of work at the different management levels, diffusion of responsibility and a tendency to over-centralisation affecting particularly the standing and effectiveness of station commanders. (In the context of the Air

¹⁸ One aspect of the Air Ministry's organisation which turned out to be beyond the control of the Air Council was its London accommodation. The Sandford Committee had hoped that it would be possible by 1963 to concentrate all the main policy branches in the Whitehall area, to the great advantage of efficiency and morale. General policy for the dispersal of Government departments, coupled with the accommodation requirements somewhat later of the unified Ministry of Defence, disappointed those hopes.

¹⁹ The Air Council discussed the report of Air Chief Marshal Sir Leslie Hollinghurst's committee at two meetings in 1955-AC9 and 10 (55). A copy of the report is in AHB ID9/950/1, Pt 3.

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Ministry's organisation much of the Hollinghurst philosophy was reflected in the report of the Sandford Committee; Air Marshal Sir Owen Jones was a member of both committees).

The recommendations of the Hollinghurst Committee had been accepted "in principle" by the Air Council but the immediate fruits were not all that abundant. The size of current tasks — and it is true that the Air Force in 1955 was still large — was deemed an obstacle to the abolition of all groups in non-operational Commands. Disbandment of two of the four in Maintenance Command and four of the six in Home Command was agreed; Flying Training and Technical Training Commands were left alone, as were the groups in the operational commands although their functions were reduced on the lines proposed by the Hollinghurst Committee. It was only as the pressures of the 1957 defence policy were felt that further structural economies were introduced and even then over a period which was to go well into the 1960s. There were some early moves. The decision to disband the remaining groups in Maintenance Command has already been mentioned; ²⁰ in addition, the Air Council agreed to disband one of the three groups in Technical Training Command and Home Command as well, distributing its duties among the remaining non-operational Commands. ²¹ The Air Council made heavy weather of the Home Command issue and the Secretary of State's patience (a quality with which he was well endowed) was sorely tried. Dismantling this Command, however, was not an easy task. It was administratively responsible for more RAF stations and units than any other Command, and though many of these were reserve units (and a re-shaping of reserves policy to conform with the new strategy was an obvious necessity) there were others of considerable and continuing importance: for example, the RAF Record Office, recruiting offices, hospitals, university air squadrons and No 90 (Signals) Group. It was also the Command most in touch with local communities throughout the country, not least through its oversight of the Air Training Corps (ATC) which had now become even more important as a source of regular recruits. There was much concern in the Air Council about the importance of keeping the RAF in the public eye as a force with a future, despite what was being said in the popular press; and a special arrangement for a separate headquarters within Flying Training Command — approved by the Air Council in October 1958 ²² to look after the interests of the ATC — was one of a number of consequences of this concern. Most of the functions of Home Command were distributed, after its disbandment in 1959, among the three non-operational Commands — Flying Training, Technical Training and Maintenance — or brought under direct Air Ministry control. Some thought was given to consolidating training under a single Command but the Council concluded that the burden would be excessive. What could not be added to an existing Command was control of the increasingly important activities of No 90 (Signals) Group, which became a separate Signals Command in November 1958.

The operational Commands presented a less complicated problem. Bomber Command needed its two groups — No 1 and No 3 — to control the expanding V-force and the forthcoming Thor missile force; indeed, the austerity of the Hollinghurst-type group was relieved by a number of extra staff posts. Fighter Command was currently no less of a size — over 30 squadrons and numerous other units — whatever the future might bring, to need its existing trio of operational groups, No's 11, 12 and 13. A fourth group, No 81, with its main task the control of operational training was disbanded early in 1958, and the operational groups took over its tasks. Coastal Command, small and planned to be smaller, presented a peculiar problem. By normal RAF standards its Command HQ and two group headquarters — No 18 (controlling units in Scotland and Northern Ireland) and No 19 (units in England) — were excessive. The groups corresponded, however, with the Navy's operational organisation and their staffs were not large. So, despite the need for economy wherever it could be found, the Air Council decided that there was more to be lost than gained by proposing structural changes which it was known the Navy would resist. HQ Transport Command, to complete the organisational picture, directly controlled its stations without subordinate groups, so no changes were called for.

The RAF Command and group structure, in the form it took by the middle of 1958, was to remain largely unchanged, except in Fighter Command, for the next ten years. It would be possible to

²⁰ P82. above. ²¹ Both decisions were taken at AC17(57). ²² AC22(58).

criticise the Air Council for not making even more radical changes; nor would this be hindsight since the creation of a single Training Command and other possibilities of economy which were not put into effect until much later were debated during the long hours the Air Council devoted to the future organisation of the RAF in the months following the 1957 White Paper. But substantial changes, with useful savings in future costs, were made. To have gone further could have involved risks to efficiency and morale at a time of worrying uncertainty. There were limits to the number of shocks which it was wise to administer.

d. **Economies in Support Functions.** In mid-1957 there were about 1700 operational aircraft in the RAF, a number which was planned to fall to about 1000 by the end of Mr Sandys' five-year plan. Supporting this operational strength was an even larger number of aircraft - nearly 2400 - for training, communications and miscellaneous tasks (TCM); and squadron patterns for the existing and planned front-line accordingly had their counterpart in TCM patterns for non-operational flying units. Together the squadron and TCM patterns were the principal determinants of the comprehensive plan. Economies in TCM activities, at least matching the planned reduction in front-line strength, were obviously called for; and if these could be proportionately bigger more would be available for the front-line. This at any rate was a reasonable assumption. It might be frustrated, for example by changes in budgetary expectations, but there remained a powerful incentive for the Air Council to review with a critical eye the policies which were currently locking up a big proportion of resources in non-operational activities. Significantly, when the Air Council addressed itself in April 1957 to the detail of TCM patterns it was for the first time. Hitherto these matters had been left to Air Ministry and Command staffs and, as VCAS (Air Marshal Sir Edmund Hudleston) observed, Commands had sometimes prevailed with arguments which "would receive scant sympathy were they debated in the same atmosphere and surroundings as our long-term front-line plans".²³ His attack was mainly against two activities: what was described as the mass of heterogeneous and obsolescent aircraft used for the continuation training of GD officers in ground appointments⁽²⁴⁾ and, secondly, the large number of communication units which, in addition to their prime purpose, were much used for continuation training.

The training issue, as it was first put to the Air Council, was not whether continuation training should be abolished. GD officers had joined the Royal Air Force to fly, and the staff and other ground appointments which a permanent officer's career necessarily involved should not be at the expense of the professional expertise that mattered most and justified the primacy of the GD Branch over the other officer branches. It is not surprising that a two-year long rearguard action was fought (chiefly by Air Marshal Sir Geoffrey Tuttle as DCAS) to retain continuation training. Various changes were proposed, including one scheme which would have been an improvement in professional terms but would have involved extra expense, but eventually the hard fact had to be faced that times had changed. The financial climate was harsher than ever before and the practical value of 'keeping one's hand in' had largely disappeared. Finally, in April 1959 the Air Council agreed²⁵ with DCAS's recommendation that, with a few exceptions, only those staff officers who were returning to flying appointments should be catered for, and this would be achieved not by a scheme by which they could fly during their ground appointments but by a properly organised and intensive course related to the type of flying appointment to be taken up. The ethos of the GD Branch had perhaps been weakened but the new arrangements had reason on their side. There is little doubt too that lives were thereby saved. A distressingly large number of senior officers had been killed in flying accidents under the old policy: 25 between 1953 and 1959.

²³ AC(57)19, discussed by the Air Council at AC10(57).

²⁴ At this time GD officers in Air Ministry and NATO posts were required to put in 24 hours continuation training annually; other GD officers in ground appointments had to do 40 hours. This requirement was not a regulational necessity for the receipt of flying pay. This turned on whether an officer was considered "appointable for flying duties". Nevertheless, many officers considered that they should keep their hand in by flying practice to justify their flying pay to themselves.

²⁵ AC9(59).

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Useful economies flowed from this change in continuation training policy, as they did from VCAS's onslaught on communications flights in which he proposed an arbitrary reduction of 25%. But little was done to bring in a more rational scheme for the sharing of communications aircraft between headquarters in the same region. Nor did he have much success with other possible economies that he put to the Air Council: the amalgamation of the Bomber Command Development Unit and the Central Fighter Establishment, the closure of the Flying College at Manby, fewer aircraft to provide flying experience for ATC cadets and also in UASs. These last units were given special attention by the Air Council early in 1959. There were 17 squadrons on 13 airfields at few of which was there any other RAF interest; and although their aircraft were small and inexpensive there were 140 of them. Inevitably they had to justify themselves, and when AMP (Air Marshal Sir John Whitley) submitted a paper²⁶ to the Air Council it was in response to a request from the Secretary of State for proposals for "reducing drastically the annual expenditure on the University Air Squadrons". This was more than a general exhortation; Mr Ward made some detailed suggestions for reducing the number of UASs, converting some to a non-flying role, and reducing the tasks of all squadrons that survived the close scrutiny that he considered necessary. In the event, no UAS was disbanded as result of the 1959 review; and in the years ahead the squadrons showed a similar capacity to survive further economy reviews, though the resources allotted to them were trimmed and re-organised from time to time. Their relatively modest cost - of the order of £1.5 million a year in 1958 - is not the sole explanation; nor could their value as a source of recruitment for regular RAF commissions ever be as clearly justified as cost/benefit experts might wish. The reality was that the squadrons were valued by the university authorities; the Air Ministry placed much store on the link between the RAF and the universities; and so long as the individual squadrons were sufficiently supported by students no objective case that might be made against them could prevail against the arguments, imponderable though some of these might be, for their retention. Moreover, later developments outside the period, notably the so-called "all graduate entry" policy, made the UAS system even more an essential feature of RAF officer recruitment and training.

The heart of the problem of excessive numbers of non-operational aircraft was flying training, to which 1700 of the 2400 non-operational aircraft of 1958 were allotted. This was not an area - continuation training for staff officers aside - where the Air Council was inclined to make radical changes; the decision not to make front-line squadrons responsible for conversion training to operational aircraft has been noted earlier in the chapter. Some reductions in numbers of training aircraft were bound to arise as the need for trained aircrew diminished with the prospectively smaller front-line. Moreover, different assumptions about the length of productive service obtainable from aircrews, governed as this was by a number of factors which were to some extent within the Air Council's control, could reduce the size of the training task relative to the front-line. But whatever the size of the task it had to be well done, with the least possible prejudice to standards of safety and quality. The decision taken in 1956, to move to an all-jet sequence - the Jet Provost followed by the Gnat - for basic and advanced pilot training is an indication of the Air Council's concern both for quality of training and for the simplest possible system appropriate to a force equipped to a large extent with jet aircraft. This decision was re-affirmed early in 1957 when the Air Council agreed that the Gnat rather than the Hunter should be used for advanced training²⁷ By then, however, the new defence policy had affected the balance of the front-line. Whereas in 1956 most of the output from pilot training went to the fighter role, less than 10% would do so in future. The attractive simplicity of the Jet Provost/Gnat sequence had to be abandoned. Instead, pilots under training would go from basic training on the Jet Provost to advanced training in one of four "streams" - Canberra for bomber pilots, Varsity for the transport and maritime roles, Gnat for fighter pilots and the Sycamore and

²⁶ AC(59)11, considered by the Air Council at AC4(59).

²⁷ AC17(56) and AC5(57). The Gnat/Hunter choice was to be looked at again in 1959 because of difficulties encountered with the development and production of the Gnat. The fine balance between the two aircraft came down in favour of the Gnat mainly because of its lower running costs. There was one other factor: persistent lobbying by a distinguished retired air officer. The choice may not have been all that sound. The Hunter would certainly have been a better aircraft to lead in the TSR2.

Whirlwind 2 for helicopter pilots²⁸ But if simplicity was a casualty the change had the merit of being cheaper. Fewer Gnats would have to be bought and fewer hours would be flown in thirsty jet aircraft. The capital savings were estimated as £18m; the savings in running costs were about £1m a year. But it was typical of the uncertainties of policy making that what appeared to be a sensible change of policy, fixing the pattern of flying training for many years ahead, had to be amended early in 1960. A gloomy forecast of the production of Canberra trainers compelled the Air Council to earmark the Gnat for the bomber as well as fighter training 'stream'. The modified multi-stream policy remained less costly than the original Jet Provost/Gnat sequence.

All in all, the Air Council did well in its efforts to switch resources from non-operational to operational aircraft. By the end of the 5-year period the number of non-operational aircraft had fallen by nearly one thousand; far fewer aircraft were allotted to communications squadrons - about 170 compared with over 300; and those employed in a wide range of miscellaneous duties - calibration flights, target towing and so on - had come down from nearly 300 to 130. That the ratio between operational and non-operational aircraft, at 1 to 1.5, had hardly changed was no more than a curiosity;²⁹ the important point was that the introduction into front-line squadrons of many new and expensive aircraft, backed by new and more expensive ground equipment, had undoubtedly been facilitated by the reduction in aircraft used for training and support.

e. **Policy for Reserves** If the Government's defence policy had been a racehorse there could have been argument about whether it was by Economy out of New Strategy, or the other way round. Indeed, this issue was argued, as earlier chapters have shown, and continued to be argued. The view of those responsible for the RAF was that changes in the balance of the Services as a whole as well as within the Air Force itself were called for for strategic reasons, irrespective of the resources allocated to defence. Nowhere was this clearer than in the Air Council's policy for reserves - of officers and airmen as well as aircraft and equipment. The logic seemed inescapable. Global war would mean the end of everything; it had to be deterred by forces which were available and ready in peace, the more so as the initiative was held by the potential enemy; and if deterrence failed the catastrophic consequences would occur so quickly that any reserve strength could have no significant influence on events. Whatever the resources they should be so used as to maximise front-line strength. The logic was open to challenge, one ground being that a lengthy period of political tension, accompanied as it might well be by military pressure and alarums of various kinds, would have an impact on front-line forces, and without strength in depth their effectiveness might weaken to the point where deterrence, and hence political will, might also be weakened. But to set against this was the view which at any rate the British JIC consistently held at this time, namely that those who had the initiative were unlikely to give long notice of aggression. The failure of deterrence was most likely to be registered by a general offensive at short notice with all available weapons. Viewed thus, the question of reserves came down to this: what could be done to assist the front-line from readily available reserves; what part could reserves play in helping Britain as a community to withstand and recover from global war; and what reserves might be useful for the lower levels of possible conflict, somewhere between global war and internal security operations outside the NATO area. There was room for discussion about how these objectives were best met. Where there was scarcely any difference of view within the Air Council was on the need to change most of the policy for reserves, and dismantle most of the resultant structure, that had been followed during the decade since 1945. This took courage because it meant the end, or virtually so, of the Royal Auxiliary Air Force, one of the jewels in the Air Force crown.

In the eyes of the Air Council the value of the RAuxAF had been suspect well before the events of 1956 and 1957. The ideal policy of equipping auxiliary flying squadrons with similar aircraft to regular squadrons had been abandoned as too expensive and too taxing as well for part-time pilots. It would only be if there was time to train them to operational standards that they could be useful.

²⁸ The case was presented by DCAS in AC(59)33 and approved by the Air Council at AC9(59).

²⁹ Ten years later, despite changes of policy and one exhaustive and supposedly comprehensive defence review, the ratio was much the same. Some sort of law seems to apply.

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There was little discussion, let alone argument, when in August 1956³⁰ the Secretary of State (Mr Nigel Birch) proposed that the Air Council should agree in principle that the flying squadrons should be disbanded and that the junior Minister (Mr Christopher Soames) should lead a group which would prepare the necessary plans and report back to the Council. In little more than a month a report was submitted. The Air Council in September 1956 was much exercised in responding to the austere directive from Sir Walter Monckton described in Chapter 2.³¹ There could hardly have been a less appropriate time for arguing the RAuxAF case. Nor was a case seriously argued. The AOC-in-C Fighter Command (Air Marshal Pike), encountering difficulties as he was in keeping the RAuxAF flying squadrons in good shape, made no plea for their retention. Indeed, he recommended that the auxiliary Fighter Control Units (FCUs) and Raid Reporting Units (RRUs) should be disbanded as well; improvements in techniques and methods held out improved prospects of manning air defence radars and communications entirely with regular personnel even under the stress of war - provided the war was short. The proviso was all-important because it determined the Air Council's approach to the future of all components of the RAuxAF - flying squadrons, FCUs and RRUs, RAF Regiment auxiliary squadrons, Air Observation Post (AOP) squadrons, and even a special intelligence unit whose members were as unusually qualified as their tasks were mysteriously important.³² The point was put like this in the report to the Air Council:

In the present conditions of financial and manpower stringency, we consider that the first call upon all our resources must be the front-line units and such backing and reserves as are required to make them function efficiently in limited war and during the first hours or days of a global war. Within this context there is no place for Auxiliary units which cannot immediately take their place in the front line. We therefore consider, notwithstanding the importance and value of the voluntary principle, that all the components of the RAuxAF should be disbanded as nearly as possible at the same time.³³

The Air Council duly approved the recommendation.³⁴ Money was a factor - the savings were assessed at about £7m a year; so was the saving in regular manpower - employed in the RAuxAF. But underlying both was the new look of strategy. Most of the proposed disbandments were put into effect in 1957. Some of the FCUs survived until 1960, by which time a small number of auxiliary units had been formed for the administrative support of Coastal Command. But the heart, and the history, of the RAuxAF lay in the flying squadrons; and if their departure was logically justified a valuable link between the Service and the cities and regions of the United Kingdom was broken. It was a necessary but sad decision. Significantly, the parallel Admiralty decision to disband the flying squadrons of the RNVR was taken entirely on grounds of economy; the 'strategic' case was not conceded.

The RAuxAF, considered as a second-line air force capable, given time, of taking its place in the front-line, was not and never had been the most readily available means of reinforcement. These consisted of trained officers and airmen in posts from which they could be transferred in war or under the threat of war. The scope for transfer depended on what view was taken of the nature of a future war; if a long, hard slog was to be expected there would be strict limits on, for example, the extent to which trained aircrews employed as instructors in the flying training organisation could be spared for operational duties and trained ground staffs redeployed to front-line units from the non-operational commands. The logic of the new strategy called for a different approach. Moreover, a short but fiercely intensive war would limit the extent to which the operational commands could absorb and make use of surplus manpower from the support organisation. Much of this would be best made available to the RAF officer, AOC-in-C Technical Training Command at this period, whose wartime responsibilities involved him in participating with the other Services in the home defence of Britain, including the maintenance of the machinery of government. The numerous detailed plans that flowed from this policy are beyond our scope but the policy itself is clear enough.

³⁰ AC18(56)(SPECIAL). ³¹ Ch 2. p 31.

³² So much so that when this unit was formally disbanded other arrangements were made to ensure that its talents were not lost.

³³ AC(56)81. ³⁴ AC20(56).

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The focus of all plans to reinforce front-line aircrew strength was the First Reinforcement Scheme. Apart from a few reservists with recent operational experience this relied on aircrew in ground posts and in flying posts outside the operational commands. As the scheme stood in June 1956 over 600 pilots, 500 navigators and a similar number of other aircrew were planned to be added to front-line squadrons in war. The scheme was in trouble for a number of reasons, the most important being a general shortage of aircrew. This had been offset as far as possible by extending the length of aircrew tours, but this in turn had reduced the flow of aircrew to ground appointments and thus the numbers on which the First Reinforcement Scheme could call. Some training difficulties had also been encountered. Altogether, against a planned requirement of some 1500 aircrew there was a deficiency of about 600. But this was 1956, and what can be regarded as the aircrew balance sheet began to look healthier when the manning requirements of the future front-line - the 100 squadron force - were calculated. By mid-1957 the deficiency had fallen to some 30 pilots and 140 navigators though there was still the problem of providing sufficient training to First Reinforcement Aircrew for these to be ready, or all but ready, to take their place in the front-line.

Reserves of ground airmen were plentiful; the problem here was to determine the extent to which regular airmen who could be redeployed to operational duties in war needed to be supplemented by those who had returned to civil life but were recallable for full-time service. A distinction can be drawn between regular and national service reservists. Regular reservists were regarded as the main source of supply for Reserve Flights which would be used to bring all essential stations and units up to strength (in formal terms, to make up the difference between peace and war establishments). A separate Mobilisation Index was maintained for the same purpose. Together, the two involved, under the plans of 1957, the call-up of 50,000 reservists, mostly ex-regulars some of whom had a liability to undertake training in peacetime and were accordingly paid a small retainer. Against the reduced future requirement the Air Council saw scope for some useful savings, and in June 1957 it decided to reduce this particular category of the reserves (Class E) to 25,000 airmen, which saved £1m a year.³⁵ The number of Reserve Flights allotted to RAF stations fell progressively during the succeeding years, from over 300 in 1957 to 120 in 1962.

The main wartime task for National Service reservists arose from the Government's civil defence policy which, whatever its public face, led to controversy in Whitehall between those who considered any expenditure wasteful and pointless and those, like successive Home Secretaries, who argued successfully that it was politically impossible to do nothing. On this basis and with the Services - the Army in particular - disposing of resources of reserve manpower with no operational role, tasks were allocated which, in the case of the RAF, included fire fighting by National Service reservists organised in Mobile Fire Columns with civilian firemen. This was a more modest application of an earlier policy which required the RAF to provide a number of Mobile Defence Columns with a wider range of tasks. Relying as the Mobile Fire Columns did on National Service reservists it was recognised that these might eventually have to be manned by regular reservists. Such a situation lay some way in the future, and the Air Council in the late '50s rested content with a policy of using only a small portion of the substantial National Service reserves, some in the Mobile Fire Columns and some, with particularly useful qualifications, in support of the RAF itself if ever mobilisation was called for.

In general, the Air Council, taking the view it did of deterrence and of the nature of global war if deterrence failed, attached limited importance to reserves. The resources of men and equipment not already deployed in operational units constituted the most immediately available source from which the front-line would be strengthened, if necessary. The First Reinforcement Scheme and also the use of the resources of OCUs as supporting squadrons exemplify this aspect of policy. Tight money and strategy combined to provide a strong compulsion to put as much as possible into the front-line. Moreover, the policy of strictly limited equipment reserves for global war and the selection of only modest numbers of personnel reserves for mobilisation had its influence on the contingency of

³⁵ AC14(57).

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limited war outside the NATO area; the assumption here was that operations would last no longer than about three months. It would be an exaggeration to describe the post-1957 plan as one for a "shop window" Air Force, but not much was provided for the stockroom.

Personnel Policy

It is appropriate that the Service Member of the Air Council, and the succeeding AFB, ranked next in precedence to the Chief of the Air Staff is the Air Member for Personnel. In the period in question, much time was spent by the Air Council on a wide and complex range of personnel problems. Taking 1959 as an example, more than a quarter of all memoranda submitted to it in that year bore upon personnel: their recruitment, training and management, and the harmonisation of demand and supply. The manpower target of 135,000 trained adult males that had been set by the Government only expressed in broad terms a task which would have been complicated and detailed at any time. In the post-1957 period the difficulties were compounded by many uncertainties: the extent to which regular recruiting would replace National Service, doubts about the future size and shape of the Air Force, and the adequacy of existing training methods to meet the challenge of new and more advanced equipment. No area of Air Council business could be said to be the exclusive responsibility of any single member, and this was notably so in the personnel field affected as it was bound to be by any and every decision about the size, equipment and deployment of the force and its supporting structure. Beyond these obvious interrelationships were the technicalities of manpower management and control.

a. **Manpower Supply and Demand.** It had been apparent when the 100-squadron plan had been approved by the Air Council in 1957 that its manpower requirements would not be easy to meet within the limits set by the Government. Much was done, and at remarkable speed, to reduce the number of units that had to be manned. In a progress report of July 1959³⁶ AMSO (Air Chief Marshal Sir Walter Dawson), as the Air Council member responsible for calculating the manpower requirement as well as for the Air Ministry estate, listed nearly 200 units disbanded in the previous three years, with another 40 due to be closed soon. The larger ones included 17 group headquarters, 38 maintenance units, 9 ground training schools, 4 flying training schools and 6 hospitals. As well as these reductions in the support structure the number of front-line flying squadrons came down from over 160 to 117 during the same period. But the traffic was not all in one direction. New requirements for which there was an unanswerable case had to be met. The planned Thor force, as seen in 1958, was expected to require about a thousand posts additional to those which could be filled by men from disbanded units and a similar increment would arise as SAGW units were deployed in Fighter Command. Trials of new weapons - for example, a series of nuclear tests at Christmas Island - set up demands for more manpower. Overseas commands outside NATO, particularly the Middle East and Aden where the pressure of events increased during the period, could not be denied substantial increases; for example, the decision to make more use of Kenya as a supporting base for the Arabian peninsula carried with it the need to establish flying facilities at Embakasi - a new requirement calling for some 700 officers and airmen. Overall, reductions exceeded additions; in terms of the needs of the force for trained officers and airmen, numbers fell from 210,000 in April 1956 to 153,000 in April 1959.³⁷ Nevertheless, there was still a long way to go at that time if the 1963 target of 135,000 (including those under training) was to be met. There could be no expectation that the allowance would be increased, and unless matching economies could be made the Service would be seriously short of manpower. How short was impossible to estimate exactly: between 7000 and 10,000 was the best guess that could be made. There were several aspects to the problem facing AMP, responsible for providing the men that AMSO calculated as the requirement. One was uncertainty about the success of regular recruitment, with no insurance available to him in the form of an intake of National Servicemen. Another was the need to recruit in the most economical way with the broad object of attracting as many as possible to long engagements so as to maximise productive service and so reduce training costs; yet savings from such a policy tended to be eroded because the long serving officer and airman - with his family, accommodation, and educational needs - was becoming

³⁶ AC(50)65.

³⁷ Civilian strength in the same period fell from 115,000 to 98,000 despite the substitution of civilians for officers or airmen in about 9,000 posts.

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increasingly expensive. Yet another was the importance of a reasonable balance between requirements and resources. for if the first seriously exceeded the second the prospects for a contented Service - the best of all recruiting agents - would not be good; but to play for safety could involve the risk of an expensive manpower surplus.

In the event, recruitment of regular airmen generally proved buoyant enough in the period up to 1963 to avoid the extremes of difficulty: either too little manpower, though there were serious shortages in some trades, or the costly waste of too much. But it was an exceptionally worrying period for those who filled the AMP appointment. A clear statement of how one AMP looked on life is worth quoting, not least for its implicit plea for realism in the making of basic policy:

The figures of requirements given to me should represent requirements which the Air Force needs and which it can afford. If we get into a position in which I am told that I am not to meet the requirements because the money is not available, or because I shall be exceeding my manpower ceiling, my job becomes not only more difficult but to some extent impossible and, of course, the effect on the Air Force could be disastrous. I submit to my colleagues that we must, even at the expense of painful decisions on policy, get back to a position in which requirements and strength can be brought into balance.³⁸

b. **Aircrew.** A study of aircrew requirements - the most important as well as most expensive category of RAF manpower - had been commissioned by the Air Council in the summer of 1956.³⁹ Among a number of uncertainties affecting future plans that underlay this decision was the need for a policy - for operational aircraft as well as aircrew - that was consistent with the defence policy emerging from the 1956 Policy Review; and the Air Council suspected that what seemed to it to be the right policy might not be followed, or applied with the same austerity, by the other Services. The terms of the study were straightforward: to review the war and peacetime aircrew/aircraft ratio in the light of the latest strategic assumptions and to re-examine the First Reinforcement Scheme in the light of the latest assumptions about the duration and intensity of the opening period of war, and the availability of war reserves of aircraft. But the study itself was far from straightforward. If it was to be adequately done it had to take account of many interrelated considerations some of which, such as casualty rates in war, were matters of opinion. Its consequences would be crucially important, bearing as they would on the numbers of aircrew to be trained, the flying programmes necessary to maintain a high standard of operational readiness, what would be involved in providing the serviceable aircraft required by those programmes and, not least important, on money. The study took over a year to complete and was discussed by the Air Council in February 1958⁴⁰ by which time the implications of the 1957 Defence White Paper, as the Air Council at any rate interpreted it, were profoundly affecting the whole policy process. It accordingly deserves attention as an illustration of the response of the Air Council at the time to its essential task, the maintenance of an air force effective for the peace and war tasks which government policy laid upon it.

The assumptions of the study were all-important. Existing aircrew/aircraft ratios had last been revised in 1953 on the assumption of a conventional war lasting six months or more. To have used the same assumption at any time from 1956 would have been wholly inconsistent with the government's policy. Instead, it was assumed that operations in global war would not last for more than 30 days, made up of 7 days at maximum rates of effort and 23 days of diminishing effort. This provided a basis for assessing war reserves of equipment and thence for the purchase and replenishment of the necessary stocks. But it was agreed that no reserves of aircraft should be purchased beyond what was needed to maintain a particular type of operational aircraft during its expected lift in the

³⁸ Extract from AC(58)72, a memorandum to the Air Council by Air Marshal Sir John Whitley.

³⁹ AC17(56).

⁴⁰ AC(58)6; AC5(58).

expected life in the front-line. Within the broad assumption about the duration of a global war there were variations, depending on operational roles. If deterrence failed and the V-Bomber force had to be used it was beyond belief that it would either need to operate for as much as 30 days or be capable of doing so. The assumption here was that the force would mount no more than three strikes within the first few days of war, after which effective operations would not be possible. Similarly, the light bomber force, wherever deployed - in Bomber Command, Germany or the Middle East - and Fighter Command and 2TAF in Germany were assumed to be so heavily involved from the beginning that little would be left after a week. Coastal Command, in contrast, was assumed to be needed for up to 45 days at a steady rate of effort - a reflection of the possibility that operations at sea might continue longer than on land. The Secretary of State (Mr Ward) made no secret of his disbelief in the likelihood of this prospect but the assumption was nevertheless formally approved by the Air Council. However, since losses in maritime patrol operations were unlikely to be high there was little at stake between one assumption and the other. Taking the force as a whole, the meaning of the assumptions was that the front-line strength with which the RAF entered an all-out war would be destroyed as a fighting force in little more than a week; in a limited war the forces employed could be maintained at their initial strength for at any rate three months. Policy assumptions of this kind had to be made if plans covering the requirements of the RAF were to be consistent with one another.

To what extent the assumptions of the period would have been confirmed in the event has fortunately not been tested. What the Air Council believed was that those it had selected were consistent with government policy and realistic in terms of the resources likely to be allotted to the RAF. These two considerations hung together, as is clear from Air Council discussions of how the assumptions should be translated into aircraft/aircrew ratios and other factors bearing on future numbers of aircrew.

It was important to arrive at a judgment of the balance ^{between} the number of aircrew in operational squadrons necessary for peacetime efficiency and what might be needed in a short, intense war involving heavy casualties. Too many crews in squadrons in peacetime would mean too little flying for each crew and affect their readiness for war; too few for the aircraft available would reduce the fighting potential of the force unless aircrew reinforcements were available and ready, in every sense, to make up the numbers in war. In view of the financial pressures but also of the government's emphasis on deterring rather than fighting a war, the inevitable compromises were weighted towards economy. Aircrew/aircraft ratios in peacetime were set at levels which were economical in crews; wartime ratios were the same or only a little higher (in the V-bomber force they were the same - 1.25:1 - to ensure that it was always fully manned); and aircrew reinforcements were limited to those who had recently completed a tour on the aircraft they would fly in war. The possible options involved substantial sums of money. Even a difference between peacetime ratios in Fighter Command of 1.125:1 and 1.25 to 1 (the AOC-in-C argued strongly for the higher ratio) was estimated to cost over £2m a year; and a correspondingly higher ratio of fighter crews in wartime would have added nearly the same amount to the annual cost of aircrew reinforcements behind the fighter front-line. On both points, the Air Council came down in favour of economy. So at the end of discussions that went on into 1959 ⁴¹ the effect of a series of Air Council decisions on front-line aircrews was that if war occurred the RAF would have to fight with little more than the aircraft and aircrews actually in squadrons on the outbreak of war. Aside from what could be claimed as the financial and strategic realism of this policy it is also the case that in the later 'fifties and beyond the frequent complaint from operational Commands was that aircrew were flying less than the highest standards of operational efficiency demanded. Additional flying hours and consequently greater expense, could have improved this position; but so could reductions of the front-line beyond those which were planned. Neither course was practicable or acceptable.

⁴¹ Further references are AC(38)22 and AC9(58); AC(58)51 and AC19(58); AC(58)66 and AC23(58); AC(59)49 and AC15(59).

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The Air Council's responsibilities did not end with the determination of the number of aircrew posts, whether in the operational squadrons or elsewhere. The posts had to be manned. The objective was easy to state but dauntingly difficult to achieve. Policies and programmes which would produce sufficient aircrew for all cockpits and flight decks were only part of the task. The GD Branch, as the executive branch of the Service, included ground posts up to the highest command level which, as a matter of basic policy, had to be filled by officers with front-line experience at different levels and at different stages in their careers. With the certainty in 1957 of a diminishing front-line but with no assurance that the number of GD ground posts would reduce in the same proportion, especially as more missile units were introduced, it was difficult to see how the GD Branch could continue to be entirely manned by officers with flying experience. There were other important factors to be taken into account; what kind of commission structure and career prospects would be attractive to young men thinking of joining the RAF; how far might these be consistent with general careers policy for the Services;⁴² how many new entrants would fail to complete their flying training; what were the optimum lengths of tour in front-line squadrons, particularly for full-career officers who showed promise as future commanders and staff officers. The problems were not new, and standing machinery for their consideration had been in existence for most of the post-war years in the form of the Officers and Aircrew Manning Committee (OAMC). But in their detail, as presented in the post-1957 period, they were exceptionally difficult; yet their solution had to be in terms which avoided an unnecessarily large bill for aircrew training. There were in the event to be no "solutions" since the size and character of the aircrew requirement was not to remain constant. The best the Air Council could do was to agree on certain general principles. And the best that can be done in this narrative is to illustrate the essential substance of a problem which frequently changed in detail.

Peering into an uncertain future in the period after the 1957 Defence White Paper the Air Council made assumptions about the size and shape of the RAF as far ahead as 1970. This was necessary because at least some of the existing resources of aircrew and the majority of new entrants could be expected to be still capable at that date of filling flying posts. It would not have done to look no further ahead than 1963 - the end of the 1957 five-year plan - especially as the Air Council had no alternative but to assume that the 100-squadron force planned for 1963 would be considerably smaller by 1970. A shorter view would have carried the risk of recruiting and training excessively large numbers of aircrew whose productive service would be limited: a situation much too costly to contemplate. The force to be manned in 1970 was assumed to be no more than 52 flying squadrons, massive reductions being assumed in Bomber Command (from 29 squadrons in 1963 to 10 in 1970) and in Fighter Command (from 20 squadrons to 4), offset by 60 Thor and 100 BLUE STREAK missiles and nearly 300 SAGW launchers. It is hardly surprising that the Air Council decided early in 1958⁴³ to reduce the annual intake of pilots from 450 to 360 (plus the entry to Cranwell) with a useful saving in consequence of one basic and one advanced FTS. Indeed, the Air Council was deterred from an even bigger reduction only by the need for a comprehensive report on the GD Branch which looked likely to change in character. What it could not know was that the assumptions on which its decisions were based were to be falsified to such an extent that in 1970 there would still be some 80 flying squadrons in the RAF front-line and that BLUE STREAK would have been abandoned. While this illustrates the difficulties encountered in formulating a stable policy it remains true that the Air Council at this period was trying to avoid one of the most expensive errors open to it - the excessive recruitment of aircrew.

⁴² The report of the important Advisory Committee on Recruiting, with Sir James Grigg as its chairman, was published in October 1958. From this emerged the broad decision that the career structure for officers with permanent commissions in the Army and RAF should offer a choice between retirement before their 40th birthday and employment to 55. The Admiralty successfully argued that arrangements in the Navy should be different.

⁴³ AC9(58).

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Whatever changes might be made in the size of the planned front-line, the planning factors were the same. Intakes for aircrew training depended on the number of active flying posts to be filled, the average productive flying life of trained aircrew, and wastage rates during training. They were affected as well by the structure of the GD Branch, with its broad distinction between those officers who would have a full career in a variety of posts and those with more limited career prospects who were expected to spend proportionately more time in flying posts - a distinction registered at this particular period by the separate General and Supplementary lists of officers and one which, while changing in form from time to time, was unavoidable. Much thought had to be given to the effect on this dual structure of the new careers policy. Amongst other complications was the extent to which the output from the FTS and OCU stages of training could be immediately fed into operational squadrons without over-diluting the experience of a force which, under the new defence policy, had to be even more prepared than in the past to fight with all it had got, with little advance warning.

Productive service and wastage in training were the key factors determining the numbers of aircrew to be recruited for a particular size of future front-line. The expectancy, derived from experience, of an average flying life of 10 years and a wastage rate in training, equally based on experience, of 25% among Cranwell cadets and 45% of other entrants, determined the Air Council's 1958 decision to recruit 360 pilots a year, with a further 96 entering through Cranwell. Absorbing into squadrons those who passed successfully through all the flying training stages was not at the time, or later, managed to the general satisfaction. The Air Council had no doubt, however, that a scheme to provide for further training and experience, after the OCU stage but before pilots joined their first squadron, simply could not be afforded. However carefully Air Staff plans for the future size and shape of the Service were expressed in manning programmes, the crucial consideration was recruitment of aircrew in adequate numbers and quality. Recruitment in earlier years against a much larger front-line than that now planned for 1963 and beyond meant that there would be little difficulty in manning the front-line of the fifties. But prospects in the longer term were not good. Concern at the impact of the 1957 Defence White Paper on the attractiveness of a flying career in the RAF appeared to be confirmed by the failure in 1958 to meet more than 60% of the aircrew recruiting target. The number of applications was in fact gratifyingly high but average quality was disappointing. In the following year, the achievement was somewhat better; nearly 80% of the target was met but a worrying number of candidates had to be accepted who were considered borderline in quality. The reality was that there were in practice limits to the number of young men who were willing to serve as aircrew in a peacetime air force. And of those who answered the call many could not be chosen. Taking 1958 as an example, out of 2000 applications (not including those for Cranwell) for service as pilots, navigators and air electronics officers only 461 were considered acceptable for training and of these 361 were actually recruited. But there were also limits to the Air Council's selection policy. Recognising that there was a statistical relationship between numbers of applications and acceptances, the Air Council had a choice. It could take the kind of action - an intensified recruiting campaign aimed at a wider section of the nation's youth - designed to increase the number of applications or it could try to improve the average quality of applicant and so reduce the proportion failing the various aircrew and officer selection tests. It chose the second course on two grounds, first because it was unwilling to overload the existing selection organisation (or to expand it) and secondly because of the risk that large numbers of poor quality candidates would over a period discourage the better candidates. This same emphasis on quality underlay a decision, despite some ministerial pressure, not to re-open the aircrew ranks to NCO pilots.⁴⁴

The numerous threads of aircrew recruitment policy were drawn together in decisions taken by the Air Council in September 1959.⁴⁵ Apart from the entry to Cranwell and the entry from universities there would be a special entry of those who were too old for Cranwell but could offer good academic

⁴⁴ What were the different constituents of the required set of standards and what weight should be attached to each as described in Mr G A Roberts 'History of Officer Selection in the Royal Air Force 1958-69'. Mr Roberts was one of AMP's staff during this period.

⁴⁵ AC(59)78 and AC20(59).

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qualifications (at least two 'A' level passes) and who would have a full pensionable career; a general entry with lower educational achievements (five 'O' level passes) and a limited but pensionable career; and short service commissions for five years, designed for small numbers of highly qualified entrants who were unwilling to commit themselves to a permanent commission but who, it was hoped, would do so later. This package was not to stand the test of time and experience in all its features, and the problem of attracting sufficient potential aircrew of good quality was to remain difficult to solve. But the Air Council's 1959 policy, in putting a strong emphasis on those types of commissions which promised to result in lengthy careers with a substantial period of productive service in flying posts, contributed to economy in the bill for flying training. This was, and continued to be, an important objective.

c. **Cranwell.** 1958 and 1959 were important years for the RAF College Cranwell, not so much because the 1957 Defence White Paper directly affected the objectives and methods of the College as because a growing concern about the adequacy of its training and educational programmes came to a head. To accommodate the education of the post-war officer cadet and an increasingly taxing programme of basic and advanced flying training within a three-year course was proving extremely difficult. Aiming as the College did at an academic standard broadly equivalent to that achieved by the end of the second year of a university course it was disturbing that the time available for academic training was less than had been allotted in the pre-war two-year course: this, even though there was more to be done especially in scientific and technical subjects. The outcome, after much work at the College and in the Air Ministry (and a report from the Ministry of Education which could be summed up as 'must do better'), was a group of Air Council ⁴⁶ decisions which extended the course to a fourth year (devoted to advanced flying training), laid down higher educational standards for entry to the College and led to a revised syllabus which improved the academic content. A building programme providing more domestic and educational accommodation was also put in hand.

d. **Henlow.** The RAF Technical College at Henlow came under the same kind of scrutiny at Cranwell, with similar results and for the same reason - the need to improve the quality of full-career officers in the more demanding Air Force of the future. What was not decided, though the question was considered, was that both flying and technical cadets should be trained at a single establishment (which could only be Cranwell). Other considerations aside, such as whether it would be in the interest of the Service to make a change which might affect the primacy of the GD Branch, a merger of the two colleges at this period would have involved a building programme which would have been more expensive in the short term than the improvement of their separate facilities. In some respects the pre-1959 policy for Henlow was even more worrying than that for Cranwell which, whatever its academic shortcomings, was producing young officers who would at least be competent aircrew. But something had gone badly wrong at Henlow when it could be said that a course of training and education designed to produce nearly half the full-career technical officers in the Service "is not producing really sound technical officers with fully developed officer qualities, capable of thinking for themselves". ⁴⁷ How far the criticism was justified is arguable but the Air Council was in no doubt that changes had to be made. Technically, the demands of the RAF were not less than those of the other Services, yet the Navy and Army both thought it necessary to devote almost twice as much time to the initial training of their permanent engineer officers. The need for higher standards was accepted by the Air Council. ⁴⁸ As against a three-year course aiming at a standard equivalent to a pass degree the Henlow course was redesigned in 1959 to meet the honours degree standard represented by the recently introduced Diploma in Technology; the course was extended by over a year; and more emphasis was put on practical engineering training and on management and officer training. As at Cranwell, a major building programme was necessary.

e. **Recruiting of Airmen** Of the total RAF strength of 148,000 under the 1957 five-year plan the number of airmen was about 114,000, the rest being officers, WRAF and boys. In the three years before 1957 annual regular recruitment had exceeded 20,000; so on the face of it, regular

⁴⁶ AC(59)5 and AC1(59); AC(59)40 and AC11(59). ⁴⁷ AC(59)89. ⁴⁸ AC25(59).

recruitment sufficient to meet the airman target would not be unduly difficult. But many had joined for short engagements of three or four years as a better paid and more satisfying alternative to two years obligatory National Service. To what extent this source of regular recruits would be affected by the prospective ending of National Service and whether longer engagements than three or four years would be attractive were the key questions. Adequate numbers combined with the commitment of a large proportion of airmen to a length of engagement which would foster experience and technical and management skills were obviously vital to future efficiency. There was in addition the unrevealed gap⁴⁹ that could well exist between the maximum manpower allowed by the government and the larger number required to man the planned Air Force, unless the gap could be filled by economies other than in front-line strength. This gap was not entirely closed by the end of the five-year period and for some time afterwards; the search for economies was not as successful as had been hoped; new tasks arose, and recruitment for the various airmen trades was not uniformly up to target. In general, however, the passage from an Air Force underpinned by National Service to an all-regular and largely long serving force was negotiated with less difficulty than had been feared. The Air Council paid particular attention to the apprentice and boy entries, leading as both did to long regular engagement. The apprentice entry remained steady during the five-year period at about 1200 a year (it would have been difficult to increase it without applying lower educational standards); boy entrants were increased from some 2000 a year to over 3000. These measures, combined with campaigns for recruitment of adult entrants from civil life and extensions of engagement by regular airmen within the Service, achieved the desired results. Whereas at the beginning of the five-year period only 28% of airmen were engaged to serve for 9 years or longer, by the end of 1962 68% were so committed. The numerical target was also achieved. The 1957 force of 220,000 included 127,000 regular airmen; the 1962 force of 147,000 (which was almost exactly on target) contained 116,000. The Air Council could take some of the credit but perhaps the RAF as a Service which young men continued to consider attractive, despite the jeremiads about its future, could take even more.

Infrastructure Problems

The much smaller force envisaged in 1957 still faced the Air Council with some important and expensive decisions affecting its supporting operational structure. Key issues included the improvement of the C and R system, essential to all operations from bases in Britain; related thereto was an adequate system of airfields for the V-bomber force and Fighter Command, as was the deployment of the planned missile force - Thor as the first ballistic missile component of the deterrent and SAGW units to augment its air defence. Essentially, what was at stake was the effectiveness of those elements of the deterrent that were based in Britain; and what was done to provide active and passive defences to ensure the credibility of deterrence was accordingly important to the USAF as well as the RAF. Overseas, there were similar problems.

a. **Control and Reporting Systems.** Economy and new strategy - the inspirations of the new defence policy - affected the C and R system no less than the RAF front-line. Plans approved in 1956⁵⁰ had recognised a change in the nature of the threat and were designed to replace a system, rapidly devised in 1950 in the context of Korea and the Cold War, to deal with mass daylight raids. These plans assumed a division of the approaches to Britain into nine sub-sectors each with a type 80 'L' band radar to provide both early warning and fighter control - hence their description as "comprehensive" stations. The "comprehensive" stations were to be supported by some sixteen additional radars but, in total, substantial economies would arise both in numbers of stations and personnel (savings of over 3000 regular airmen and 12,000 auxiliary personnel were expected). This plan was substantially modified in the next three years, partly under the pressure of economy but also because of technical advance. Under a plan considered by the Air Council in July 1957 the number of "comprehensive" stations remained nine but supporting radars were cut to eight - three satellite stations in the east and south-east coasts to improve low-level cover and five Centimetric Early Warning (CEW) stations

⁴⁹ See Ch 3, p60. ⁵⁰ AC(56)53 and AC14(56).

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without fighter control facilities.⁵¹ The Air Council approved the nine comprehensive stations as a first stage in putting the plan into effect but deferred decisions on the rest. In the event, substantially new proposals were put to the Air Council in December 1958. A better appreciation of the operating requirements of SAGW, recognition of the vulnerability to jamming of the system as earlier planned, and a clear need to replace human by electronic transmission of data were the main considerations leading to change. This further revision of the C and R plan kept the nine "comprehensive" stations but five were to be equipped with a new 'S' band radar offering much better performance than 'L' band radars under heavy jamming conditions and a capability of tracking jamming aircraft. Big improvements in data handling by computer were promised (and hence fewer men would be needed), and better links with SACEUR's radars in Europe. The operation of SAGW would benefit from the introduction of "S" band radars but low level warning remained a difficult area. Experiments with balloon-borne radar to extend the radar horizon were in hand.

Air Council approval was given early in 1959⁵² to a plan which, if still uncertain in some of its detail, provided the basis for a C and R system which exploited the latest radar and computer technology. It marked a technical jump from previous systems which had been recognisably derivatives of the original radar chain for the air defence of the country. But nobody was thinking beyond a system adequate to give credibility to deterrent strike forces; nor was a significant improvement in the current performance of the systems expected until 1964, by which time the threat could well be much more from missiles than manned aircraft. It is for this reason convenient to add at this point that it was during 1959 that discussions took place with the USAF leading to an Air Council decision⁵³ to negotiate an agreement for the ballistic missile early warning station (BMEWS) at Fylingdales in North Yorkshire as part of the Alaska Greenland - Europe warning chain, a decision later endorsed by the Defence Committee. Early warning was indeed a rapidly changing scene during this period.

b. **Bomber Command Airfields.** A deterrent strike force would be no deterrent at all if it could be destroyed on its bases before it could be launched. What this truism implied for defence policy in general as well as for the practicalities of deterrence haunts the history of the period. Its influence can be seen at different levels of policy - from what it was reasonable to assume about advance warning of attack (and the political as well as military indications that an attack might be in prospect) to the precise means of ensuring that the deterrent continued to be credible. Air defence policy as well as the means of nuclear deterrence was affected by it. In the early years of the post-1957 period, whatever the arguments about the long-term future of the deterrent, there was no questioning of the principle that the V-bomber force had to be capable of dispersing rapidly from its normal stations and, having dispersed, of operating effectively. Translating the principle into criteria applicable to the dispersal airfields, selecting the airfields and providing facilities to meet the criteria, was a formidable and expensive task; much time and effort was devoted to it, with the Treasury needing to be convinced that the scheme amounted to adequate insurance but no more.

The basis of the dispersal plan was that one of the three squadrons on each main V-bomber station would stay put during a period of tension and, if necessary, operate from the station; two squadrons (16UE) would be dispersed equally on four airfields. By the middle of 1958, when there was sufficient certainty about the ultimate size of the V-bomber force for the dispersal plan to be finalised, 24 airfields were required in addition to the Class 1 airfields on which the force was normally based. Whether the PR aircraft of Bomber Command should be similarly dispersed was discussed at some length, as was the relationship between, on the one hand, the location and facilities of the dispersal airfields and, on the other, the extent to which second or third strikes would be necessary or possible.

⁵¹ The "comprehensive" stations were Sopley, Wartling, Bawdsey, Neatishead, Patrington, Boulmer, Buchan, Hacklett (or South Uist where it was to be used as part of the Hebrides GW range) and Killiard Point; St Margarets, Trimingham and Bampton were the planned satellites; and Trileaver, Ventnor, Beachy Head, Saxa Vord and Uig were the CEW stations.

⁵² AC(58)84 and AC1(59).

⁵³ AC(59)60 and AC16(59); AC(59)76 and AC19(59).

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The issue here was how far precautionary measures could go in the interest of effective deterrence without running into the objection that the objective of expenditure was to avoid war not to fight it. For the Air Council, this was a genuine issue, and not less because the Treasury was the unseen presence at all its deliberations.

Only a limited number of airfields were suitable. All had to be active airfields ready at short notice to accept their allocation of four V-bombers. They had to have good approaches, high load bearing runways (LCN 40) of 2500 yards (or easily extensible to that length) and good taxiway access from large and substantially built hardstandings (LCN 80). Less than fifty airfields met the runway and approach criteria, and one-third of these were unsuitable for other reasons. Some would have done at a pinch; and their use was not ruled out if the threat, especially from ballistic missiles, counselled a higher degree of dispersal. Domestic accommodation to austere standards had to be built at most of the selected airfields. At the majority, servicing and equipment facilities, bulk fuel storage and - not least important - special telecommunications had to be provided. Difficult though the criteria were to satisfy, a programme was worked out in detail and approved in stages before the end of 1958. It covered 24 airfields at an estimated cost of about £16m. Good progress was made and from the end of 1958 Bomber Command enjoyed a steadily improving ability to disperse at short notice; even before then it would not have been limited to operations from its normal bases. Moreover, dispersal to overseas airfields had an increasingly important place in operational plans. How the Command geared its training to dispersal and improved its ability to react quickly in emergency is described elsewhere.⁵⁴ What needs to be stressed is the care that the Air Council took to plan and monitor the scheme.⁵⁵ And behind the Air Council stood the Minister of Defence; Mr Sandys and Mr Watkinson, who succeeded Mr Sandys in September 1959, had an obsessive interest not just in the size and equipment of the V-bomber force but in its demonstrable ability to operate effectively. There were many who opposed the Government's policy of nuclear deterrence on grounds of principle; but what would have put it at greater risk would have been manifest weaknesses in the operating efficiency of Bomber Command.

c. **Deployment of Thor.** The strong likelihood at the turn of 1956 that Thor would be deployed in Britain has been referred to in earlier chapters. President Eisenhower and Mr Macmillan had reached agreement in principle at the Bermuda Conference in March 1957; and with the mounting evidence of Russian progress with ballistic missiles principle had to be translated into practice. By the end of 1957 the Air Ministry was in an awkward position. It was heavily involved in settling the terms of an agreement for the operation and control of a weapon which had yet to prove reliable, and before these doubts had been satisfied it had to make detailed arrangements for the deployment of the weapon and the training of RAF officers and airmen to operate and service it - all within an extremely tight schedule. The policy issues that Thor gave rise to are described in a later chapter. The question of its deployment is best dealt with here because it formed part of the task of co-ordinating the deployment of all offensive and defensive air forces with the related C and R system.

The intergovernmental agreement for the supply of Thor was published in February 1958. Unpublished understandings embraced the number of missiles - 60 - to be supplied; the number of squadrons to be formed; and the division of expenditure between the two countries over such features as training, spare parts, land and buildings, and support in general.⁵⁶ They also included the best formulation the British negotiators could achieve to ensure that the missiles they received would

⁵⁴ 'RAF Strategic Nuclear Deterrent Forces', by Mr H H Wynn of AHB(RAF).

⁵⁵ The progressive development of the dispersal plan can be traced in the following papers and meetings: AC(55)26 and AC11(55); AC(56)23 and AC8(56); AC(56)55 and AC15(56); AC(58)7 and AC5(58)36 and AC11(58). AC(58)7 contains the most comprehensive description of dispersal policy and the need for it.

⁵⁶ These documents are annexed at AC(58)18.

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have a satisfactory performance. The agreement was for five years. Joint operational control through SAC and Bomber Command channels was separately agreed.

The eastern counties of England were the obvious areas for deployment, and as far to the east - to make the most of the operational range of Thor - as was consistent with some degree of protection from the C and R system and the active air defences.⁵⁷ But finding suitable sites within the area was far from easy. Each squadron required a main site and four satellite sites each with three missiles, visible above ground and not the kind of neighbour anyone would willingly choose. There was much concern about local reactions, which could be exploited by those opposed to nuclear weapons. Yet what had to be avoided if the deployment was to go ahead on time was a series of public inquiries into objections to particular sites. Acquiring the necessary land by purchase or requisition would have strengthened the case of those who would press for public inquiries to be conceded. Fortunately it was possible to accommodate the main sites and some of the satellites on active RAF airfields; the rest - 8 of the total of 15 sites - were located on inactive airfields used under license for farming but still owned by the Air Ministry. Local planning authorities were much less perturbed than had been feared and local opposition to Thor turned out to be the least of the Air Ministry's problems. The final deployment plan grouped the Thor squadrons in three areas - North Yorkshire, Lincolnshire and East Anglia - with the RAF stations at Driffield, Hemswell and Feltwell each controlling five squadrons.

d. **Fighter Command Airfields and SAGW.** Adequate airfields for Fighter Command presented the Air Council with a problem. Runways and other facilities adequate for a Hunter/Venom force had to be improved for the Javelin/Lightning generation of interceptor fighters. The 1957 plan provided for 20 squadrons, equally divided between Javelins and Lightnings, by the end of 1962. But the Javelin was not well regarded, and there were doubts about whether it would be retained in the front line of the Fighter Command after 1964. There was more assurance of a long term future for the Lightning; in what numbers could be, and was being, questioned but its runway criteria, being more onerous than those for the Javelin, at least indicated what minimum work would have to be undertaken on whatever number of airfields were to be improved. How many airfields and where these should be, were the questions to be answered. The right answer, in the view of the Air Staff, was ten airfields nine of which would be more or less equally spaced between Leuchars (Fife) and West Malling (Kent) with the tenth at Aldergrove in Northern Ireland to guard the back door.⁵⁸ DCAS argued for a 9,000 feet runways to meet the needs of the Lightning. This was a surprising and, to the Air Council, unwelcome and expensive increase on an earlier agreement that 7,500 feet runways would be adequate, and the Air Council balked at it unless it could be demonstrated that all the possible expedients for avoiding it would be unsatisfactory. In the event, 7,500 feet became the accepted length in Fighter Command.⁵⁹ The Air Council also decided that at two of the selected airfields, Acklington and Aldergrove, permanent accommodation should not be built; and it recognized that it might not be possible to justify placing some of the contracts if the continuing argument about fighter defences went badly.

There were no such doubts about SAGW defences. The immediate question facing the Air Council was the initial deployment of Bloodhound Mk I (the so-called Stage 1). The bigger and more extensive (Stage 1½) deployment of Bloodhound Mk 2 called for decisions at much the same time, in part because of the need for an integrated and comprehensive deployment plan which would have some permanence but also because options were available which could affect the number of missiles to be produced and purchased. Both stages were considered by the Air Council in the spring and

⁵⁷ At a Press conference following his announcement of the intergovernmental agreement, Mr Sandys was invited by a Polish journalist to agree that deployment of the missiles in eastern England was a provocative threat to Russia and her allies. Mr Sandys replied, "it is convenient to put them there".

⁵⁸ The ten airfields were West Malling, Wattisham, West Raynham, Coltishall, Coningsby, Ixworth, Middleton St George, Acklington, Leuchars and Aldergrove. Improvements were made to most of these but less than half were to be used as stations for Lightning squadrons.

⁵⁹ Compared with 9,000 feet for USAF fighter airfields and 8,500 feet for NATO tactical airfields.

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summer of 1958. Some important elements of the defensive problem seemed reasonably firm at the time: the Class I and dispersal airfields of Bomber Command, the main UK bases of SAC - seven at this time ⁽⁶⁰⁾ - and the locations of the Thor force. The deployment and early warning capabilities of the C and R system had also been settled and, for the time being, a 20-squadron fighter force could be assumed, which meant that the defensive system as a whole need not be strictly confined to the protection of the deterrent. The provision of Stage I SAGW, however, had for some time past been conceived as so small in scale that it could at best provide only a limited defence. The debatable question of extending SAGW protection to wider areas than those in which the deterrent strike forces were located only arose when the better capabilities of the Stage 1½ system fell to be considered.

Air Staff proposals for the deployment of Stage 1 - to be completed by 1961 - were amended at a meeting of the Air Council in May, ⁽⁶¹⁾ on the advice of the AOC-in-C Fighter Command whose scheme for a wider deployment providing some protection for all the planned Thor sites was preferred. This had political as well as military advantages but it was true of both schemes that neither offered direct defence of all the deterrent forces. Five of the seven SAC bases and most of the Bomber Command dispersal airfields were outside the protected area. Nevertheless, the approved plan made the most of what was expected to be available. Eleven sites were selected, each with two fire units and a planned total of 40 Bloodhound Mk I missiles ⁽⁶¹⁾. The sites were in four groups, two related to the Thor units in East Anglia, one each to those planned for Lincolnshire and Yorkshire. Each group had a Tactical Control Radar (TCR) which together gave radar cover round the whole defended area of some 150 miles radius. The target illuminating radars (TIR) at each SAGW site were linked with the TCRs and were so planned so as to give an unbroken target/impact line at twenty miles range up to 60,000 feet. Considered as the first stage of SAGW deployment, which would have to serve for several years from its completion in 1961 until Stage 1½ equipment became available in quantity, the plan made the best use of resources that were limited in numbers as well as capability. The sites were so located that they could form part of the wider deployment that was expected to be possible under Stage 1½.

Deployment of the Stage 1½ system was discussed in August 1958 in response to an invitation from the Chiefs of Staff ⁽⁶²⁾ who asked for "a comparative assessment of possible deployment plans for SAGW, succeeding Stage 1, showing what measure of defence of cities in the United Kingdom could be obtained, within existing planned resources, under two alternative assumptions:

- (1) Deployment to cover nuclear bomber and IRBM bases.
- (2) Deployment to cover as many cities as possible in addition to the nuclear bomber".

The frame of reference was much wider than that governing the deployment of Stage 1; the successor system to Bloodhound Mk I (which had not at this date been finally decided) was expected to have a distinctly improved performance, especially at both extremes of altitude; improved TIRs and more ability to deal with jamming would be available. But what was most notable was the assumption that some of the missiles would be nuclear. What was at issue, taking account of the current stage of British SAGW development, was the size and shape of a defensive system of such effectiveness against aircraft attack as to cause an enemy to doubt his ability to neutralise the Bomber Command and SAC strike forces. The political climate surrounding the Air Council's consideration was not

⁶⁰ Greenham Common, Fairford, Brize Norton, Upper Heyford, Chelveston, Lakenheath and Bruntingthorpe, nearly all of which were less exposed to aircraft attack than Bomber Command's main airfields.

⁶¹ The sites were North Coates (where the SAGW Trials Unit was located; exceptionally, the Air Council's plan provided for three fire units), Honington, Wyton, Marham, Watton, Wittering, Woodhall Spa, Dunholme Lodge, Driffield, Lindholme and Leeming. With some variations in detail this plan was put into effect, and eleven SAM squadrons had been formed by the end of 1961.

⁶² COS(58) 9th Mtg, 3 June 1958.

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propitious. Heavy investment in active air defence was plainly not high in the Government's defence priorities (hence the reference by the Chiefs of Staff to "existing planned resources"), the more so as the threat to the deterrent was likely increasingly to be from ballistic missiles rather than aircraft. Accordingly, the deployment plan that was put to the Air Council, its underlying rationale, the problems perceived and the conclusions reached, are worth describing in some detail.

What VCAS and DCAS (Air Marshals Hudleston and Tuttle) were seeking was agreement in principle to a Stage 1½ deployment plan on which a reply to the Chiefs of Staff could be based. The eleven Stage 1 sites were embodied in the new plan, with the intention that their weapons and radars would be modified to Stage 1½ standards. Eight new forward sites were proposed - from south-east of London and round the coast to north of the Humber - and three rearward sites to provide close defence of SAC bases not directly protected by the Stage 1 deployment. The forward sites were each to have three fire units with conventional warheads, the three new rear sites one conventional and one nuclear fire unit, and the Stage 1 sites when re-equipped would also include a nuclear fire unit. Essentially, the object continued to be (or could be so presented) the defence of the deterrent, but the longer impact range of the Mk 2 missiles, combined with more sites on the coast, was seen as providing a reasonable degree of all-round defence for all urban areas in the eastern half of England south of the Tees, including London itself. Over half of Bomber Command's dispersal airfields were also covered. Some 700 launchers, of which 112 would have nuclear warheads, would be emplaced on the 22 sites;⁶³ and it was estimated that the system would achieve a 75% kill rate against the size and character of attacks by manned bombers that might be made in the late sixties.

Although the Air Council recorded its agreement in principle to the plan it⁶⁴ was concerned about a number of implications. One was whether the deployment was extensive enough, providing as it did no protection north of Yorkshire; another was whether it was tactically wise to justify some of the fire units on the grounds that these would provide some defence for the London area. How far could the investment be defended against the argument that the manned bomber would be a diminishing threat; might not the scheme prejudice the case for an improved mark of Lightning with a better AAGW; was the provision for nuclear warheads consistent with previous bids - these were further questions. Hardly less important was the cost of the scheme. The VCAS/DCAS memorandum included some cost estimates - equipment costs of not less than £60m; works costs of about £15m; running costs of the order of £30m over a five-year period - and it was claimed that provision in existing costings was consistent with the programme. The programme, however, would extend beyond the current costing period, and PUS was openly sceptical about the reliability of the estimates which in any case made no allowance for the cost of nuclear warheads. So while to the approval in principle were added other decisions - not to regard any of the fire units as specifically required for the defence of London; to reserve the Air Council's position on an extension of the deployment to protect more towns and cities; not to limit the nuclear element of the programme to a precise number of warheads - it is clear that the Air Council had done no more than provide a basis for discussion with the Chiefs of Staff and Ministers of what size and shape a developed SAGW system might take.

At the same meeting the Air Council considered SAGW deployment for air defence of overseas bases which by now, after some argument with the Army, was virtually certain to be the responsibility of the RAF. Here too uncertainties, such as the long-term tenure of the main bases, bedevilled reliable planning. Akrotiri and Aden were provisionally selected for deployment of missiles to the Stage 1 standard. The question of a similar deployment in Singapore was left until the Council could consider the air defence needs of FEAF as a whole. The Secretary of State (Mr Ward) was not at the time convinced by the Air Staff view that SAGW would be needed overseas to deal with the more sophisticated threats that might have to be faced in future. Fighter aircraft had the advantage of flexibility; yet to deploy SAGW defences as well might affect the number of fighters than could be afforded.

⁶³ This 1958 plan did not call for significantly different resources than those assumed for the force recommended to Mr Sandys a year earlier - see Ch 3, p 64.

⁶⁴ AC(58)53 and AC19(58)

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The fate of the 1958 plans for SAGW defence is described in a later chapter. What it is hoped has emerged from this chapter is the nature of the management task for which the Air Council was constitutionally responsible and to which it devoted much of its time, more indeed than to policy in the generally understood sense of the word. Lengthy though the chapter has been it illustrates only some of the more important subjects. If Appendix G shows more comprehensively what engaged the Air Council's attention in a particular year it must be stressed that each year during the exceptionally busy period following the 1957 Defence White Paper threw up new problems, or fresh applications of old ones, which would have a place in a longer history. The technical, financial, and manpower implications of defence policy, as much as the policy itself, called for nothing less than a reshaping of the Air Force in all its features as well as for a different and more ruthless approach to virtually every problem that came before the Air Council. Its members had the misfortune to find themselves living in 'interesting times'.

CHAPTER 5

CHANGES IN RAF PLANS; NATO AND DETERRENCE

Introduction

The influences bearing on defence policy are clearly reflected in the case of the RAF in plans for the size, shape and deployment of its front-line units. Variations in those plans over a period are sign posts pointing a way through a thicket of political, financial, strategic and other factors. Viewed in this light, the plan approved by the Air Council in June 1958¹ is a convenient point of departure. It reflected those changes in force structure which were made in the twelve months after the 1957 Defence White Paper; and when it is compared with the modified plans of the two succeeding years the further developments of policy affecting the RAF during the period become apparent. The period is particularly important because The Outline of Policy, as the White Paper claimed to be, begins to be filled in, becoming the five-year plan for all the Services which was Mr Sandys' political and military objective. How far the philosophy underlying the White Paper was realised in practice; what strains it came under and from what directions; to what extent its application was consistent with Air Staff views - these are among the questions to be considered.

Taking the end of the 1962 financial year, March 1963, as a convenient point at which to appraise the five-year plan, the 1958 plan for the RAF envisaged 103 squadrons at that date, including seven in supporting roles such as ASR and specialised signals, meteorological, and nuclear monitoring. These supporting units were a standing feature of successive plans; and it is accordingly changes in the plan for 96 operational squadrons (923 UE) that reflect developments in policy.

Bomber Command showed the biggest change from the force proposed in the first reactions in 1957 of the Chiefs of Staff and the Air Council to the new policy. Instead of 23 squadrons (184 UE) of V-bombers the plan provided for 18 squadrons (144 UE) - the outcome of a debate in the Defence Committee in August 1957. The question of the size of the tanker force had been settled, to the extent that two squadrons of Valiant tankers were in the planned front-line in March 1963. Three Valiant squadrons were by then expected to have replaced Canberras as the element of Bomber Command assigned to SACEUR. The full deployment of 60 Thor missiles would have been completed. No date was set in the plan for the first BLUE STREAK ballistic missiles but these were included a year later: deployment to begin in 1964/65, with 60 sites completed by March 1968. The twenty squadrons of Fighter Command - eight Javelin and twelve Lightning - were still in the plan, as were eleven SAGW squadrons under the Stage 1 deployment described in the previous chapter. There was, however, a significant change in Coastal Command: whereas in 1957 the Air Council, attaching as it did such low priority to maritime operations in the NATO area, had planned no more than six Shackleton squadrons, these were now increased to eight. No changes were made in the plan for a wholly strike/reconnaissance force in 2TAF in Germany; its currently substantial fighter force was still scheduled to be withdrawn by 1960/61. The plan for Transport Command envisaged two squadrons of Britannias and one of Comets, two of Beverleys and two of Hastings for the freight role and a light support squadron of Pioneers. Overseas, there were insignificant differences between the plans of 1957 and 1958. Most of the operational roles - light bomber, DF/GA, MR, PR and theatre and short-range transport - were provided for: nine squadrons in Cyprus² and Malta, six in the Arabian peninsula, and nine in the Far East. No SAGW defences for the overseas commands were included in the 1958 plan.

By October 1960 the 1958 plan for the force as it would be in March 1963 had changed in several respects. The V-force was virtually unaltered but initial intentions for the successor aircraft to the Canberra (the TSR2 - though not yet so described) had been pencilled in. Thor remained in the plan but BLUE STREAK had been abandoned. Fighter Command's interceptor force was much reduced; in what was

¹ AC(58)71 and AC 24(58).

² The curious aberration of 1957 which ruled out fighter defences for Cyprus (see Ch. 3, pp 72-73) was corrected in the 1959 plan.

a formal plan, Plan M, approved in 1959³ for all executive and provisioning purposes, the number of squadrons had been cut from twenty to sixteen. Offsetting this reduction, the number of SAGW units had increased from eleven to twenty-two. Coastal Command was unchanged but more resources were allotted to Transport Command. The Britannia force was modestly increased and the freight force was enlarged by a third squadron of Hastings and two of AW 660 (Argosies); twice as many short-range tactical support aircraft, mainly Whirlwind Mk 10, were provided. This last change had been introduced in Plan M and included an allocation to RAF Germany. All the overseas commands showed increases compared with the 1958 plan. In the Mediterranean region an increase from 64 to 90 front-line aircraft was due to extra transport aircraft and a Hunter squadron for Cyprus. The force in the Arabian peninsula was strengthened - from about 50 to over 100 UE - partly by additional DF/GA fighters but more by improvements to its theatre and short-range transport capabilities. FEAF was also strengthened by comparison with the 1958 plan: the theatre transport force was increased from 12 to 20 aircraft; 20 short-range transports and helicopters were added; and what had been little more than a token DF/GA/FR force of eleven aircraft was now to be two full-sized squadrons (32 UE), one of Javelins and one of Hunters. Provision was made for a SAGW squadron in Singapore, as it was for one at Akrotiri. The reductions in Fighter Command were exceeded by the increase in fighter strength elsewhere and in transport aircraft, with the result that the number of operational squadrons at March 1963 in the 1960 plan was 102 compared with 96 under the plan of 1958.

On the evidence of the 1958/60 plans several features of policy had been given fresh thought and others had reached a greater degree of certainty. The argument about the size of the V-force had apparently been settled but a successor system had been put in question with the demise of BLUE STREAK. That about Fighter Command had obviously gone in favour of reduced fighter strength but, on the face of it, with a compensating improvement in SAGW defences. The strengthening of Coastal Command indicates a change of policy in the maritime area. Even more remarkable is the greater emphasis on air transport, particularly overseas and even in Germany where the force structure planned in 1956 and 1957 for 2TAF had been conceived as a rigorous application of a policy of nuclear deterrence. The additional weight that was being given to DF/GA fighters overseas is also notable. While the plans do not necessarily signify the reduced importance of nuclear deterrence, they point towards a stronger emphasis on conventional air power, especially outside Europe. Moreover, this was affecting the planned size of the RAF front-line in a direction which, it is fair to say, the Air Staff had foreseen from the beginning in 1956 of the review of defence policy: a conventional emphasis was a recipe for more squadrons. Hence the increase in the number of squadrons, well beyond that assumed by the Air Council in 1958 for the purpose of planning the intake of aircrews.⁴

The plans of 1958 to 1960 were important in the context of Mr Sandys' five year plan; but the planning process is necessarily continuous especially at a time, such as this was, when there could be no certainty that future defence budgets would be sufficient to meet escalating costs. So, before surveying the background of policy against which those plans were set, it is necessary to see what view was being taken at this time of how the RAF was expected to develop in the years beyond 1963.

The 1960 plan outlined above met what had become the normal MOD requirement for an annual statement for each of the Services of its programme and costs for the next financial year and the four years thereafter - a 5-year costing frame which had been introduced in April 1958⁵ with the good intention of keeping a firmer grip on the defence programme as a whole. This was no innovation for the Air Ministry: five and ten year costed programmes had been an important part of the RAF planning process for some time. That these were bound to be less reliable in the later years was no reason for not producing them. Amongst other advantages they could expose peaks and troughs in future expenditure which might be avoidable. They could also provide a basis for assessing the political and economic acceptability of financial trends (the relatively restrained reactions of the Air Council to the rude shocks of

³ AC(59)45. The memorandum that best describes the 1960 plan, which modified Plan M, was AC(60)59 considered by the Air Council at AC 16(60).

⁴ Ch 4, p. 100.

⁵ Wallworth (see Ch 4, p.79).

the 1956/57 reviews of defence policy can be ascribed in part to its recognition that current plans were becoming financially insupportable). So in December 1960, having a month earlier approved a memorandum, based on the 1960 plan and presented by PUS (Sir Maurice Dean) because it was mainly about the financial position in the year immediately ahead, the Air Council considered another memorandum by VCAS (Air Marshal Hudleston) on the front-line strength of the RAF over the next ten years.⁶

Although respectively approved within a few weeks the 1960 plan and that presented in VCAS's memorandum showed some startling differences:-

Bomber Command.

- a. The V-bomber force remained unchanged at eighteen squadrons until 1964 but was to be reduced by 1966 to fourteen squadrons - twelve of Vulcan Mk 2 armed with the American SKYBOLT missile and two of Victor Mk 2 armed with Blue Steel. This force was seen as continuing at least until 1970. One squadron of V-bombers for strategic reconnaissance was planned for the full 10-year period and three Valiant tanker squadrons were shown in the force from 1963 onwards.
- b. The three Valiant squadrons assigned to SACEUR continued until 1967, to be replaced by two squadrons of TSR2.
- c. One squadron of Canberras was kept for tactical reconnaissance until 1968; it would then be re-equipped with TSR2.
- d. Thor deployment would continue until 1964. It would begin to run down during that year and would no longer be in the front-line by 1966.

Fighter Command.

- a. The fighter component was to be reduced still further by 1965 - to eight squadrons of Lightnings, half of these being earmarked for overseas reinforcement.
- b. SAGW defences were drastically revised; not improved, as might have been expected, to offset the reduction in interceptor fighters, but reduced. Even at their peak - in 1962 - they would be no more than the 11 sites of the Stage 1 deployment plan; thereafter they would be reduced by 1966 to 3 sites. Stage 1½ deployment was no longer even a planning assumption.

Coastal Command. Here all was peaceful - a ten year prospect of 8 Shackleton squadrons (48 UE), with meteorological and SAR support.

Transport Command. Compared with the 1960 plan, each element was to be expanded. Strategic aircraft were to increase from 27 in 1963 to 40 by 1966, including a half-squadron of VC10 and a squadron of long-range freighters (10 UE Belfast). The medium range force would go up by one more squadron, making seven in all; after 1966 a new aircraft to replace the Beverley and Hastings was expected to come into service. The short-range force was planned to become almost wholly a helicopter force (with one Twin Pioneer squadron as well) - 27 Whirlwind Mk 10 and 13 Wessex Mk 2 - part of which was earmarked for duties in Germany.

2TAF. Few changes were planned for the RAF in Germany until late in the decade when, in 1967, the nine Canberra and Hunter (FR) squadrons would begin to reduce to six - two equipped with a new aircraft to replace the Hunter and four with the TSR2. As presented to the Air Council, the plan made no provision for interceptor fighters (nor for any SAGW defences) but VCAS had by 1960 given notice that this policy might have to be modified.

Mediterranean and Arabia. Aside from some improvements late in the planning period in aircraft equipment (and a small consequential reduction in the number of squadrons) no major

⁶ The PUS memorandum was AC(60)59, discussed at AC 16(60); AC(60)68 and AC 20(60) dealt with the ten year survey.

variations were made to the 1960 plan for Cyprus and Malta or for the Arabian peninsula force based in Aden. The plan to provide Akrotiri with a SAGW squadron was retained.

Far East. The greater strength introduced in the 1959 and 1960 plans was to be maintained, even slightly improved by additional fighters and medium range transports. And more provision was made for SAGW defences: three sites with 192 launchers - substantially more than was planned for ADUK.

Even so brief a description indicates changes in policy that would have seemed unlikely when the 1957 Defence White Paper was published. These were definite enough for VCAS to put his memorandum to the Air Council not for an unbuttoned and reflective discussion of how things might develop but as the rationale for the issue of new squadron patterns which would provide a basis for comprehensive planning and executive action. It was approved as such by the Air Council, and what was known as Plan O was authorised.

Expressed as variations between policy in 1957 and as it had developed by the end of 1960, the key points are obvious. The V-force was to be much smaller than planned; 88 front-line aircraft as against the 144 approved by the Defence Committee in August 1957 (and Mr Sandys had recommended 184). The intention to improve the force by introducing later marks of Vulcan and Victor had been confirmed. But whereas these aircraft were to have been armed in the sixties with the British Blue Steel weapon (the Mk 1 with a range of 100 nm and a later version with a range of at least 600 nm) to maintain the credibility of the deterrent until BLUE STREAK could be brought into service, BLUE STEEL Mk 2 and BLUE STREAK itself had disappeared from the plan and had been replaced by the American SKYBOLT missile. The nuclear deterrent was thus planned to continue as an airborne weapon but hardly as manifestly independent and British as conceived in the 1957 policy. Indeed, it is clear from the Air Council's proceedings that even the continuance of two Victor squadrons armed with BLUE STEEL Mk 1 represented second thoughts. The essential deterrent would be the twelve Vulcan squadrons with SKYBOLT but such a force would not have the flexibility of the V-force as originally planned. With the additional Victor squadrons there would be a component which could be spared for deployment overseas in the type of emergency which might result in limited war. This might also be an alternative (and far less expensive) arrangement than a British contribution to any NATO missile force. The Air Council had some misgivings about disbanding the Thor squadrons. The strategic weakness of what was essentially a first strike weapon and its cost in money and manpower were eventually to settle the argument, though a final decision to this effect was not to be taken until 1962.

Insofar as strategic deterrence would be entrusted to a smaller V-bomber force, with no element of land-launched missiles, the Air Staff thinking of 1957 would have implied improved direct defences to assure its credibility. That the 1960 plans included only eight squadrons of Lightnings in Fighter Command and four permanently overseas (and the Air Council was aware that the Defence Committee might decide on an even smaller force) is not all that remarkable in view of the doubts already being expressed in 1957 about the value of interceptor fighters. But what was a singular change of policy was the virtual scrapping of SAGW in ADUK.

The larger Coastal Command of 1960 was one of the results of the consideration that Ministers gave in 1957 to the previously unsettled question of the future role and composition of the Navy, and especially to its role in NATO. Otherwise, the most important changes in RAF plans can be ascribed to the greater emphasis that was given to the second and third of the three tiers of policy, as the Chiefs of Staff had expressed it in 1957⁷: first, the nuclear deterrent and contributions to NATO and other alliances; second, reinforcement forces; third, the garrisons overseas. A distinct alteration in the geographical balance of the RAF resulted. Of the White Paper force of 1957⁸ 67 squadrons were to be based in Britain and Germany and 21 overseas; and Transport Command was planned to be 7½ squadrons strong, only one of which would be for tactical support. Each succeeding plan in the next three years shifted the balance towards the overseas commands and also added to the size of Transport Command.

⁷ Ch 3, p.52.

⁸ Ch 3, p.55.

Under Plan O of 1960, there were to be 56 squadrons in Europe in 1963 and 49 in 1966, compared with 32 and 35 squadrons overseas and 12 and 15 squadrons in Transport Command. And within this change in the deployment picture was a notable increase in the number of squadrons in the transport role; for in addition to the increase in Transport Command itself the three theatre transport and three tactical support squadrons envisaged in 1957 had increased to seven and eight (most of which were helicopter squadrons) respectively.

Few of these various changes in plans for the RAF were reached without debate, and always hard and sometimes bitter debate. This was the case even when a change in a particular area of capability, such as the air transport force, seemed to follow logically and sensibly from the broad policy of the 1957 White Paper. Financial constraint was a factor common to all problems of resource allocation; and alone was severe enough to make decision-making difficult and controversial. But the process was made still more arduous by inter-Service arguments, industrial considerations with their inherent political anxieties, and also, especially in the fields of deterrence and air defence, differing views on the significance of the nuclear dimension. The period can be seen in perspective as one in which the future of air power as exercised by the RAF was determined for many years to come. Succeeding chapters deal with its importance for air defence policy, for the role of the RAF in peacekeeping on the world scene, and for the means by which the credibility of nuclear deterrence would be maintained. Immediately, it is necessary to consider how British defence policy developed towards NATO and the effect of this on the RAF, and also the extent to which that policy, particularly as expressed in plans for the V-bomber force, came under criticism in Whitehall.

Policy towards NATO

British policy towards NATO, so far as it was acceptable to its allies, had found its political expression in the directive issued by the NATO Council of Ministers in December 1956⁹. Its military significance had been brought out in the Defence White Papers of 1957 and 1958: BAOR reducing to 55,000 men and 2TAF halved, with a clear statement that there might have to be further reductions unless a satisfactory agreement on deutschmark costs could be reached; the Navy concentrating on the anti-submarine (ASW) role and "not necessarily . . . a fully balanced all-purpose British fleet".¹⁰ These forces were regarded as part of the NATO shield. The main British contribution to the NATO sword would continue to be Bomber Command which, in partnership with SAC, was the ultimate sanction against global war. Other generalisations about NATO policy were also made public. The concept of balanced collective forces¹¹ was aired in the 1958 White Paper, as was the need for wider co-operation within the Alliance in research, development and production - the concept of interdependence.

In general, the Alliance in the late fifties gave a well warranted impression of political solidarity, all the more to its credit in view of the number of nations involved, their political and social variety and a number of longstanding disputes which caused trouble from time to time, Cyprus and Icelandic fisheries being among them. Its organisation and procedures gave an equally good impression. As a peace-time achievement inside the decade since the North Atlantic Treaty was signed in 1949, the permanent organisation in Paris (with the Standing Group in Washington), the supporting committee and staff structure, the comprehensive command organisation and the growing number of NATO agencies for logistic purposes, was something to be proud of. Half-yearly meetings of Ministers in the North Atlantic Council provided a necessary means of reviewing progress and renewing the political authority for its activities. The whole system commanded a remarkable degree of loyalty and co-operation. Even so, the British initiative of 1956 which led to the new directive, and the associated reductions in the British contribution to NATO forces negotiated in the early months of 1957, together put considerable strain on the Alliance. There were other difficulties at the time - Suez, Cyprus and Algeria - but in his annual report for 1957¹² to the Foreign Secretary the British Ambassador to NATO (Sir Frank Roberts) said

⁹ See Appendix C.

¹⁰ Defence White Paper 1958 (Cmnd 363), para 46.

¹¹ "... it should be possible gradually to get away from the idea that each member nation must continue to maintain self-contained forces, which by themselves are not fully balanced" (para 25).

¹² WUN 1011/1 of 8 March 1958 (AHB MR 022676).

that these British actions "with all the risks of a chain reaction, were a matter of even more serious concern to the Alliance as a whole." His report identified all the major military problems that confronted NATO and were to influence British defence policy in the years ahead. It can speak for itself:

- a. It was widely realised that the Political Directive was still open to conflicting interpretations and ... had plastered over cracks rather than solved the strategic problems of the Alliance. In particular, the United Kingdom were known to take a more revolutionary view of military requirements in the nuclear age than was acceptable to their continental allies, with the Americans standing somewhat uneasily between, conscious of the strength of the United Kingdom arguments but equally concerned with their possibly dangerous political effects upon Continental policies.
- b. Even those like SACEUR, who admitted the basic truth of the strategic thinking behind the White Paper, were disturbed by its emphasis upon the deterrent and away from the shield, and above all by its stark statements that there was no longer any defence against nuclear attack.
- c. This controversy was ... quickened during the course of the year (1957) by the many signs, culminating in the launching of the Sputnik in the autumn, that the Soviet Union was rapidly catching up with the West in modern weapons ... with her possession of at least a prototype of the Inter-Continental ballistic missile. On the other hand, the efforts of NATO to build up its shield of conventional forces, to be armed increasingly with tactical nuclear weapons were, as usual, behind schedule, more especially as regards the German build-up.
- d. On the naval side, there was even greater uncertainty, and the most contradictory views had been canvassed, ranging from the extreme position of SACLANT and the American Navy, which would, regardless of expense, entrust not only defence against the enormous Soviet submarine fleet but also a large part of the western nuclear strike deterrent to the Navy, down to the thought canvassed in the United Kingdom early in the year that the Navy might have little or no role to play in future nuclear war. An uneasy compromise was reached, under which it was assumed that major land and air war could not last more than 30 days, whereas naval planning continued to be based upon holding the seas and bringing convoys across the Atlantic for a considerably longer period.
- e. ... a considerable stir was created in NATO in particular by the views ... associated with the name of Dr Kissinger. The basic thought here was that since both sides now had power to destroy each other, an all out East-West struggle was unlikely. On the other hand, probing actions by the Russians, within or outside the NATO area, might lead to local conflicts of varying intensity in which suitably graduated atomic weapons could be used, as required, on the tacit understanding between the Russians and NATO that certain rules would be followed in order to avoid a major cataclysm. Behind this thinking was the basic fear that once the United States lay within range of Soviet ICBM, or shorter range nuclear weapons launched from submarines, she would be unlikely to risk her own destruction by launching a nuclear attack against the Soviet Union in riposte to some Soviet probing action in Europe or elsewhere.
- f. No very satisfactory answer was found in NATO to these dilemmas excepting in so far as SACEUR developed the Sword/Shield concept to include the shield forces as an essential part of the deterrent by virtue of the fact that their presence in adequate strength should prevent only limited Soviet or satellite incursions ... Apart from this, there was no weakening within NATO in the basic concept that the Russians must be left in no doubt that any military action on their part would invite an immediate nuclear attack.

There is much more in the report that is important for the history of British relationships with NATO. The extracts quoted above have been selected particularly to show the political climate in which the British Government had to pursue its defence policies. Less emphasis on its contribution to conventional forces in NATO, indeed on the conventional capabilities in Europe of the Alliance as a whole, and more upon NATO's own interest in an effective British military effort outside NATO was clearly meeting with less than unanimous approval. It would be dangerous to say that the British strategic concept was not fully understood. The Continental Allies had their own public opinion and interests to consider; both argued for the maintenance of the British conventional commitment in Europe itself. The Ambassador

rubbed the point home: "NATO is mainly interested in our presence in Europe and not so much in our responsibilities in the Middle East or Asia, nor even in our possession of the major deterrent, since the United States' contribution to the deterrent is generally considered to be enough for the Alliance as a whole". Certainly, the climate in 1957 and 1958 was such that the British had to move very carefully over their longer term plans for force contributions in Europe: further cuts in BAOR from a strength of 55,000 to 45,000 and possibly less, and in 2TAF to a smaller and exclusively strike/reconnaissance force. The Continental allies were also concerned about the American contribution where some reductions in ground forces were in prospect and it was this, together with their misgivings after the Sputnik launch about the continuing reliability of the American deterrent, that led to President Eisenhower attending the NATO Council of December 1957. From this aspect, the decisions that were then taken to base IRBMs - Thor and Jupiter - in Europe and establish nuclear stockpiles for Alliance use were part of the premium the United States had to pay to maintain European belief in the nuclear deterrent as a reliable insurance against aggression. But what flowed from those decisions was a new and continuing debate about how the Continental allies could themselves be actively involved in nuclear deterrence. To pursue the consequences of this debate in detail - the possibility of a European ballistic missile and of a multilateral nuclear force (MLF), the French decision to develop their own nuclear weapons, the eventual formation of the Nuclear Planning Group (NPG), and other issues - would mean departing too far from the main theme. This is not because British, or even specifically RAF interests were not involved. There were strong British views on the importance of finding a middle way between the understandable concern of their European allies to have a say in how nuclear capabilities should be deployed and the danger of so widely diffusing nuclear responsibilities that the credibility of the Anglo-American strike forces would be put at risk. It followed that a consistent aim of British policy was to avoid over-insurance in nuclear forces and especially in long-range strategic weapons; and if the European allies insisted on having a finger in the nuclear pie this should not be such as to provoke strong Soviet opposition, as would most obviously be the case if West Germany were allowed to develop its own nuclear capability.

In working for the new political directive of December 1956 the aim of the British Government had been to find a basis of political agreement for the reduction of their conventional force commitments to NATO. To the extent that a new directive was issued and at least a first tranche of British reductions accepted, though only reluctantly, British policy had achieved some success.¹³ But whether it could go further in the same direction, as Ministers wished to do, depended on the translation of the political directive into a new strategic doctrine and, in turn, new force goals for the Alliance. British Ministers could override their own military advisers; they had done so forcefully in 1956 and 1957 and, moreover, in taking the initiative over a new strategy for NATO they had deliberately by-passed the NATO military staff because they had little faith in it as an instrument for radical change, whatever other merits it might have. But they were in a much less powerful position when it came to appreciating, for the whole Alliance, the military consequences of the political directive. These were matters which had to be remitted to the NATO military hierarchy, including the Supreme Commanders.

NATO military thinking about the consequences of the political directive was expressed in a series of documents finalised in 1957 and 1958 - MC 14/2 (Overall Strategic Concept for the Defence of the North Atlantic Area), MC 48/2 (Measures to Implement the Strategic Concept) and MC 70 (Minimum Forces Study 1958-1963). The first and third of these attracted most attention, the first because it provided, or was conceived as providing, the basic doctrine underlying NATO's military posture and the third because it was intended to express the agreed doctrine in terms of the specific force goals which each member of the Alliance should achieve in the next five years. The NATO Standing Group in Washington was the key committee in which both doctrine and force goals were thrashed out, based on the views of the NATO Supreme Commanders. During this definitive period Admiral Sir Michael Denny was the British member of the Standing Group; and through the normal processes of liaison and consultation the

¹³ A recognition of the limited success of the British initiative is contained in the Prime Minister's brief for the Bermuda Conference: "although useful [the new directive] did not in itself open up the way for smaller more effective forces and consequently offers inadequate justification for our cuts. At SACEUR's and Mr Dulles' request we have since based our case on economic grounds."

Chief of Staffs in London had the opportunity to comment on, and influence, the key documents as these took shape. There is much evidence in the contemporary documents of the difficulty of arriving at formulations which meant the same thing to all concerned. As an illustration, the JPS reported to the Chiefs of Staff in November 1957 ¹⁴ that the British strategic concept was being "progressively watered down in order to reach superficially an agreed policy, which is in fact a compromise, and submerges fundamental international and inter-service differences of opinion". The JPS thought that differences remained between SACEUR and SACLANC on the effect of a nuclear exchange, with SACLANC still planning on the need for a large volume of shipping, needing naval protection, to reinforce and re-supply Western Europe. Both SACEUR and SACLANC were in error, according to the JPS, in envisaging the possibility of limited war with Russia. This was almost certainly not SACEUR's view; if at times he gave that impression it arose from his concern to have sufficient conventional forces to constitute, together with the strategic nuclear forces available to the Alliance, a comprehensive deterrent. What he regarded as a sound military case was reinforced by the political need to hold the Central Front in sufficient strength to avoid the rapid and wholesale yielding of NATO territory if it were to be seriously attacked. SACLANC was perhaps more genuinely convinced of the possibility of what he described, in his contribution to MC 70, as "limited [Russian] aggression without resort to nuclear weapons". Whatever their differences, both Supreme Commanders were anxious that the doctrine should be so formulated as to give as little scope as possible for smaller conventional forces. The British Chiefs of Staff, aware of the views of their own Ministers, were uneasily poised between a doctrine which, on one possible interpretation, would have unwelcome financial consequences and, on another, so strictly applied the logic of nuclear deterrence that it ran the risk of dividing the Alliance.

The outcome of these stresses and strains was far from satisfactory. To nobody's surprise MC 70 called for an increased military effort on the part of most members of the Alliance. It maintained the requirement for a shield force of at least 28 divisions in Central Europe (only 18 divisions were more or less readily available in 1958) and provided for a shift of resources from manned aircraft and artillery to missiles. In formal terms, the MC 70 force goals were not criticised by the British Government; but equally they were not accepted as practicable for the British to achieve, in view of their other obligations outside NATO. And as the goals set were substantially beyond what most NATO nations had any intention of achieving, MC 70 has to be regarded, whatever its military justification, as a recipe for friction between national and NATO authorities. Its requirements nevertheless remained a formal target for some years ahead but the general restiveness at its lack of economic realism was apparent in a resolution adopted at the Ministerial meeting of the Alliance in December 1958, which called for an investigation to reconcile military requirements with economic possibilities. This resolution was significant. Yet it represented less than Mr Sandys had hoped to achieve. He privately deplored the size of the bill which the NATO military authorities had presented; and in the Council he contrasted national, and certainly the British, procedure (under which military requirements were scrutinised, criticised and modified by Ministers responsible for defence and finance before they were submitted for final decision) with the NATO procedure which saw the requirements going straight to the NATO Council without any intermediate stage. He made no progress with Mr McElroy, the US Secretary of Defense (who was accustomed to a much more public discussion of military demands under the American system of government) who argued that a change in the NATO procedure would amount to a vote of no confidence in MC 70. That this was precisely Mr Sandys' point did not reduce the difficulty of his political position. Suspicion of British motives and aims was still a factor inhibiting even so determined a Minister as Mr Sandys. The procedure under which the NATO military authorities put their force requirements directly to the NATO Council was not changed even though MC 70 was generally considered an excessive and unsatisfactory application of strategic doctrine.

Mr Sandys, at the same Council, could and did repeat the essentials of British policy. He reminded his colleagues that Britain was spending more on defence than most NATO countries, partly because of commitments outside NATO which, however, served the same purposes in containing Russia as NATO itself; "it is essential", he said, "to ensure that our flank in the Middle East and beyond is not turned".

¹⁴ JP(57)135(FINAL).

And as for the ultimate sanction, nothing had changed or was likely to even when Soviet nuclear capabilities matched those of the West: "the safety of the West continues to depend on our ability to convince the Russians that a major attack upon any member of NATO will provoke a massive nuclear retaliation . . . the effectiveness of the nuclear deterrent does not depend upon the possession of superiority. It depends upon the power to inflict on the aggressor a degree of injury which he is not prepared to accept".¹⁵ But there were two conditions for continuing success: the nuclear deterrent should be so organised that it could not be destroyed in a first strike, and the Russians should not come to think that the West no longer had the courage to use it. He deplored talk about the "nuclear stalemate" (which was an important factor in Dr Kissinger's ideas of graduated deterrence) and about American unwillingness to use strategic weapons unless directly attacked. If words and demeanour meant anything his audience ought to have been impressed by Mr Sandys' evident determination to threaten and if necessary use the British deterrent in a crisis; and in a passage which upset some American officers he said that the majority of the aircraft in any initial and crucial retaliatory attack would be British. Mr Sandys' purpose was not just to emphasise that the strategic deterrent was the essence of safety; this had, or should have, a profound effect as well on other NATO forces, their capabilities and how their role should be envisaged and planned. Yet when the Council responded to his wish that the final communique should reiterate the importance of the nuclear dimension the most he could get was that "NATO defensive strategy continues to be based on the existence of effective shield forces and on the manifest will to use the nuclear retaliatory forces to repel aggression." A transposition of the two elements would have better met Mr Sandys' point but the fact was that the size and shape of "effective shield forces" continued to be the area where Britain's influence was least effective and her aims most suspected.¹⁶

Wrongheaded though it may have been for the NATO Allies to attach so much importance to the British contribution of conventional forces, the political realities obliged the British Government to accept a compromise. The Allies were not convinced by the strategic arguments for smaller British forces but the economic case was more sympathetically received. The resulting negotiations were a case of an economic trump taking a strategic ace. Under an agreement reached in May 1958, the West German Government agreed to contribute £12M annually for three years towards the foreign exchange costs of BAOR and 2TAF in Germany. In return, the British Government agreed that BAOR should remain at a strength of 55,000 and never less than 45,000; no undertakings were given about the size of 2TAF although the long-standing intention to withdraw its day fighters was at last declared. It was not all that good a bargain financially since two-thirds of the costs were still borne by the British. And what it precluded was the early reduction to 45,000 in BAOR which the Government had planned, with the possibility of an even lower figure later on. Moreover, a larger army in Germany carried implications for the total strength of the Army unless its commitments outside NATO could be reduced.¹⁷ The financial advantages of the agreement, which in any case were not guaranteed beyond three years, were almost immediately offset by the announcement in the Defence White Paper published in February 1959 that the Army would be allowed to recruit to a ceiling of 180,000 - compared with the 1957 plan of 165,000 - and that the additional men would be used to increase the strength of units overseas and in the Strategic Reserve.¹⁸

¹⁵ The text of Mr Sandys' speech is to be found in MOD Records (MO 13/5/4 Pt 1).

¹⁶ It would be easy to over-simplify the reasons for these suspicions. Domestic policies, fears of loss of territory, doubts about whether nuclear weapons were the talisman they were claimed to be, inability or disinclination to think in radical terms, were among the complex of considerations which worked against Mr Sandys. He had, however, been warned at an early stage that his policy was liable to be misunderstood. In suggesting to him in February 1957 that he should omit from the Defence White Paper the statement that "the overriding consideration in all military planning must be to prevent war rather than to prepare for it", Sir William Dickson said, "although this thought may be uppermost in our minds in reallocating our resources, such a statement made in public is liable to be misunderstood in NATO because the contributions which we have to make to our alliances are, in our allies minds, contributions for fighting if war should come. If we say otherwise they will believe that we do not intend to make such contributions truly efficient or effective" (MOD Record MO 2006, Minute of 7 February 1957). Mr Sandys left the passage in.

¹⁷ CIGS (Sir Gerald Templer) told the Chiefs of Staff in June 1958 that, as seen at that time, commitments in Cyprus and elsewhere would be so heavy after 1960 that the Army in Germany would probably have to be reduced to 35,000 (COS(58)49th Mtg).

¹⁸ Cmnd 661, para 27.

At bottom, the difficulties of the British Government can be ascribed to its failure to re-write NATO strategy in 1956 as thoroughly as it had intended. Nuclear deterrence and, if necessary, a nuclear offensive had been accepted but not what Mr Sandys and at least some of his advisers, including the Air Staff and their civilian colleagues, regarded as their full implications. Too much emphasis continued to be placed on preparations for war, which had the lowest priority, at any rate officially, in British defence policy. To those who thought this way, the formulations in MC 14/2 - the statement of the overall NATO strategic concept - gave too big a place to conventional defence. The key passage was:¹⁹

In preparation for a general war, should one be forced upon us,

- a. We must first ensure the ability to carry out an instant and devastating nuclear counter-offensive by all available means and develop the capability to absorb and survive the enemy's onslaught.
- b. Concurrently . . . we must develop our ability to use our land, sea and air forces for defense of the territories and sea areas of NATO as far forward as possible to maintain the integrity of the NATO area, counting on the use of nuclear weapons from the outset. We must have the ability to continue these operations . . . until the will and ability of the enemy to pursue general war has been destroyed.
- c. Finally, we must be prepared for a period of reorganisation, rehabilitation and the assembly of residual resources to accomplish the remaining necessary military tasks leading to a termination of hostilities.
- d. Throughout, we must protect and maintain sea communications as required in support of the above tasks.

Mr Harold Watkinson, who succeeded Mr Sandys as Minister of Defence in October 1959, had much the same worries about where NATO doctrine was leading. Moreover, other factors were emerging, besides the danger of over-investment in conventional forces, which were an encouragement to another attempt to re-state NATO strategy, unpopular thought this might be with the rest of the Alliance. There was the changing nuclear balance between the West and Russia - the approaching nuclear parity which had concerned, and continued to concern, the Chiefs of Staff when the new British defence policy was being thrashed out; there was pressure from SACEUR and the United States for more advanced nuclear weapons, especially medium range ballistic missiles (MRBM), to be made available to NATO, as distinct from the strategic forces of SAC and Bomber Command which were not under NATO command; and this in turn raised questions about arrangements for their control and release. Parallel studies were put in hand in 1960, one by the Chiefs of Staff and another, at Mr Watkinson's request, by Mr R C Chilver, a Deputy Secretary in MOD.²⁰ Mr Watkinson himself had already made what he termed a "tentative advance" to other Ministers of Defence in NATO, to see what reception there might be to a fresh look at NATO strategic doctrine: necessarily tentative because of the suspicions to which the British initiative in 1956 had given rise and because a new President in place of General Eisenhower would soon be in power.

Other appreciations besides that which Mr Chilver submitted to Mr Watkinson could be selected as expressive of NATO's strategic difficulties at this period. None excels it in reducing the problem to its essentials. Its origins included the need for economy. Nevertheless, cut-price security was not Mr Watkinson's overriding purpose; if economies were possible they would come as a by-product of better policy which would increase the credibility of deterrence. The Chilver argument - selecting his key passages - was on these lines:²¹

- a. NATO strategy needs to be reformed in two respects - plans for action short of all-out war and, secondly, provision for all-out war itself.

¹⁹ MC14/2, para 25 (MOD Records MO13/1/16 Pt 1).

²⁰ Mr Chilver had been one of the team of officials which had produced a position paper in 1956 for the Policy Review Committee on The Future of the United Kingdom in World Affairs (Ch 1, pp 5-9).

²¹ The full text of this paper, dated 31 August 1960, is at Appendix I.

- b. Under present NATO strategy SACEUR would have a free hand to use nuclear weapons, once he had been given the initial authorisation. Some argue that the insecurity of this arrangement - an automatic mechanism that leads inescapably to catastrophe - is the best guarantee against war. The weakness of the argument is that the mechanism only functions if NATO takes off the safety catch. This will only be done in desperation and the Russians could go a long way without serious risk.
- c. Others argue that NATO should have large enough conventional forces to meet a Russian attack. This is not practical politics. Talk of something less than conventional parity is dangerous. If the Russians are stronger in conventional forces they will win a struggle between conventional forces.
- d. The only tolerable course is discriminate nuclear reaction, using nuclear weapons to prevent the East getting an advantage from a resort to force but in such a way as to minimise the risk of all-out war. If a conventional attack were too strong for NATO conventional forces to deal with, nuclear weapons would be used but primarily as political rather than military instruments. There would have to be political control of timing, location and size of nuclear explosions. Escalation to all-out war would not be inevitable provided neither side can believe that decisive advantage can be gained by being the first to go one higher.
- e. The idea is not the same as "Graduated Deterrence", which merely invites a series of aggressions carefully planned to keep within safe limits.
- f. NATO policy is in error in its second objective - to win an all-out war if its first objective - to prevent war - is not achieved. It is argued that the Russians might think all-out war worth risking if they believed that after the nuclear exchange their surviving forces would dominate the world; and that if the West was manifestly making no preparations for fighting after all-out nuclear exchange the Russians might infer that there was no risk of the West initiating such an exchange. The United Kingdom has not favoured this argument. The effects of an all-out nuclear exchange would be so gigantic that the outcome of battles in Europe or the Atlantic would be insignificant by comparison. It is folly to spend on preparations for "winning" an all-out war resources that could be spent on preventing it. HM Government should repeat the attempt that was made in 1956 to get this second objective abandoned by NATO.
- g. The weapons implications of the proposed reforms need to be studied but almost certainly SACEUR already has far more weapons than the new policy would need. This does not mean that existing weapons should be thrown away. It is money on replacement weapons that needs to be saved, including the massive expenditure contemplated by Continental countries on the F104 fighter bomber.
- h. Conventional forces ought not to be appreciably thinner on the ground and should have a high standard of readiness, but major logistic savings should be possible. There would be no need for preparations for keeping open communications across the Atlantic, which is not to say that no tasks would be left for NATO navies.
- j. Discriminate nuclear reaction means facing the problem of what political authorities should control the use of nuclear weapons. It would be wrong to deal only with this. The second reform - no preparations for fighting all-out war - should also be advocated. HM Government should no longer continue to pay lip service to a policy it does not believe in. The equipment, disposition, command, etc of assigned NATO forces should be directed to dealing with situations short of all-out war and not all-out war itself.
- k. The reforms should be proposed initially to the US Government through political channels, and not in the North Atlantic Council.

The Chilver memorandum should not be regarded as the personal initiative of an able and experienced civil servant. Underlying it was a widespread feeling, in NATO generally as well as in British defence circles, that a middle course had to be sought between a conventional conflict with Russia and an "instant and devastating nuclear counter-offensive", to quote MC 14/2. The ability to guarantee such an offensive

remained essential to deterrent strategy but its credibility as the only military answer to serious aggression – whether by Russia herself or a satellite – was being increasingly doubted. Similar conclusions to those of the Chilver memorandum were reached by the staffs advising the Chiefs of Staff Committee.²² There was, however, one important difference, which Lord Mountbatten, now CDS, put to Mr Watkinson:²³

“Our conclusions . . . do not differ greatly in substance from those of Mr Chilver. However, we cannot emphasise too strongly our conviction that the problem confronting us cannot be solved solely by a military exercise of this nature. We must have regard for the morale of our own troops, the confidence of our allies – both in the military and political fields – and the continued belief of our enemies in our steadfastness of purpose. These factors lead us finally to conclude that we cannot admit, even to ourselves, that we would not fight on after a nuclear exchange, nor that we should not attempt to defend as much as possible of the territory of our continental allies. In order to make our determination clear, both to friend and foe, we must organize, equip, train and supply our forces with these evident intentions in view. This is the premium which we have to pay to ensure that we achieve our primary objective, namely the prevention of war.”

Lord Mountbatten went on to try to dissuade Mr Watkinson from raising with the rest of the Alliance the limitation of the role of conventional forces and their supporting structure, as proposed in the Chilver memorandum: “We believe that at the present time such an approach could have disastrous consequences and we must therefore advocate the continuance of a doctrine whose basis we agree to be unrealistic from the strictly military point of view”. This appeal had some success. Although Mr Watkinson, with the agreement of the Prime Minister and the Defence Committee, put a memorandum to the North Atlantic Council early in 1961, this took essentially the form of a series of questions designed to provoke discussion, rather than a set of specific proposals. It nevertheless played an important part in initiating a debate on NATO's strategic problem which was eventually – though not until 1967 – to lead to the replacement of MC 14/2 as the agreed statement of strategic doctrine. In that process the British had some grounds for satisfaction at what was achieved. One result was that the possibility of NATO emerging as a “fourth nuclear power” (after the US, Russia and UK) came to nothing. Similarly, little came of the proposal that SACEUR should be provided with nuclear missiles, as distinct from aircraft, which could strike deep into the Soviet Union – much to the relief of British Ministers who believed strongly that the control of this type of deterrent should be kept out of NATO.²⁴ Control of whatever nuclear capability was available to SACEUR was another area in which progress if slow was steady; and the Alliance sensibly decided not to seek its own nuclear capability independent of the United States but to concentrate instead on closer involvement in policy for the control and use of nuclear weapons provided by the United States and in US custody.

In other respects British policy had less success. The supply of large numbers of nuclear weapons to SACEUR, even if these did not include MRBMs, had little appeal to a number of senior Ministers – Mr Watkinson, the Chancellor of the Exchequer (Mr Selwyn Lloyd) and the Prime Minister himself. The position of the Foreign Secretary (Lord Home) was more flexible since he could see the political attraction to European allies of a stock of nuclear weapons to which they had access, even under stringent

²² The relevant study of NATO strategy is contained in the Annex to COS(60)256, 14 September 1960.

²³ Minute of 14 September 1960 (MOD Records, MO 13/1/16 Pt 1). Lord Mountbatten had succeeded Sir William Dickson as CDS in July 1959.

²⁴ British Government policy on this issue had to be pursued tactfully and even with a degree of dissimulation which was difficult to avoid in circumstances where the Eisenhower administration and SACEUR himself were for a time adamant that medium-range missiles (up to 1600 nm) were crucial to SACEUR's armoury, not least in the interest of Western Europe. Mr Watkinson had no objections to SACEUR's strike aircraft. A personal note by him in August 1960 is an example of his position: (1) Aircraft are dual-purpose, nuclear or conventional (2) They can be poised or patrolled in a situation of high tension in a way that missiles cannot be (3) They can be recalled after launching (4) They lower the tension of any critical situation, for the knowledge of (2) and (3) to both sides avoids to some degree at least the impetus to “fire first” always present in a situation where each side faces one another with “finger on the button” (MOD Records MO 13/1/16 Pt 1). A full statement of the British objections to the deployment of MRBM under SACEUR's operational control is contained in D(60)31 of 8 July 1960.

conditions. To judge by a minute which Mr Watkinson sent to the Prime Minister at the end of 1960,²⁵ he accepted the view in the Chilver memorandum that SACEUR "almost certainly" already had far more weapons than a policy of discriminate nuclear reaction would need. Leaving aside a few nuclear-tipped SAGW (Nike), SACEUR at that time had about 90 weapons available for an initial nuclear strike, including US-provided weapons for the Canberras assigned to him from Bomber Command and the Canberras in 2TAF; and he expected this number to have increased to about 250 on a realistic assessment of what would be achieved under the force goals set out in MC 70. Thereafter, however, SACEUR's plans envisaged a massive increase to over 4000 initial strike weapons, two-thirds on aircraft and the remainder on missile launchers; and certainly Mr Watkinson considered this size of capability excessive under any sensible strategy.²⁶ Nevertheless, plans for SACEUR's nuclear armoury were not amended and the numbers of weapons available to him grew even beyond those he was hoping for at the end of 1960. American political concerns are part of the explanation: to stress the importance of joint involvement with her European allies in the tactical nuclear dimension of deterrence in order to offset doubts about the validity of the strategic nuclear deterrent - this was understandable. This need, as the Americans saw it, was compounded by the instability of Europe in the late fifties and early sixties. An unbiddable General de Gaulle, Soviet pressure to change the status of West Berlin (and a little later, in August 1961, the building of the Berlin Wall), the abandonment of the Paris Summit in May 1960 because of the U-2 incident - these were only some of the outward and visible signs of a troubled period for the Alliance both internally and, even more so, in its relations with the Soviet Union. Certainly, it was not the best of times for the success of a British initiative, however tactfully pursued, designed to persuade the Alliance to re-think its strategy and re-shape its forces, especially along lines which would mean smaller nuclear forces under SACEUR than those planned and a more limited, though still important, role for conventional forces. Whether a more forthright British initiative would have had, as Lord Mountbatten feared, disastrous consequences is open to question. British strategic thinking at this time was not so revolutionary²⁷ as to put at risk the basic solidarity of the Alliance, any more than had proved to be the case in 1956. What is not in doubt is that differences between the American and British Governments would have come embarrassingly into the open - probably on the extent of NATO's nuclear capability and certainly on conventional forces. Whereas the Americans, who had always been less willing than the British to reduce conventional forces, were increasingly in favour of deliberately improving them in order to raise the nuclear "threshold", British Ministers saw positive risks in such a policy. Lord Home and Mr Watkinson jointly advised the Defence Committee that "it is not so much the lack of conventional capacity on the part of NATO that might lead to Soviet adventures, as doubt about NATO's will to resort to nuclear weapons in its own defence".²⁸ A bigger conventional emphasis might well be taken as a weakening of NATO's resolve. Moreover, the longer an initial, but politically controlled and discriminatory, nuclear response to conventional attack was delayed the more likely the risk of escalation to catastrophic levels of nuclear exchange; for the more the antagonists became committed in combat the less acceptable and practicable would be a negotiated settlement.

To the British objections on strategic grounds to greater investment in conventional forces were added those of finance, notably the effect on the balance of payments. British military expenditure overseas increased from £170M in 1959 to £215M in 1960, and Ministers were anxious to reduce it. Discussions between the German Federal Republic and Britain, and also within the NATO machine, were

²⁵ Minister of Defence to Prime Minister, 8 December 1960 (MOD Records MO 13/1/16 Pt2)

²⁶ SACEUR presented his nuclear posture and plans, including targeting plans, to a meeting of the Permanent Council of NATO in January 1961, and Mr Watkinson duly reported to the Prime Minister in a minute of 14 February. Mr Macmillan expressed modified satisfaction that "SACEUR had at last come into the open".

²⁷ If the record of a meeting between Mr Watkinson and Herr Franz-Josef Strauss in March 1961 is anything to go by the German Federal Minister had similar ideas: "the Americans had enough nuclear weapons to do whatever was necessary and there was no need for other members of the Alliance to develop their own nuclear potential, provided NATO could share in the determination of nuclear policy . . . NATO's conventional forces should be capable of dealing with testing probes, minor incidents or accidents, but no more" (MOD Records MO 13/1/16 Pt 2).

²⁸ DC(61)24.

favourable to continued help in meeting the local costs of BAOR and 2TAF. Nevertheless, a continued objective of British policy was the avoidance of a situation in which the Alliance committed its members to a bigger effort in conventional forces. In this sense, the failure of the Alliance to get to grips during this period with its strategic problems was not necessarily to Britain's disadvantage, frustrating though it was to those who felt strongly that the Alliance was seriously misdirecting itself.

NATO and the RAF

a. **Air Defence.** If there was uncertainty about NATO's overall strategy there were at least some features on which RAF planning could be securely based. The strategic nuclear forces continued to be a crucial part of deterrence: and British Ministers were as determined as ever to make an important contribution to them, as they were to the tactical air forces assigned to SACEUR's command. Nor was there serious opposition to SACEUR's plans to improve the readiness of his air forces. Whereas a few years earlier the Air Staff had been anxious to avoid the expense associated with maintaining a QRA system in 2TAF they had come to accept its necessity as the counterpart for SACEUR's tactical aircraft of what was being done in Bomber Command to ensure that the V-force was, and was seen to be, an effective weapon. This can be understood as a significant development of the concept of deterrence; and, taken in isolation, it was a development essential to what British opinion believed to be the way ahead for the Alliance. At any rate, whatever else divided them, by 1960 the Chiefs of Staff and the Minister of Defence were agreed that tactical nuclear forces and the manner in which they might be used - the number of weapons was a separate issue - had become more important to NATO's security. It was also in 1960 that an integrated air defence under SACEUR was at last approved by the North Atlantic Council. This had been a long and difficult road. That SACEUR should be able to co-ordinate the national air defence forces in Allied Command Europe had been accepted in principle in 1955; and SACEUR had proposed a 4-region scheme, one of which would be ADUK,²⁹ towards the end of 1957. Politically and constitutionally, there were objections to making SACEUR responsible in the full sense for the air defences of the United Kingdom, as for any of the national territories within NATO.³⁰ On the other hand, it made sense to co-ordinate national air defence plans and systems, peacetime exercises, states of readiness, operating procedures and - not least important - to ensure that the C and R systems in Allied Command Europe were effectively linked; and all this needed a system for command and control that had to be set up in peacetime if NATO's air defences were to be effective. CAS (Sir Dermot Boyle) was wholly in favour of arrangements of this kind, so long as the role of Fighter Command and its size, shape and deployment remained a national responsibility. SACEUR himself was well aware that his scheme could run into trouble, particularly with the British and French; and he proposed reservations designed to meet national misgivings and to give the scheme a federal rather than a monolithic structure.³¹ Thus, he envisaged a UK Air Defence region which was co-terminous with the area covered by Fighter Command and he was prepared to concede, though reluctantly, a fifth region for metropolitan France. But serious difficulties had still to be overcome. The main political obstacle, in terms of British public opinion, was the formal placing of Fighter Command under SACEUR's command. In terms of relationships within the Alliance, what most worried British

²⁹ The others were Northern, Central and Southern Mediterranean.

³⁰ The legal position in Britain was that the Air Council, under the Air Force Constitution Act 1917, was responsible for "the air defence of the realm". This responsibility was transferred to the Defence Council in 1964.

³¹ These reservations, as set out in a paper submitted by CAS to the Chiefs of Staff Committee (COS(57)283), including the following points:-

- a. Air defence units would not be used for other tasks without national approval.
- b. National forces would be, in principle, deployed in national territory except in such cases as the situation might demand; those exceptions would require national approval.
- c. The composition of Allied Staffs would be broadly in proportion to the forces contributed to each Allied Command.
- d. C and R centres and stations would be manned primarily by the nation in whose territory they were located unless unusual circumstances applied.

Ministers was the risk of pressure from SACEUR, almost certainly with support from most of the Alliance, for a bigger Fighter Command than they considered necessary. Would SACEUR be content with the principle that ADUK should be no bigger than was required "to defend the deterrent"? Even if he was, would his view of what was necessary be embarrassingly different? So it was that although there was no important difference between the government and its military advisers³² on the need to move ahead on the lines proposed by SACEUR, it required two meetings of the Defence Committee, with references on each occasion to the Cabinet, and much diplomatic activity within NATO before British approval was given to the NATO memorandum (MC 54/1) setting out the principles and general organisation of an integrated system.³³ This was registered by a Cabinet decision of 10 December 1958.³⁴ The Cabinet recognised that it was committing the air defence forces to SACEUR's operational control in peace and war but the government would be able to stipulate the restrictions within which control would be exercised; and it would remain entitled to determine the size, shape and deployment of the forces themselves as well as to withdraw them if they were needed for commitments outside NATO. As a result, from the end of 1958 such worries as SACEUR had about the involvement of the British in European air defence were replaced by concern about the French. Even so - and this indicates the extent of Ministerial nervousness - General Norstad was persuaded to agree to a confidential exchange of letters with the UK Ambassador to NATO in January 1959 in which SACEUR agreed not to use the British acceptance of MC 54/1 as a basis for criticising the size and shape of ADUK, but without limiting his right to advocate the air defence programmes which he thought necessary.³⁵ That it took another eighteen months, after British difficulties had been settled, before collective NATO approval was formally reached was due to France, who continued to be opposed to integration. The compromise eventually reached was that only a small part of Eastern France was brought within the unified air defence system, the rest of France remaining under national control. De Gaullist politics rather than serious French military objections underlay this arrangement; it was to prove not too serious a handicap to the development of NATO's air defences. Much work was done between the NATO air forces to plan the integrated system while what was essentially a political squabble was still going on. Its structures and procedures owed much to RAF influence.³⁶

Political difficulties of the kind that arose over the integration of national air defence forces did not apply to the setting up of a comprehensive early warning system for Allied Command Europe. There had been links between national radar chains from the early days of the Alliance; and under the direction of SACEUR's headquarters (SHAPE) common operating procedures, standardised nomenclature and other improvements had been introduced. But something better was needed and in January 1957 the North Atlantic Council formally supported the establishment of a multilaterally-financed integrated early warning system in NATO Europe.³⁷ If there was no political objection in principle to the scheme there were formidable technical and administrative difficulties, some of which had political overtones, in building what was conceived as a standardised chain of early warning stations, eighteen in all, stretching from the North Cape to Eastern Turkey.

³² The Admiralty had reservations about applying the principle of integrated air defence to other fields and were also concerned to have safeguards for the air defence of British shipping and the operation of naval aircraft within the NATO defended area. But these scarcely bore on the main issue.

³³ The heavy weather which the Cabinet made of its deliberations proved embarrassing on 21 November 1958 when the Military Committee of NATO was meeting in Paris and the Cabinet in London. Mr Sandys had to telephone Sir William Dickson at lunchtime to tell him that, against all the expectations, the Cabinet still had reservations. The afternoon session of the Military Committee was not a happy occasion for the British representative.

³⁴ CC(58)84th Conclusions.

³⁵ Tel No 10 UKDEL NATO to Foreign Office, 14 January 1959 (AHB ID3/304/7 Pt 2).

³⁶ General Norstad was an admirer of the Fighter Command system and during the formative period of NATO's air defences his principal adviser was A Vice-Marshal H D McGregor who became AOC-in-C Fighter Command during 1959.

³⁷ The purposes and broad characteristics of the system proposed by SACEUR and approved by the Council were set out in MC 61(Final).

What types of radar and associated equipment should be selected was the biggest difficulty, with firms - and national authorities - from different NATO countries urging the merits of their products.³⁸ RAF and other British representatives were heavily involved in all aspects of the planning, specification and contracts work that took place between 1957 and 1960; and the system finally devised incorporated many features based on British experience. Some of the larger radars were supplied by Marconi Ltd and were based on those selected for the modernised early warning system that was concurrently being installed for ADUK.³⁹ Flight checking the performance of the NATO stations as these were completed was undertaken by a flight of Canberras specially formed for the purpose.⁴⁰ From October 1961, when the first of the eighteen stations came into service, NATO's early warning capability against aircraft attack steadily improved. Considering the complexities of the task and the number of countries whose agreement had to be obtained this was a notable achievement.

In terms of RAF policy, the significance of improvements in NATO's air defences should not be overstated. What the Air Staff recognised was the importance of improved early warning for the security and credibility of the strategic strike forces based in Britain. This was accepted too as a sign visible to the Soviet Union that aircraft attack against ACE, as distinct from the Bomber Command and SAC squadrons in Britain, would be unlikely to spring a surprise. There was, however, little change in Air Staff thought about RAF participation in the conventional air defence of Western Europe. The role of Fighter Command, even after it had been embodied as a separate region in the NATO air defence system, was the defence of the UK-based strategic deterrent, though as a sop to NATO opinion occasional detachments to other regions were not ruled out. Air defence elsewhere in ACE was an invaluable forward line of defence for the same purpose, but otherwise its usefulness was limited to whatever part it might be called on to play in resisting any probes that might be made into NATO territory. An air defence battle as part of prolonged resistance to conventional attack was considered neither a likely possibility or a capability required by a correct view of NATO strategy. Withdrawal of the day and all-weather fighter squadrons from 2TAF, an intention pre-dating the 1957 White Paper but not formally disclosed to the Alliance until the summer of 1958, was a consequence of this policy. At that date, there were still four Hunter day fighters, and one Javelin and three Meteor all-weather squadrons in 2TAF which were planned to be withdrawn by the end of 1960. Changes were made to this plan during the period covered by this chapter but only to the extent that three squadrons were to be kept on in Germany until 1962 to offset delays that had occurred in building up the fighter forces of the Federal Republic.⁴¹ Quite apart from the strategic argument for withdrawal the pressure that was being brought to bear on the Air Ministry to reduce the number of fighter squadrons in the RAF as a whole made it extremely difficult to justify a fighter component permanently in 2TAF. It was still hoped that British treaty responsibilities for the air control of the boundary between the British sector and East Germany could be transferred to the Federal Republic.

³⁸ In a situation where one member of the Alliance had an overwhelmingly dominant defence industry, the European members were bound to be in competitive difficulties. There was a political dilemma, recognised on both sides of the Atlantic. American equipment was good (though not always as good as was claimed) and was nourished by an industrial and R and D investment well beyond what could be matched in the 'fifties and 'sixties by Western Europe. Moreover, orders for American industry were a reasonable expectation in view of the massive contribution that the US was making to European security. On the other hand, over-reliance on American equipment had political and other disadvantages. A policy of 'interdependence', with the broad objectives of fair shares within the Alliance and a more rational deployment of R and D effort, was the nominal solution to the dilemma. It cannot be said to have been effective, except in the amount of committee work it generated. Yet it would be facile to say that arms procurement policy shows the unacceptable face of NATO. Of all the areas of Alliance business this was and is the most difficult. What deserves serious study is the effect of aggressive and chauvinistic salesmanship on NATO's military policies and posture.

³⁹ Ch 4, pp 103-104. ⁴⁰ The aircraft, crews and ground staff were drawn from No 35 Squadron in Bomber Command. The cost of the operation was met from the funds of the Alliance. ⁴¹ The possibility that fighters might have to be retained in 2TAF was not discussed at Air Council level until August 1959 (AC(59)74 and AC 19(59)).

b. **Ace Mobile Force.** Notwithstanding a policy of eventual withdrawal, one of the 2TAF fighter squadrons was committed during the period under review to what was a new element of Allied Command Europe, the ACE Mobile Force (AMF). This concept was first mooted within the Alliance at large by Lord Montgomery early in 1957⁴² It had been accepted by SACEUR and included in his contribution to the Minimum Forces Study which was eventually incorporated in MC 70. The force was no more than sketched at this stage: a mobile force, equivalent to a division in strength and much of it air transportable, made up of elements already assigned and readily available to SACEUR and stationed in the Central Region for operations in any area of ACE. According to Lord Montgomery, when asked by CIGS (Sir Gerald Templer) towards the end of 1957, nothing had otherwise been done: he said, "it is of course an essential part of the NATO military strength and I cannot understand why the Military Committee does not get on to it - and insist on its being formed".⁴³ The Air Staff were nevertheless doubtful. They suspected that the concept could be the thin edge of a limited war philosophy. Doctrinal difficulties aside, the air transport requirements for a complete division would be extremely difficult to find and then only at the expense of commitments which were likely to have priority in the critical situation in which the AMF would be required to deploy. And if it required several airlifts to move the division it would be quicker to go by train. As a military concept the JPS likewise thought little of it but they put their finger on the real point (no doubt after discussions with SACEUR's own staff): "we believe that what SACEUR intends is not a fighting role for the division but for it to act merely as a symbol to a *potential* aggressor of the involvement of all NATO countries. It would thus be essentially a cold war force".⁴⁴ It was on this understanding, which SACEUR confirmed in a letter of 8 April 1958 to Sir William Dickson, that the Chiefs of Staff formally agreed "that a small international air-transportable force appeared to be desirable for political reasons". What was in mind was the deterrent value of a force which could be seen to be capable of moving quickly, especially to the flanks of NATO where Soviet pressure could be applied with less obvious risk than in the Central Region; and as the AMF developed from 1960 onwards its training and logistic support was directed towards effective deployment in such areas as Norway, Greece, Turkish Thrace and Southern Turkey. From the outset it was organised in two separate elements - land and air: sensibly, since the avowed purpose of demonstrating NATO solidarity could be most quickly met by deploying a squadron or more of aircraft, with land forces following if necessary in slower time. By the end of 1960 four NATO countries had committed themselves to provide fighter squadrons: Belgium, the Netherlands, Canada and the United Kingdom. Italian and German squadrons were later assigned. No 5 Squadron, equipped with Javelins, from 2 TAF was the selected British squadron,⁴⁵ consistently with the criterion that all components of the AMF should already be under SACEUR's command.

British support for the AMF had been on the understanding that little or no additional expenditure would fall on the contributing countries; in particular, airlift for exercises and any operational deployment would be undertaken by transport squadrons assigned to SACEUR. This was to prove the most awkward of all the practical problems that were encountered during the formative period of the AMF, since SACEUR could only call on limited air transport resources in peacetime (though much more would become available to him in a real emergency). Airlift for the tactical air squadrons and their accompanying support was relatively modest; the difficulty was to find

⁴² He had spoken about it to the Chiefs of Staff Committee during the previous year (see p 18).

⁴³ Quoted in Minute of 7 January 1958 from CIGS to his Chiefs of Staff colleagues (AHB 1D3/30/3/13 Pt 1).

⁴⁴ Annex to JP(58)9(Final). The future Field Marshal Carver was one of the Joint Planners at this time. The JPS report was discussed at COS(58)19th Mtg, 25 February 1958.

⁴⁵ No 5 Squadron had this role until 1964 when it was replaced by a Hunter squadron of No 38 Gp in Transport Command. It was at first required only for deployment to the Northern Region of ACE; later it had a place in plans for support of the Southern Region as well.

sufficient air transport to undertake realistic peacetime exercises by the land contingents.⁴⁶ Solutions were found but, in the case of the RAF, by an eventual and reluctant commitment (and, even so, somewhat hedged about) to provide air lift for the British elements of the AMF. The truth was that the concept and role of the AMF involved plans of considerable sophistication and complexity, with resources to match, if the force was to be up to the best military standards. Whether those standards were necessary for the essentially political purpose of the force is,⁴⁷ from one standpoint, open to argument. On the other hand, any organised military force needs to have confidence in its own effectiveness. It is at any rate clear that the requirements of the British component of the AMF were a task which the Air Staff approached with professional conscientiousness rather than enthusiastic belief.

c. **Nuclear/Conventional Balance.** What most obviously emerged during these first difficult years for the Alliance after the British attempt in 1956 to revise NATO strategy was the beginnings of an attempt to escape from a policy, and a definition, of deterrence the core of which was the immediate and large scale use of strategic nuclear weapons if NATO territory was attacked above the level of a mere probe. It was the immediacy of use that was the main cause of concern. Those in Britain and elsewhere who were thinking about these things had come to believe in a wider range of options for responding to aggression. Aggression could take several forms, and insofar as one of the more likely was a carefully managed operation to test NATO solidarity it was correspondingly important that the Alliance should not over-react. Instead, it should have the means, and a plan for their use, to keep the situation from getting out of hand - "to force a pause" was a phrase that General Norstad used frequently, in public as well as privately. And as one of the reasons for a more flexible policy was the growing ability of the Soviet Union to launch a nuclear attack on North America it was understandable that the European Allies became more concerned to be involved in the nuclear dimension of deterrence. SACEUR's prolonged campaign to have more nuclear weapons, including IRBMs, physically within Allied Command Europe is to be understood as an attempt to allay European fears: not without some success, for although all nuclear weapons in the squadrons and missile units under his command were US-supplied and unreleasable without Presidential authority they nevertheless represented a capability in Europe which the Soviet Union had to take into account as an element separate from the American and British strategic forces. But it was precisely for this reason that British policy at this period was against providing SACEUR with a substantial missile force that could strike into Soviet territory. This would give SACEUR, whatever the procedural arrangements for the control and release of nuclear weapons might be, more power than was appropriate.⁴⁸ The use of SACEUR's nuclear capability which made more sense to the British was a limited and controlled reaction, under political direction and well below what might be interpreted as the strategic level, which would nevertheless unmistakably register the Alliance's will and intention to resist. In this area, much progress was later to be made by the Nuclear Planning Group.

⁴⁶ Airlift for a Javelin squadron deploying to the Southern Region was calculated to require 9 Britannia sorties plus a small effort from Cyprus, assuming that the squadron made use of equipment stockpiled there. On the same assumption, airlift for the British land component required 22 sorties from the UK and 81 from Cyprus. If no use was made of Cyprus, 22 Britannia sorties were needed for the RAF move, which would be completed in three days, and 46 Britannia and 46 Argosy sorties, completed in seven days, for the Army move (AHB ID3/303/ 13 Pt 1).

⁴⁷ To begin with, the purpose was so rigidly political that the 1960 SHAPE concept of operations assumed that the AMF would be relieved as soon as sustained fighting occurred in the area of deployment. Not surprisingly, this was later modified (ACE Mobile Forces Directive No 3, 29 March 1963); but SHAPE's consistent policy in the early 'sixties was that the AMF would not be deployed if the risk of general war was judged to be imminent.

⁴⁸ During discussions preceding the deployment of Thor in Britain, British Ministers successfully objected to a proposal to assign the Thor force to SACEUR. Instead, the force was considered part of the Anglo/US deterrent, to be activated by joint Anglo/US decision and not through a NATO chain of command.

But the British had little or no say in the size of SACEUR's nuclear armoury. The Canberra squadrons assigned to SACEUR had from the end of 1958 the nuclear capability required under the British view of NATO strategy; and it would not have been practical politics to withdraw them (or the short-range Corporal missiles in BAOR⁴⁹) so as to make the point that SACEUR was planning to acquire an excessively large number of nuclear weapons.

It was no less difficult to take any dramatic initiative over conventional forces, whether as to their size or how they might be deployed and used. British policy had been pressed in 1957 to the point where substantial reductions in British ground and air forces in ACE had been reluctantly accepted. To have gone further would have been extremely unpopular with the rest of the Alliance. Some threatening noises were made but in the context of further reductions if financial help was not forthcoming, not in terms of new strategy.⁵⁰ Yet what was questionable, as the Chilver memorandum had shown, was not so much the size as the role of conventional forces in Europe. The ideas that were under discussion in London in the last months of 1960 did not assume that the forward strategy, so important to the European allies for political reasons, could be discarded; on the contrary, they implied the permanent deployment of more ground forces in the forward areas and at a higher level of availability and readiness than was the current NATO practice. Where they were innovative was in what they implied for the structure and weaponry of conventional forces and for the nature and length of conventional operations (hence the extent of logistical support) before nuclear weapons might have to be used. This was the real substance of the issue and, as we have seen, British Ministers on the advice of the Chiefs of Staff fought shy of pressing the Alliance to face up to it. Plans for the ACE conventional forces consequently continued to be based on improving their ability to fight a conventional campaign at least for several weeks, with a full range of weapons. This was not a situation which offered much hope of significant economies in the British contribution to ACE. On the contrary, it implied more conventional air power than the Air Staff had earlier intended to provide. That the Alliance should seek to widen its options was understandable. But it was in no position to forswear strategic nuclear weapons. Hence the acid test for all proposals for changes in other weapons - and the doctrine for their use - was whether these were more or less likely to convince the Soviet Union that aggression could not be launched without risk of a catastrophe. It was not an easy test to apply.

Bomber Command

The future size and equipment of Bomber Command was the first of several outstanding questions of force structure which remained to be settled after the government had launched the 1957 Defence White Paper. a special meeting of senior Ministers, under the Prime Minister, on 30 May 1957⁵¹ discussed a memorandum by Mr Sandys in which he proposed a V-bomber force of 184 front-line aircraft (to which the three squadrons of Valiants to be assigned to SACEUR and the PR and tanker squadrons would be additional). As much as the total size of the force Mr Sandys stressed the need for most of it to be equipped with Mk 2 Vulcans and Victors armed with Blue Steel Mk 1 when its development was completed, and later with an improved guided bomb, and he asked for a Mk 2 component of 120 UE. In so arguing - with the full support of the Air Staff - he was envisaging a force which would be effective up to the end of the 1960s, even allowing for the expected improvement in Russian air defences. He was also seeking a decision on which Mk 2 V-bomber production could be firmly based.⁵² The meeting recognised the need for production decisions and authorised orders for another 40 Mk 2 aircraft. But the issue of size was deferred until the costs of the proposed force could be considered against those of the RAF as a whole and of the other Services.

⁴⁹ Corporal had been deployed in BAOR by 1959. At an earlier stage the Air Staff had doubts about the need for the Army to have its own nuclear armoury but these were never seriously pressed.

⁵⁰ See Defence White Paper 1958 (Cmnd 363, para 43). The Cabinet decision that, for all practical purposes, marked the end of ministerial hopes at this period of further reductions in the size of BAOR was taken in November 1959 (CC(59) 60th Conclusions). The subject was to come up again.

⁵¹ Gen 570/2nd Mtg.

⁵² All orders for Mk 1 aircraft had been placed by this date, and contracts had been made for 78 Mk 2 aircraft. Another 95 were needed to support a force of 120 Mk 2s.

SECRET

By the end of July the Defence Committee was in a position to take decisions. It had before it papers on other expensive areas, such as the naval construction programme and Fighter Command, as well as the strategic bomber force, and it met in an atmosphere of concern about economic prospects unrelieved by Mr Sandys' contention that the defence policy which the government had announced offered no prospect of significant economies, at least over the next few years. The memoranda included one from the Admiralty⁵³ which cast doubt on the priorities and balance of the defence programme as this seemed likely to emerge. Two meetings were necessary⁵⁴ before a decision on the V-force was reached, which was that the V-bomber front-line should be 144 aircraft, of which 102 would be Mk 2 Vulcans and Victors. This was an acceptable compromise. Mr Sandys had in fact been advised beforehand of the capabilities of a 144-strong force of which 102 would be Mk 2 aircraft; and he offered the Defence Committee no detailed justification for a stronger force. What was important to him, and to the Air Staff, was the capability needed for a British deterrent to be effective in its own right. Of the possible criteria the one selected had been the infliction of unacceptable damage on some thirty to forty major Russian cities, and such a capability, looking some years ahead, would rest primarily on the Mk 2 component of the force. This criterion was to become generally accepted as a key consideration when issues such as improved weapons for the V-bomber force and the weapons systems which might take its place had to be considered.

The 144 force, with its 102 Mk 2 aircraft, thus emerged from the Defence Committee discussions as an agreed feature of defence policy. It survived a challenge in the Defence Committee a year later⁵⁵ when the Air Staff argued that a 25% reduction would halve the number of targets that could be attacked because some of these would have to be attacked with more than one bomb and because a smaller force would be that much more vulnerable to Soviet air defences. The rationale was highly theoretical, the more so as the context in which it was put forward - that of the effectiveness of the British deterrent on its own - was less likely than combined Anglo/US deterrence. But granted the firmness of the government's commitment to an independent deterrent, it, or something like it, was necessary. Certainly, there was no retreat from that commitment at the meetings of the Defence Committee in the summer of 1957, despite the Admiralty memorandum with its clear implication that the priorities of the government's announced policy were wrong. In it the Defence Committee was reminded that neither the Admiralty or the Chiefs of Staff had agreed that a sound defence policy was possible within the manpower limits of the Defence White Paper. It accepted that Britain "should make a contribution to the nuclear deterrent" but the smaller the manpower of the Services the more important their equipment, and if Bomber Command absorbed an excessive proportion of defence resources it would be that much more difficult to implement a policy designed to support the alliances of which Britain was a member and her worldwide interests. It concluded: "Until there is a firm indication of money for defence or the most specific assurance can be given that the equipment of those conventional forces of all three Services, which the Chiefs of Staff judge to be the minimum, can be afforded on top of whatever the Bomber Force turns out to cost, the Admiralty cannot support any pre-determined Bomber Force having the first call on Defence Votes". What Mr Sandys thought of this paper, especially the contention - unacceptable to any government - that whatever conventional forces the Chiefs of Staff might recommend should be underwritten, is not recorded; he merely circulated it to his colleagues, without comment. The Prime Minister, however, reaffirmed the priorities: the deterrent must have first call on defence resources; second priority must be given to carrying out worldwide commitments and preventing small-scale incidents developing into major war; lowest priority to the various means of waging global war.

On the face of it, the Admiralty's arguments had been rejected. Yet their misgivings, if not disinterested, had a basis of realism affecting all the Services. The prospects for the British economy were uncertain and an assured defence budget - including an allowance for the higher costs of new equipment - could not be assumed. A commitment to a particular size of deterrent, if this reached the point where no useful economies could be made, might disproportionately reduce the resources available for conventional forces. Moreover there was room for argument about the effect of the growing nuclear armoury of the Soviet Union. This could be significant for British and NATO strategy and also for the nature of the threat to British interests outside NATO, to which conventional rather than nuclear capability might be

⁵³ D(57)18.

⁵⁴ D(57)6th and 7th, on 31 July and 2 August.

⁵⁵ D(58)26th Mtg.

more relevant. Much time was spent on this subject - generally referred to as Nuclear Sufficiency - by the Chiefs of Staff in 1957 and 1958. The debate was conducted mainly in military and strategic terms but the background to it was a developing financial situation which threatened the plans of all the Services.

Argument about Nuclear Sufficiency

An appreciation made by the Joint Intelligence Committee towards the end of 1957⁵⁶ gave little encouragement to those who remained unconvinced by the government's strategic priorities. This defined Soviet aims in the shorter term, against a long term aim of total Communist domination, as follows:

To maintain and increase the strength and stability of the Soviet bloc, and to overtake the United States in economic power and nuclear potential.

To disrupt NATO and to secure United States withdrawal from military bases abroad.

To undermine pro-western alliances in the Middle East and Asia, and to work against western influence and interests and extend communist influence in these areas, particularly in the uncommitted countries.

To penetrate the African continent using economic and subversive methods.

While pursuing these aims, to avoid nuclear war.

The last of these points was crucial. The Soviet Union, the Committee thought, would be no more anxious for war than hitherto. In a key passage the JIC dealt with the argument that when each side could devastate the other one of them might take the risk of fighting a limited war which it believed it could win. Their conclusion was to doubt whether the Soviet leaders would support this thesis: "if they were to embark on a war with the intention of limiting the conflict, they could not be absolutely certain that they would succeed in doing so". This view was qualified (after argument and at the insistence of the War Office representative) to the extent that it was considered "just conceivable" that the thesis might be accepted, in which case there would be a possibility of limited war. Whatever doubts there might be about limited war, particularly in the NATO area, the JIC thought that Soviet policy would probably become more thrusting elsewhere but the Soviet leaders would avoid getting into situations from which they could not retreat.

The essence of the JIC view was that nuclear sufficiency - a situation which it was generally thought would have come about by the middle sixties - would not significantly increase the threat to the NATO area, whatever might happen elsewhere. It was a conclusion wholeheartedly supported in the Air Ministry but it was not to the liking of CIGS who foresaw an increased risk of swift and conclusive action against some limited but important objective before the West had time to react. He was even less attracted by the conclusions of an appreciation⁵⁷ which the Joint Planning Staff had been required to make when the JIC report had been circulated. These confirmed the principles and priorities of the government's defence policy; indeed, insofar as nuclear sufficiency might affect American resolution the JPS concluded that the importance of what it called 'the United Kingdom's independent share of the deterrent' would be enhanced. The JPS proposed no change in the restricted role of the NATO shield forces, though the formulation remained open to different interpretations. So did their view of global war measures: these "should be limited to those which contribute to the credibility and effectiveness of the deterrent". But in adding that expenditure under this heading "will undoubtedly be determined by financial and manpower resources rather than by the lack of military requirements" they were saying in effect that anything more than the minimum contribution to the NATO shield forces could only be justified if it were relevant to the peacekeeping role outside NATO.

Argument about the principles and the practical consequences of the policy set out in the JPS paper lasted most of 1958. It was an unhappy and divisive period, exceptional too in the inability of the Chiefs

⁵⁶ 'The Effect on Soviet Policy of the 'Attainment by the USSR of Nuclear Sufficiency' - JIC(57)120(FINAL).

⁵⁷ JP(57)151(Final).

of Staff Committee to agree on even an amended version of a policy paper produced by its own planning staff. The differences went too deep to be resolved by skilful wording. After an initial discussion at which Lord Mountbatten appeared to accept the paper subject to an amendment which would have left him free to challenge the relative balance of expenditure between conventional and nuclear forces, the alignment of the parties became clear. This was, as in 1956⁵⁸ and on much the same issue, Lord Mountbatten and Sir Gerald Templer against Sir Dermot Boyle, with Sir William Dickson trying (and not always succeeding, at least in the view of CNS and CIGS) to present the issues fairly. Changes in the membership of the JPS⁵⁹ only complicated the picture since, when asked in June to look again at the effect of nuclear sufficiency, they could not agree and thereupon submitted three significantly different reports. Inevitably, Ministers entered the lists: the First Lord of the Admiralty (Lord Selkirk) sent a paper to the Minister of Defence countered by one from Mr George Ward.⁶⁰ Much was made by those doubtful about deterrent policy of the critical developments in the summer of 1958 in the Middle East where the coup in Baghdad and the assassination of the Iraqi Royal Family had disturbed the uneasy post-Suez equilibrium: an example, it was claimed, of the kind of situation to which conventional forces were relevant and the nuclear deterrent was not. The successful Anglo-American interventions in Jordan and Lebanon underlined the argument, on the face of it. But it was also true that these operations owed their success to the speed at which comparatively small forces were launched from, in the British case, a permanent base in Cyprus. They did not necessarily signify that the government's defence policy should be adjusted in favour of conventional forces.

Long drawn out though the argument was and numerous the papers produced at different staff levels,⁶¹ the issues were clear enough: the credibility and relevance of nuclear deterrence in general; the part to be played by the British deterrent in particular; and the division of resources between that and conventional forces. Even so, Sir William Dickson had great difficulty in reaching the point at which he could put the differences between the parties to Mr Sandys for decision, in agreed terms. The agreement and the decision were both needed. Otherwise a review of worldwide strategy covering the next decade, which the Chiefs of Staff were anxious to complete, would have no solid basis: not when Lord Mountbatten and Sir Gerald Templer believed that the government's defence priorities should be stood on their head. In their view, first priority should be given to maintaining "minimum conventional forces to fight limited wars and to defend our worldwide interests . . . we absolutely oppose the concept of an independent UK nuclear deterrent".⁶² In the context of the 1958 debate, this second point did not mean that the anti-deterrent party wished to dismantle the V-bomber force. Sir William Dickson explained their position to Mr Sandys in these terms:

When the First Sea Lord and CIGS state that they are absolutely opposed to the concept of an "independent UK nuclear deterrent", they mean that they are opposed to attempts to possess ourselves with an "unrestricted" deterrent force which is powerful enough by itself to inflict unacceptable devastation on Russia. They do not think that there is a 'military' requirement for an 'independent' deterrent, but accept that 'political' reasons require us to have a contribution to the western deterrent which is not controlled by US strings.

CAS agrees that our "independent deterrent" does not have to be of a size capable by itself of defeating Russia, but that it must be of such size and capability as to cause Russia to think twice before attacking this country and British vital interests.⁶³

With this document the Chief of the Defence Staff submitted a list of questions to provide a frame of discussion for what was expected to be a decisive meeting with Mr Sandys: all bore upon the future

⁵⁸ Ch 1 pp 20-21.

⁵⁹ Air Cdre Rosier and Brigadier Carver replaced Air Cdre Davis and Brigadier Coles during 1958.

⁶⁰ DB(58)5 and DB(58)6.

⁶¹ AHB ID3/80/4 contains the papers formally considered by the Chiefs of Staff and Ministers, as well as internal Air Staff memoranda and briefs.

⁶² Joint Minute to CDS, 22 September 1958.

⁶³ CDS to Minister of Defence, 24 October 1958.

credibility of deterrence, possible changes in the nature of the threat and consequently the need to alter the balance between nuclear and conventional forces. A paper produced jointly by Lord Mountbatten and Sir Gerald Templer and one by CAS alone ⁶⁴ were added for good measure.

The meeting was held on 28 October 1958. Insofar as the government's deterrent policy and the priorities flowing from it were being challenged no formal changes were made. As recorded, Mr Sandys was as unshaken as he had been at his meeting with the Chiefs of Staff in March 1957 when he had insisted on a policy that would enable National Service to be abolished. He would not accept that the credibility of the American deterrent was in doubt; if it were, Britain would more than ever need nuclear forces. And if the issue was not the withdrawal of American protection but merely hesitancy at a particular time of crisis "the existence of an independent British nuclear deterrent would still cause the Russians to pause in any action of major aggression in Europe". Mr Sandys accepted that the priorities of defence policy were not, and never had been, mutually exclusive but he saw no justification for putting the deterrent into a lower priority. He would not concede that the deterrent was taking an undue share of defence expenditure nor that, if it were abandoned, the money saved would necessarily be used to strengthen conventional forces. The most important contribution by Sir Dermot Boyle was that the currently planned bomber force was the minimum sufficient to inflict enough damage on Russia to deter her from launching a nuclear offensive under circumstances in which she calculated that the United States would not retaliate.

The record of the meeting reads well enough. But it was far from satisfactory to CNS and CIGS. There was a three weeks delay before circulation (which suggests that the Secretariat had difficulty in producing a record acceptable to Mr Sandys). CIGS⁶⁵ thought it a very condensed report of a lengthy discussion and blurred the issues on which there was genuine disagreement. Lord Mountbatten also protested, in a minute to CDS⁶⁶ which as good as said that Mr Sandys had gone back on views on priorities that he had expressed at the meeting. Each said that they had not changed their views; but whereas Sir Gerald Templer was about to give place as CIGS to Sir Francis Festing, Lord Mountbatten remained in office. Mr Sandys refused to amend the record but in what may have been an olive branch, tendered for him by CDS, ⁶⁷ he agreed that the meeting had not reached a final answer and that when the government had taken decisions on how and in what strength the deterrent would be maintained a directive to guide defence planning would be issued. In one sense even this was a rebuff to CNS and CIGS who had all along been strongly opposed to separate and prior consideration of the future of the deterrent, with its obvious risks to the resources left over for other forces. Such an examination was nevertheless the only avenue by which some change in the nuclear/conventional balance might be reached. For when all the arguments about the credibility and consequences of a deterrent policy had been exchanged, the fact remained that a number of matters affecting the deterrent and its defence were currently on the ministerial agenda; and these raised questions of their cost, practicability and inherent merit to which there were no easy answers. The point had been fairly made by the First Lord of the Admiralty in his memorandum:⁶⁸ after the existing equipment of the deterrent force were to come Thor, Mk 2 V-bombers, Blue Steel Mk 1, BLUE STREAK and BLUE STEEL Mk 2 and, for its defence, the later marks of Lightning, Stage 1 and then Stage 1½ SAGW, underground sites for BLUE STREAK and a modernised C and R system.

⁶⁴ CAS's paper was in fact the JPS memorandum which had been unacceptable to CNS and CIGS who objected to it being put before Mr Sandys.

⁶⁵ CIGS to CDS 3 December 1958.

⁶⁶ CNS to CDS 28 November 1958.

⁶⁷ CDS to CNS and CIGS 9 December 1958.

⁶⁸ Whether the credibility of the *use* of the deterrent was the crucial question rather than the credibility of the *threat* of its use was to prove a continuing source of misunderstanding and argument. Thus, at the meeting with Mr Sandys Lord Mountbatten is recorded as saying that he could not entirely agree that the British deterrent became of even greater importance if Britain was isolated from the United States because to use it in retaliation for an attack on Western Europe would surely be to commit national suicide immediately and forego any possibility of a negotiated peace. Mr Sandys' emphasis, in contrast, was on the resolve to use the British deterrent and that it was this resolution and the doubts that it raised in the mind of a potential aggressor that was the key to effective deterrence.

⁶⁹ P 162 above.

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Could all these be afforded, consistently with well balanced forces as a whole? The Air Ministry believed that they both should and could; in any case, what conventional forces were genuinely needed?

Financial Difficulties

What was only too clear from the debate about nuclear sufficiency was that when the time came for decisions the RAF was likely to be short of friends. It was likely to be short of funds as well. If the debate had no apparent effect on defence policy, the means and the cost of the policy were under question. The issues involved in the resignation of Mr Thorneycroft, the Chancellor of the Exchequer, and his senior Treasury Ministers (Mr Enoch Powell and Mr Nigel Birch), in January 1958 were not confined to the size of the Defence budget.⁷⁰ It was nevertheless true that the Prime Minister refused to reduce the Defence budget for 1958/59 to a level acceptable to Mr Thorneycroft; and the resignations, coming as they did within a year of Mr Macmillan becoming Prime Minister, exemplify the government's difficulties in maintaining its defence policy without running into political as well as economic and financial trouble. If the episode was, as Mr Macmillan said at the time, "a little local difficulty" the problems underlying it did not disappear with the resignations.

Management of the defence budget necessitated both a short term and long term approach (the second becoming more practicable with the introduction in 1958 of five-year costings covering all defence expenditure). The strategy adopted by the Cabinet Office and the Treasury - in a tacit but effective alliance with which the Ministry of Defence was uneasily associated - was to set financial targets for the years immediately ahead that were not unrealistically low yet would be difficult to meet. These functioned as a lever for prising out individually small but cumulatively useful economies during the annual process of scrutinising the Service and Ministry of Supply Estimates. This was the short term approach which sought economies within the framework of agreed policy. The long term approach was based on doubts about certain features of the policy itself, reinforced by the inherent difficulty of maintaining any given level of defence (and the force structures appropriate to it) when equipment costs to meet a growing and increasingly sophisticated threat were bound to rise. Nor was there any scope for savings in manpower costs, short of a reduction in strengths: on the contrary, the obvious need to make volunteer forces attractive meant that rates of pay, living conditions and virtually all other conditions of service had at least to keep pace with trends in the civilian sector. Even if the growth in national prosperity proved sufficient to maintain a constant proportionate allocation of resources to defence it would not automatically follow that this would be enough to keep the Services at the same level of manpower and also provide them with the replacement equipment that they claimed to need. And as the British economy during the late fifties was not growing at a satisfactory rate - with the balance of payments and the strength of sterling considered the most significant indicators - it was inevitable that the more expensive features of policy and new weapons were under continuous questioning throughout the period. The arguments about the Defence costings for 1959/60 and beyond illustrate the problem as the Treasury perceived it. The contention that the future seemed reasonably satisfactory since although more money would be needed there would be little change in the percentage of Gross National Product (GNP) absorbed by defence left the Chancellor of the Exchequer⁷¹ quite unimpressed: he wanted an absolute reduction in defence expenditure, mainly in production, new buildings and research and development because, he argued, these were the areas where resources could most usefully be diverted to productive industry. He made a strong attack on the R and D costs of the various missile projects: the missile - Seaslug - for ship defence was the worst example but Firestreak, Bloodhound and BLUE STREAK were all proving massively more expensive than originally estimated. He commented favourably on the possible advantages which Polaris might have over BLUE STREAK, a project which had never convinced his officials.⁷² Policy changes were, in his view, unavoidable and the Defence Committee agreed with him at least to the extent of calling for a list of the possibilities.⁷³

⁷⁰ Wallworth pp 59-65.

⁷¹ Now Mr Heathcoat-Amory.

⁷² Sir Frederick Brundrett in a minute to Mr Sandys' Private Secretary in January 1958 spoke of "the bitter hostility of the Treasury" to BLUE STREAK (MOD Records MO 26/10/2 Pt 2). The Cabinet Office seems also to have been unenthusiastic.

⁷³ D(58)14th Mtg, 23 July 1958.

A full description of all the possible economies that were examined would be excessively detailed. Projects and plans in each of the Services were questioned: for example, the level of reserve stocks in the Army and the roles and numbers of aircraft in the Fleet Air Arm as well as the rising trend of naval expenditure as a whole. Some economies were made by reducing the resources allotted to particular projects without going as far as to abandon them or the policy which had given rise to them. Both Bloodhound and BLUE STREAK suffered in this way. Most notably, however, the area where considerations of policy as well as plain economy combined to raise fundamental doubts was Air Defence. Other important features of defence policy, indeed the policy as a whole, continued to be worrying but there was general agreement in all the Departments concerned - even to a degree in the Air Ministry - that this was the one most ripe for review.

This chapter began with a survey of RAF front-line plans over the period from 1957 to 1960, and thereafter has sought to outline the relationship between British and NATO defence policies. In that context the balance between nuclear and conventional forces constituted a major part of the difficulties which arose. This applied to the wider scene as well; for if ADUK was primarily debated in the context of deterrence the essential problem continued to be how best to remain in the business of deterrence and yet have sufficient conventional forces, including fighter aircraft, to defend British interests worldwide. Hence the history of policy towards RAF fighter and SAGW defences with which the next chapter deals leads into a survey of the other RAF Commands as policy was developed and adjusted in the interests of the global peacekeeping role.

CHAPTER 6

AIR DEFENCE

Introduction

Within a month of the publication of the 1957 Defence White Paper the AOC-in-C Fighter Command (Air Marshal Pike) made a report to the COS Committee¹ on reductions in the interceptor fighter force. The twenty fighter units of the R Aux AF had already been disbanded, as had two regular squadrons: a further seven were planned to go by March 1958 and another six by March 1959 by which date the force would comprise ten squadrons of Javelins and ten of Hunters, with a total UE of 280 (160 Javelins and 120 Hunters). This was major surgery: at the beginning of June 1956, when Sir Anthony Eden's review of policy was getting under way, there had been nearly 600 operational aircraft in the regular squadrons of Fighter Command and over 140 in the R Aux AF squadrons. By the middle of 1958 the Air Council's plans still provided for a force of 280 aircraft but with its composition changing from 1960 onwards: Lightnings were expected to come into service in 1960 and would steadily replace Hunters under a programme planned to be completed by April 1962. Thereafter it would be the turn of the Javelin squadrons to be reduced - to eight squadrons by April 1964 - but the total strength of 280 was to be retained by forming two more Lightning squadrons. This plan for the fighter defences of the country can be regarded as the target at which those who believed that air defence should be allocated fewer resources were aiming. As such it was to be attacked, unsuccessfully, during 1957 itself. Plans for the SAGW component of ADUK came under serious criticism somewhat later. And what was not challenged was the need for an effective C and R System. Whatever might be said about the value of fighters and SAGW the nuclear strike forces would be totally unconvincing - to friend or foe - without a system of passive protection, including radar warning and dispersal airfields, designed to enable a major part of the force to take off before missile or aircraft attacks arrived.² Such difficulties as the Air Council's policy for the C and R system encountered were on matters of detail, such as the case for the balloon-borne radar, BLUE JOKER. This is not to say that its scale and costs were not closely questioned.

Within these broad plans there were important and potentially controversial questions of equipment. Any replacement for the Hunter and Javelin could only be the Lightning, for which the first production order had been placed before January 1957. This was for the Lightning Mk I which was the first genuinely supersonic aircraft in RAF service but was not regarded as a fully capable interceptor in the conditions expected in the 1960s. The debate about air defence policy accordingly subsumed an argument about the level of investment in later marks of Lightning, especially Lightning Mk 3, and the air-to-air missiles with which they were to be armed. Here, as things stood in 1957, Firestreak as the first British AAGW project was not seriously threatened, however much its slow and expensive development programme was deplored. Whether its successor - Red Top - should be brought into service remained in doubt until 1960. In both cases there was a naval as well as RAF requirement. GENIE, an American weapon with a nuclear warhead, also had a place in the RAF programme from 1958. SAGW plans included the first mark of Bloodhound, primarily an introductory weapon to the Mk 2 version which offered the performance needed against sophisticated opposition and was planned to be the standard weapon for the SAGW component of ADUK. This had a Continuous Wave (CW) homing system. A Mk 3 Command Guidance (CG) missile was planned as well, capable of intercepting powered bombs and, possibly, ballistic missiles. By the end of 1958 the intention was to equip a proportion of Bloodhound Mk 2 and all Bloodhound Mk 3 missiles with nuclear warheads. There was one casualty early in the period: this was the BLUE ENVOY

¹ COS(57)34th Meeting, 7 May 1957.

² BMEWS at Fylingdales came in for some public criticism because of the short minimum warning of a missile attack on Britain that it could guarantee. There was also a tendency among some supporters of POLARIS to disparage its value. Both types of criticism failed to perceive the importance of the BMEWS system as a whole.

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project, designed to give a significantly better performance than Bloodhound Mk 2 against aircraft.³ The Air Council accepted that it should be abandoned so that the R and D effort in the SAGW field could be concentrated on defence against powered bombs and ballistic missiles. Together, the plans for interceptor fighters, AAGW and SAGW and their associated radars, and the works services required at airfields and elsewhere, involved a heavy investment of R and D and other resources. Nor were these the only items of expenditure on what was, in Britain at any rate, the main objective of air defence policy - the defence of the Bomber Command and SAC strike forces. Dispersal airfields for the V-bomber force and the emplacement of BLUE STREAK missiles underground were additional, and expensive, defensive measures. There was thus a very large target for the critics.⁴

As well as the force of 20 squadrons in Fighter Command, the 1958 Air Council plan provided for a fighter squadron in Cyprus, one in Aden and one in Singapore (with a detachment in Hong Kong). Allowing for the planned withdrawal (and disbandment) by early 1960 of the nine fighter squadrons that were still in 2TAF in 1958, the total fighter force for planning purposes at that time was thus some 23 squadrons.⁵

The Threat

Assessments of the Soviet Union's capabilities for an air offensive were a regular feature of the information available to Ministers and their senior advisers. The JIC in London and the intelligence organisations advising the NATO Standing Group in Washington worked closely together; and although there were occasional differences about details - for example, on how soon the Soviet Union would bring into service a supersonic bomber with a radius sufficient to attack North American as well as British targets; on the numbers of ICBM and IRBM that NATO would be faced with and by what dates - the intelligence picture, as distinct from its interpretation, was not in itself a matter for debate. However, the main lines of development in the Soviet Union, as these were seen in 1957, were significantly re-interpreted during the following three years, and it was in this period that most of the decisions determining the size and shape of ADUK and air defence overseas were taken.

An Air Staff appreciation⁶ made in the summer of 1957 illustrates how the threat to the United Kingdom was evaluated at that time. Up to 1960 the main threat was seen as a force of about 275 Badger medium bombers (twin-engined aircraft with a performance somewhere between the Canberra and a Mk I V-bomber) armed with nuclear weapons. (A separate appreciation at this period by the JIC put the size of the Soviet nuclear stockpile at over 800 weapons, rising to about 2000 by 1960). A supersonic guided bomb with a range of about 100 miles - the Soviet equivalent of Blue Steel Mk 1 - was not expected to be in operational service before 1960. Light bombers (BLOWLAMP and BACKFIN, each with a better performance, except for range, than the Canberra) would also be a threat, but in small numbers and at high level. ECM capability of these forces would steadily improve during the period. Soviet ballistic missiles were not regarded as a serious threat before 1960, though there was some intelligence evidence

³ A report to the Air Council (AC(57)37) in 1957 envisaged Bloodhound Mk 2 as effective against a Mach 2 bomber up to 60,000 feet at 30 miles range; it was also expected to have a useful performance against low flying aircraft down to 2000 feet. BLUE ENVOY was planned to be effective against the same kind of target up to 70,000 feet at a range of 80 miles, and against low-level attack down to 1000 feet.

⁴ On a lighter note: the Treasury had made such difficulties over some of the expenditure on missiles that the author invited his Treasury colleague to visit a Fighter Command station to see that money had been well spent. The man from the Treasury duly admired the special storage for missiles that had been built at Wattisham, with the latest equipment to ensure the specified conditions of temperature and humidity. He looked noticeably more thoughtful when he learned that a nearby stack of Firestreak missiles, covered only by a tarpaulin, had been returned from field storage trials in Cyprus and were in good condition.

⁵ The number was sometimes set at 22, depending on whether the MOD instruction of 1957 that Cyprus should have no resident fighter squadron was being taken seriously.

⁶ Annex A to Air Ministry paper on The Air Defence of the United Kingdom which was sent to the Ministry of Defence in September 1957 (AHB 1D6/RD57/1).

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(mentioned elsewhere in JIC documents) that trials of IRBMs with ranges of about 1600 nm could have been completed by 1959. From 1960 both Soviet bomber and missile capabilities were expected to improve, missiles to the point where 1965 was considered "as probably the mid-year of the period in which the threat will change from a mainly manned bomber threat to a mainly ballistic missile threat". Even so, the Air Staff doubted whether the Russians could count on eliminating ballistic missile sites in Britain, especially those underground, by missile attack. As for improvements to aircraft, 1961 to 1965 was expected to be the period in which a new Soviet strategic bomber would come into service: cruising at Mach 1.7, a 200 mile dash capability of Mach 2 at 60,000 feet and a maximum combat radius, with flight refuelling, of 3,500 nm.⁷ Substantially improved light bombers were also anticipated, though their estimated combat radius of 600 nm suggests that these would threaten only peripheral British targets. Where the Air Staff were on firmer ground was in forecasting advances in the quantity and quality of Soviet ECM equipment.

Defence Effectiveness

The Air Ministry paper included an estimate of the effectiveness of the planned 20-squadron fighter force, supplemented as the period advanced by Stage 1 and Stage 1½ SAGW. Inevitably conjectural and hypothetical, and containing assumptions that could be no more than informed guesswork, the appreciation reached conclusions that were sober enough. If attacks of the scale and type assumed were mounted - the maximum number of attacking aircraft was 450 - about half the bombers attacking in daylight might be destroyed but no more than 15% if the attacks were by night. This was with the use of conventional weapons; no estimate was made of the enemy's casualties if nuclear-headed SAGW and AAGW were employed. Distribution of enemy losses between fighters and SAGW varied, reaching the point by 1963 when SAGW might, on certain assumptions, destroy nearly as many aircraft as might the fighters. SAGW would not, however, be able to deal with the stand-off bomber or aircraft whose mission was to jam defence radars and other transmissions; these could only be targets for fighters. The broad summation, and one wholly directed to the value of air defence as part of the strategic deterrent, was: "against the bomber threat which will persist throughout the period, the opposition likely to be presented by Fighter Command is on any military calculation inadequate to prevent wide spread destruction. But it remains a matter of opinion whether, in the face of such bomber losses, the enemy will appreciate that he could not reasonably expect to achieve his objective - namely the destruction on the ground of all that part of our bomber force which is unable to take off during a period of warning". Little was said about the vulnerability of deterrent missiles to enemy missile attack: in part because of the expected inaccuracy of this type of attack during the early 60s on what would be relatively small and numerous targets.⁸

Overseas, the role of the interceptor fighter was not in dispute. There was an obvious case for reasonably sophisticated air defences for Singapore/Malaya and Cyprus to underline the credibility of nuclear strike forces deployed there, either permanently or on detachment, and also for their value in case of limited war. The case for Aden was not so strong and although for a time SAGW defences, as well as fighters and early warning radars, were planned for all three locations SAGW were in the event not deployed in Aden.

Dimensions of the Problem

With deterrence, and by means of deterrence the avoidance of war with the Soviet Union, the first priority of British policy, air defence could have a significant place in the structure of defence only insofar as it

⁷ What evidence of a long-range supersonic bomber was available in 1957 has not been researched. The Air Staff appreciation presented it as a "hypothetical medium/heavy bomber", which suggests that its development was extrapolated from what was believed to be technically possible rather than from factual evidence. It was not until the BACKFIRE bomber came into service in the seventies that the long-expected improvement in Soviet long-range offensive aircraft can be said to have materialised. An improved light/medium bomber (BOUNDER) which was probably supersonic in level flight appeared in 1961 but was not brought into operational service.

⁸ The Air Council was advised in 1959 that manned bombers would be the only accurate means of attacking BLUE STREAK emplacements until at least 1967.

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could contribute to the effectiveness, and hence the credibility, of the nuclear strike forces based in Britain. What that contribution could and should be was the key question in the air defence debate. Another question might conceivably have been posed, one arising from the view that an initially conventional aggression by the Soviet Union might best be responded to in kind, with tactical and strategic nuclear retaliation coming at a later stage, if at all. On this view, a case might have been made for an air defence system of the size and structure required to produce an effective counter to conventional attacks on military and civil targets in Britain intended to weaken the will and solidarity of NATO generally. As the last chapter has shown, British policy was by 1959 moving away from what had come to be regarded as over-reliance on massive nuclear retaliation. Even so, neither before or after that date was there any inclination to evaluate ADUK in terms of defence against conventional attack. It would not even be true to say that conventional air attacks against Britain were regarded as so indicative of Soviet determination that they would be bound to lead to immediate nuclear retaliation and that, for that reason, an air defence system of orthodox size and shape to deal with large-scale conventional attacks was unnecessary. This point was occasionally and obliquely taken in the Air Ministry but usually to emphasize (when the Admiralty and War Office were deploring the allegedly excessive expenditure on deterrent forces) the heavy extra investment in the RAF programme that would be called for if a bigger conventional challenge were to be offered to the Soviet Union. Thus, when Mr Sandys and then Mr Watkinson criticised the Air Council's air defence plans they did so primarily in the context of what was needed for the credibility of nuclear deterrence; and the Air Council's defence of its plans was in the same context. Whatever criticism might now be made of this approach it was at the time consistent with and derived from government policy. Indeed, the Air Council's basic acceptance of the government's deterrent policy comes out in sharp contrast to the attitude of the Admiralty and War Office; and what disturbed Ministers and senior staff in the Air Ministry was not so much the criticism of their plans for air defence as the failure of the government, as they saw it, to apply announced policy consistently to all the key features of British defences as these existed when the new policy was enunciated. If the Air Ministry, within the limits in which the air defence debate was conducted, argued more vigorously for Fighter Command than the merits of the case justified part at least of the explanation lies in a reluctance to degrade an illustrious part of the RAF when much in the other Services was not being subjected to the same searching and persistent criticism. What is, however, unquestionable is that looking at RAF front-line plans as these emerged from the 1956 and 1957 views of defence policy, one area where the Air Staff were prepared to admit, if only among themselves, to some degree of over-insurance was ADUK.

The First Challenge

The same meeting of the Defence Committee as reached decisions on the size of the V-bomber force agreed also that further studies should be made of a number of areas, including air defence.⁹ In a minute sent to Mr Sandys the next day Mr Macmillan posed some broad questions: "What is the threat of air attack upon this country during the next 10 years? What are the plans for maintaining and equipping the Air Defence system during this period, and what are the military arguments on which they are based?" This minute marked the formal beginning of a review of air defence which was to continue with scarcely a break until the end of 1960. At the levels inside the Air Ministry responsible for policy as a whole this review was to absorb more time and effort than any other question, even more than was to be devoted to the deterrent systems to succeed the V-bomber.¹⁰

The Air Ministry memorandum already mentioned amounted to a vigorous defence of existing plans. Looking to the air defence task in the next ten years it argued that the 20-squadron force would continue to bear the main burden since SAGW would not be capable during that time of destroying more than 20% of

⁹ The other subjects were The Role of the Navy and Tactical Atomic Weapons for the Army (D(57)7th Mtg, 2 August 1957).

¹⁰ Mr George Ward remained S of S for Air throughout the period. Sir Thomas Pike succeeded Sir Dermot Boyle as CAS in January 1960. Sir Edmond Hudleston was VCAS for the whole period as was Mr R C Kent in the post of AUS(A), from whom prodigious labours of drafting were required. Memoranda and briefs accumulated at an extraordinary rate. CAS's papers alone on the major policy aspects of the controversy (as distinct from more technical features) occupy some two feet of shelf space.

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the attacking forces, even under ideal conditions. Consequently, the full potential of the Lightning as a weapon system should be developed. Looking further ahead, an anti-ballistic missile defence would be necessary.

Mr Sandys' initial response ¹¹ was to question whether Fighter Command's limited task of defending the V-bomber airfields required interceptor fighters. He argued that the Soviet Union would only attack airfields in Britain if she could simultaneously destroy all other Allied bomber airfields, including those in the United States. This would be beyond her capabilities until sufficient ICBMs were available, which could not be the case before 1963. Thereafter, fighters would be irrelevant to that particular threat: why then keep them in the interim, except to deal with intruding reconnaissance aircraft? Mr Sandys recognised as well a possible fighter role against stand-off bombers and jamming aircraft but he was obviously thinking of a smaller force than twenty squadrons. Mr Ward quickly replied. He challenged the assumption that there would or could be no aggression until the Soviet Union had built up its ICBM forces. In any case, there was always a risk of war by miscalculation. Moreover, one of the reasons why Government policy attached such overriding importance to possessing its own independent deterrent was that the United States might not stand by its NATO allies. In those circumstances, an attack might be threatened against Britain alone. And why single out the fighter force as an area for economy if there were no risk of war for several years: why provide substantial ground and naval forces for NATO? Some of these arguments were hardly more than debating points. What had more political impact was how was a change in air defence policy to be put across to the public and to the NATO allies, particularly to the United States with substantial forces stationed in Britain.

This last point influenced the Defence Committee at its meeting in December 1957 ¹² when it was agreed that "for the time being fighter aircraft should be retained for the air defence of the United Kingdom". Expressed in these terms, the decision fell a good way short of confirming the 20-squadron fighter force in Fighter Command. The discussion itself - recorded at unusual length - was not encouraging to the Air Ministry. Mr Thorneycroft argued for stopping further development work on the Lightning, relying on Javelins for the next few years and, if any successor aircraft was necessary, on an American fighter thereafter. He failed to persuade his colleagues; but they agreed that any further orders for the Lightning should not be placed without the express authority of the Defence Committee. In Mr Sandys' view, fighters provided only a marginal degree of security for the deterrent: the real defence lay in increasing the state of readiness of the V-bombers so that they could be launched before being destroyed on the ground. His acceptance of the Committee's temporising decision was entirely on political grounds: "a decision to abolish our fighter defences would seriously increase the international difficulties which our defence policy was already likely to encounter in other respects, such as the withdrawal of our ground forces from Germany".

The Prime Minister's views were an impressively fair, if in some respects over-simplified, summary of the problem. They identified the essential issues on which argument about the RAF fighter force was to continue for the next three years and deserve re-stating in the terms recorded:

- a. From the military point of view it could be argued that the expenditure involved in providing fighter aircraft was no longer justified. Fighters could not provide a complete defence against even manned bombers, and only a few bombers of this type, armed with megaton weapons, would cause devastating destruction. Against the ballistic missiles fighters would be useless. These factors suggested that the only defence was the nuclear counter-attack and that it would be better to use the £100 millions a year at present devoted to fighters on providing more bombers or on building up the other deterrent forces. ¹³
- b. On the other hand, it could equally be argued that fighters could still make it more difficult for a bomber force to carry out their attack successfully and that, at least until this role had been taken over

¹¹ Minister of Defence to S of S for Air, 21 October 1957 (AHB 1D3/900/32)

¹² D(57)14 Mtg, 31 December 1957

¹³ It is not clear whether Mr Macmillan was here referring to BLUE STREAK or BLUE STEEL missiles (or their equivalent) or to tactical nuclear weapons or to conventional forces. In the context it seems more likely that he had the first possibility in mind.

by surface-to-air guided weapons, fighters should be retained. Moreover, the Soviet Union was continuing to build up a large manned bomber force and, in the absence of United Kingdom fighters, would be able to use even obsolescent aircraft for an attack on this country. In any event a limited number of fighters would be required indefinitely to prevent unhampered aerial reconnaissance and to intercept unidentified intruders. The military arguments were therefore not conclusive.

c. Moreover, it was necessary to take account also of the psychological impact on this country and on our Allies in the North Atlantic Alliance if we were to abandon our present fighter forces, particularly the effect on the United States if we appeared to be failing to honour our undertaking to provide protection for their strategic bomber bases in this country.¹⁴

d. In all the circumstances, he had come to the conclusion that the effective choice lay between the complete disbandment of Fighter Command (other than the limited number of aircraft needed to prevent aerial reconnaissance or minor intrusions) and the maintenance of a properly equipped force, and that it would be unjustifiable to adopt the intermediate course of maintaining a fighter force in principle but equipping it, in the interests of economy, with obsolescent aircraft.

The Prime Minister's last point, putting an emphasis on quality whatever the future mission of Fighter Command, was some comfort to the Air Staff, as was the recognition of a minimum role which only the interceptor fighter could undertake. Otherwise, there was much in the Defence Committee's discussion that was ominous, including a request that an acceleration in the rundown of Fighter Command to 20 squadrons should be examined. (Nothing came of this: any financial savings would have been outweighed by the costs of redundancy). The most that could be said was that a skirmish had been won and that the main battle had still to be fought. What is noticeable, however, is that whatever the doubts about the future of the fighter force there was no suggestion, at any rate in the Defence Committee's proceedings, that SAGW had no place in the future armoury of ADUK.¹⁵

There had been no complacency in the Air Ministry about its air defence plans even before the Defence Committee meetings. Not least worrying was their estimated cost over the next five years: this, at well over £120M a year, exceeded that of Bomber Command over the same period. "This can be justified", Mr Ward said, "only if we can show that it makes all the difference to the success of the deterrent". Nor was it imagined that a completely effective air defence system was attainable. What was honestly believed was that fighters and SAGW together were necessary to implant doubt in the mind of an aggressor that he could neutralise the nuclear strike forces by bomber attack. But what size of force might reasonably be considered to make "all the difference to the success of the deterrent"? Here there was a real difficulty. When the case was made for a particular size of V-bomber force there was the broad criterion of its ability to cause heavy damage to given numbers of Russian cities which were immovable targets. In contrast, what degree of protection should be afforded to strike forces, at least part of which could be expected to be airborne before any attack arrived, was much more open to argument. It was difficult to show in quantifiable terms that nothing less than a 20-squadron force and an associated SAGW system would suffice. As a judgment, as distinct from a convincing calculation, such a force had some justification in that it was of similar size to that recommended in 1956, independently of the Air Staff, by the Air Defence Committee.¹⁶ And against the contention that it might be too big ~~in capabilities~~ the need for overseas reinforcements had to be taken into account; for it could not be seriously maintained that the scarcely more than token fighter forces in the theatres outside NATO would be sufficient for the contingencies that could only too easily arise. Yet when all these points had been made it remained true at the end of 1957 that the Air Ministry had still not convinced the government that its air defence plans, conceived primarily as part of strategic deterrence, were sound in military terms and justified the heavy expense involved.

¹⁴ No formal undertaking has been traced. Certainly, in the many briefs that were provided for Air Ministry spokesmen throughout the ADUK controversy no reference was ever made to such an undertaking; and the point would not have been overlooked if the Air Ministry had been aware of it. But whether or not the Prime Minister was mistaken on the formal position US reactions to any change in air defence policy had to be taken into account.

¹⁵ A major article in the Daily Express by Mr Chapman Pincher, which was published on 4 December 1957 shortly before the Defence Committee meeting, made precisely this suggestion. Mr Pincher was never a biddable journalist but it was noted in the Air Ministry that he had lunched with Mr Sandys the previous day.

¹⁶ Ch 1, p 26 and Ch 2, p 34.

The Discussions of 1958

Work on the Defence budget during the summer of 1958 exposed an uncomfortably high level of future expenditure, whether in the next year or two or for the five years covered by the forward costings. Numerous savings were discussed between officials of the Treasury and the various defence departments, and between Ministers. These so-called "shopping lists" (which is what they were not) varied with the identity of the "shopper" as well as with the size of the saving to be achieved. The Chancellor of the Exchequer's favourite targets continued to be air defence, the deterrent and the Navy (where one of his senior advisers thought that expenditure was out of control).¹⁷ In general, the Prime Minister and his most senior colleagues were becoming increasingly alarmed at the prospects; and at an informal meeting in September¹⁸ they agreed that another fundamental study of defence expenditure was required. No formal action was taken to put this in hand but Mr Sandys was invited to produce papers on a number of subjects, particularly ADUK, for the Defence Committee's consideration later in that year. Among the provisional views of Ministers was the possible need to alter existing plans for SAGW: of no value against the developing missile threat and even if SAGW could be developed into an effective ABM system it might be better to get them from America or manufacture them under licence. On the other hand, the political objections to any dismantling of Fighter Command were still a factor important to Ministers, at any rate at this time in the life of the government.

Pressure on the Air Ministry to justify its air defence plans was if anything even heavier than in the previous year. A memorandum from the Prime Minister¹⁹ listing the various means of ensuring that "our bomber force will be able to make one sortie, or at the most, two", carried the implication that together they were more than was necessary or affordable. Over-insurance was the theme of the advice he had been getting from Sir Norman Brook, the Secretary of the Cabinet, for some time past; and it influenced much of the discussion when the Defence Committee made its next attempt, at a meeting on 10 September,²⁰ to decide its air defence policy. Only one conclusion was reached: "the objective of the air defence policy of the United Kingdom should continue to be confined to the defence of the deterrent". This was no more than a reaffirmation of the policy announced in the 1957 Defence White Paper. It was a conclusion the Committee reached after a discussion in which some of those present assumed that the active defence of the deterrent would eventually pass to SAGW; these would not, however, have sufficient range, or be affordable in the necessary numbers, to give useful protection to the United Kingdom as a whole.

So the main issues, and particularly the size of the fighter force, remained to be settled. Useful support for the Air Ministry's plans came from the Defence Research Policy Committee, under Sir Frederick Brundrett's chairmanship. In a memorandum on guided weapons for air defence²¹ the DRPC surveyed all the weapons about to come into service, such as Firestreak and Bloodhound Mk I, or under development, such as Red Top and the more advanced versions of Bloodhound. But it first set out what it thought should be provided for the defence of the deterrent: UK airspace must be denied to air reconnaissance; the manned bomber (and by the mid-sixties the supersonic bomber) would continue to be a serious threat even when ballistic missiles were available, and to make no provision for defence against it would reduce the credibility of the deterrent; and the defence should be in depth, preferably by means of fighters.²² It followed that the Lightning would need a better weapon to follow Firestreak and that improved marks of the Lightning should be developed. The US GENIE, unguided but with a nuclear warhead, could also be useful; but of more general value in all the conditions that might call for air

¹⁷ Big supplementary estimates for the Navy were necessary in 1957-58 and 1958-59. Appendix J shows estimated and actual annual expenditure by the three services over the period from 1957 to 1962.

¹⁸ The meeting was held on 10 September 1958. Other Ministers present were the Home Secretary, Foreign Secretary, Chancellor of the Exchequer and Minister of Defence.

¹⁹ D(58)35, 2 September 1958

²⁰ D(58)18th Mtg

²¹ DRP/P(58)82, October 1958

²² No country at this time had successfully developed SAGW of sufficient range to be a replacement for the air defence fighter, and then only for the role of direct interception and destruction at high altitudes. The DRPC instanced the difficulties the Americans were encountering with Bomarc. This weapon eventually was brought into service for North American defence but its production was limited and ceased in 1962.

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defence operations - overseas in limited war as well as in Europe - would be the guided, collision-course weapon, Red Top. On the other hand, the DRPC saw scope for economies in SAGW projects and recommended that Bloodhound alone should be developed for static air defence against bombers:²³ first, Bloodhound Mk 2 with CW homing and a conventional warhead, and then as a later possibility an improved Mk 2 weapon with a nuclear warhead. A question on which the DRPC made no recommendation was whether the ultimate development of Bloodhound - the Mk 3 version - with command guidance and a nuclear warhead - both essential for anti-ballistic missile defence - should be pursued. There were no illusions about the difficulties of defence against ballistic missiles: "an adequate active defence is unlikely to emerge in practicable form in less than 10 years". The Americans were working hard on a system but not one which would necessarily be appropriate for Britain. In any case, a complete system would be beyond British resources, and a joint project with the Americans would be necessary.

The DRPC paper was well received, first by the Chiefs of Staff at a meeting on 28 October and two days later by the Defence Board under Mr Sandys who agreed that the DRPC recommendations were right "if the policy of defending the deterrent was to continue". This was a crucial proviso. The recommendations were relevant only to the types of weapon which air defence needed; whether sufficient weapons should be produced to meet the Air Council's plan for twenty fighter squadrons and twenty-two SAGW stations²⁴ with a mix of conventional and nuclear missiles was a separate question. Within the Air Ministry there were no lively expectations that the plan would be approved. Indeed, the brief provided for the Secretary of State and CAS for the meeting of the Defence Board faced the possibility of an imposed decision to reduce the ADUK fighter force to what was needed to prevent unrestricted reconnaissance - about four squadrons. In that event, the brief argued, a further eight squadrons would still be needed as a mobile reserve for deployment overseas in emergency. This arrangement would be preferable ostensibly because it would be more flexible than using the squadrons to strengthen the garrison forces in the Middle East and Far East. In reality, it was a tactical move, though not one whose merits for the overseas role could be dismissed, to preserve as big a Fighter Command as possible if the defence of the deterrent ceased to be a role for fighters.

Towards the end of the year, after much correspondence between MOD and the Air Ministry, an attempt was made to reach decisions. Three meetings of the Defence Committee were held in November to consider memoranda by Mr Sandys on the Defence of the Deterrent and air defence missiles;²⁵ and much besides. Papers on the V-bomber force, offensive airborne weapons such as Blue Steel, and on BLUE STREAK were also considered and at the first of these meetings - on 5 November - there was a discussion of defence policy and the budgetary position which led to general Ministerial agreement that conventional forces should not be reduced below the levels agreed and that they should be fully and properly equipped. The Committee recognised that this left the deterrent and its defence as the main possibilities for significant economies for which the Chancellor of the Exchequer was pressing. He was prepared to abandon BLUE STREAK even if this meant that at some time in the sixties there would be no independent deterrent; and as for Fighter Command he proposed a study to see whether it should be fighters or SAGW or both that should be abandoned. If these were serious proposals as distinct from negotiating tactics he had little success. Certainly, neither Ministers collectively or Mr Sandys in particular were prepared to dismantle deterrent policy to the extent the Chancellor proposed. Indeed, as far as the fighter force was concerned, Mr Sandys' position was closer to that of the Air Council than it had been a year earlier, though he argued it with less conviction than he showed in resisting economies in the offensive components of the deterrent. He supported the 20-squadron force in principle and made it clear

²³ One consequence of this recommendation was an Air Council decision to withdraw its interest in YELLOW TEMPLE which had begun as an Army project for a mobile SAGW but which offered an alternative technical solution to Bloodhound as a weapon for ADUK. YELLOW TEMPLE technology, with the English Electric Co as the contractors, was employed in Thunderbird which was later, after much study and argument, confirmed as the Army's SAGW in the field rather than a mobile version of Bloodhound.

²⁴ See Ch 4, pp 195-198.

²⁵ D(58)24th, 26th and 27th meetings. The memoranda under reference were D(58)56, 61 and 67.

that he was not advocating any reduction; in any case, the political objections that had previously been perceived still held good. Yet if some reduction in defence expenditure was absolutely unavoidable he considered that a smaller fighter force - "about 12 squadrons" - would probably be the least damaging step open to the Government.

On the face of it, the Defence Committee decided very little. The development of Bloodhound Mk 2 was blessed as was Red Top (the Chancellor conceded that even a small fighter force - he suggested eight squadrons - should be adequately equipped); but the Committee seems to have battered itself into something like paralysis by the length and intensity of its own discussions and it reached no conclusions about the future size of the air defence forces. As was the custom, few of the many views recorded were attributed to individuals but it is safe to say that Mr Ward and Sir Dermot Boyle argued powerfully for no further reductions in total fighter strength, at home and overseas.²⁶ That no decisions were reached was not, for them, a good sign.

Effectively there was a stalemate, so much so that even while the Defence Committee discussions were taking place Sir Dermot Boyle raised within the Air Ministry the possible tactical advantage of offering up one or two Hunter squadrons to provide some savings in the budget for the next financial year. The Prime Minister too, before the end of the year, took a short term view of the problem and asked what would be the effect of making economies of £5M in 1959/60 in the costs of air defence. Neither suggestion made much sense. To disband active squadrons would have produced insignificant savings in the year ahead and in any case the approach came up against the reasonable objection that a major policy decision which the Defence Committee had failed to reach on the merits of the case would have been made for short term financial advantage, and a modest one at that. Neither suggestion was pursued. But the hunt had not been called off. The year ended with a factual report to the Defence Committee, prepared in the Air Ministry at MOD request on the financial effects over the next five years of a reduction in Fighter Command from twenty to sixteen squadrons. If economy was to be the master of policy it was at least more sensible to look several years ahead so that all the consequences of a smaller fighter force - on weapons, spares, airfield construction and maintenance, and on manpower and training costs - could be estimated.²⁷ This report, with several others bearing on defence expenditure, was considered at a meeting of the Defence Committee on 22 December.²⁸ Various possibilities for reducing the defence budget were aired but, once again, no conclusions were reached. Indeed, it is clear that the Committee was at this period anxious to avoid decisions, in any area, that could be open to the criticism that the Government had departed from its announced defence policy. It was left to the Prime Minister to "arrange for further consideration to be given to the issue involved". In the meantime nothing was said in public about the problem - in its various forms - of the ends and means of defence that was so exercising the Government. The annual Defence White Paper published in 1959 was little more than a brief report of progress towards the target of all-regular forces.

First Reductions in the Planned Fighter Force

Air Defence was not to appear again on the Defence Committee's agenda until the end of 1959 by which time there was a new Minister of Defence (Mr Watkinson), a new CDS (Lord Mountbatten) and Sir Thomas Pike was about to succeed Sir Dermot Boyle as CAS. Although Mr Sandys had appeared on occasion to be bent on doing away with fighters for the defence of the deterrent he had failed to persuade his colleagues and he had himself accepted that there was a role in ADUK which only fighters could perform. On the assumption that Fighter Command should contain the squadrons needed for overseas

²⁶ The personal notes which Sir Dermot Boyle made before the third of this series of meetings have survived (AHB 1D3/900/33). He was clearly appalled at the prospect of any further significant reductions in fighter strength. If this were to happen, BLUE STREAK would be a waste of time and money; there must be no further procrastination over Red Top; "the same thoroughness, the same objectivity" as was being brought to bear on RAF plans should be applied to the other Services. He also noted a point which was to be important later: the ease with which, in the absence of adequate defences, the bomber force could be exhausted and caught on the ground by false alarms and feint attacks.

²⁷ This estimate, set out in D(58)88, had to be made in a hurry. The savings on manpower and AAGW were especially speculative. Over the five years from 1959/60 to 1963/64 the total hypothetical savings came to nearly £26M.

²⁸ D(58) 31st Mtg.

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reinforcement Mr Sandys' final position can be summed up as acceptance, if reluctantly, of a UK-based force of twelve squadrons and possibly as many as sixteen, all of which should be equipped with improved marks of Lightning armed with Firestreak and later Red Top, with the nuclear-headed GENIE as another possible weapon. Up to the time of his departure in September 1959 there were no Ministerial decisions that obliged the Air Council to make reductions in its plans for twenty fighter squadrons at home or in the substantial deployment of SAGW units that it had approved in 1958. Yet before then the Air Council itself had decided to alter the 20-squadron plan. Whereas in 1958 it had intended to maintain twenty squadrons in Fighter Command at least until 1964, with single squadrons in Aden, the Far East and possibly Cyprus, in the summer of 1959 it approved a reduction of the force at home to thirteen squadrons - all with Lightnings - by 1965. The Council in the same series of decisions²⁹ increased the garrison forces overseas: to two squadrons in both Aden and the Far East and one permanently in Cyprus rather than provided by rotation from Fighter Command. And for the first time the Lightning was given a role overseas, where it was to be introduced - in Singapore - in the mid-sixties. A further amendment before the summer was out reduced the all-Lightning force at home to twelve squadrons, to be achieved by 1964.

More than one factor had been taken into account in this self-imposed change of plan. If Ministerial decisiveness had so far been conspicuously absent, senior officials outside the Air Ministry continued to be doubtful about the scale of air defence expenditure. In the summer of 1959 the Air Ministry costings for the next five years showed no great increase - some £70M over the £2,700M which had been the estimate a year before - but the Navy and Army costings showed substantial increases as did the planned expenditure on R and D of the Ministry of Supply. Another review of the whole defence programme was inevitable; and it was in preparation for that review that by August the Air Ministry was supplying MOD with the forecast costs of both the deterrent and its defence. By choosing a basis for the costing which excluded most of the fighter force because of the inescapable requirements of anti-reconnaissance and overseas reinforcement, it was possible to give a relatively modest figure of under £400M as the five-year cost of defending the deterrent. About £730M was the estimated cost of the deterrent over the same period. Within the Air Ministry, however, a different picture was being presented. Even under the reduced plans which the Air Council had by now approved the full costs of ADUK for the next five years were put at £900M; and against what was foreseen as a critical attack on air defence policy the Air Staff were set the task of defending the plans in detail. The CAS-designate had to be told since the arguments were likely to continue into his term of office. The letter to him could hardly have been more frank:

The problem is briefly this: how can you justify an expenditure on air defence of some £900M over the next five years when the end product in terms of Plan Ahead [the term used for a modernised C and R system] and Stage 1½ [SAGW defences] does not begin to materialise until 1964 at the earliest; and when Intelligence estimate that the Russians will be capable of attacking all our offensive bases - above and underground - with an adequate number of missiles by 1962 (UK alone), by 1964/65 (UK and US together).³⁰

A changed view of Soviet capabilities thus appears as another factor affecting air defence policy. In the summer of 1959 the JIC, with the Air Ministry intelligence staff in agreement, were advising that by 1962, possibly even earlier, the Russians would be able to deploy considerable numbers of ballistic missiles, of lesser range than ICBM, capable of attacking targets in Britain.³¹ There continued to be doubts about the accuracy of Russian missiles against small underground targets such as BLUE STREAK sites; and this, together with the possibility that this type of attack would be expensive in fissile material, explains the contemporary speculation that precision attacks against small targets might in the main be a task for

²⁹ AC12(59) and AC 18(59).

³⁰ VCAS to Sir Thomas Pike, 28 August 1959 (AHB ID3/900/34(Pt 1)).

³¹ In a minute of 28 August 1959 ACAS(I) quoted a JIC view (JIC(59)34) that ballistic missiles could play a large part in an attack against Britain by as early as 1961. He went on to advise that by 1962 the Soviet Union "could, if she so wished, have enough IRBMs to attack our soft deterrent sites from Soviet territory" (AHB ID3/900/34(Pt 1)).

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manned bombers. But all in all, intelligence opinion had moved towards an earlier date than had previously been considered likely for a substantial missile threat to the deterrent strike forces in this country and also to those based in the United States.

A comprehensive air defence policy paper was under preparation and frequent revision from August until November 1959. This could not be said to have been put in hand on the unprompted initiative of the Air Ministry. The debates of 1957 and 1958 were so obviously unfinished that it was common prudence to prepare for another round of argument. In any case, a long questionnaire from MOD about air defence was delivered at the end of September to which a reply was obligatory. Later, the Air Ministry also had to contend with a paper produced jointly by MOD and the Treasury (an unusual combination that in itself registers the strength of the opposition) that presented a challenge in terms that could not be avoided:

- a. Without active air defence as now planned by the Air Ministry can we count on launching our deterrent forces before they are attacked?
- b. If not, are the Air Ministry's air defence plans sufficiently effective to be worth the cost? ³²

The paper went on to argue that the answer to the first question was yes and that, if this was uncertain, the answer in any case to the second question was no. A small force of fighters - four squadrons - to deal with reconnaissance aircraft was conceded, but no more: the planned SAGW defences could be dispensed with and the C and R system modified and reduced. To add to the Air Ministry's difficulties yet another paper, produced by the Air Defence Committee, contemplated abandoning the further development of Bloodhound in favour of a version of Thunderbird for both the mobile and static roles; and the committee went back on its previous advocacy of Red Top, even though Ministers had accepted the need for this weapon, and proposed instead a better pursuit-course weapon to succeed Firestreak. Air Marshal Elworthy, newly appointed as DCAS and so ex-officio a member of the Air Defence Committee, had had no opportunity to influence his colleagues. But in what had now become a highly charged atmosphere he was able to persuade Sir Frederick Brundrett that the paper should not be put to the Chiefs of Staff Committee as a formal statement of the committee's views.

What was desirable as the next step - indeed necessary if the normal processes of decision-making were to be properly followed - was a collective view from the COS Committee; and a meeting was arranged for 24 November. The Committee can rarely have been faced with a more difficult task. There was no lack of memoranda and advice. The paper on which the Air Ministry had been working throughout the late summer and autumn had finally emerged as a formal memorandum to the COS Committee entitled Air Defence against the Manned Threat. ³³ There was the joint paper by MOD and the Treasury already mentioned and a further paper from the same source commenting on the Air Ministry memorandum and suggesting, to a point perilously close to presumption, what issues the Chiefs of Staff should address; and going no less close to saying that the two Departments had already decided to recommend to Ministers that no new commitments should be incurred on SAGW and the C and R System and that Fighter Command should run down to twelve squadrons as rapidly as possible. Both CAS and CDS circulated minutes, in advance of the meeting, intended to highlight the crucial points, as they saw them. ³⁴ Finally, the Chiefs were aware of the somewhat abortive paper on air-to-air weapons produced by the Air Defence Committee.

It is not surprising that more than one meeting was needed before the Chiefs of Staff could decide on the terms of their report to Ministers. There were in any case difficulties in dealing with air defence in isolation. During the second half of 1959 an official committee - the Future Policy Committee - set up by the Prime Minister and with Sir Norman Brook as chairman, had been engaged on the same kind of clarifying exercise on national policy as had preceded the Policy Review of 1956, the main difference

³² This joint paper was circulated to the Chiefs of Staff on 19 November 1959.

³³ COS(59)286 19 November 1959.

³⁴ CAS's minute was retrospectively placed on record as a formal COS paper - COS(59)294.

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being that more senior staff were involved and it was taking much longer to produce a report.³⁵ The future of the independent deterrent and the military means by which Britain's overseas position might be maintained were among the questions being considered. Each was relevant to the size, shape and deployment of air defence forces.

The Chiefs of Staff also had a major study in hand - the forces required for limited war - which had an important but as yet uncertain air defence dimension. In the circumstances they could make no more than an interim report, confined to air defence at home. They put forward three agreed points to the Minister of Defence:

- a. The United Kingdom will at all times need an up-to-date efficient early warning system including a capability to detect and track ballistic missiles.
- b. Until such time as the Russians can rely on ballistic missiles for their attack plan on the United Kingdom without prejudicing their ability to carry out simultaneous attacks against other Western countries, some degree of active air defence against manned bombers will be necessary and will add to the credibility of the deterrent. Afterwards, the need to exclude trespassers will remain.
- c. In view of Russia's mounting missile capability and probable changes in the form of our deterrent forces, there is a good case for reviewing those of the Air Ministry's present plans which would not give effective service until 1965, for improving the Control System, developing highly sophisticated fighters and weapons systems, and expanding and developing SAGW.³⁶

The Chiefs of Staff dealt firmly with the Joint Treasury and MOD view that an active air defence was unnecessary to the defence of the deterrent and that all that was needed was dispersal and a high state of readiness. CAS's patience had been sorely tried by views of this kind which were based on speculations on the attack capabilities of the Russians against various levels of air defence. This seemed to him to be fundamentally wrong because it assumed the failure of deterrence and hence actual warfare, whereas Government policy was that deterrence must not be allowed to fail; from which it followed that the last area in which risks should be taken was the security and credibility of the deterrent. To leave it undefended would, he said, "wantonly undermine the deterrent".³⁷ His colleagues on the COS Committee supported him but, significantly, only for so long as there was a serious manned bomber threat. And in this respect views were changing - at least in some quarters. A report at this time by the Air Defence Committee said that it was becoming increasingly unlikely that the Russians would bring a long range supersonic bomber into service, partly because of the success of their ballistic missile programme but also because of the technical problems.³⁸ Sir Kenneth Strong, the Director-General of the Joint Intelligence Bureau, took much the same view. There were others, however, who were less certain. In any case, there were the commonly acknowledged doubts about the effectiveness of missile attacks against small targets which could be argued as justifying the provision of defences against bombing attacks, whether or not the bombers were supersonic.

³⁵ See Ch 1 pp 11-20. One difference between the 1956 and 1959 exercises was that the second was formally commissioned, and there was none of the secretiveness of the earlier exercise; CDS was a member of the committee.

³⁶ Memorandum from CDS to Minister of Defence, 30 November 1959 (COS(59)301). Mr Watkinson indicated his agreement to this memorandum. On the same day he separately replied to a minute from his Permanent Secretary who said that he disagreed with the Chiefs of Staff and that the air defence of the deterrent had "negligible military value". Somehow Mr Watkinson found it in himself to agree with this view as well. (MOD Records MO9/4 Ptl).

³⁷ COS(59)294, para 3.

³⁸ The Air Defence Committee reported to this effect in December 1959: "in view of the very real difficulties which the Americans are encountering in this field, we have serious doubts whether the Russians will think it worth their while to devote sufficient effort to produce a Mach 2 strategic bomber". A supersonic tactical aircraft with reconnaissance and some bombing capability against British targets was still at this time considered possible.

In a situation becoming more complex and controversial almost daily, the Air Ministry and MOD prepared papers putting their respective points of view to the Defence Committee. Some of the ground to be debated was cleared beforehand at a meeting between Mr Watkinson and the Chief of Staff.³⁹ As had happened earlier in the year over the size of the fighter force, the Air Ministry on its own initiative was by this time prepared to make further economies for a combination of military and financial reasons. Thus, the diminishing prospect of large-scale bomber attacks was held to justify not only the smaller 12-squadron force, but the abandonment of one of the two Master Control Centres in the previously agreed plan for the C and R System. The CG version of Bloodhound was preferred to the CW version (Bloodhound Mk 2) because it offered the only possible lead into an ABM system as well as better point defence capability against supersonic bombers, should these materialise, and guided bombs. Whether Bloodhound Mk 2 should be abandoned completely was left open: it might be a better weapon than Thunderbird for mobile air defence and there were also export possibilities. Most significant of changing thought was a proposal to confine SAGW production to about half the number needed for the full Stage 1½ system.⁴⁰ Decisions about the rest could be delayed for a year or so in the expectation that more reliable intelligence would by then be available on the relative balance of the bomber and ballistic missile threats. Red Top continued to be an essential requirement (although the Air Defence Committee had still some doubts about it) and would be preferred if it came to a choice between it and GENIE.⁴¹ Altogether, these reductions were estimated to save about £50M in the capital costs of air defence and some useful savings in running costs over the next five years, out of an average annual expenditure on air defence of about £180M: much less than MOD, not to mention the Treasury, considered achievable.

What with this advice from the Secretary of State for Air (which the Air Ministry regarded as consistent with the air defence principles on which the Chiefs of Staff were agreed), and with opinion in MOD, Treasury and Cabinet Office still hostile to any direct defence of the deterrent, Mr Watkinson was finding it difficult to decide just what to recommend to the Defence Committee. Sir Frederick Brundrett, his Chief Scientific Adviser, was not making his position any easier. His personal advice to Mr Watkinson was that only a very elaborate air defence system (which was financially out of the question) would make any serious difference to the credibility of the deterrent. Moreover, he had obviously been impressed by the latest intelligence assessments of the extent to which missiles rather than bombers were the threat to be reckoned with. So much so that he told Mr Watkinson that "in the new circumstances, the only real purpose of keeping SAGW in the UK air defences was that we did not lose all contact with the techniques. This step was in fact a form of insurance against subsequent decisions in the disarmament field which might very well make air defence a great deal more important than it is today."⁴² Remarkably, this highly eccentric view seems to have been taken seriously, at least to the extent that Mr Watkinson, who had previously intended to advocate the development of Bloodhound Mk 2 and Mk 3 and the abandonment of Thunderbird as a weapon for the Army in the field,⁴³ accepted Brundrett's advice that to develop Thunderbird for both static and mobile air defence was the preferable way to keep in touch with SAGW techniques.

³⁹ MM 13/59, 8 December 1959 (AHB 1D3/900/34 (Pt 2)).

⁴⁰ These plans, described in Ch 4, had been endorsed by the Chiefs of Staff (COS(59)27).

⁴¹ GENIE was regarded as primarily a deterrent weapon whereas Red Top could be used in all situations including those in which the use of a nuclear-headed missile would not make sense or to which the Americans, who would have supplied GENIE, might have political objections.

⁴² Personal minute to Mr Watkinson 30 December 1959 (MOD Records MO9/4 Pt).

⁴³ Mr Watkinson had so instructed in a telegram, sent while he was attending the NATO Council in Paris in mid-December, setting out the main features of the paper he wished to present to the Defence Committee (ibid).

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Watkinson v Ward

In the week before Christmas 1959 a paper by Mr Watkinson was deemed sufficiently complete to be circulated to the Air Ministry and the Chiefs of Staff for comment. It stood no chance of being accepted without argument. An attempt to arrive at an agreed paper might have been made but the next meeting of the Defence Committee, at which the Prime Minister was adamant that air defence should be discussed, was only a week away and there was no alternative to inflicting a second paper by the Secretary of State for Air on the Committee: in other words, a straight fight between MOD and the Air Ministry, with the Chiefs of Staff as a body not clearly siding with one or the other.⁴⁴

The two papers⁴⁵ were considered at a meeting of the Defence Committee on 31 December. The essence of Mr Watkinson's position was expressed as follows:

The present policy can be questioned on two grounds. Firstly although it costs more than we can afford it still does not give complete protection from attack by aircraft armed with nuclear or conventional weapons. Secondly as there is at present no defence against the ballistic missile the air defence plan becomes less and less credible as we move into the middle sixties. There are certain decisions which must now be taken with this situation in mind if we are to keep pace with events. These decisions do not terminate the policy of defending the deterrent but endeavour to relate it to the situation as at present foreseen for the next five to ten years.

He also argued that the dispersal and readiness plans for the V-bomber force - the main deterrent up to 1965 - would enable it to get into the air before an enemy attack could be delivered; and that its security would not be significantly enhanced by the planned air defences since these could not stop bombers getting through in sufficient numbers to attack all the deterrent airfields. His conclusions were:

An up-to-date efficient early warning system to include against ballistic missiles will always be needed in the United Kingdom. We should continue with all present plans affecting early warning.

Our objectives should be:

- a. to prevent trespass in United Kingdom air space;
- b. to maintain the techniques of air defence;
- c. to defend our bases and the Army in the field overseas.

For these purposes we should:

- a. keep a small force of fighters. By the time the Lightning is available this could be confined to 4 squadrons; in addition we should keep a number of fighter squadrons in the UK for reinforcement of overseas theatres [elsewhere in the paper Mr Watkinson said that the number need not be settled immediately];
- b. complete the deployment of Stage 1 Bloodhound missiles that is already in hand;
- c. add a number of Thunderbird missiles about 1963 for home defence and for the defence of bases overseas and the Army in the field;
- d. stop the further development of Bloodhound.

Finally, only if the Lightning Mk 3 and Red Top were developed for other purposes than ADUK - which he thought was by no means certain - should they be used for the four squadrons based at home for the anti-reconnaissance role.

What the Minister proposed for the size of the fighter force came as no surprise to the Air Ministry. Depending on what he had in mind about the number allotted to overseas reinforcement, there might be

⁴⁴ The Minister's draft paper was discussed at COS(59)78th Mtg on 22 December. Sir Richard Powell was present. CAS - at what was the last important COS meeting that Sir Dermot Boyle attended - made it clear that he could not support the Minister's paper. The rest of the Chiefs were silent on the point.

⁴⁵ D(59)41 by Mr Watkinson and D(59)50 by Mr Ward.

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little difference from what the Air Council was planning. But in almost all other respects the paper was appalling; almost as much for the Ministry of Supply as the Air Ministry since it proposed the abandonment of most of the current SAGW projects and put a question mark against Red Top and even against the Mk 3 version of the Lightning. An unspecified number of Thunderbirds over and above the minimal defences provided by SAGW Stage 1 could scarcely be regarded as a serious proposition. There would be no semblance of an air defence system. To say, as the Minister did, that the decisions he was seeking would not terminate the policy of defending the deterrent seemed to be the voice of unreason.

Mr Ward's response was fairly restrained. Only when commenting on the startling volte-face on SAGW did exasperation break through: "it seems to me quite impossible to follow a policy of adopting developed versions of Bloodhound and Thunderbird alternately in alternate years, in view of the waste of time, scientific and industrial effort and money, quite apart from the breach of faith with Australia" (who by this time had agreed to buy Bloodhound). For ADUK he proposed that the command guidance version of Bloodhound should be developed, for its nuclear capability and as a possible basis for ABM defence; the choice for overseas defence between Bloodhound Mk 2 and an improved version of Thunderbird should be determined by an expert investigation. But important though all this was, the crucial difference between the two Ministers and their staffs was conceptual. Not for the first time, those who tried to assess the effectiveness of air defence against the kind of attacks that might be made and those who wanted to ensure that the deterrent was seen to be sufficiently protected so that there could be no certainty of preventing its use arrived at different conclusions. As the brief provided for Mr Ward and Sir Dermot Boyle at the Defence Committee put it:-

It is beside the point to argue that for the money we are spending in order to defend the deterrent we cannot give it complete freedom from attack. Since we are not providing air defences in order to go to war, complete protection is not required. Our object is to stop a nuclear attack on this country by demonstrating to the Russians that they could not destroy our retaliatory forces by the unopposed use of manned aircraft.

The Minister's [Mr Watkinson's] argument that our present air defence plans become less credible in the middle 60s in the face of the missile threat is only valid to the extent that the Russians use missiles exclusively in practice in preference to manned aircraft. There is no certainty about their intentions. If we were to provide no defences against manned Russian bombers there are strong reasons (eg in the potentialities of a feint attack by manned bombers) why the Russians should continue to use them.

Finally, there must be continuity between our planned defences against manned aircraft and whatever defensive system which may be devised against missiles. The fighter force ... is required to prevent jamming of the ballistic missile early warning system. Command Guidance nuclear-headed Bloodhound is certainly required, because Command Guidance and nuclear-headed techniques are the only foreseeable lead-in to an active ballistic missile defence.⁴⁶

Mr Ward's memorandum repeated the case for going ahead with Lightning Mk 3 and Red Top - for overseas as well as ADUK - with which by now all the members of the Defence Committee were familiar. The compromise already described over the full plan for an SAGW defence was again offered; and whereas Mr Watkinson had left open the number of fighter squadrons for the overseas role Mr Ward went into detail on why twelve Lightning squadrons (160 UE)⁴⁷ was on any reasonable view the smallest force that could carry out the various tasks. Unusually, there was a hint of emotion: "within a matter of 5 years the planned size of Fighter Command has been progressively decreased from some 790 to about 280 aircraft, and within the last 12 months the Air Ministry have volunteered a further reduction during the next 5 years from 280 to 160 aircraft". A reference to the withdrawal of the remaining fighter squadrons

⁴⁶ A copy of this brief is at Appendix K, and illustrates the style and content of a typical Air Ministry brief which had to deal with a complex issue in such a way as to help those being briefed to see both the wood and the trees.

⁴⁷ Twelve into 160 won't go, and the Air Staff hoped that in the outcome they would be allowed 13 squadrons each of 12 UE.

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from RAF Germany by the end of 1960 or as soon as possible thereafter, was a reminder of both the Air Ministry's loyalty to the essentials of the government's defence policy and the political objections to the dismantling of air defence forces which had previously weighed with the Committee. What was certainly relevant, emotion and politics apart, was that the planned disbandment of the squadrons in Germany would mean that the 12-squadron force the Air Ministry was now advocating could only too easily be over-stretched if major emergencies arose overseas.

The link between the ADUK and overseas roles was not as clearly set out as it might have been. Mr Ward's memorandum identified three requirements - the defence of the deterrent and its credibility; the prevention of trespass and jamming; and overseas reinforcement commitments - which justified a 12-squadron force. But in arguing that at least eight squadrons were needed for overseas emergencies and that twelve squadrons were therefore justified in Fighter Command even if it were decided that the active defence of the deterrent should be abandoned he made the future size of the fighter force at home dependent on what view was taken of the need for fighters overseas. The memorandum also argued that if a component for overseas were not maintained in Fighter Command it would be necessary to maintain permanent fighter garrisons overseas. Yet the Air Council were already planning to increase the number of fighter squadrons overseas. Altogether, it is not at all easy to be certain of just what size of fighter force the Air Ministry was advocating at this time: twelve squadrons at home and an unspecified number overseas or twelve plus four or five squadrons overseas or a force of that size overseas but less than twelve squadrons at home.⁴⁸ On a plain reading of Mr Ward's memorandum the Defence Committee was being invited to choose between a 12-squadron force for all purposes - home and overseas - as against four squadrons for an inescapable minimum role at home plus an as yet undetermined number either deployed overseas or available for overseas reinforcement.

Besides the size of the fighter force, the issues for the Defence Committee were Lightning Mk 3 and Red Top - Mr Ward adamant that both were needed for home defence as well as overseas; Mr Watkinson convinced of neither but more open to persuasion on their utility for conventional air defence tasks overseas; secondly, the extent to which the previously planned SAGW defences should be completed - Mr Ward agreeable to about half the planned Stage 1½ deployment with a decision on the remainder deferred but with Bloodhound Mk 3 an essential feature; Mr Watkinson indefinite on the deployment aspect but preferring Thunderbird to either Bloodhound Mk 2 or Mk 3 for such additional SAGW defences as might be deployed at home after Stage 1 had been completed and also for overseas air defence. GENIE received a favourable mention from Mr Ward: discussions with the Americans had gone well, especially on the financial terms. As for costs, those involved in the latest Air Ministry plan for Fighter Command were set out in an appendix to Mr Watkinson's paper: nearly £860M for the next five years, with costs increasing each year to over £200M in 1964/65. These included R and D costs for fighters and AAGW of £46M and £86M for SAGW. Production and operating costs for the fighter component were estimated at £417M and at £165M for SAGW. The C and R system - £124M - accounted for most of the remaining costs. By the time the Defence Committee met some figures were available,⁴⁹ at the Prime Minister's request, of the savings that might be made over the next five years if Mr Watkinson's proposals were adopted. As he had left the size of the fighter force uncertain, total savings could not be estimated. Those arising from the various changes in weapons and from not developing Lightning Mk 3 were roughly put at about £25M; fairly enough, the Air Ministry brief commented that "these are small and would result in wholly disproportionate damage to the effectiveness of our air defences".

⁴⁸ In the Air Council discussion in the summer of 1959 (p 146 above) VCAS had envisaged possibly as few as nine squadrons in Fighter Command by the end of the sixties. Striking the right balance between home and overseas was recognised as difficult and at the mercy of events, especially as regards the availability of reinforcement routes in a particular emergency. There was also the balance of advantage between maintaining the largest possible force in Fighter Command and the practical value of familiarity with the military and physical environment overseas.

⁽⁴⁹⁾ Letter from MOD to PM's Private Secretary, 30 December 1959 (AHB/D3/800/34 Pt 2).

Decisions Again Deferred

With two Ministers proffering such divergent advice on how to deal with a military problem that was not even defined in agreed terms, it would have been by a combination of will and intuition rather than rational evaluation that the Defence Committee could have come to any effective conclusions. Cost-benefit analysis, so far as it was ever to be thoroughly applied, was certainly not in evidence at this period;⁵⁰ and it was in any case hardly Mr Macmillan's style. There was a long discussion and a graceful tribute to Sir Dermot Boyle who was attending his last Defence Committee meeting, but no decisions were reached and there was little to encourage the CAS to think that his successor would have an easier time. Further papers were called for: first, on the role of fighters for air defence at home and overseas (an aspect on which the Defence Committee had already received much advice). This was to take into account the form which the independent deterrent might take in future; significantly, because the opposition to the introduction of BLUE STREAK was showing signs of getting its way. A separate paper, essentially on the choice between Bloodhound and Thunderbird, was commissioned. The financial aspects of each were to be dealt with in detail. One possibly hopeful outcome, from the Air Ministry's point of view, was that Ministers were quick to recognise the political difficulties⁵¹ with Australia if Bloodhound was dropped from the programme. But if there was any part of the record of the meeting which was most significant it was that "a compromise ... might be found between two extreme courses": to aim only at preventing trespass by hostile reconnaissance aircraft over the United Kingdom or to do everything possible, at least for some years (implying that the time would come when only missile attack need be feared), to improve the defence of the deterrent in the interest of its credibility and effectiveness. This had been the crux of an argument that had by now gone on for over two years. What the meeting of 31 December 1959 signalled to the Air Ministry was that the Defence Committee was looking to it to present a smaller bill.

Accordingly, the first weeks of 1960 saw the Air Ministry again examining its air defence plans. One thing was clear: those who wanted less air defence had been if anything heartened by the temporising of the Defence Committee; and as the need for economy was still pressing it is not surprising that one of the first actions of Sir Thomas Pike, the new CAS, was to ask what could be provided in future if the current level of expenditure on air defence was not exceeded. The answer was not encouraging; in brief, it was that he could have a global force of 12 fighter squadrons and SAGW limited to the Stage 1 deployment of Bloodhound Mk I. Nor can he have had much hope that the other Chiefs of Staff would support him if the Air Ministry tried to insist that the plan which Mr Ward had put to the Defence Committee was irreducible. At a private meeting of the Chiefs of Staff on 8 January 1960 no final views were reached except on the continuing need to prevent trespass over the United Kingdom⁵² (about the only role for active air defence which even the strongest critics accepted). Opinion in the Chiefs of Staff Committee certainly contributed to one economy. Whereas Mr Ward had given the highest priority to Bloodhound Mk 3, by the end of January it was being assumed in the Air Ministry that this project should be cancelled and Bloodhound Mk 2 continued. Neither weapon, in the view of the JPS,⁵³ could be justified on its own merits for ADUK because by the time they came into service (1963 onwards) the threat would be predominantly from missiles. On the other hand, there was a better case for Bloodhound Mk 2 for

⁵⁰ A hint of this type of approach comes in a minute from Mr R C Kent to CAS and others in February 1960 where he contrasts the sum which Mr Watkinson was unwilling to spend on ADUK with the similar sum which would be spent, with nothing like the intensive questioning that had been applied to air defence, on the Fleet Air Arm. Mr Kent said that the overall ratio of naval defensive aircraft to strike aircraft (nearly 1/1) was higher than the Air Ministry was seeking (144 Lightnings to defence 144 V-bombers, 60 Thor, the tactical strike forces and all the various tasks overseas) and that this took no account of the guided missile ships, surface escorts etc required to prevent the naval strike force "from having its airfields sunk underneath it" (AHB 1D30/900/34/pt 3).

⁵¹ These lay in the investment which Australia was making in facilities for Bloodhound trials at the Woomera range as well as her interest in acquiring Bloodhound Mk 2.

⁵² JPS 14/14/60.

⁵³ JPS 22/22/1/60.

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for overseas defence, and if this was accepted the JPS thought it would be sensible to have a modest deployment of the weapon at home. While not accepting all the JPS arguments the Air Ministry saw that it would be wiser to concentrate on Bloodhound Mk 2 as a general purpose weapon than to insist as well on the Mk 3 version which would be more expensive, longer in development and, with its nuclear warhead, unlikely to be relevant overseas. The question of what development work should continue on command guidance techniques - for a possible ABM defence - was left for further study. Discussion among the Chiefs of Staff also led to a more modest bid for the deployment of improved SAGW in addition to the Stage 1 system: twelve Bloodhound Mk 2 sites, with some five hundred missiles in the front-line, to meet the needs of overseas defence as well as ADUK. Improvements in transportability were envisaged so far as these were possible without major redesign of a weapon developed for static deployment.

As discussion proceeded within the Air Ministry of just what response should be made to the remit from the Defence Committee the hitherto confused picture of the distribution of the global fighter force was at last cleared up: ⁵⁴ four squadrons for anti-reconnaissance and anti-jamming, four more squadrons normally in Fighter Command but available for overseas reinforcement and four normally stationed overseas - two in Singapore, one in Aden and one in Cyprus. This was the force that was recommended when a number of papers on various aspects of air defence were sent to Mr Watkinson early in February. Nothing was said about when it would be achieved but within the Air Ministry the intention was to reduce the current strength of thirty squadrons (nine in 2TAF, one in FEAF and the others in Fighter Command) to twelve squadrons, deployed as just described, by April 1964. ⁵⁵

The Air Ministry's 1960 Proposals

The fighter and SAGW forces, together with the continued development and introduction into service of the Lightning Mk 3, Red Top and Bloodhound Mk 2 and a less expensive plan for the C and R System, were the important features of the proposals that Mr Ward put to Mr Watkinson. (The GENIE weapon and the BLUE JOKER project to improve the low-level detection performance of the C and R System as well as command guidance techniques were left to be considered separately). Equally important was the presentation of the principles and policies justifying the force proposals. No less important were their financial consequences. Six papers were submitted, each of them admirably brief considering the complexity of the subject: The Role of Fighters; the Number of Fighters to be provided; the Operation of Lightnings Overseas; Types of Aircraft to be Provided and the Weapons Needed; the Choice of SAGW; and Financial Considerations. Leaving aside air defence outside NATO, which was secondary to the main argument, the tasks were defined as:

In conjunction with SAGW, to demonstrate to the Russians that they cannot destroy our retaliatory forces in the United Kingdom by the unopposed use of manned bombers.

To preclude the jamming of BMEWS.

To identify and prevent reconnaissance or other forms of trespass and intrusion.

To enable the United Kingdom to play her part in NATO.

The second and third roles were the most that fighters could hope to perform to make missile attack less capable of destroying the bases and thereby the credibility of the bomber and ballistic missile forces in Britain; and by now the Air Ministry was in no position to argue that more than four squadrons were needed. ⁵⁶ It was additional squadrons for the first role, as well as the size of SAGW defences, that was the

⁵⁴ Even the Secretary of State for Air had become confused. He thought that the aim was to make a case for 12 squadrons plus 4 for the anti-reconnaissance role, at a time when the Air Staff had come to accept that they could hope for no more than 12 or perhaps 13 for all purposes: Minute from PS to S of S to PS to CAS, 5 January 1960. (AHB 1D3/900/34 (Pt 3)).

⁵⁵ Fighter squadrons primarily engaged in the ground attack role are excluded: as they invariably were in all the debates about air defence. There were three such squadrons in 1960; and the Air Ministry plan at that time was to increase these to six, including two in Fighter Command, in phase with the reduction of the interceptor fighter force.

⁵⁶ Over a long period the Air Staff normally presented the requirement as "a minimum of four squadrons". It was and is typical of any argument about numbers that it takes on a precision that was not originally intended.

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Air Ministry's principal difficulty, faced as it was with a strong body of opinion that missile attack and aircraft engaged in associated reconnaissance and jamming operations were the only threat of any significance: hence the essentially political arguments introduced by the reference to NATO. This was dealt with at some length. A useful contribution had to be made to the recently agreed NATO air defence system, especially as the French were continuing to make difficulties; secondly, there was a risk of trouble with the United States which "could not be expected to regard with complacency the stationing of its forces in a country which made no serious attempt to provide an air defence"; lastly, there had to be sufficient squadrons at home to allow detachments to be made to Germany when the RAF fighter squadrons there had been withdrawn.⁵⁷ All this was intended to bolster the case for a further four squadrons at home, with another four squadrons overseas and all eight regarded as available for flexible and mutual reinforcement. SAGW defences were given much the same treatment. The reduced plan envisaged fourteen Mk 1 and eight Mk 2 stations at home and four Mk 2 - two in Cyprus and two in Singapore - overseas: to be achieved by March 1965.

These plans, when compared with those put to the Defence Committee the previous December, were substantially less expensive. The estimated savings came to about £130M over the next five years. Even so, the cost would take over 8% of the defence budget, rising temporarily to nearly 10% in 1964/65 - a year in which heavy capital expenditure would arise on the Lightning Mk 3 and SAGW. Mr Ward could and did point out that, taking his revised proposals into account, expenditure in the RAF as a whole was not expected to rise over the five-year period but Mr Watkinson's first reaction was that the Air Ministry had not gone "nearly far enough". He also told Lord Mountbatten that the Air Ministry had reverted to the position it had taken up before the Defence Committee meeting.⁵⁸ This was plainly untrue: the new proposals reduced the planned fighter front line (if only modestly - from 160 to 144 UE), cancelled Bloodhound Mk 3, used the same number of Bloodhound Mk 2 to cover the overseas as well as home deployment (whereas previously the overseas requirements were additional) and economised in the capacity of the C and R system at home to control fighters.⁵⁹ Lord Mountbatten did not take the opportunity to put the Minister right; he may have thought this difficult since the Chiefs of Staff had no agreed view of what air defences were required. It is fair as well to add that, however hard Mr Watkinson was pressing the Air Ministry at this time, he refused to yield to no less heavy pressure from the Chancellor of the Exchequer, and hardly less from the Prime Minister, to agree to wasteful short-term economies. What he was in fact beginning to appreciate was the difficulty of dealing with the air defence plans of the RAF as a discrete subject capable of separate decision whatever might be the air defence weapons operated by the other Services and whatever changes might be in prospect in defence policy in general.

It was against this background that the scope of the prolonged debate changed to some extent in the early months of 1960. Mr Watkinson accepted that final decisions should await the results of a COS study of the air defence requirements of all three Services (the Air Ministry welcomed this provided the inquisition was as severe as its own plans had suffered), of the COS study of limited war, and finally of Sir Norman Brook's Future Policy Committee. Reluctantly, Mr Macmillan and Mr Heathcoat Amory agreed, though on the assumption that the economies would not be less than £120M over the next five years, and almost certainly more. There was accordingly yet one more Defence Committee meeting, on 25 March, at which air defence was only generally discussed except for Bloodhound Mk 3. Even on this there was no clear decision though for all practical purposes work on this weapon ceased.⁶⁰

⁵⁷ The British Ambassador in Bonn had recently expressed misgivings about the planned withdrawal in the light of British responsibilities for preventing violation of West German airspace (see Ch 3, pp 127-128).

⁵⁸ Minute from Mr Watkinson to CDS, 4 February 1960 (AHB 1D3/900/34 (Pt 3)).

⁵⁹ This economy indicates, as much as those in fighters and SAGW, the extremes to which the Air Ministry were being driven. The remaining capacity was considered only sufficient to control Fighter Command's aircraft; there was little or nothing available for any other fighters - RN or USAF - which might be available in emergency. On the other hand, this was consistent with the philosophy of credible deterrence as distinct from fighting an air defence battle.

⁶⁰ Sir Solly Zuckerman, who had replaced Sir Frederick Brundrett as Chief Scientific Adviser in MOD, advised Mr Watkinson some days later that it should be left to the Ministry of Aviation to arrange for such research into CG techniques as seemed desirable.

The Wider Debate on Air Defence

Until March 1960 the main argument had been directly between the Air Ministry and the combined forces of MOD and the Treasury, supported by the Cabinet Office. On the new basis the Air Ministry could legitimately throw a few stones itself. Old acquaintance was presumed on in an attempt to influence the Prime Minister and a memorandum was sent privately to a senior Air Ministry official seconded to the Cabinet Office. The familiar arguments were presented to justify the eight squadrons to be based at home; but as the Prime Minister was becoming increasingly worried about how to maintain the British position overseas without what he considered excessive military expenditure (an important aspect of the work of the Future Policy Committee) the memorandum also questioned the wisdom of relying on smaller overseas garrisons and a highly mobile strategic reserve unless there was adequate fighter strength to defend the airfields and bases overseas which would receive reinforcements in emergency. This was an important shift of emphasis. Other points were made: all the economies in air defence had been volunteered by the Air Ministry whereas the other Service Departments had produced no comparable statements of their air defence programmes, still less volunteered any savings.

None of this was likely to be unfamiliar to the Prime Minister.⁶¹ What was more to the point was the work put in hand by the Air Staff and their scientist colleagues to evaluate the weapons proposed for Navy and Army air defence: in the Navy's case, to question the value of Sea Slug Mk 2, which at this stage was mainly founded on its capabilities with a nuclear warhead, and, if there was any case at all for a high-altitude SAGW for the Army in the field, to advocate a mobile version of Bloodhound Mk 2 rather than a developed Thunderbird. If a year had to be selected as that in which the Air Ministry began to be more obviously and aggressively critical of the programmes and policies of the other Services, it would be 1960.⁶²

Much of the summer of 1960 was taken up by the COS study of air defence. A paper was produced by the Joint Planning Staff in May⁶³ which was important in itself but important as well for the views expressed about the task set and the limitations of the approach to it. Because these bear upon the nature of joint staff work they are worth quoting:

We have found the preparation of this study a particularly difficult and arduous task which has involved almost daily meetings for some three weeks ...The first lesson, in our view, is that it is militarily illogical to select air defence - or, indeed, any particular aspect of defence in isolation - as a target for major economies. If economies are arbitrarily imposed in any one particular element of defence potential without a balanced military view being taken of our defence requirements as a whole we believe that this could lead to imbalance.

If we have to cut our coat from a limited amount of cloth - and we realise that we are liable to be under continuing pressure to do so - we think that it would be much better to do it in the following way. The first stage should be to invite each of the Service Ministries to re-examine their plans in the light of jointly agreed policies and to propose how a given percentage of their planned expenditure could be saved, with the least damage to their overall military effectiveness. At the same time they should also be invited to point out how their proposed cuts would affect their ability to meet planned commitments. Subsequently these single-Service proposals should be examined jointly by us. We should study them against current strategic policies and for their inter-Service repercussions before recommendations are submitted [to the Chiefs of Staff].

⁶¹ The memorandum also said that Unilever spent as much on advertising their products as the Air Ministry proposed to spend on air defence at home. Presumably, the comparison was thought to be significant.

⁶² This is a personal view based on an impression of developments over the period from 1956. Other features of RAF programmes besides air defence had been, and in 1960 were still being, subjected to much high-level criticism against which the Air Ministry had usually to battle alone; and this, with no sign that the pressures on the Defence budget would lessen, could well account for the change.

⁶³ A Strategic Review of Air Defence (JP(60)31(Final)).

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The second lesson we see emerging from this study is that there is a need for the development of agreed criteria in certain common fields, on which requirements for equipments may be based. Much of the data we have recently been examining has been conflicting and, on several occasions, has been altered during the progress of our study.

The last of these points referred in the main to differences in the logistical policies of the three Services, such as different criteria for calculating the number of aircraft ordered to support those in the front-line and the numbers of SAGW and AAGW needed for specific tasks. The JPS recommended that a joint working party of specialists should be set up to reassess the criteria. Money was obviously at stake here but more besides: for example, the Air Staff believed that the Army's assumptions about the effectiveness of Thunderbird in the field were seriously over-optimistic and correspondingly underrated the severity of the weapon's logistics; in contrast, they believed that the Navy over-insured in the numbers of aircraft it provided to back a given size of front-line.

What the other observations of the JPS implied was that to select air defence at an early stage of the drive for economy and to concentrate on it, almost obsessively, to wring out the biggest possible savings was mistaken. The merits of the alternative JPS approach may be arguable⁶⁴ but, if followed, it might have led to a re-allocation of resources: for example, between Bomber Command and Fighter Command. As events had developed, any initiative in that direction by the Air Ministry would have run a double risk; without the comprehensive approach suggested by the JPS, both air defence and strike forces might have suffered.

As for the substance of the issue, the JPS study was as comprehensive and competent as could be wished. "It accepted that the object, in the case of ADUK, was effective deterrence, not an air defence system to fight a war: "If the deterrent to global war failed, no air defence system could save the United Kingdom from devastation, certainly not by ballistic missiles. No expenditure can therefore be justified on the creation of air defences simply for fighting a global war". If, however, nuclear disarmament took effect before conventional disarmament air defences on a vastly larger scale would be necessary. The threat from manned aircraft was carefully presented: this would remain the main threat for a year or two and although from 1963 the Russians could rely exclusively on ballistic missiles medium and tactical bombers could not be discounted, at any rate for the next ten years. In any case, aircraft presented a permanent reconnaissance and jamming threat. Nevertheless, the JPS recommended a policy for ADUK which effectively put an end to such hopes as may have remained for an air defence system as big as the twenty squadrons, over twenty SAGW stations and a matching C and R system which had been the Air Council's original plan for Fighter Command. As formulated, it was the most the JPS could do to end a long period of uncertainty since it was directed to the post-1963 situation which Ministers and many others had for some time considered the only one that needed to be taken into account. It was to govern air defence policy for the next decade and more and was as follows:

After 1963 air defences will still be required in peace to identify hostile or potentially hostile aircraft and to prevent them from intruding for reconnaissance, jamming or any other purpose over United Kingdom territory; to provide the earliest possible warning of the approach of any air threat; and to enable the United Kingdom to play an appropriate part in the NATO integrated air defence system of which the United Kingdom is one of the regions. The known ability to do all this will undoubtedly influence potential enemies and reassure our own people.

The knowledge that the United Kingdom has an air defence system, which is able to provide effective early warning and tracking, should by itself deter Russia from using aircraft against her; the comparatively large amount of warning available from such a system would permit the United Kingdom - and, in fact, the United States - to launch their nuclear strike forces.

⁶⁴ A reaction to a not dissimilar but less developed proposal by the Chiefs of Staff in 1956 is described in Ch 1, p 20.

⁶⁵ The Chairman of the JPS at this time was Air Commodore F E Rosier who was an air defence specialist.

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Air defence overseas was given lengthy and detailed consideration: necessarily so, since it was in this context that the Admiralty and War Office plans fell to be considered (the JPS saw no need for air defences for the RN strike force in the Atlantic beyond what was provided for general naval purposes). A full analysis is unnecessary, though it is interesting that the JPS concluded that nuclear air defences would be militarily justified in the Far East to protect nuclear strike forces in Malaya and Singapore in their role of deterring aggression by China in South East Asia and also for carrier task forces in that theatre. They were notably unenthusiastic about the utility of a weapon such as Thunderbird for the Army in the field, except possibly in the Far East. Where the JPS departed from the normal form of military appreciation was in indicating, having set out the military case for the various weapons and systems, what further economies might be made if budgetary considerations were overriding. This was refreshingly realistic compared with some of the earlier work within the COS organisation. Taking the Services in turn, the possibilities for the Navy were expressed in general terms: fewer air defence weapons for the planned fleet or the planned standard of defence for a smaller fleet. The JPS admitted to having had difficulty in reaching an agreed view on Seaslug Mk 2; they concluded neither for or against it but pointed out that in their view its retention rested solely on its nuclear capability. One possible economy in Army air defence was suggested: the reduction of the Thunderbird regiment based at home to a size sufficient for a mainly supporting role for a regiment in the Far East. Bloodhound Mk 3 (which, as already noted, was in any case by now a moribund project) might also be abandoned; insofar as this prejudiced future nuclear defence capabilities the purchase of GENIE became more important but in recommending that every effort should be made to obtain the weapon without political strings the JPS, wittingly or not, exposed the case for not having it at all. Finally, they suggested that some reduction in the number of Bloodhound Mk 2 squadrons at home might be an acceptable risk. The proposed 12-squadron fighter force passed without comment.

What was perceived at the time was that the JPS were for all practical purposes proposing that there should be no active defence of the deterrent. Some direct defence of the deterrent strike bases against aircraft would be possible with six, or even fewer, Bloodhound Mk 2 units (compared with eight that the Air Ministry were proposing) but these, like the four fighter squadrons over and above the irreducible minimum of four squadrons to deal with intrusions, were intended to have an overseas role as well; and both were accordingly open to the argument that the permanent garrisons deployed overseas were sufficient.

The Final Determination

It was not until October 1960 that the Defence Committee took a range of decisions which settled the main issues affecting the air defence plans of all the Services. The delay was in part due to strong representations by Lord Mountbatten. He advised Mr Watkinson that while the shape of things to come as far as ADUK was concerned was becoming clearer, decisions on the totality of air defence ought to wait until the COS report on requirements for limited war outside Europe was ready. The Future Policy Committee Report was also relevant. Reluctantly, Mr Watkinson accepted this advice. This did not deter his staff from continuing to question even the reduced forces that the Air Ministry were prepared to accept. Much time and effort was taken up during the summer in dealing with some insecurely based arguments on the lines that as the deterrent was now no longer to be defended the total number of fighter squadrons could be reduced to eight (even, at one point in the argument, to six).

By July the Defence Committee had before it a number of papers on future strategy, providing a background against which air defence policy might have been firmly determined. All were submitted by Mr Watkinson except for one by Mr Ward disagreeing with what was proposed for air defence. Yet again, the most important difference between the two Ministers was the size of the future fighter force. On this occasion, however, Mr Ward was in a better position tactically because he had the unqualified support of the Chiefs of Staff for a 12-squadron force as the minimum required for a range of tasks now so defined as to be beyond further argument. An effort had been made to reach agreement with Mr Watkinson before the Defence Committee met. ⁶⁶ When it failed separate memoranda by the two Ministers could not be avoided. ⁶⁷

⁶⁶ Meeting of Mr Watkinson, Service Ministers and Chiefs of Staff (MM/COS 14 July 1960)

⁶⁷ D(60)34 by the Minister of Defence: D(60)37 by the Secretary of State for Air.

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As far as fighters were concerned, the argument was about the overseas dimension. Here, the minds of the Air Ministry and MOD had never really met; and, as we have seen, there had been uncertainty within the Air Ministry itself about deployment as between home and overseas. MOD now represented that the Air Ministry intended to allot a larger number of squadrons to overseas tasks than had been the case a year earlier and that it would suffice to maintain four squadrons at home primarily for overseas reinforcement and only one on permanent overseas deployment in Singapore. Thus Mr Watkinson proposed a force of nine squadrons, including the four permanently in Fighter Command to deal with intruders. Cyprus would be defended by detachments from Fighter Command, reinforced in emergency; he said nothing about Germany. To be consistent with what had previously been said to the Defence Committee (which had not reflected the increased emphasis the Air Council were placing on stronger permanent forces overseas) Mr Ward had to represent the 1959 and 1960 plans as twelve squadrons in each case but with none overseas in the 1959 plan (in emergency squadrons would be provided from Fighter Command) compared with four overseas a year later. He argued that the change was due to the increasing risk of political difficulties over the use of reinforcement routes. He accepted that there had been no increase in the threat overseas but neither had this lessened; and if the force was reduced to nine squadrons (as Mr Watkinson proposed and if the four squadrons in the anti-intruder role were sacrosanct - and nobody quarrelled with this), there would only be about 45 serviceable fighters to meet various substantial threats - from the UAR and Iraq in the Mediterranean and Middle East, and from China in South-East Asia.⁶⁸ It would never be practicable to concentrate this small force in one area. Mr Ward concluded the section of his paper that dealt with fighters: "I believe that if any further reduction were made in our fighter plans, which have already been dangerously reduced, our force would be manifestly inadequate to provide even a defensive facade".

There was also disagreement about SAGW defences. Those now proposed by the Air Ministry as a long term plan - six squadrons of Bloodhound Mk 2 in Fighter Command, two and four squadrons respectively in Cyprus and Malaya/Singapore - were cut by half for Britain and Cyprus and to three in the Far East in Mr Watkinson's proposals. He gave the Defence Committee no guidance about what this meant in terms of missiles and capability; and Mr Ward's memorandum had to fill the gap. But, significantly, just as his defence of a 12-squadron fighter force was based on the needs of overseas rather than home defence, so he sought to show the consequences of Mr Watkinson's SAGW proposals by reference to an overseas scenario.⁶⁹ The reality was that as air defence policy was now crystallizing SAGW had even less of a role in ADUK than interceptor fighters. When even the Air Staff had been obliged to concede that the only threat against which active defence would be provided was reconnaissance and jamming aircraft - a defence which would be operative well out over the sea - the close defence provided by SAGW could hardly be regarded as more than a useful supplementary at best. Such a view was only marginally strengthened even if a threat from stand-off bombers with air-to-surface missiles was taken into account. Moreover, by this time no case was being made, at decision-making levels like the Defence Committee, in favour of SAGW as a line of development leading to ABM defence. Nor did the decisions, by now taken or impending, that BLUE STREAK should be abandoned as a military weapon and that SKYBOLT would be the future weapon of the V-bomber force strengthen the case for active air defence, whether by fighters or SAGW. The demise of BLUE STREAK concluded the argument that the Russians might prefer manned bombers to ballistic missiles for the attack of small protected targets; and the prospect of SKYBOLT, on the basis of two weapons for each V-bomber, meant that a smaller and more easily dispersible strike force would be practicable without seriously weakening the deterrent. It was no more (and no less) than an honest

⁶⁸ The threat was currently appreciated as one presented to Malaya and Singapore by light bombers but only if the Chinese Air Force was able to operate from South Vietnam. A more serious defence problem would arise if British forces operated as part of an Allied force, on the mainland of SE Asia. Whether that contingency should be catered for was an issue crucial to the size and shape of British forces as a whole in the Far East (see Ch 7).

⁶⁹ The selected illustration showed that even if all SAGW stocks in the UK were transferred to Cyprus or the Far East the available missiles, assuming a limited war lasting 30 days, would be sufficient to engage only between three and five aircraft a day. Mr Ward did not add that, on the current assumptions for the lethality of Bloodhound Mk 2, this would mean that no more than two enemy aircraft a day would be destroyed.

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recognition of the realities of what seemed to be the emerging future that Mr Ward criticised Mr Watkinson's SAGW proposals only in the overseas context, where there was a conventional threat. He admitted that if there had to be any further reduction in expenditure on RAF air defence, the least militarily damaging place to make it would be in SAGW deployment. The logic of this position was that any such reduction would be in SAGW defences at home.

Due credit was given by Mr Watkinson to the savings the Air Ministry were prepared to make. The further reductions he recommended were expected to add about £60M in the next five years to those of over £100M⁷⁰ which were estimated to arise from the Air Ministry's own reduced plans. There would be a small additional saving if it were decided that nuclear air defence weapons were not essential overseas, which would mean that the Bloodhound Mk 3 project would not be revived and that GENIE would not be bought from the US. No estimate was given of the economies that might be made in the air defence plans of the other Services. Some reductions were proposed in the Army's plans for Thunderbird; and in any case it remained uncertain whether this weapon or a more mobile version of Bloodhound Mk 2 should be selected for air defence in the field. Reductions in naval air defence were also left open. The ship and weapon programme was represented as a single problem: ship design depended on the weapons to be carried and since ships had to last at least twenty years a long look into the future was necessary. This was plausible enough, but the suspicions of a by now extremely sensitive Air Ministry were aroused when the Admiralty, having previously emphasised the importance of the expensive Seaslug Mk 2 as a nuclear weapon, hedged their bet by now claiming that it was essential in any case with a conventional warhead.

What might have been an important meeting of the Defence Committee took place on 27 July.⁷¹ All the groundwork had been done: the two Ministerial memoranda on air defence, no less than four papers on aspects of strategic policy (including the major Chiefs of Staff study of strategy in circumstances short of global war), and one on important defence projects requiring early decisions. But it was the end of a hard parliamentary session; the numerous papers offered much food for thought; and the Prime Minister decided that what he foresaw as a number of meetings on defence policy would best be deferred until September. One modest success for the Air Ministry had, however, been achieved. As a result of an initiative shortly before the meeting by Mr Ward and Sir Thomas Pike, Mr Watkinson told the Committee that he would compromise on a force of ten Lightning squadrons rather than the nine proposed in his formal memorandum.⁷² Efforts to achieve - and better late than never - an agreed position between the two Ministers continued throughout August and September. This was not easy. MOD found it difficult to agree, in the light of what Mr Watkinson had already said to the Defence Committee, that twelve squadrons of fighters could be justified. An even more serious difficulty was the likely attitude of the Treasury, for since the financing of the extra fighter squadrons depended on economies elsewhere in the RAF programme there was a risk that the economies might have to be made without getting the extra squadrons in return. Nevertheless, the risk was taken in what was a package deal put to the Defence Committee in a joint paper by the two Ministers.⁷³ Even so, Mr Watkinson would not join with Mr Ward in proposing a 12-squadron

⁷⁰ There had been argument about this figure which, at one stage, the Air Ministry had put as high as £130M. The Treasury assessed it as substantially less because the fissile material saved from not proceeding with nuclear-headed SAGW would still be produced. The figure above is not, however, under-estimated.

⁷¹ D(60) 8th Mtg.

⁷² Mr Ward and Sir Thomas Pike met Mr Watkinson informally on 25 July. On the evidence of a subsequent letter of 27 July from Mr Ward to the Minister, the meeting got off to a surprising start. Mr Watkinson said that his main reason for the proposed cuts in air defence was to find savings to help to meet the bill for the TSR2 and P1127. An explanation for the campaign against air defence which MOD had been pursuing for the previous three years, this falls some way short of conviction. The proposition put to Mr Watkinson was that his SAGW proposals would not be challenged if he would agree to a tenth fighter squadron; that the necessary economies would be made elsewhere in the RAF programme to finance another two squadrons; and that the fighter force would be run down earlier to a final level of twelve squadrons - by April 1963 instead of April 1965.

⁷³ D(60)47 of 10 October 1960

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force; he would go no higher than ten but was willing to defer a decision on the eleventh and twelfth squadrons because production orders for the Lightnings and associated weapons for these squadrons would not have to be placed before early 1962. The full scope of the proposals was as follows: ten (possibly twelve) fighter squadrons; the reduced SAGW defences proposed by Mr Watkinson in July; the abandonment of the plan to purchase GENIE; and a further examination of the already reduced plan for the C and R system (Plan Ahead), from which the project for balloon-borne radar, BLUE JOKER, was in any case proposed to be deleted. Financial consequences rather than military rationale was the main substance of the joint paper, which was notably short. In effect, the two Ministers were reporting the results of negotiations between their Departments in a situation in which previous discussions had reduced the role of air defence - home or overseas - to a very bare minimum indeed. They broadly defined the threat at home as preponderantly a missile threat from 1963 onwards; the "residual manned aircraft threat" thereafter should be countered as far as possible by the four squadrons provided to prevent intrusion and jamming. The three Bloodhound Mk 2 squadrons in Fighter Command were justified as primarily a strategic reserve behind the five squadrons to be deployed overseas - two in Cyprus and three in the Far East. The patent inadequacy of planned missile stocks for operations lasting more than a few weeks was rationalised thus: "in conjunction with fighters, however, this should be enough to maintain an adequate military presence to deter limited war, to repel a concentrated air attack in the opening stages of any limited war, and to give an enemy serious doubt about the wisdom of further attacks". Nothing was said about the political implications of reduced air defences. These had been important, even crucial, to the Defence Committee in the early stages of the debate but were mentioned less as this proceeded. It was, however, referred to in the context of NATO air defence as a whole in a brief agreed between MOD and the Air Ministry for their Ministers' use.⁷⁴ This was a brief in name but hardly in nature, since it explained at length the position that had been reached and set out the production, supply and logistic consequences in detail. Most important of all, the financial consequences were set out: necessarily so in any circumstances, but more than usually necessary at this time because the Prime Minister's concern at the costs of defence generally and air defence in particular showed signs of overwhelming all other considerations. This could not have been more clearly displayed than in his reactions to what had been expected to be a trouble-free submission of the revised Plan Ahead programme. The C and R system had been the one aspect of air defence that had previously provoked no argument. The plans originally made in 1958⁷⁵ for its improvement had been substantially reduced as the scope of ADUK had itself been reduced; and in a memorandum⁷⁶ which the Defence Committee considered in mid-September Mr Ward described the main features of a system which was the least that was necessary if the accepted requirement for radar early warning was to be met, together with the facilities needed for controlled interceptions by the anti-intrusion fighter force. It was all carefully explained. As to the scope of the system, three new radar tracking stations and two existing radars would replace the ten radars (six MRS and four subsidiary stations) in use, with manpower savings amounting to about a quarter of that currently employed. As to the technology, the new stations, equipped with Type 85 radars, were necessary to cope with new jamming techniques;⁷⁷ and as speed was of the essence - to give the UK-based strike forces time to get off the ground - automatic data transmission (replacing largely manual methods) for collation and presentation at a Master Control Centre (MCC) was necessary if there was to be any hope of obtaining a reliable picture of air activity in the approaches to UK airspace. That only one MCC was proposed was a measure of the austerity of Plan Ahead in its modified form. It had not been easy for the Air Ministry to convince itself that this would suffice, even for deterrence.

⁷⁴ A copy of this brief is in AHB ID3/900/34(Pt 5). It drew attention to the minor role in NATO air defence of a reduced Fighter Command: there would, for example, be difficulty in providing fighters for agreed contingency plans if West Berlin came under heavy pressure. It also pointed out that a combination of delays in building up the air force of the FRG and political objections to giving up British responsibilities for policing the West German border had so far made it impracticable to withdraw, as planned, RAF fighter squadrons from 2TAF. Prophetically, it said that "it has yet to be established that it will be possible to do so later on". All these points were made in support of the Air Ministry's 12-squadron plan.

⁷⁵ Ch 4, pp 103-107.

⁷⁶ D(60)42.

⁷⁷ The development of the carcinetron in the mid-fifties had massively improved the capabilities of ground based and airborne jamming equipment. The Type 85 radar was a response to this threat.

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Against this background, the sharp reaction of Mr Macmillan is on the face of it surprising and even unfair. He complained at a meeting on 16 September⁷⁸ because the plan had not previously been referred to the Defence Committee. This was true, though the Committee had been forewarned and was aware that the original plan was being revised, but at least part of the explanation lay in the Committee's own indecision about the air defence policy to be adopted. He had doubts about the merits of the plan: "it was by no means clear that by the time it became operational [which was expected to be in 1966] it would be of essential value in the defence of the deterrent". He remained unconvinced even after the Minister of Defence had put up a firm and detailed defence of the project, emphasising its fundamental importance not just to ADUK - without it "our other measures of air defence would be almost completely ineffective" - but to the NATO air defence scheme as a whole. If money was the problem, Mr Watkinson was prepared to consider making savings elsewhere in the defence programme. How far the Prime Minister's objections were for military as distinct from financial reasons cannot be judged. The fact is that Plan Ahead was expensive. Mr Ward's memorandum gave an estimate of up to £20M for R and D costs, up to £45M for equipment, £8M for works services and annual running costs of about £5½M. And what made its approval that much more difficult was that it came before the Defence Committee as only one of a number of other expensive projects and policies on which decisions were being sought. At the same meeting as Plan Ahead was considered Mr Ward presented a memorandum on the TSR2: estimated development costs of over £80M and over £200M for production. The fruits of the labours over many months of the Chiefs of Staff on future strategy outside NATO were also to hand⁷⁹ and were far from sweet to those who were concerned about the trend of defence expenditure. In the circumstances, Plan Ahead was fortunate to pass scrutiny to the extent that it did. At a second meeting of the Defence Committee on 19 September it received general approval subject to a fresh look at costs and at the BLUE JOKER project. This project had been conceived as part of a different policy of air defence than that which had at last emerged in the autumn of 1960. Even so, it was never intended to provide more than supplementary warning of low-level attack by manned bombers: desirable rather than essential was the most that could be claimed for it; and the Air Ministry accepted that it could no longer be justified.⁸⁰ As for the essential features of the Plan system, the approval that was finally forthcoming in December owed something to an appreciation of its relevance to solving the increasingly difficult problem of air traffic control for civil as well as military purposes over and around Britain. The link was explained in a paper to the Defence Committee⁸¹ and agreement was obtained to the construction of a Master Control Centre and the first of the new radar stations and to the production work needed for the rest of the system.

⁷⁸ D(60 9th Mtg.

⁷⁹ COS(60)200. This memorandum had been circulated to the Defence Committee in July. Its place in the development of overseas policy is dealt with in Ch 7.

⁸⁰ The Air Ministry's case for abandoning the project was set out in D(60)49. This concluded that the main threat was ballistic missiles and that the Russians would be unlikely to mount pre-emptive low-level attacks, which would have to be carried out by aircraft of the quality of the TSR2, against the deterrent bases in Britain.

⁸¹ D(60)56. The Air Historical Branch programme of work includes a study of post-war radar policy to which Mr J F Gough will be contributing. Mr Gough was a member of the Technical Sub-Committee of the National Air Traffic Control Planning Group which was set up under Air Marshal Sir Hubert Patch in October 1960. Very early in the work of the Sub-Committee the potential value of the Plan Ahead Type 85 radars for the control of traffic was realised and from these beginnings the combined Linesman/Mediator scheme was developed for fully integrated air traffic control as well as air defence. The National Air Traffic Control Service (NATS) also owed its formation to the work of the Patch Committee. The main report of the Committee was considered by the Air Council in June 1961 (AC(61)30) but it undoubtedly assisted before then in securing Defence Committee approval for Plan Ahead.

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The joint paper on air defence by Mr Watkinson and Mr Ward was only one of a number of subjects which the Defence Committee went into retreat at Chequers to consider.⁸² According to the record, discussion was relatively brief: by now there was not much left for argument. Two important points were exposed. First, the 12-squadron force had been assessed in accordance with the Chiefs of Staff study of the needs of limited war and on the assumption that there would be no commitment to station fighter aircraft in Germany. Secondly, the Bloodhound Mk 2 proposals would mean that only enough missiles would be produced to provide one reload for the three squadrons to be based at home and two reloads for the two and three squadrons to be based respectively in Cyprus and the Far East. It cannot therefore be said that the Defence Committee was unaware of the consequences of its decisions, which were that the Bloodhound proposals were approved and that at least nine Lightning squadrons should be maintained after April 1963, with a final decision on the maximum number deferred until autumn 1961. The necessary authority was given for an additional order of Lightnings sufficient to complete nine squadrons. These were the Mk 3 version and it had by now been agreed (Sir Solly Zuckerman having put a stop to earlier vacillations) that they would have the Red Top missile. The abandonment of BLUE JOKER and GENIE was confirmed. What was decided about Plan Ahead has already been described.⁸³

There was to be no going back on the decisions of the Defence Committee in October and December 1960. These determined policy for the size and shape of RAF fighter and SAGW forces for the next decade. The outstanding uncertainty - the exact number of Lightning squadrons - was not an immediate issue and was settled in 1962 when the Cabinet agreed to ten squadrons. It was to be in the deployment of the agreed forces rather than their size that changes were made, such as the retention, not surprisingly, of a small force of fighters in 2TAF and the introduction of Bloodhound into Germany for airfield defence. In terms of the air defence plans with which the Air Council entered the debate and those that survived its conclusion, the fighter force had been halved - from over twenty to "at least nine squadrons". Those for SAGW were unrecognizable, leaving aside the initial deployment of Bloodhound Mk 1 which survived largely because most of the expenditure had occurred or been committed by the time air defence policy came under attack. What remained of the plans for a substantial deployment of later marks of Bloodhound was not even of token value for ADUK. Overseas, its usefulness was confined to deterrence: any war to which it might have been relevant would have had to be very limited indeed. Moreover, the change of policy went beyond the abandonment of SAGW as a weapon against aircraft, at least for home defence. Whereas in 1957 Air Council plans assumed, consistently with government policy, that ABM defences would have to be developed, by the end of 1960 the possibility was scarcely a matter for discussion and Bloodhound Mk 3, which had been conceived partly as a project relevant to a future ABM system, had been abandoned. Air defence, considered as a discrete element comparable with other major features of the defence programme such as the V-bomber force, the carrier fleet, and the Army's fighting units, had suffered substantially the biggest reduction as a result of what had been almost a continuous review of defence policy beginning even before Mr Macmillan became Prime Minister.

That this conclusion was reached only after some three years of debate in which the Air Ministry retreated from one plan to another and always smaller plan might give the impression of either a lack of realism on the Air Ministry's part or a fixed determination on the part of the government to override its professional advisers. Neither judgment would be fair to either party. There was no serious difference about the limitations which the nuclear threat imposed on air defence. Apart from some small element for urban protection in the Air Council's plans for Stage 1½ SAGW there was at no time any hope or intention of providing an effective defence of Britain. At bottom there was not even a difference about the physical protection of the deterrent. No claim was ever made by the Air Ministry that a particular plan would protect the various installations on which the deterrent depended. The argument was more limited and less subject to a calculated answer: it was about what was needed to convince the Soviet Union that at least a substantial part of the deterrent strike forces in Britain could be successfully launched in any

⁸² D(60)10th Mtg 16 and 17 October.

⁸³ To complete the picture, the Defence Committee agreed that Thunderbird Mk 2 should go ahead but not for deployment as earlier proposed in the Far East but in NW Europe and for the reason, as much political as military, that without it BAOR would be the only national contingent in Germany without its own medium or high level air defence. No proposals were put to the Committee about the scale and nature of air defences for the Navy.

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circumstances. Over the period of debate a spectrum of positions emerged. At one extreme was that which assumed that there would be no attack on British-based deterrent forces so long as it was out of the question for the Russians to eliminate all other deterrent forces. This was the American dimension to the British problem and if it was never taken to its logical conclusion it was always a strong influence on those who believed that heavy investment in ADUK was unnecessary. At the other extreme was the Air Ministry view that a British deterrent independently capable of functioning as such - and this was the government's avowed policy - would not be credible if not even a token defence could be put up against manned bombers and, later on, ballistic missiles. What positions were taken up between the two extremes turned primarily on what view was taken of the threat as it seemed likely to develop; and in what was a constantly worrying climate of budgetary difficulty it was always more likely that those who could rationalise the case for less air defence rather than more would have a consensus of Ministerial support.

The link between the developing threat and financial constraints becomes more obvious as the Defence Committee moved towards finally making up its mind. Both influenced the reductions in its own fighter and SAGW plans which the Air Council volunteered in 1959. What with the latest intelligence that the Russians would achieve a substantial missile capability earlier than had been expected and the strong pressure to reduce or at least contain the forecast growth in forecast expenditure, it is difficult if not impossible to quarrel with the Air Council's judgment that it was right to make some economies in air defence. Consistently with the changing threat, nothing more was heard after the end of 1959 of the arguments the Air Ministry had previously advanced for sufficient fighters to frustrate feint bomber attacks, intended to exhaust the V-bomber force as a preliminary to destroying it later on the ground. They had in any case never carried much conviction with the new CAS, Sir Thomas Pike. Once the threat from manned aircraft came to be regarded as secondary to that from ballistic missiles the case for a substantial fighter force as part of ADUK was fatally weakened. The government's decision of April 1960 to discard BLUE STREAK, which it had been argued was more vulnerable to bomber than missile attack, only added to the case against the interceptor fighter for anything other than the anti-intruder role. Thereafter, the case for the largest possible fighter force the Air Ministry could hope to negotiate rested on the needs of overseas rather than home defence.

Air defence was not the only target for major economy from 1957 onwards. The V-bomber force suffered as well, as did certain naval building programmes. The Army's equipment and building modernisation plans were affected and all the Services were obliged to make painful savings over a wide range of their normal expenditure. But no other major element of capability was so thoroughly and obsessively examined. This was because air defence was pre-eminently the area where the significance of nuclear weapons was most apparent. Effective deterrence was the only reliable way of avoiding nuclear war. If it failed, there could be no defence against blows of catastrophic weight. The simple but apparently inescapable logic revolutionised attitudes to one of the basic responsibilities of government - the defence of its sovereign territory - and when Mr Macmillan, as Chancellor of the Exchequer, told his colleagues as early as May 1956 that the sensible decision the government should be considering was the abolition of Fighter Command he was expressing a view widely held in official as well as ministerial circles. That he also recognized that such a decision could not be taken at that time merely signifies his sense of the practicable. Similarly, the equally strong views that he and others held about the irrelevance of expenditure on civil defence were not carried to extremes. As Prime Minister, Mr Macmillan became more judge than prosecutor but he held consistently to the belief that beyond what could be done to ensure the credibility of the nuclear deterrent, air defences of the United Kingdom could no longer be allowed a major share of scarce resources. This is nowhere more clearly reflected than in the heavy weather which the government made over the inclusion of the United Kingdom in the NATO integrated air defence system, despite its political as well as military merits; the anxiety being that this would give SACEUR the status to criticise British policy in a particularly sensitive area.

Any judgment of this belief has to be set in the context of a period before the implications of a more flexible NATO strategy than massive retaliation had fully emerged. What added to its appeal was the heavy expense of sophisticated air defences. The projected five-year costs of, for example, the Air Council's 1959 air defence plans were estimated at approaching £1000M: and whether this would prove an adequate estimate was doubtful in view of the development problems that were being encountered.

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especially with air-to-air and surface-to-air weapons.⁸⁴ As a result of the 1960 decisions, this bill was reduced by about £300M: still about a quarter of the planned expenditure on the RAF and nearly a tenth of forecast defence expenditure as a whole.

Whether the outcome of the debate was reasonable enough in all the circumstances raises several questions. Fighter weapon systems, C and R systems and command and control organisations at home and overseas were maintained, and provided a basis for further development and expansion should this be called for. Thus, there was no question of irretrievable damage to the techniques of interception. In contrast, the future of surface-to-air weapons, at any rate land-based weapons, was seriously affected by decisions that effectively ended the programme for developing medium range weapons effective at high altitudes; and from 1960 the emphasis moved to short range weapons for defence against low and medium level attack. What was lost by this change goes beyond this present work but it is difficult to quarrel with the decision which stopped the development of weapons relevant to ABM defence, as being beyond the country's resources.

A question that has to be addressed is whether the debate was conducted in the way most likely to result in the optimum allocation of defence resources. The scope of debate was narrow. For most of the time the main issue was the relationship between air defence and the credibility of the nuclear deterrent. This was widened in 1960 to include the air defence needs of the other Services but the resulting JPS study, while well done, was in no sense an evaluation of priorities. It is difficult not to sympathise with the view of the beleaguered Air Ministry that the programmes, of the other Services were not being subjected to the same intense scrutiny. Yet even if this had been done, it must be doubted whether the outcome for air defence would have been substantially different. Nothing is clearer than that there was a strong and consistent consensus among the most influential Ministers and their senior officials that the scales were now so heavily weighted against effective defence against nuclear weapons that Fighter Command was the most obvious of all the targets for economy. This seemed to them an incontrovertible application of the logic of deterrent policy. That they took so long to reach final decisions signifies not so much doubts about the logic as a cautious attitude towards the political consequences, at home and in NATO, of what from that aspect were difficult decisions.

⁸⁴ As examples Bloodhound Mk 1 entered operational service two years behind schedule and with a backlog of modifications that was not expected to be cleared before the end of 1961; Firestreak was about three years late and was not cleared for tropical use even by 1961.

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CHAPTER 7

OVERSEAS POLICY : COASTAL AND TRANSPORT COMMANDS

Introduction

Whether Britain's defence policy should provide for the protection of her overseas interests was not seriously debated during the 1956 and 1957 reviews. The question was not whether but how this was to be achieved, in circumstances of increasing difficulty. Some of the difficulties were self-imposed, notably the decision to abolish National Service by 1962. This had specially serious implications for the size of the Army's garrisons overseas as well as for its effectiveness during a period in which it was expected to reduce from 170 fighting units to about 120. For a time the proposed allocation of manpower to the Navy threatened its ability to maintain any forces on the American, West Indies and South Atlantic stations. That the small RAF forces overseas escaped major surgery was due to the substantial reductions planned in Europe, mainly in Fighter Command and 2TAF. But there were other difficulties arising from developments largely outside British control. Bases, and communications between bases, were threatened by the advance of colonial territories towards independence and by emergent nationalism generally. The pace of change might vary but it is clear from the attention that Ministers and Chiefs of Staff devoted to the subject that secure tenure of bases was seen as dependent not on the exercise of imperial power over subject territories but increasingly on agreement between partners of equal standing.

Not all bases were threatened by the general advance to independence. Gibraltar (not in any case a major base) could be considered secure for its own peculiar reasons. Malta (like Gibraltar, of diminished importance) presented a curious difficulty. Quiet enjoyment here depended on the extent to which the base was used; and difficulties were expected if defence economies affected Malta's prosperity. Cyprus was another special case: a liability insofar as it could only too quickly explode into a difficult and expensive problem of internal security; yet its significance for the southern flank of NATO and the support of the Baghdad Pact meant that total withdrawal was out of the question. Its security as a base depended not so much on what the British did as on the importance that Greece and Turkey attached to their position as members of NATO and also, in Turkey's case, of the Baghdad Pact. Across the Mediterranean the British position in Libya was sanctioned by the Anglo-Libyan Treaty of 1953, with a term of twenty years. It was a useful position: to the Army for training, especially with armoured vehicles (and an associated stockpile against contingencies elsewhere in the Middle East) and to the RAF both for training and for the staging post at El Adem. But whether the treaty would be effective for its full term was problematical. So was full freedom to use the facilities; this emerged in 1958 when the Libyan authorities were embarrassed by the use of troops and equipment from Libya in connection with the Anglo-American intervention in July in Jordan and the Lebanon.

Eastward from Libya nothing was left by the end of 1958 of the facilities which the British had formerly enjoyed. The Anglo-Jordanian Treaty had been terminated and the Army and RAF units in Jordan withdrawn. The Anglo-American intervention contributed usefully to stability in this part of the Middle East but it was never intended to re-establish a military position. The last military location in the area, the RAF base at Habbaniyah in Iraq, was closed shortly after the Iraqi revolution in July.¹ Iraq left the Baghdad Pact which thereafter became the Central Treaty Organisation (CENTO). So ended the once pervasive British presence on the African and Asian shores of the Eastern Mediterranean.

Strategically, what mattered most was that from 1958 Britain had no assured rights-of military air movement over a wide area from the western frontier of Egypt to the northern and eastern frontiers of Iraq. Air movement was not fatally damaged. The eastern route through Turkey and Iran, both partners in CENTO, was one alternative; Libya - Sudan - Aden was another, and was much used. Together they gave reasonable assurance for routine movements of military passengers and freight. More uncertain was their availability in a military emergency, whatever form that might take, and also their adequacy for short

¹ There were some anxious moments between July and final withdrawal but what had been a forty-year involvement of the RAF with the fortunes of Iraq was brought to an end with dignity and courtesy on both sides.

range operational aircraft. Numerous contingency plans had to be revised to cater for whatever possibility might be practicable when the contingency arose, even overflying without permission as a last resort. Even nominally sovereign routes were not considered wholly reliable. The airfield at Kano in Northern Nigeria was crucial to any route across Central Africa (a route to which the Air Staff were much attracted); yet even before Nigeria became independent in 1960 London was being advised against its use in connection with any action in or against a Muslim country.²

In sum, it was not assumed that air movement from the north and west to Aden and the Gulf would be impracticable; what had, however, become necessary was that adequate forces for at least the initial phase of any operation should be readily available south of the air barrier. But how securely based might these be? Although the Aden base was in the Colony and thus on British sovereign territory, as was Kenya as a supporting base for the region and for East and Central Africa as well, the long-term security of neither was taken for granted. As early as 1959 the Treaty by which most of the Aden protectorate states formed a Federation laid down an eventual goal of independence for the combined territories of Aden Colony and the Protectorate. It was the best that could be done to come to terms with local aspirations, and all the more necessary because of the enhanced importance of the Aden base. The troubles on the Aden-Yemeni frontier and within the Protectorate itself in 1957 and the following years would no doubt have been worse if advance towards independence had been resisted. Yet the Aden base remained a standing challenge to Arab nationalism. Nobody in London expected independence to come much later than 1970, though whether this would mean the end of the military base was uncertain. Little or nothing could be done to anticipate the answer. Expense aside, it would have made no sense to provide comparable facilities elsewhere in Southern Arabia. There was no alternative but to hope that the Aden base would still be available³ and, in the meantime, to improve its working and domestic accommodation for the larger garrison. This became a bigger task still when room had to be found from 1961 onwards for Army and RAF units which would have remained in Kenya if Kenya's progress to independence (which came in 1963) had not been more rapid than had been assumed when it had been selected as the rear area for the support of Southern Arabia.

Moving on to the Far East, extension and improvement of the airfield on Masirah island in Oman⁴ and the completion of Gan improved both the security and the capability of the links between the Middle East and Singapore/Malaya. Neither was under British sovereignty but, for different reasons, each was sufficiently secure to justify the investment involved. The same applied in Singapore and Malaya, though with a shade more doubt for a time about security of tenure in Singapore. Nevertheless, there was much concern about a future in which all the existing main bases, in the Mediterranean and around or near the Indian Ocean - Aden, Singapore and Malaya, as well as ancillary bases such as Bahrein and Kenya - might no longer be usable. If anything, the Chiefs of Staff were more worried than Ministers.

² The Governor-General of Nigeria so advised (COS 728/23/4/58).

³ In 1962 Mr Sandys as Secretary of State for Commonwealth Relations and the Colonies clashed with the Chiefs of Staff on the desirability of reserving sovereign enclaves (on the same lines as the arrangements in Cyprus) when Aden became independent. The Chiefs of Staff had agreed in 1961 that this was impracticable and, on re-examination a year later, reached the same conclusion. Mr Sandys was just as strongly convinced that current negotiations on Aden's political development were an opportunity to "anticipate the inevitable by getting agreement now to reserve certain parts of the Colony, such as Khormaksar airfield". He got his way to the extent that the principle of "exclusion or withdrawal" of specified areas was built into a treaty agreed with Adeni Ministers in August 1962. However, Mr Thorneycroft, as Minister of Defence, later agreed with the Chiefs that no action need be taken to identify the reserved areas. It is clear that, in addition to the practical difficulties of selecting enclaves that would be both adequate and viable, what weighed most with the Chiefs of Staff was that any agreement would be worthless without local goodwill.

⁴ The detailed case for developing Masirah was submitted to and approved by the Air Council in July 1959 (AC(59)72 and AC 18(59)). There was more to it than the improvement of strategic communications: Masirah was also well located for operations in Muscat and Oman and for movement between Aden and the head of the Gulf. In emergency the airfield, when developed, could accept V-bombers. Its development was regarded as a separate requirement from an airfield at Coetivy in the Seychelles; this was still considered desirable, particularly to improve the links between East Africa and Gan.

Whether this was realism or defeatism is a nice judgment.⁵ But their longstanding anxiety not to outstay their welcome in any overseas area, with the risk of becoming involved in difficult internal security situations, became increasingly focussed after Lord Mountbatten became CDS on the forces that would be needed to protect British interests overseas when the only secure bases might be Australia and Britain itself. A strategy based on this assumption was not beyond argument, on the lines that the forces that could be sustained by what would be essentially a sea-based strategy would be so small and so limited in their intervention capability that the influence they could exert would be out of all proportion to their cost. The Air Staff's alternative proposals in the early sixties took the form of the so-called 'Island Strategy'.

The size and role of the forces overseas were another problem. A complex of considerations was involved: specific military threats to territories either under British sovereignty or to which Britain was committed by bilateral treaties or understandings; threats to the countries in the regional pacts -CENTO and SEATO; the balance between garrison and reinforcement forces; and the extent to which a general capability was needed for unforeseen contingencies. Allied views and expectations, which did not always harmonise, had to be taken into account. And not least important was the continuous pressure to provide adequate forces within tight restraints of money and manpower not just for a year or two ahead but for an annually updated costing decade. It was for this, if for no other reason, that the Chiefs of Staff began studying the size and shape of the forces, if overseas bases had to be vacated, well before such a situation was likely to arise.

Some tasks were clear and were determinants of military capability. Much the most important of these was the defence of Kuwait from aggression by Iraq; a difficult and sensitive operation even in the most favourable circumstances - if a request to intervene was received before Kuwait was attacked - and calling for substantial and sophisticated ground and air forces, with such naval support as could be made available, in what was expected to be a sudden emergency. Elsewhere in the Middle East there were two inescapable commitments: the internal security and protection of the Aden Protectorate and of Oman and, secondly, the support of CENTO. These were sharply different in their military demands. The first involved British controlled operations under largely British political responsibility against a threat from within and outside the two territories, which was likely to be long-lasting. Calculations of the forces needed overseas had therefore to assume an indefinite commitment of conventional Army and RAF units to Southern Arabia. The significance of the second was primarily political. British staffs played a full part in CENTO defence planning and organisation but beyond the four Canberra squadrons based in Cyprus little was promised to the CENTO allies. The squadrons were the symbol of a policy for the security of the CENTO region that rested, and as far as the British and Americans were concerned could only rest, on the Anglo-American nuclear deterrent.

The Far East presented a complicated picture. After the independence of Malaya in August 1957 the exclusively British responsibility for internal security and border protection was confined to Singapore and the Borneo territories. The continuing commitment to assist in the external defence of Malaya was one to which Australia and New Zealand were parties as well. This task, however, was in practice difficult to separate from the contribution of the three countries to SEATO; and it became clear when Mr Sandys visited Australia and New Zealand in August 1957 that the Australian government in particular suspected Britain of plans to reduce her conventional forces beyond what was prudent. These discussions were important and had a limiting effect on the scope for economy. The outcome was a virtual commitment to a substantial carrier task force, an Army brigade group in Singapore as well as a British contingent in the Commonwealth Brigade in Malaya, and seven resident RAF squadrons with three V-bomber squadrons flying out in emergency. Planned reinforcements included a brigade to be moved by air in a week from the Strategic Reserve at home, with a sufficient stockpile in the Far East for a second brigade to follow by air a week later. A third brigade, with additional units to make all three reinforcing brigades into groups, would

⁵ One senior official, the PUS at the Air Ministry, was in no doubt. Commenting early in 1961 on a major Chiefs of Staff study of the overseas position (COS(60)200), Sir Maurice Dean wrote to CAS: "I found COS(60)200 deplorably pessimistic on the subject of bases. Staying in bases is largely an attitude of mind. If our attitude is that it is right and necessary for us to stay in Malta, Cyprus, Aden and Singapore and we firmly resist, as and when they arise, proposals designed to whittle away our position, I think we can stay in these bases for a long time. If, however, we keep our suitcase packed and remain ready to move out when called upon to do so, we shall not be there long". (PUS - CAS 16 March 1961 (AHB ID3/1/70 Pt 1)).

if required have to go by sea. As for their use, the key issue was the extent to which the Commonwealth forces would be made available for deployment in the SEATO area. No undertakings were entered into but it was accepted that Malaya could best be defended much further north, and as part of general SEATO plans, than had previously been intended. This foreshadowed the end of Plan HERMES - a defensive position in the Kra Isthmus in Southern Thailand - but overall the impression that was left with the Commonwealth allies was that Britain intended to play a useful part with land forces in a SEATO land campaign. It was this that underlay what was for some years the determining assumption for the size and equipment of the Army outside NATO, namely that it should be capable of fighting a limited war with up to two complete divisions for up to six months. This was not a self-evidently necessary assumption: certainly not to the Air Staff or, as time went on, to Ministers. It increased the Army's manpower problems, always recognised as difficult with the end of National Service and made no easier by the opposition of allies to cuts in the size of BAOR. It also had an important effect on expenditure on Army reserve stocks. Both factors influenced ministerial thinking, but whether or not the resources could have been found Ministers came increasingly to doubt for political reasons a strategic concept that envisaged a substantial British expeditionary force on the mainland of SE Asia.

Harmonising commitments and resources overseas was not so severe a problem for the RAF. The increased emphasis from 1959 onwards on air defence overseas has been described in the last chapter. Even so, the planned improvements in air defence capability were modest enough. In general, the RAF garrison forces were relatively small, with the exception of tactical transport aircraft. In Southern Arabia a wide range of operational tasks was successfully undertaken by a handful of squadrons.⁶ Their success might well have been more marked but for the limitations which Ministers considered it necessary to impose on offensive operations.⁷ Even so, a little air power on the spot was able to go a long way, so long as no major threat arose. A more difficult task during the period was to expand the air transport force, for both strategic movement and within theatres, to the extent that reinforcement and contingency plans required. Even more difficult, and certainly more controversial, was the question of the priority to be given to maritime air power. Both are considered in this chapter.

Early in the life of his administration Mr Macmillan admitted that it would be difficult to equip and deploy British forces overseas for both their traditional peacekeeping tasks and participation in a major war. At that time, May 1957, he is recorded as saying that "by the exercise of skill and ingenuity"⁸ both tasks should be possible. The next few years provided a test both of the realism of the objective and the ability of the Whitehall defence organisation to make acceptable plans for its achievement.

Maritime Policy and Coastal Command

- a. **Size and Shape of the Navy.** No decisions on the Navy had been taken before January 1957. Ministers assumed that it would be smaller but how it should be disposed between West and East of Suez had not been decided. The 1957 White Paper paid more attention to the role of the Navy in global war: if the nuclear deterrent failed to keep the peace and if the nuclear exchange was not decisive, then the defence of Atlantic sea communications would be of great importance. In other contexts (for example, air defence) the consensus of government opinion, was that neither of these

⁶ At the end of 1960, for example, air force strength in BFAP included 2 DF/GA squadrons (Hunters), one Shackleton squadron and 6 transport squadrons (3 Twin Pioneer, 2 Beverley and 1 Valetta). At the same date FEAFF had 1 AFW squadron, 1 Canberra (LB), 1 Canberra (PR), 6 transport squadrons and 3 RAF Regt field squadrons. There were also 2 RAAF fighter squadrons, 2 Canberra squadrons of the RAAF and RNZAF, and one RNZAF transport squadron. MEAF was most notable for the 4-squadron Canberra force in Cyprus for the support of CENTO, with Canberra PR squadrons in Malta and Cyprus and a Shackleton squadron in Malta.

⁷ Whereas before World War II punitive bombing had been the final sanction of air control in areas such as Iraq and the NW Frontier, the post-war Air Council came to accept that these methods would rarely be politically acceptable and that the balance had swung to maintaining order by closer co-operation of air and ground forces (AC(58)19 - Note by VCAS and DCAS).

⁸ Gen 570/3rd Mtg 30 May 1957.

possibilities was likely; nevertheless, the White Paper went on to say that "it is therefore necessary for NATO to maintain substantial naval forces and maritime air units" to which Britain must contribute though on a somewhat reduced scale.

The White Paper stressed the value of the Navy's mobility in bringing power rapidly to bear in peacetime emergencies or limited hostilities, the aircraft carrier being the crucial component of the Fleet: (on another occasion Mr Sandys said that without carriers the Navy would be no more than "a maritime police force"). It did not commit the government to a precise number of carrier groups but it stated an intention to station one such group in the Indian Ocean. Whether this would be based in the Far East was uncertain to the extent that the future of the Singapore naval dockyard had not at this time been decided. Mr Sandys was to be pressed hard by Mr Robert Menzies during his visit to Australia later in 1957 to maintain substantial naval forces in South-East Asia and to keep the dockyard open as an important contribution to stability and good relations in Singapore.

During the rest of 1957 there were other influences in favour of a larger Navy than Mr Sandys had in mind in his early months in office. These derived from the size of the '80' Fleet,⁹ ie which could be manned by naval manpower limited to 80,000 adult males. This was represented by the Admiralty as too small to maintain the stations required by the traditional worldwide naval presence. Strong support came from Lord Home and Mr Lennox-Boyd, the Commonwealth and Colonial Secretaries. Such strategic arguments as were advanced were related to the defence of the sea routes around Southern Africa and the importance of not prejudicing the naval agreement with South Africa.¹⁰ The threat was assumed, not defined.

The issues were put to the Defence Committee in November in separate memoranda by Mr Sandys and Lord Selkirk.¹¹ There was not much difference between them on the size and shape of the proposed Fleet. Mr Sandys was prepared to agree to three fleet carriers as the heart of the Fleet - two in the Atlantic and Mediterranean and one East of Suez. This meant a fourth carrier to cover refits and other contingencies if three were to be always available; and Mr Sandys attached conditions to the extra carrier which sought to minimise the cost in manpower and other resources. He accepted as well the case for sufficient destroyers and frigates to maintain the American/West Indies and South Atlantic stations. But whereas his memorandum was typically brief and matter-of-fact Lord Selkirk submitted a lengthy and passionate Admiralty paper which presented a maritime view of strategy and scarcely troubled to conceal its distaste for the implications of the Government's deterrent policy. If this had the merit of consistency with the line that Lord Mountbatten had taken during the 1956 Policy Review¹² and Lord Selkirk earlier in the year,¹³ it was nevertheless special pleading direct to no less a body than the Defence Committee of the Cabinet with the Chiefs of Staff collectively given no opportunity to comment on a number of assertions which were as important as they were debatable. Equally, Mr Sandys' paper had not been sent to the Chiefs for comment. This was not the way in which controversial matters of defence policy were supposed to be considered.

Not all the points in the Admiralty paper had a direct impact on the RAF. Two are worth attention: one because it bore on reinforcement routes (and rapid reinforcement was a cardinal feature of the Government's policy), the other because it was to have a direct impact on RAF front-line plans. Supporting the assertion that current trends were such that only the Navy could expect to retain freedom of movement, the paper said that "even today we should be unable to reinforce the Arabian

⁹ Ch3, p.54.

¹⁰ The government took an entirely different view of the defence of Southern Africa against internal threats. There were lengthy discussions in London in September 1957 with the South African Minister of Defence whose efforts to involve the United Kingdom in a regional defence organisation were firmly resisted.

¹¹ D(57)10th Mtg. 18 November 1957; the memorandum were D(57)28 and 29.

¹² Ch1 pp 17-19.

¹³ Ch5, p130 (footnote 53).

peninsula with short-range aircraft in the face of the potential Middle East barrier. If the Afro-Asian group wished, they could prevent short-range aircraft reinforcing beyond Cyprus." This overstated the RAF's difficulties - real though they were - in order to make a point which underrated the Navy's own problem of maintaining ships in distant waters. It exemplifies a lack of objectivity in the Admiralty paper which might have been corrected if it had been examined beforehand by the Chiefs of Staff.

The same could fairly be said of the second point: the paper's emphasis on the SACLANT as opposed to the SACEUR view of the NATO strategy. Doubts about the continued effectiveness of nuclear deterrence - an issue on which the Admiralty had previously failed to convince either Sir Anthony Eden or Mr Macmillan - were apparent in these extracts: "If in the course of the next one or two decades the world situation develops in such a way that the nuclear bomb is not usable, sea communications will be our Achilles heel, and our enemies will remember this. If the Russian submarine fleet which had been built up since 1953 has not been put to use before, it will then be settled beyond all doubt for what purpose it has been built.... It is the Admiralty view that a main pillar of United Kingdom defence policy should be to ensure that NATO is capable of maintaining the Alliance's Atlantic lifeline". What was, however, only too clear from the paper itself was that an attritional campaign against submarines of the kind pursued in 1939-1945 was not a practicable option. Allied ASW resources, enemy submarines on patrol and shipping losses in 1943 were compared with the estimated position under the same headings in 1961; and in what was described as a conservative estimate, prospective shipping losses were put at three times - 100 ships a month - those suffered in 1943. To reduce these losses even to the high level of 1943 called for resources which the Alliance could never supply or, if it could, would be willing to supply.

Up to a point, Mr Sandys was unimpressed. In his own paper he put most emphasis on the East of Suez role, and the increases he was prepared to allow in escort forces were primarily in the interest of a worldwide naval presence. In the 1958 White Paper, in which the uncertainties about the Navy's role had to be cleared up, the navy's contribution to the global war capability of the Western Alliance was placed below its peacetime and limited war tasks. But he yielded to the pressure by proposing a policy that both conceded that some degree of ASW capability had to be maintained, and opposed, for that same reason, the all-purpose 4-carrier fleet which the Admiralty wanted. Thus, he recommended to the Defence Committee that the fleet carriers in the NATO area should be equipped predominantly with ASW aircraft and helicopters whereas the carrier East of Suez should have a balanced complement of aircraft. The Defence Committee approved these proposals, subject to a belated reference to the Chiefs of Staff for their opinion on the strategic implications of the resultant fleet (as there was little enough to choose between the proposals of the two Ministers this limited reference raised no problems). What flowed from this decision was an increase in the naval manpower allocation to 88,000 (and thus from the '80' to the '88' Fleet) to cover the fourth carrier, additional frigates and also an allowance for the more buoyant recruiting which was though more likely in the Navy than in the Army. On the basis of this last possibility the Admiralty increased the planned number of Royal Marine Commandos from three to five and, in the context of the peacekeeping role, began to stress the value of the Commando carrier.

Overall, the results of the examination in 1957 of the Navy's role and composition were reasonably satisfactory to the Admiralty: not, however, to the Air Ministry where the implications were regarded as a departure from deterrent orthodoxy. This became apparent shortly after the Defence Committee approved a mainly ASW role for the Navy in NATO.

The ink was scarcely dry on the Defence Committee decision before MOD followed up a suggestion by Lord Mountbatten that the planned size of Coastal Command (36 UE) should be reconsidered. The letter¹⁴ could hardly have been better designed to antagonise the Air Ministry. It prayed in aid what it called "NATO Commanders" on the importance of LRMR aircraft, as if there were a coherent NATO view of maritime strategy. It suggested that the smaller V-bomber force agreed by the Defence Committee in August would release funds "to do a little more for Coastal Command." as if there were

¹⁴ Mr R G K Way to Sir Victor Raby 20 November 1957 (AHB ID3/902/10 Pt 2).

no prospective budgetary difficulties even as things stood, it ignored the point that although the Navy would be concentrating on ASW in the NATO area, it would have to do so with smaller forces than had been declared to NATO. The reduced strength of Coastal Command had, in contrast, been declared to NATO: why then, asked the Air Ministry, should it be increased and what difference would two or three extra squadrons make? But inconsistencies in basic policy also agitated the Air Ministry: to spend more money on what the Air Ministry considered preparations for war, which had the lowest place in national defence priorities, and to make no effort to resolve the differences between national and NATO policy -these were the mistakes that MOD were in danger of making. The eventual Air Ministry reply¹⁵ in March (an exceptional and deliberate delay of over three months) contended that any proposals increase to the planned strength of Coastal Command were "non-starters from both the financial and strategical points of view" and that if they were to be pursued it would be essential to have a proper strategic reappraisal by the Chiefs of Staff.

Thereafter the business proceeded to a decision in ways that were untidy and obscure. In May, Sir William Dickson on Mr Sandys' instructions asked the Chiefs of Staff to consider whether on strategic grounds Coastal Command should not be larger.¹⁶ (Despite what had been said in March, the lower levels of the Air Staff, though not CAS, were alarmed by this, fearing that deterrent policy might again be disputed). The following month he withdrew this request on the grounds that in view of the difficult prospects for the Defence budget no decisions on Coastal Command could be taken except as part of the general defence programme. Yet even before this, Mr Sandys had instructed the Air Ministry to assume that Coastal Command would be two squadrons stronger than planned (48 UE rather than 36 UE). This assumption was accepted by the Air Council, under protest,¹⁷ for the purpose of a review of RAF expenditure over the next five years. Even so, the Air Council was not at this stage reconciled to a change which would actually be put into effect and the AOC in C Coastal Command was still being formally instructed to base his LRMR deployment on 36 aircraft. As he was well aware of what was happening in Whitehall, he was hardly a happy man. At no time was the issue considered in any of the usual committees, such as the Chiefs of Staff, the Defence Board or the Defence Committee itself. Mr Sandys appears to have reached a view and to have imposed it. His final decision that the LRMR force should not be less than 48 front-line aircraft was communicated in a brief minute to Mr George Ward in March 1959.¹⁸

Annoyed though the Air Ministry had been at what it considered a departure from the Government's own policy as well as at the unorthodox way in which it had been pressed to alter its plans, there were at least some who took comfort from what, from one point of view, was a rebuff. Their position was based on the adequacy of the original plan for Coastal Command. It was not necessary to subscribe to a naval view of strategy to be in favour of a larger Shackleton force, if only for peacetime and cold war purposes. The Shackleton had proved successful in a number of roles besides ASW: colonial policing (including punitive bombing), emergency transport of troops and supplies and as a utility aircraft, for example in support of nuclear weapon tests. Tasks such as these at times reduced the force available for normal work over home waters to the point where the ACAS(Ops) of the day could say that it was difficult to undertake any worthwhile ASW training and that "it was almost dishonest to pretend to NATO that we are contributing anything effective in the way of anti-submarine forces".¹⁹ However right the Air Ministry believed itself to be over the implications of defence policy and although Coastal Command was efficiently and economically managed, there was danger in such a situation. Whether the Air Ministry's resistant attitude was a factor in the next development

¹⁵ Mr R C Kent to Mr Way, 7 March 1958 (AHB ID3/902/10 Pt 2).

¹⁶ i. WFD/375 of 27 May. ii. WFD/392 of 19 June.

¹⁷ Sir Maurice Dean to Sir Richard Powell, 13 June 1958: "... Such an increase would be inconsistent with approved strategic priorities, and it would not be militarily significant, bearing in mind the size of the long range maritime forces which it was necessary during the war to deploy against a submarine threat nowhere approaching in numbers or in quality the threat which confronts us today".

¹⁸ Minute of 25 March 1959 to S of S for Air (AHB ID/6/28 Pt 2).

¹⁹ ACAS(Ops) to ACAS(P), 16 December 1957 (AHB ID3/902/10 Pt 2).

affecting the future of the Command does not emerge from the official records. It remains true that when the storm broke - on whether the Command should be transferred to the Admiralty - the Air Ministry had not, to say the least, given the impression that it welcomed an increase in the size of the Shackleton force.

b. **Controversy over Coastal Command** The first formal indication that the often considered question of the control of Coastal Command might be re-opened came in September 1958 in a letter from Sir Richard Powell to Sir Maurice Dean. On the face of it, this was no more than a request for information about the functions, organisation, training, logistics and so on of the RAF's shore-based maritime aircraft. But rumours had been abroad for some time,²⁰ and the alarm bells rang in the Air Ministry. Sir Maurice Dean thought it deplorable that MOD should be even considering raising the issue but his advice that a factual reply should be sent to a factual questionnaire was accepted.²¹ Any attempt at this stage to forestall an investigation would have been strongly resisted by Mr Sandys. As Minister of Supply in 1953, he had declared himself in favour of transferring Coastal Command to the Navy when the question had been raised during Sir Winston Churchill's post-war administration.²² The importance that was now being placed on ASW capability and the pressure he was under to restrict defence expenditure were sufficient reason for him to re-open the issue, whether or not others sought to influence him. On the face of it, there was no flavour of prejudgment. In a minute of 6 November 1958 to Lord Selkirk he said:

At different times over the last few years the claim has been made by the Admiralty and others outside that there would be financial and operational advantages in transferring responsibility for shore-based maritime aircraft from the Air Ministry to the Admiralty. In view of the Chancellor of the Exchequer's request for a further intensive drive to restrict defence expenditure, we must, I consider, explore this claim. If it can be firmly substantiated, we shall have to consider making this transfer of responsibility. If it cannot, then it would obviously be unwise to disturb the position for no purpose.

Having thus stated the objective he invited the First Lord to show "in some detail" how the Admiralty would propose to exercise responsibility. The Air Ministry by this time had provided the information MOD had asked for in September, and Mr Sandys sent this to the Admiralty with an invitation to get whatever else it needed from the Air Ministry.

Once Mr Sandys had gone this far, the investigation could only have been called off at some damage to his own authority.²³ Nevertheless, Mr Ward made the attempt: "ill conceived and unnecessary"; "an unanswerable case on operational logistic and personnel grounds for leaving things as they are"; "there could not be a worse time for casting doubt on the future shape of the three Services and for starting the inter-Service row which would inevitably blow up" - these assertions were part of his appeal to Mr Sandys.²⁴ He went on to question the need for as much information as the Admiralty

²⁰ The Daily Mail had speculated (6 June 1958) about the possible transfer of Coastal Command to the Navy and certain backbench MPs had addressed PQs intended, but failing, to draw Ministers.

²¹ PUS to S of S and CAS, 2 October 1958. A copy of this minute is in AHB ID3/11/24 (Pt 1); this three-part folder provides the documentary basis for most of this section.

²² Lord Alexander of Tunis, the Minister of Defence at the time, was opposed to any change and carried the day with the Defence Committee at a meeting on 26 February 1954.

²³ Whether he sought the Prime Minister's agreement beforehand is not clear. The fact that, some weeks after he had written to Lord Selkirk, the Prime Minister's office asked the Air Ministry for some background information about Coastal Command suggests the contrary. With hindsight, a more satisfactory way to have handled the business can be perceived. This was to have presented a prima facie case for an investigation, together with the objections to it, to the Defence Committee as the body which had previously decided that Coastal Command should stay within the RAF.

²⁴ Minute of 27 November 1958: a copy was sent to Lord Selkirk. An even more strongly worded note was sent at about the same date to the Prime Minister's office (see footnote above), including some disparaging comparisons of the value for money represented by naval aviation and by Bomber Command.

had by now requested,²⁵ much of it irrelevant to the main issues and an unnecessary burden on staffs who were hard-pressed on more urgent tasks. It was all to no avail: Mr Sandys had already decided that he would formally ask the Chiefs of Staff Committee whether or not, "on operational grounds alone", there would be advantage or otherwise in making the change.²⁶ The argument was well and truly joined, if on a less than comprehensive basis. It was not to be settled until the following summer, and only after the diligent staffs of the Admiralty and Air Ministry had produced a spate of memoranda, statistics of various kinds, claims and counter-claims, and different definitions of the principles governing the conduct of air operations at sea. To trace its course in detail might be necessary if the outcome had been other than a decision that Coastal Command should remain part of the RAF. As it was not, and as the size and shape of the shore-based maritime squadrons were not affected, only the processes by which the decision was reached and the final statements of the case for and against transfer will be described.²⁷

Deliberately, the Air Ministry left it to the Admiralty to take the initiative: the Admiralty was the plaintiff, let it make its case. It did so: curiously, in a memorandum by Lord Selkirk, not Lord Mountbatten, early in December to which Mr Ward responded before the end of the month. Copies of each paper were sent to the Chiefs who, in turn, briefly set down their own views. Lord Mountbatten supported Lord Selkirk, Sir Dermot Boyle supported Mr Ward - naturally enough. No less naturally, since he had no wish to make unnecessary enemies, the CIGS, Sir Francis Festing, sat on the fence. At any rate he did so until instructed by Mr Sandys to make up his mind; whereupon he came down in favour of the Admiralty, qualifying this by stressing the need to take the cost in money, manpower and morale into account before a final decision was reached.²⁸

This left Sir William Dickson, Chief of the Defence Staff but also an airman (though one who had begun his career with the Navy). In a notably concise memorandum²⁹ to the Minister of Defence he brought out what were for him the key points:

There was no evidence that the present arrangement was not efficient and was not working smoothly.

The RAF brought its own particular expertise to the sea/air war.

Retaining Coastal Command in the RAF was the best way to use it on cold war tasks overseas where its aircraft could be supported by the worldwide RAF Command and base organisation.³⁰

²⁵ This was a questionnaire so long and detailed that it prompted the acid comment that if the Admiralty knew so little about what was involved in running Coastal Command how could they have made such confident claims in the past about the Navy's ability to take it over. It was at this time that Mr Kent of the Air Ministry was inadvertently sent a copy of the record of an Admiralty meeting at which the naval case had been discussed. He was duly (but silently) grateful especially as he believed it revealed serious weaknesses in the Navy's competence to take over Coastal Command, and certainly not without extra expense. The minutes of later meetings were not sent to him.

²⁶ Minute of 27 November 1958 from the Secretary of the Chiefs of Staff Committee (COS 2015/27/11/58).

²⁷ A reasonably full amount was produced by a member of the Air Staff shortly after the controversy had been closed. A copy is in the AHB(RAF) archives.

²⁸ Sir Francis Festing was put in an unenviable position, perhaps needlessly. Sir Dermot Boyle believed that, as had happened on all previous occasions, only Admiralty and Air Ministry views should be ascertained and that the business was not appropriate for the Chiefs of Staff collectively (CAS to CDS, Minute of 31 December 1958).

²⁹ COS(59)8 of 6 January 1958.

³⁰ The achievements of No 42 Squadron from June to October 1958 were an example of the flexibility of the system. The squadron was heavily engaged in ASW exercises and other tasks in home waters but was ordered to Aden early in July as one of the precautionary measures resulting from the coup in Iraq. In less than five days it had completed the move and undertaken its first operational reconnaissance on the Yemen frontier. Over the next three months it successfully undertook a range of tasks very different from its usual role and in a desert environment rather than the North Atlantic. The Air Ministry took good care to send a copy of a report on the squadron's performance to Mr Sandys (AHB ID5/28 Pt 2).

Large 4-engined maritime aircraft were best handled within the RAF for a variety of reasons - training, engineering, careers of personnel. In any case, to establish a second shore-based air force would be no "good economy of force".

Lastly, he stressed the morale aspect: "the Services are experiencing an almost unprecedented state of instability. Drastic changes are taking place in all three Services and there is a widespread feeling of uncertainty". His conclusion was that on the evidence the arguments in favour of leaving Coastal Command with the RAF considerably outweighed those for its transfer. At a subsequent meeting with Mr Sandys he said that if arrangements for the higher direction of operations at sea were not working satisfactorily, the right course was not to transfer Coastal Command but to revise the existing agreement between the Admiralty and the Air Ministry.³¹

CDS had made a good contribution, particularly in reminding everyone of the management aspects of the controversy. Mr Sandys was now in a difficulty, but one of his own making. He could not have expected the Chiefs of Staff to be anything but divided on the issue. In such circumstances, the CDS was expected to give an independent view; this was one of the reasons for the appointment. That the CDS who had now recommended against change was an airman was not in itself a valid reason for rejecting his advice. A similar situation could arise when the CDS was a sailor or soldier. Thus, Mr Sandys was faced with the choice of abandoning the investigation or failing to support his principal military adviser on what was the first occasion of real substance when he had done what he was appointed to do. Mr Sandys took the second course. The investigation continued but under new management. Sir Richard Powell was asked to take over, with VCNS (Sir Caspar John) and VCAS (Sir Edmund Hudleston) as "assessors" (nobody being at all sure of what this involved). The Defence Board formally accepted the arrangement at a meeting³² at which it was clear that Mr Sandys was still inclined to change.

So the arguments continued: for a further six months with, in the Air Ministry's view, increasing evidence that Sir Richard Powell saw his task not so much as objectively evaluating contesting claims as making the best case he could for the Admiralty. The first draft of his report towards the end of March 1959 inspired more than a dozen pages of detailed criticism from VCAS. VCNS had much less to say; he thought the draft "eminently fair" and was chiefly concerned that a section suggesting what might be done short of outright transfer of Coastal Command should be omitted from the final version. It was, whereas despite further exchanges in the next few weeks scarcely any alterations were made to meet VCAS's points.³³

The Powell report and VCAS's counter to it were submitted to Mr Sandys early in July.³⁴ The report concluded "that there is a case on merits for transferring responsibility for shore-based maritime aircraft to the Royal Navy, and that it could be done without any increase of total expenditure and with reason to expect some reduction which might be substantial". This was not necessarily as firm a conclusion as it appeared to be. The report conceded that the existing ASW forces were highly efficient, that a spirit of healthy rivalry prevailed and that what was claimed to be "substantial defects" lay primarily in the arrangements for the higher management of ASW policy and operations. Moreover, according to VCAS,³⁵ Powell privately admitted that no overwhelming case had been made and that he was worried about the effects of a transfer on RAF morale, not only in Coastal Command but the Service as a whole. All other considerations aside, the main point at

³¹ Sir William Dickson had himself negotiated this agreement in 1946 with Admiral Sir Charles Lambe. One of its key provisions was that the "predominant partner" (the Navy) in operations at sea would be the "co-ordinating authority".

³² Defence Board Meeting, 9 January 1958.

³³ Sir Richard himself introduced a new point at the last minute. This was that SACLANT had such strong objections to the existing command arrangements in the Eastern Atlantic that he would have difficulty in supplying British forces with US atomic depth charges unless they were altered. VCAS's comment that this was "irrelevant and improper" was a triumph for moderation.

³⁴ DB(59) and DB(59)28.

³⁵ Minute from VCAS to Secretary of State for Air, 30 June 1959, reporting a private meeting with Sir Richard Powell.

issue was whether the theoretical advantages of a monolithic structure outweighed the risks involved in damaging what was agreed to be a successful going concern. But as Mr Sandys had a known predilection for unitary chains of command - hence his insistence that unified Commands should be set up in Aden, Cyprus and Singapore - Coastal Command's chances of survival might have seemed to be slim. There were, however, other considerations - one of which was crucially important.

What was not known to more than a few Ministers and officials was that the Prime Minister had expressed his distaste for the investigation at an early stage. The sequence of events is not wholly clear. The Prime Minister's staff knew in November 1958 that Coastal Command was coming under scrutiny. There is evidence too that Mr Sandys had mentioned this informally to the Prime Minister, possibly before the end of 1958. What is certain is that sometime in the winter of 1958/59 the Prime Minister sent Mr Sandys a private minute³⁶ (of which there is no copy in the Cabinet Office records) to the effect - according to one account - that this was not an appropriate time to change the status of Coastal Command, or more precisely - according to another - that he did not wish the issue to be dealt with before an election.³⁷ Between January and July 1959 nothing was said about the investigation in the Defence Board, copies of whose proceedings were sent to the Prime Minister: so no formal opportunity was presented to him to intervene again. Whether he knew that, despite his wishes, the business was still being pursued, is uncertain. But the news was ill-received by officials in the Cabinet Office when they learned of it in March 1959. How this happened is known. Towards the end of March VCAS sent copies of the first draft of the Powell report, with his own comments and those of VCNS, to an Air Ministry official seconded to the Cabinet Office, on the understanding that the documents would not be shown to anyone outside. This was an unusual action, and improper as well in that it involved disclosing documents to a third party without the authority of their originators. It is unlikely to have been taken unless the Air Ministry had become aware of some special and justifying factor such as recently acquired knowledge that the Prime Minister was against the investigation. It may also have been this knowledge that led Mr Ward in May to advise some influential friends of Coastal Command not to proceed with representations they wished to make to the Prime Minister; Mr Ward told them that "things are coming out all right".

Despite what was happening off-stage, preparations went ahead for a meeting of the Defence Board on 9 July. On the evidence of the record, the meeting was a straightforward consideration of the Powell judgment and the Hudleston case against it. If the consensus of those present³⁸ had been the sole basis for a decision, the so-called "case on merits" for the transfer of Coastal Command would have been accepted. Leaving aside Mr Ward, Sir William Dickson and Sir Dermot Boyle, all spoke in favour of a unified system under the Admiralty, though Mr Soames (S of S for War) supported this more as the ideal theoretical solution than one that was either practically or politically desirable; and Sir Francis Festing also saw the practical difficulties. Yet while conceding nothing on what he considered the organisational advantages of unification, Mr Sandys himself raised the question of whether there were measures short of a transfer of Coastal Command which would remedy the existing defects. From this emerged the suggestions that had earlier been included in the Powell report but had been taken out on Admiralty representations: namely, placing the AOC in C Coastal Command and his subordinate commanders under the operational command of their RN counterparts as deputies instead of co-equals, and in addition making changes designed to strengthen the Whitehall organisation and underline the primacy of the Admiralty on matters to do with sea/air warfare. Formally, the conclusions of the meeting were, first, that Lord Selkirk and Mr Ward would examine the possible compromise and, secondly, that Mr Sandys would reserve his "decision" on the transfer of Coastal Command until he had received the views of the two Ministers.

³⁶ Cabinet Office 12/3/28, which is the source for much of this section.

³⁷ The last General Election was in 1955. As was increasingly expected during 1959, the next was held in October of that year.

³⁸ These were the Ministers of Defence, First Lord of the Admiralty, S of S for War, S of S for Air, Minister of Supply (Mr Aubrey Jones), CDS, First Sea Lord, CIGS, CAS, Sir Richard Powell and Chief Scientist MOD.

Despite appearances, this meeting of the Defence Board marked the end of the main argument. Compromise of some kind offered the only way out for Mr Sandys. Whether this was in his mind before the meeting is not certain. The official record may not be all that reliable: it was not circulated for several days and there is evidence that it differed in a number of ways from what was first produced by the Defence Board secretariat. It is possible that Mr Sandys had realised much earlier that to transfer Coastal Command was politically out of the question. What is clear is that he could have been in no doubt by early July that strong forces were opposed to change. Before the Defence Board meeting the Secretary of the Cabinet was advised that the investigation had gone ahead against the Prime Minister's wishes; that the Powell report had "considerable failings and a fairly destructive argument against it can be produced by the Air Ministry"; and that a serious inter-service dispute "would be particularly unrewarding at the present time". Mr Sandys might have argued against these official views. What he could not dispute was that a decision was not for him to take; this would lie with the Defence Committee or the Cabinet.³⁹ This was made entirely clear after the Defence Board meeting in correspondence between the Cabinet Office, the Prime Minister's Office and MOD. At the end of July Mr Sandys issued a directive which began with the statement that "shore-based maritime air forces will continue to form part of the Royal Air Force, and Coastal Command will continue as a separate Royal Air Force Command". What really mattered to the Air Ministry and the RAF had been settled in their favour.

Once the main issue was out of the way the Admiralty and Air Ministry quickly agreed to a number of changes in the 1946 Dickson/Lambe agreement (Sir Charles Lambe became CNS in the summer of 1959) and there was also no dispute between them over changes in the sea/air warfare organisation in Whitehall. Some difficulties of detail were encountered over the precise formulation of naval primacy in terms of the relationship between RN and RAF commanders, in the NATO as well as national context. But in general there was agreement in both Services to put the controversy behind and to improve if possible the close co-operation which, indeed, had been a feature of the maritime scene for many years. And as soon as it was clear that Coastal Command was saved, the Air Ministry got down to matters that the controversy had delayed. Thus, at the end of July the Air Council agreed to the formation of R Aux AF Maritime Headquarters Units to support Coastal Command; a programme for modernising Shackleton aircraft to match a larger front-line was launched by the end of the year; and not least important for the future of the Command, by July 1960 the requirement for a Shackleton replacement had been defined (OR 350), from which eventually the Nimrod emerged.

All this was satisfactory enough. But there remained a bad taste from what a senior Cabinet Office official described as "an unnecessary and deplorable exercise": one which was all the more likely to linger when Mr Sandys' final pronouncement was to the effect that he was satisfied that on its merits the case for the transfer had been made out but that he had been impressed by the effect such a transfer would have on the morale of the RAF. This consideration had been put to him before he had committed himself to an investigation, and it had been heavily stressed by CDS at a stage when it would have been possible to have dropped the investigation (and when Mr Sandys may already have been told by the Prime Minister that this was his wish). Mr Sandys seems to have been wholly insensitive to it,⁴⁰ at any rate until it was a convenient reason for not persisting with the notion of transfer.

There were other reasons for dissatisfaction. The extraordinary circumstances in which the Defence Board considered the Powell report and Hudleston memorandum meant that the genuine merits of the case were never objectively and rationally discussed. Not that it is easy to see how that might have been achieved. Bodies such as the Defence Board are likely to reach decisions as much, if not more, on political as on military grounds. Impartial weighing of the evidence was called for, which suggests

³⁹ The Cabinet Office view was that a decision would not even lie with the Prime Minister, on advice from the Minister of Defence.

⁴⁰ This struck Air Vice Marshal D J P Lee so forcibly that he stepped outside his neutral position as Secretary of the Chiefs of Staff Committee and wrote personally to CAS: "I was shocked by his apparent total lack of understanding of the depth of feeling which would be generated by the loss of Coastal Command" (Letter of 7 January 1959, AHB ID3/11/24 Pt 1).

a quasi-judicial process if only as a preliminary to political consideration. As things turned out, while the Air Ministry was thankful enough, the arguments of the Hudleston memorandum can hardly be said to have had the hearing they described.⁴¹

Moreover, some fundamental questions had been ignored. At an early stage in the controversy the Air Ministry seems to have been prepared to challenge the underlying assumption that ASW capability needed to be strengthened. Disbelief in the likelihood of global war (so long as the deterrent was maintained) and especially in the kind of war that SACLANT envisaged, with hundreds of Russian submarines at large in the Atlantic, led to the bold statement that there were "no grounds for attempting to increase the priority for measures of protection from submarine attack for convoys bringing supplies to the United Kingdom".⁴² Added to this was an aspect of policy on which the Air Ministry had strong feelings, under pressure as it was to economise in air defence at home: namely, the inconsistency of putting more effort into protection at sea while doing little or nothing to defend the harbours and anchorages which convoys would need when they arrived. But views of this kind were not pressed home: understandably in the circumstances, since they would have played into the hands of those who were very ready to accuse the Air Council of a lack of enthusiasm for Coastal Command. The fact was that the Air Ministry was on the defensive on a number of fronts: air defence, maritime aircraft, future deterrent systems, and to some extent on the V-bomber force itself. It would only have added to its difficulties if it had widened the scope of debate about maritime policy. So the extent and nature of investment in maritime forces, whether for the unlikely contingency of global war or for the requirements of peacekeeping and possible limited wars, was not examined. The Admiralty contention that the size and shape of the planned fleet was appropriate to all situations was not openly challenged.⁴³

Development of the Air Transport Forces

Air transport policy was not bedevilled by such fundamental doubts as marked nuclear deterrence, air defence and the maritime scene. A general policy of smaller forces but with no reduction in commitments overseas made it essential to improve airlift capability. And not for strategic movement only; tactical movement of personnel and equipment within the overseas theatres was equally important. Just as maritime policy demanded a degree of agreement and co-operation between the Admiralty and the Air Ministry, so air transport was a joint concern of the War Office and Air Ministry.

By the beginning of 1957 the labours of the Bingley Committee⁴⁴ had produced what seemed at the time to be a solid basis for future policy. The Britannia in its military version (the 253) would replace the Hastings as the hard core of the long-range force, for freight as well as passengers. It would be backed up by the Beverley for the carriage of bulky and specialised loads beyond the Britannia's capacity, though it was recognised that the sooner the Beverley could be replaced as a long range freighter the better. In major emergencies civil aircraft would be used, particularly those already under charter for defence tasks such as trooping. The Beverley had its place as well for air transport tasks within theatres, where the Hastings would continue to be employed after it had been replaced by the Britannia as a strategic transport; a replacement for the Valetta was also envisaged, coming into service not before 1962. Belvedere helicopters and Twin Pioneers were seen as the future means of meeting light transport tasks (the Fairey Rotodyne was also a possibility for this kind of work though the Air Staff were unenthusiastic). A total force of 32 Britannias - divided equally between Transport Command and civil aircraft on which the Air Ministry

⁴¹ Extracts from both the Powell Report and the Hudleston memorandum are at Appendix L.

⁴² Minute to Minister of Defence from S of S for Air, 22 December 1958.

⁴³ The Admiralty view was clearly stated in the Explanatory Statement on the Navy Estimates 1958/59: "It will be quite clear that there is no intention to maintain a fleet, or any part of it, purely for global war. It will be equally clear that the Navy will have a part to play in global war.... But every ship has its duties short of global war. Uncertainty about the course and direction of global war, which applies to all the fighting services, does not restrict the role, the shape or the size of the future Navy".

⁴⁴ Ch1 p.15 and Ch3 pp. 68-70.

could call - 48 Beverleys (or a smaller number offset by equivalent Hastings capacity), 38 Twin Pioneers and 12 Belvederes was recommended by the Committee. One feature of transport policy not examined in detail was the need for short-range helicopters. Nor was a plan produced for a strategic replacement for the small number of Comet 2 aircraft in Transport Command which were expected to be life-expired by the early 1960s. These points apart, the history of air transport policy in the years immediately following the Defence White Paper is essentially one of the extent to which the Bingley Committee's proposals, which were accepted by the Chiefs of Staff, stood up to pressures of one kind and another.

a. **The Long Range Force.** At the time of Suez, RAF transport aircraft were capable of moving 2,400 passengers or 375 tons of freight in a single lift. By 1962, on the same basis of calculation, the corresponding figures were 5,600 passengers and over 1,000 tons of freight.⁴⁵ Set against what was involved in the air movement of a brigade group (2,600 men, 100 trucks and trailers and 70 tons of freight) the general improvement in airlift capability speaks for itself. It was not, however, in respect of total capacity that the most serious problems arose. These lay principally in these areas: first, the rate of re-equipment of Transport Command from the largely Hastings force that existed in 1957 to the Britannia force; secondly what aircraft should be chosen to replace the Beverley for the long haul of specialised and heavy loads; thirdly, the operational management of Transport Command, where the problem was to devote enough effort to routine tasks to satisfy the numerous claims for air transport without prejudicing the intensive rates of effort that would be required at short notice in a major emergency. Here the Treasury had an interest in maximising routine use so as to reduce expenditure on civil aircraft chartered for passengers and freight.

Difficulties were encountered in putting into effect the Bingley Committee's proposals for the composition of the long-range transport force. The idea of supporting a front-line of 16 Britannias (two squadrons each of 8 UE) in Transport Command by a similar number of Government-owned Britannias operated by a civil consortium was not pursued for reasons of civil aviation policy. Civil aircraft would still be available if an emergency arose beyond the capacity of Transport Command to handle, but less conveniently and possibly less quickly than could have been expected under the consortium concept. This loss of readily available potential was offset as far as possible by a deliberate decision, taken by the Air Council early in 1958,⁴⁶ to establish all the Britannias which had been ordered for Transport Command in squadrons rather than to keep some in reserve. Consistently with the primary object of maximising the effort that could be deployed in emergency, routine utilisation of what would be a 20 UE force was to be kept down to the level appropriate to the force of 16 UE that had been originally planned. Thus, the Britannia plan as it stood in mid-1958 was two squadrons each of 10 aircraft, the first to be formed by April 1960 and both to be operating by the end of that year. This was modest enough; the Ministry of Supply's original forecast was that the Britannia 253 would have made its first flight in April 1958. Moreover, the Air Ministry was being strongly criticised at the time, in public and within Whitehall, for the antiquated equipment of Transport Command. That the Hastings/Beverley force was fulfilling its tasks (it responded particularly well to the heavy demands that arose for the reinforcement of Aden in the early months of 1958) was not a convincing defence; both aircraft had conspicuous inadequacies in the long-range role. But there was no merit in an unrealistic plan and little chance of an earlier date for an effective Britannia force. This emerged at a meeting of the Air Council in July 1958.⁴⁷ Amongst several industrial difficulties the crucial factor, and one that the Air Ministry was unable to influence, was the failure to secure orders for the civil version of the Britannias big enough to justify investment in a higher rate of production. Only one Britannia 253 was due to come off the line each month and there was no prospects of improving this tortoise-like progress. However, once deliveries began - at the

⁴⁵ Quoted in CDS A7/03 (MOD Records): 75% serviceability was assumed.

⁴⁶ AC(7)58. The full requirement of 32 aircraft had in any case been somewhat reduced by a decision taken by Mr Sandys in 1957 that Navy and RAF reinforcements for the Far East, which the Bingley Committee had assumed would be sent concurrently with the Army brigade group, could be despatched in slower time.

⁴⁷ AC 18(58).

end of 1958 - progress if slow was steady. No 99 Squadron was operational with its full establishment of Britannias by June 1960 and the second squadron, No 511, by the end of the year. A number of civil Britannia 252s, originally bought by the Ministry of Supply, came in useful for converting aircrews. Three aircraft of this type were later made available to Transport Command to supplement the 20-strong force of militarised Britannias.

The force as a whole has to be seen as the Air Council's response - and a very adequate response, as the later achievements of the Britannia squadrons were to show - to the Bingley Committee's recommendations for the long-range movement of personnel and normal freight. With support from the Comet 2s of No 216 Squadron, it was capable, without civil reinforcement, of meeting the contingency that was the agreed determinant of the long-range transport force, ie the movement of a brigade group at light scales from Britain to Singapore in seven days. If associated naval and RAF reinforcements had to be moved as well, the task could be completed in about fifteen days. Gan, it should be noted, was ready to accept Britannias and Comets by the end of 1959. For what was at least as likely a contingency - the protection of Kuwait - the introduction of the Britannia greatly eased the problems of the planning staffs; as events turned out, the force was required for this operation less than a year after its build-up had been completed.

There remained the question of the future of the small but valuable component of the long-range force represented by the Comet 2. The Air Council took the necessary steps in April 1960⁴⁸ when it approved a modest programme to recondition some of the existing aircraft. Looking further ahead, it also decided to purchase 5 Comet 4c's and, further ahead still, 5 VC10s which were planned to come into service in 1965 when the Comet 2's in Transport Command would have completed their useful life. The most important military justification for a squadron of very high quality aircraft was their use for the positioning of aircrews and ground staffs along the strategic routes as the first stage of a major reinforcement operation. Of their numerous routine tasks, casualty evacuation and VIP flights were obvious areas where their speed and comfort were invaluable.

b. **Utilisation of the Britannia Force.** With the long-range transport force rapidly becoming more effective from 1960 onwards there were inescapable problems of utilisation. The prospect of years of plenty led to demands that could only have been met by operating the force at a rate which would prejudice its ability to respond to a serious emergency. The Army in particular wanted a substantial increase in the effort allotted to mobility exercises. There could be no general objection to this in view of the emphasis that overall policy placed on rapid reinforcement; and nothing could be more natural than the Army's wish to exploit the new capability of the long-range force.⁴⁹ On the other hand, how many exercises were necessary and how far a particular exercise should exactly mirror the contingency to which it was related were questions to which the War Office and Air Ministry could give different answers. A firm policy was called for but one which was bound to be a compromise between a rate of effort consistent with the planned investment of money and resources and one which met the demands of potential customers but at excessive cost to the RAF budget. The Air Council got down to it towards the end of 1960.⁵⁰ Under an earlier plan for the Britannia force, 1,600 hours were to be flown each month and it was on this that personnel and logistic plans, and hence the long-term costings for Transport Command, had been based. By the time the Air Council met nearly 2,900 hours would have to be flown if all the potential customers were to be satisfied. The biggest increase was for exercises. In the original plan 300 hours had been allotted for this purpose, whereas

⁴⁸ AC 5(60).

⁴⁹ One of the earliest joint exercises in which the Britannia showed its paces involved moving nearly 4,000 troops from the UK to El Adem and back to the UK. Ten aircraft and twelve crews of No 99 Squadron completed the homeward move in five days, a performance substantially more efficient than was possible with the Hastings force.

⁵⁰ AC 17(6)), a meeting on 1 December at which the Council considered a joint memorandum (AC(60)61) by VCAS and AMSO.

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nearly 1,000 were now being sought - over 700 for the Army and some 260 for the RAF. The proposals put to the Air Council were based on 2,000 hours each month, allocated thus:

Crew training (most of which could be used for freight and some for passengers)	350
Special Flights	150
Ministry of Aviation (mainly to meet the needs of the Atomic Weapons Research Establishment)	150
RAF mobility exercises	200
RAF priority freight	500
Army exercises	400
Allocated to Principal Administrative Officers (for ad hoc Service needs)	250

These allocations were not intended to be rigid, variations between most of the categories could be negotiated when detailed programmes were being drawn up. Even so, the record of discussion shows a concern to provide the Army with as many exercise hours as possible, though the Army could also help itself by so arranging its exercises as to reduce unproductive flying hours. Costs were of course an important consideration, and in approving the proposals, if only as a general guide, the Air Council accepted that extra expenditure (over £1m in capital costs and a similar amount annually as well as some additional manpower) would arise, compared with the original 1,600 hours plan.⁵¹

c. **The Case for a Strategic Freighter.** Leaving aside what were hardly more than marginal deficiencies, the Britannia/Comet force satisfied the strategic mobility requirements of government policy, with one exception. This was a high quality aircraft for heavy freight. Here, the Air Ministry was not displaying the foresight that the War Office thought necessary; and in August 1957 the Secretary of State for War wrote to Mr Sandys claiming that "the Army needs as soon as possible a fleet of long-range freighter aircraft capable of lifting military cargoes of up to 15 tons over a range of about 3,000 miles."⁵² The truth was that this was a new requirement and no charge could fairly be laid against the Air Ministry. That the Beverley was unsatisfactory as a long-range load carrier was fully recognised. This was why the Bingley Committee had stressed the need for adequate stockpiles in the main theatres. The Beverley was an effective, indeed indispensable, aircraft for movement within theatres; and it was not intended that its eventual replacement would be in service much before 1966. Any change in this plan - and the War Office was thinking in terms of additional (and expensive) aircraft that would be in service by 1963 - would be an additional charge on the hard pressed Defence budget and in particular on RAF Votes. Thus, the key question to be considered was how strong was the case for a high performance strategic freighter.

Until the autumn of 1957 studies had been concentrated on the Beverley replacement, primarily for theatre transport but with a useful capability over long ranges. By September these had resulted in a draft OR envisaging an aircraft which could lift 13 tons (short) or 80 troops over a range of 1,500 miles, as a theatre transport, and at least 6 tons over 2,500 miles in the long-range role. It was to be capable of carrying out the full range of dropping tasks and of operating from short airstrips in forward areas. The resultant aircraft would have had a loaded weight of some 65 tons (it was noted at the time that this was much the same as the Lockheed C130 which had recently gone into service with the USAF). It did not find favour. It was regarded as too big for the tactical role and not big enough

⁵¹ The Air Council balked at going any higher. It considered going to 2,800 hours, ie an effort more closely matching current bids, but this would have involved nearly £3m in capital costs and about £2.5m in annual running costs. It would also have enabled Transport Command to do considerably more routine trooping, but only part of the expenditure thereby saved on chartered civil aircraft would have accrued to Air Votes because, under the rules in force at the time, the other Services were not charged for routine flights in RAF aircraft. This was not the main reason for not increasing the Britannia effort but it exemplifies one of the advantages of the comprehensive financial system that was later applied to the three Services.

⁵² Mr John Hare to Mr Sandys, 2 August 1957 (AHB ID3/943/1 Pt 1).

for the strategic: too expensive to be affordable in the numbers required and unattractive to the civil market. The staffs involved - from the Air Ministry, War Office, Ministry of Supply and also Transport Command - seem to have been agreed on these views.

Over the next few months a separate War Office working party sought to define the Army's requirements in more detail. The Air Staff was kept in touch with this work and it began to be evident that the War Office was inclined to limit the amount and range of equipment in overseas stockpiles. At one stage, the Air Staff having pointed out that it would be far less expensive to stockpile the heavier and more awkward items of equipment than to carry these about the world in large aeroplanes, the working party agreed to revise the memorandum it was preparing for the Army Council. Despite this, DCAS uttered a warning in February 1958 that the War Office was likely to propose a long range strategic freighter as well as an aircraft to replace the Beverley.⁵³

The War Office study was completed in March 1958 and, after approval by the Army Council, was considered by the Air Council at the end of July.⁵⁴ There was indeed much to be considered. Under the title of 'The Army's Requirements for Heavy Freight Aircraft' a detailed case had been made for two new aircraft, one for tactical support and the other a strategic freighter which would have some tactical capability as well. A heavy potential bill was involved; moreover, the policy underlying the Army's requirements departed significantly from that which had informed the report of the Bingley Committee.

Some of the assumptions in the War Office paper, as well as its operational concept for forces overseas, fall to be described later. What was relevant to the question of a strategic freighter were the assumptions about stockpiling. Heavy equipment was to be stockpiled only at the scales needed for internal security, as distinct from the more taxing requirements of limited war. Moreover, it was assumed that the use of tactical nuclear weapons, even in limited war, could not be ruled out. Accordingly, and although some war reserves were maintained overseas, the War Office raised a requirement for the air transport of the planned BLUE WATER SSGW as well as for such other heavy and awkward loads as SAGW, Saladin armoured cars and earth-moving equipment. All these were expected to be transportable in the Beverley but only slowly and, in certain circumstances, by unsatisfactory route patterns if the departure point was in Britain. Granted its assumptions, the War Office thought that it had made a strong case for a much more capable aircraft than the Beverley.

Much of the Army's load carrying requirement was relevant as well to a future tactical freighter. It was this complicating factor which led to one of the Air Council's more confused and controversial meetings. Nevertheless, while recognizing that the case for a strategic freighter would have to be approved by the Chiefs of Staff Committee, the Council "was generally agreed that there was a need for a long range freighter which could be employed in both the tactical and strategic roles". Both roles were embraced in the requirement because it might be necessary to deliver loads over long distances to short and rudimentary airfields in forward operational areas. As for the aircraft itself, no suitable British aircraft existed. There was no question of developing one from scratch; expense alone ruled this out, especially as there were doubts about a civil market. In any case, the War Office wanted the aircraft quickly. If it were to be British, aircraft developed for other purposes would have to be adapted; otherwise, a foreign aircraft was unavoidable. The Air Council was well aware that the Ministry of Supply was alarmed at the second prospect.⁵⁵ Nevertheless, the C130 emerged from the Air Council's discussion as its preferred solution, with the larger and more expensive C133 as another possibility.

⁵³ DCAS to CAS 12 February 1958 (AHB ID3/943/1 Pt 1).

⁵⁴ AC 18(58). A joint paper (AC(58)52)) by VCAS and DCAS, to which the War Office memorandum was appended, was submitted to the Council.

⁵⁵ Mr Aubrey Jones to Mr Ward 3 July 1958, in a letter in which the beginnings of a Press campaign against buying an American aircraft were mentioned. Both Ministers had previously agreed, as had Mr Sandys, that a transport aircraft to be developed to meet a NATO specification was not the answer to British requirements. This aircraft, the Transall, eventually came into service with the French and German air forces in 1969: not an impressive achievement.

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On the face of it, this was a curious conclusion in that the C130 was not at the time regarded as a true strategic freighter. But it was much better than the Beverley, already in production, relatively inexpensive, and a reasonable compromise offering a big improvement in both tactical and long range capability. How far it was acceptable in the long range role depended on how important was the small number of difficult items that figured in the Army's loading tables. A final choice of strategic freighter was not made until February 1959 but before then there had been two developments. First, the War Office persuaded the Air Ministry that as between the C130 and C133 the latter would be better, at any rate for heavy long range tasks. However, they need not have bothered because the second development was a Ministerial decision before the end of 1958 that an American aircraft was politically unacceptable. While this meant that there could be no hope of meeting the Army's need as soon as had been hoped (it was only reluctantly that the War Office accepted the Air Ministry's advice that items of heavy equipment currently in service could continue to be moved by the Beverley)⁵⁶ it opened the way for an aircraft more precisely tailored to the strategic freighter role, with an in-service target of 1964/65. By then, sophisticated and costly weapons systems such as BLUE WATER, which the Army were unwilling to stockpile overseas, were expected to be in service in some numbers. So, the hunt was on for a suitable British aircraft to meet a formidable strategic requirement; henceforth, less importance was attached to tactical capability.

To begin with, the choice appeared to lie between adaptations of three aircraft already in service or under development: the Beverley, the Britannia and a freighter version of the VC10, the first two under the names of the Blackburn 107 and the Britannic.⁵⁷ Later, several more possibilities emerged: more advanced versions of the Britannic, the Handley-Page 111 (based on the Victor wing and tail unit), the Avro 756 (a completely new design), and a rear-loading version of the Britannia. By the end of 1958 the situation had become very confused. Discussion at the Defence Committee on 19 December was confined to the VC10 freighter and a version of the Britannic, even though other possibilities were known to exist, and the Minister of Defence was asked to make a report on their respective merits. Within the Air Ministry there was more than one view, though nobody had a good word for the Britannia freighter. As between the various versions of the Britannic (one of which, the Britannic 4, involved much new design work) and the VC10 freighter, the latter was preferred. But a later contender, the HP 111, was coming through strongly: and the arguments at a special meeting of the Air Council in January⁵⁸ concentrated on this aircraft and on the Britannic 3 and the VC10 freighter. None was the ideal answer. The Britannic would be much the slowest and as a turbo-prop aircraft had little potential for development; on the other hand, it offered most scope for a variety of loads as well as ease of loading. The VC10 freighter would have cargo handling limitations and more demanding runway requirements; but as VC10s were in mind to succeed the Comet there was the attractive prospect in the longer term of a homogenous fleet for all strategic movement. The Air Council's choice was the HP 111, with its promise of good performance and a freight capability distinctly better than the VC10. This was, on the face of it, consistent with the recommendations put to the Council by DCAS (Sir Geoffrey Tuttle) who argued that the long range freighter should be a turbo-jet aircraft and that if the HP 111 did not find favour the VC10 should be selected. But Mr George Ward, in saying at the outset of the Council's discussion that "the final decision would have to take other considerations into account", was reminding his colleagues of what they well knew: that the political case for the Britannic would be strongly argued. Although he succeeded in persuading

⁵⁶ In a minute to CAS of 8 December 1958 VCAS explained that an increase in the authorised take-off weight of the Beverley had significantly improved its strategic capabilities. It was now able to carry the critical Army load (the Saladin armoured car - provided its gun was removed and carried separately) over stage lengths of 1,600 miles; by using a route across Africa and thence by the normal "all red" route, it could meet the UK-Far East requirement. VCAS's Army colleagues were not wholly convinced but the War Office later formally accepted the Beverley as a stop-gap until something better was available (AHB ID3/943/1 Pt 2).

⁵⁷ These three were mentioned in a memorandum by S of S for Air to the Defence Board (DB(58)62) in November 1958.

⁵⁸ AC 2(59) Special. 14 January 1959.

both Mr Sandys and Mr Soames, as S of S for War, to back the HP 111 he had no alternative but to present this in terms of a comparison with the Britannic. For all practical purposes, the VC10 was scratched. It was not even mentioned when the Prime Minister himself early in February put a paper to the Cabinet, it having been clear for some time that the final decision would have to be taken at that level. There was, however, a last minute entrant from Mr Aubrey Jones, the Minister of Supply.

d. **Cabinet Discussion and Decision.** Most of the Cabinet meeting on 10 February 1959, which the S of S for Air attended, was devoted to the two memoranda.⁵⁹ Mr Macmillan had set out the arguments for the Britannic and the HP111 with his usual brevity. The substantially better performance of the HP111 was brought out but in mentioning the easy loading that would be a feature of the Britannic and its greater economy on short and medium stage lengths (the current calculations made the HP111 more economical only on flights of over 2000 miles) he introduced, fairly enough, commercial considerations.⁶⁰ He also exposed the industrial implications. The Britannic would bring work to Shorts in Belfast (where the end of Britannia production was in sight), a company owned by the government, which would have to lay off most of its workers if it got no more major orders; if it did, it could have a useful place in the expanding market for air freight. In contrast, no future was seen for Handley Page as an independent company. To select the HP 111 would prolong its life and in effect reverse the government's policy of progressively rationalising the aircraft industry. While the Prime Minister gave no indication of his personal preference, those who read his paper must surely have got the impression that it leaned towards the Britannic.

The Minister of Supply's proposals amounted to a text book solution. What he and his officials had perceived was that neither the Britannic or the HP111 was at all likely to be attractive in the civil market. It would therefore be better to accept the delay in producing a competitive aircraft, which should be a turbo-jet (with later a ducted fan engine) with all the design features needed for the loading and carriage of a wide range of freight. In the meantime, the Britannia could be modified to make it a rear-loading aircraft, more useful in many respects to the Services than the Beverley and with some chance of being a lead-in to the exploitation of the civil market. Unfortunately, all this was put forward so irritatingly late in discussions that had been going on for many months that there was something of psychological barrier to consideration on strict merits.⁶¹

Mr George Ward had been strongly briefed to oppose Mr Jones' plan; Mr Sandys is recorded as speaking against it - on the lines that the Services did not need the modified Britannia and that a totally new aircraft would be too late; and although there appears to have been some recognition that it would be advantageous to the national interest a fatal objection was that it would not be as beneficial to employment at Shorts. The decision went in favour of the Britannic 3, on the understanding that as much work as possible should be carried out in Northern Ireland. It is clear that the Cabinet had little faith that any would be sold for civil use.

So the RAF was saddled with an aircraft that, at best, was the Air Council's second choice: for which there was no allowance in forward costings; an untypical aircraft and one unlikely to be in service in more than the small numbers (ten was the maximum envisaged) required for the RAF; and with an engine (the Tyne) not fitted to any other RAF aircraft. None of this made much sense in logistic and engineering terms. Moreover, in operational terms, the aircraft would be only marginally better than the Britannia freighter even for the more taxing tasks that current contingency plans called for.

⁵⁹ C(59)16 of 6 February by Mr Macmillan and C(59)17 of 7 February by Mr Jones. The Cabinet discussion is recorded in CC(59)6th Conclusions.

⁶⁰ The Air Ministry had the opportunity to comment on an earlier draft and the Prime Minister accepted Mr Ward's view that there was no certainty that either aircraft would attract a worthwhile civil market. The Air Ministry also passed on the thought that the increasing demand for air freight might be satisfied by adapting the larger passenger aircraft of the future rather than a purpose-built freighter.

⁶¹ Mr Aubrey Jones' paper contained no estimates of costs and, at the Chancellor's request, some were hastily produced and circulated on the morning of the Cabinet meeting.

⁶² But this was not what led to the decision to introduce a high capacity freighter; rather, it was the future requirement, beginning in about 1963, to transport Army SSGW and SAGW. Yet as was recognised when the studies began, it was not accepted policy that tactical nuclear weapons should be deployed outside Europe.⁶³ Even if circumstances altered this policy, the numbers needed would be small; and the same could be said for SAGW (which in any case were less difficult to move). It can be regretted that the Air Staff's early view that a less than overwhelming case had been made for a very large aircraft was not more forcibly expressed. That something better than the Beverley was needed is certain; something better than a modified Britannia was much more open to question. But the War Office was pressing hard; a big freighter aircraft would be useful if not essential; and it is understandable that the Air Ministry did not wish to add another bitter battle to the others in which it was engaged at this time. Why it was obliged to accept the Britannic 3 has been described; that the aircraft was re-christened the Belfast was entirely appropriate since its selection had been so much determined by the employment needs of Northern Ireland. But underlying the search for a better long range freighter were developments in what was thought to be needed against the contingency of limited war outside the NATO area. As the War Office perceived this, more transport capability would be required than had been assumed by the Bingley Committee in 1956, if a smaller Army was to be able to meet its commitments. This applied to transport aircraft for use within theatres as well as to long range aircraft. Consequently, and concurrently with the discussions about a long range freighter, the Air Council found itself presented with a much bigger bill for tactical transport aircraft than it had provided for in its forward plans.

e. **Tactical Transport Aircraft.** Whereas the Belfast was a less than satisfactory aircraft which the Air Council was obliged to accept, the selection of the AW660 as a tactical transport was of the Air Council's making. A provisional decision in its favour was taken at the difficult Air Council meeting in July 1958⁶⁴ at which the case for two new transport aircraft - one for the strategic, the other for the tactical role - was considered. As with the strategic freighter, there was an awkward choice between the best that could be developed and produced quickly and what appeared to be the ideal aircraft but only obtainable over a much longer period. Moreover, if an interim rather than a long term solution was sought, the resultant aircraft would bear a close resemblance to the Beverley: an unattractive prospect both to the Air Council and those who had an eye for the civil market. A third possibility was the Argosy (a military application of the civil AW650) which was being offered by the Armstrong-Whitworth company. Modifying the civil version to make the most of it for Army and RAF purposes promised to be inexpensive. The objection that it would not be able to carry some important military loads might be met by redesign (the original version was in fact modified to carry the Saladin armoured car); in any case, a few Beverleys could be kept for this kind of task. On this basis, the Air Council concluded that the Argosy would suffice and that it would be a useful improvement on the Beverley not least because it was a handier aircraft for a wide range, if not the full range, of tactical transport tasks.

As important a consideration as the choice of aircraft was the underlying military requirement. Air transport for internal security operations was subsumed in the larger requirements of limited war which the War Office, recognizing the difficulty of looking more than a few years ahead, considered possible in three areas: in the Eastern Mediterranean, possibly as part of an international force, with Cyprus as the base; in Kuwait, Bahrein or Muscat, operating from Aden; and within 400 miles of Butterworth in Northern Malaya or of Bangkok, with Singapore as the base. The scale of air lift should be sufficient to meet the following tasks:

A parachute drop by one brigade group, including the dropping in the first lift of two battalions.

⁶² On the information available in 1959 it was estimated that, using six aircraft an armoured car squadron could be moved from the UK to the Far East in sixteen sorties over eight days by Britannic, and in nineteen sorties in eleven days by Britannia freighter.

⁶³ This was admitted in the War Office paper of March 1958 on the Army's requirements for a heavy freight aircraft.

⁶⁴ P.182 above.

The movement within the theatre of an infantry brigade group within a period of 7 days, with a further brigade group being moved during the following 7 days.

The supply by air of a substantial part of the requirements of a force of 6 brigade groups during the first month of a limited war.

These tasks were seen as consecutive rather than concurrent. Even so, the concept demanded a much larger tactical transport force than had been planned, primarily because the War Office had concluded - on the evidence, it said, of the Suez operations - that the parachute battalion group should be almost doubled in strength, from some 540 to 850. This had not been endorsed by the Chiefs of Staff, and the Air Council could not accept the requirement on its own responsibility. But neither was it willing to engage in a long argument with the War Office about the size of military force to be transported before agreeing to see what aircraft other than the Beverley might be practicable. Its discussions accordingly assumed that the requirements had to be met, but as cheaply as possible. To meet it in full would mean an order of 75 Argosies to maintain a front line of 50 aircraft, all of which would be additional to current plans. Capital costs over the next five years were put at £45m, with running costs for the period of £25m and extra manpower of over 3000 - a most unwelcome bill.

The War Office concept was considered by the Chiefs of Staff in December 1958.⁶⁵ According to the record, a few questions were asked by CDS and VCAS about the strict need for a two-battalion drop; and VCIGS conceded that one battalion might be adequate for certain coup-de-main operations.⁶⁶ But he was able to point out that the Chiefs of Staff Committee had previously agreed that a two-battalion capability was needed and that nothing had changed except the size of the battalion. There was still "a firm military requirement on tactical grounds". A suggestion by VCAS, that it might be assumed that operations requiring such a large airborne operation could only be attempted with the aid of an ally, was not pursued. Nor was the requirement subjected to serious questioning when the Defence Board later recommended⁶⁷ to the Defence Committee that the most suitable aircraft to enable the requirement to be met as soon as possible was the Argosy. The Defence Committee duly agreed but there was some satisfaction for the Air Ministry in its decision to limit the initial order to some twenty to thirty aircraft. This limited the risk which a full order would have presented to the realisation of other, and from the Air Staff point of view, more important features of the RAF programme. In the event, only 56 aircraft were ordered, and by mid-1963 the first squadrons had been formed. As the Air Ministry had hoped, the stratagem of ordering in batches, two of twenty and one of sixteen, proved economical. Even so, before the final order could be placed the Minister of Defence (Mr Watkinson) had to intervene personally to overcome Treasury opposition based on disbelief in the realism of the two-battalion drop. The inadequacies of the Argosy as a heavy load carrier were accepted but work on the 'ideal' aircraft to replace the Beverley began in earnest in 1960. This was to lead to the issue in that year of OR351, the basis of the HS 681 as an aim and of the Hercules as events turned out.

f. **Short Range Transport Forces.** There remained the question of close range transport support of the Army in the field, whether for internal security operations or limited war. Air Council plans, based on the Bingley recommendations, envisaged a front line of 12 Belvederes, 25 Twin Pioneers and 15 Pioneers by the end of 1960 but, as with strategic and tactical transports, the Army concept described earlier⁶⁸ was more demanding, in quality as well as numbers. Moreover, it included a new requirement. This was for substantial numbers of aircraft for the Army in Europe.

A paper approved by the Army Council under the title of 'The Army's Requirement in the Middle Range of Aircraft', together with a second paper giving the views of the Air Staff, was considered

⁶⁵ COS(59)99th Mtg, 4 December 1958.

⁶⁶ The all-important Kuwait contingency plan, in its various permutations to meet differing circumstances, assumed only a single battalion drop.

⁶⁷ DB/C(58)6th Mtg, 11 December 1958.

⁶⁸ P 185 above.

by the Air Council in March 1959.⁶⁹ Once again the Air Council found itself in a difficult position: anxious not to antagonise the War Office yet faced with a case to which there were serious objections, on conceptual as well as practical and financial grounds. As seen by the War Office, "the middle range of aircraft"⁷⁰ fell broadly into two categories: "utility" aircraft capable of moving a section of troops or loads up to the size of a Landrover anywhere in an operational area up to a range of 50 miles - a requirement which only helicopters could meet; a 'light cargo' aircraft for transporting loads of up to three tons over a 200 miles radius, a quarter of these being helicopters and the rest STOL aircraft. In addition a special requirement was stated for a small number of 'flying crane' helicopters to lift up to six tons over distances of at least 15 miles.⁷¹ Underlying the requirement for aircraft was policy of substantially increasing the Army's dependence on movement by air in any operational situation. This could hardly have been expressed more clearly:

In operational conditions today and in the future, the lift of troops and their equipment by air to meet a tactical situation within a theatre must be regarded as normal and not exceptional. It is in no way an overstatement to say that the lift of personnel by air should be as natural as their lift by armoured personnel carrier or by troop carrying vehicle; and of their equipment and supplies by air as by the normal load carrying Army vehicle..... The operational requirement is framed on the high priority of cold and limited war. The absolute necessity of having available an adequate lift for men, equipment and supplies in those circumstances is greatly emphasised in limited wars in which the nuclear weapon might be used, or in global war. In these circumstances, indeed, it is likely that the only method of movement in a tactical area would be by air, either from quickly improvised airstrips or by vertical take-off aircraft.⁷²

It did not escape the Air Staff's notice that part of the War Office case depended on a belief in the possibility of global nuclear war - the least likely of all the contingencies that the Government's defence policy was prepared to admit. No less noteworthy was the War Office claim that these particular categories of air transport resources must be regarded as an integral part of the order of battle of an Army formation. Such a claim could contain the seeds of just such an argument about who should own and operate the resources as had currently arisen over shore-based maritime air forces. In any case, to allot aircraft exclusively to Army formations would be to fall into the "penny packets" heresy; and it was a sign of grace that the War Office itself recognized that there might be a stronger case for centralised control.

As well as these conceptual problems there were those of the type and number of aircraft required. As to type, the Air Staff considered that the Army's 'light cargo' requirements had failed to take into account the tactical capabilities of aircraft of the size of the Beverley and Argosy which would be far more efficient than smaller aircraft at moving troops and equipment from base areas and airheads to positions about 50 miles from a contact line. This would still apply even in comparison with a large and complex helicopter such as the Rotodyne, to which the War Office was attracted. The important point, as the Air Staff saw it, was the helicopters were so expensive a form of transport that they should only be used for troop lifting or the carriage of freight when no other aircraft could do the job, and then only for the shortest possible distance consistent with tactical needs. In short, the Army was over-sold on helicopters and on air supply as the prime means of maintaining itself in the field.⁷³

⁶⁹ AC 7(59): the two papers submitted to the Council are appendices to AC(59)20.

⁷⁰ Above the 'middle range' were the long range and tactical transport aircraft, the policy for which has been described earlier in this chapter. Below were the light aircraft and small helicopters of the Army Air Corps which at this period were limited, under an agreement reached in 1956, to a maximum all-up weight (auw) of 4000 lbs.

⁷¹ This was one of the early statements of the requirement for what was to be termed the Medium Lift helicopter (MLH) which eventually came into RAF service in 1981.

⁷² Appendix A to AC(59)20, paras 5 and 6.

⁷³ Cf CAS to CIGS, November 1960: "I quite agree that air supply should be used to the maximum practical extent but, of course, it is extraordinarily expensive and depends essentially for its success on complete air superiority. As you know, both the Army and the RAF air defences have been cut to danger level and I feel that the Army should retain an ability in most circumstances to use motor supply, at least as a back up to air supply..... I feel that the pendulum may be swinging too far from practically no helicopters to rather more than we may need in a method of transport which is about fifty times as expensive as the three-ton truck". (AHB ID3/943/1 Pt 3).

As to numbers of aircraft, it was clear to the Air Staff that a simple calculation of the separate requirements of six brigade groups - the maximum assumed to be involved in a hypothetical limited war - was no way to arrive at a realistic figure of what additional aircraft should be provided. Such a calculation would mean another sixty aircraft in the front line, with another eighty aircraft to meet the Army's stated requirements in Europe. Coming on top of the previously unbudgeted expenditure on Argosies, provision on anything like this scale would have required a shift of resources to the RAF from the other Services or an increase in the total Defence budget; and Sir Maurice Dean advised the Air Council that any such assumption would be unreal. Objecting as it did to claims based on fighting a global war and taking account of the economies that would always flow from the centralised control of aircraft, the Air Council concluded that a comparatively small addition of some twenty Whirlwind Mk 10 to the planned helicopter front line would meet most of the Army's needs.⁷⁴ This view was defensible only on the basis that the War Office had misstated the Army's light cargo requirements (the Air Ministry was prepared to concede the need for a few helicopters for 'flying crane' tasks). But no fixed position was taken up; negotiations with the War Office "needed careful consideration". The Air Staff paper criticising the War Office proposals was accepted but only as the basis for a detailed joint study by the two Departments.

Any hopes that the War Office would reduce its demands were soon disappointed; and by mid-1959 the Air Council felt it prudent to move further towards the Army's position. Otherwise, the Army might seek to expand its own Air Corps or perhaps get help from the Navy's helicopter force. Thus in a review in June of RAF plans for the next five years⁷⁵ the Council decided to increase the planned front line of Belvederes and Twin Pioneers by a modest four aircraft of each type and, more importantly, to increase the Whirlwind force in the 'utility' role to 45 UE - to be achieved by 1963. Including the earlier increases, this meant that nearly £80m (capital, running costs and manpower) had been added to prospective air transport costs during the next five years compared with the plans of 1957. Even so, the new plans fell short of the Army's requirements by nearly 100 'utility' helicopters and 20 aircraft in the 'light cargo' role. For this role the War Office remained wedded to the Rotodyne but had agreed that part of the task could be carried out by a fixed wing aircraft, one smaller than the Beverley or Argosy; and what had by now emerged as the best contender was the Canadian-built Caribou. To meet the full War Office requirement was estimated to cost yet another £80m as well as another 3,000 officers and men over the five year period. Nor was this all. The Army's light helicopters and aircraft were due for replacement. If their successors exceeded the 4000 lb auw agreed as the limit for Army Air Corps aircraft they would strictly speaking fall to the RAF to operate and the Air Ministry to finance - a nice dilemma indeed. Anxious though the Air Council was to avoid a row (the one over Coastal Command had not at this time been settled) it was becoming less and less realistic to plan on providing everything for which the War Office was asking. At least one member of the Air Council was feeling restive under the pressure.⁷⁶

g. Effect of Changes in Strategic Policy. For the War Office and Air Ministry to attempt to reach an agreed view on air transport policy was sensible and in no way at odds with the normal conduct of inter-Service business. But from the middle of 1959 the scene shifted to the Chiefs of Staff Committee which had commissioned a major study of Military Strategy for Circumstances Short of Global War. Insofar as War Office requirements for additional air transport stemmed from the assumption that up to six brigade groups might be committed to a limited war, such a study and the reactions of the Government to it could be expected to confirm or alter War Office expectations. Much more than this

⁷⁴ At the same meeting - AC 7(59) - as the Army's requirements were considered the Air Council agreed that a programme for converting existing Whirlwinds (with radial engines) to the Mk 10 version (with the Gnome turbine engine) should be extended by an order for 18 Whirlwind Mk 10. This extended programme was considered necessary irrespective of any decision to select the Whirlwind Mk 10 to meet the Army's requirements. A detailed account by Wg Cdr J R Dowling of post-war helicopter policy in the RAF is available in the Air Historical Branch.

⁷⁵ AC(59)45: AC(59)51 is also important.

⁷⁶ Writing to CIGS in May 1959 to persuade him not to commit the Army prematurely to the Rotodyne, VCAS said: "Over the past six months the Services have been landed with three maverick Britannias which do not meet military specifications. We have been compelled to order some 8-10 Britannic, which will be obsolete when we get them..... My concern is that we should not again repeat the process". (AHB ID3/943/2 Pt 1).

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was under examination: nothing less than the objectives of British defence policy outside NATO in the decade from 1960 and how those objectives might be reached. What increased the importance of the study was a decision by the Prime Minister in June 1959 to set up a Future Policy Committee under Sir Norman Brook with terms of reference which amounted to a review of grand strategy. So significant for defence policy was this work that it is the subject of the next chapter. Some anticipation is, however, necessary in order to complete the account of those influences and decisions which affected plans for the RAF's air transport force.

Shortly after Mr Harold Watkinson had succeeded Mr Sandys as Minister of Defence in 1959 he confided his first thoughts to his Permanent Secretary, Sir Richard Powell.⁷⁷ Looking at the objectives that seemed to be appropriate outside NATO he said:

I doubt whether it is today conceivable that one could fight a war to which major forces were committed, without one of two consequences following the first few days of the struggle. Firstly the start of a world conflict or secondly vigorous action by the United Nations to damp down hostilities. I consider therefore that it may well be unrealistic to plan for a war on this scale lasting six months. I would rather examine the possibility of providing for the utmost mobility of our forces; in other words, to try to provide a kind of conventional deterrent to war in the knowledge that we would deploy our forces with great speed and striking power. This would mean the provision of more aircraft and perhaps more amphibious forces.

This stated a theme of policy which Mr Watkinson was to follow consistently until he ceased to be Minister of Defence - in July 1962. It involved placing much less emphasis on a substantial contribution by British land forces to any operations in support of SEATO; much more on the ability to move small but well-equipped forces quickly to points of crisis. It demanded improved strategic air transport forces, with aircraft with the range and load that would reduce the difficulties of moving reinforcements around or over the air barrier in the Middle East. On the other hand, while it called for effective tactical and short-range transport and helicopters, it also implied fewer aircraft in those roles than the War Office at any rate had been demanding. There was more to these first thoughts than an academic appreciation of strategy. Doubts about the availability of overseas bases, about the Army's ability to recruit to its manpower ceiling, and about the costs, especially in overseas currency, of maintaining even the smaller garrisons that had emerged from the 1957 review of policy, all contributed to his view that air transport was crucial if British interests overseas were to be protected less expensively. The air transport force was for him a weapon of war and not merely a means of trooping and carrying luggage about the world;⁷⁸ and, as far as the Army was concerned, its need for manpower should be assessed "in terms not of our ability to fight conventional campaigns but of our ability to keep order in the colonies, to send small 'fire brigade' forces to stop trouble before it became serious and to help keep a 'shield' in Europe".

Views of this kind could be and were disputed but without affecting the high priority that had consistently been given to air transport since the 1957 Defence White Paper. If anything, they enhanced its importance; and as the limited war studies continued - reaching the stage of a final report⁷⁹ in July 1960 - the first question affecting air transport policy was the operational adequacy of the existing long-range force - Britannias, Comet 2's, and Beverleys (later Belfasts) for heavy freight - for the whole of the period under study, ie until 1970. What was seen to be needed was an improvement in speed and range, in at least a proportion of the force, to offset what was generally assumed: fewer overseas bases and increasing difficulties over assured staging posts and reinforcement routes. The VC10 was the obvious answer. In the worst situation, one in which movement to the Far East and even as far as the Gulf could only be by a westabout route, the

⁷⁷ Minute of 28 October 1959 (MOD Records MO 25/7/2).

⁷⁸ Minute to CDS 23 March 1960 (AHB ID3/1/65 Pt 1).

⁷⁹ COS(60)200 - Military Strategy for Circumstances Short of Global War - 5 July 1960.

speed and range advantages of the VC10 would be crucial. As early as 1960, a high quality component in the transport force of up to 18 VC10s, coming into service in 1966, emerged as one of the objectives of Air Staff policy. But the timing of the bid had to be right and, to begin with, approval was sought for no more than five Comet 4c's and five VC10s to replace the Comet 2's still in service. Even so, while the Treasury made no difficulties over the order for Comets, it refused to allow any VC10s to be ordered until the strategic studies had been completed and considered by Ministers. This was not unreasonable and it was only after lengthy ministerial consideration in the autumn and winter of 1960 that the order for five VC10s was approved. So far as any decision is irrevocable, this ensured the RAF's capability for long-range passenger and light freight movements for many years to come. As for the long-range movement of heavy freight, the decision of February 1959 to adopt the Belfast was not reviewed even though the outcome of the discussions at the end of 1960 weakened the case for this particular aircraft. Some of the heavier loads, the need for which had been an important part of the original case, such as the BLUE WATER and Thunderbird missiles, no longer had a place in overseas deployment plans. Yet to criticise the Air Council because it failed to re-open the issue would be to forget that if the Belfast was not its preferred aircraft it was a massive improvement on the Beverley; and the bird was at least in hand.

The strategic studies had substantial consequences for other categories of air transport. Numbers of tactical transports, light cargo aircraft and helicopters largely depended on assumptions about the scale and type of operations in which the Army might be engaged, especially outside the NATO area. Reaching agreement on issues of this kind was not easy for the staffs advising the Chiefs of Staff or for the Chiefs themselves; but, with more reluctance on the part of the Army than of the other Services, progress was made towards proposals less expensive in manpower and equipment than previous assumptions had called for. Moreover, faced with so many possibilities of conflict in the three overseas regions - Mediterranean, Africa and the Gulf, and the Far East - the Chiefs of Staff reached a point in their discussions where assumptions had to be made about the duration and also the frequency of limited wars. They recognised that all such assumptions were at the mercy of events, that under-insurance involved risks and that over-insurance was costly. The necessary decisions could only be made by the government, and Ministers in the event agreed that force requirements should be assessed on the assumption that limited wars would be measured in weeks rather than months, except possibly in the Far East, and that none would arise in any of the main theatres at intervals of less than two years. The trend of provision, in short, was downward; and in communicating these decisions the Prime Minister is recorded as saying that what the Chiefs of Staff had in mind might be reduced even more.⁸⁰

Against this background, which is more fully described in the next chapter, the final Chiefs of Staff report paid special attention to the air transport support of the Army in the field. It saw a continuing need for airborne operations in the Near East (for example, intervention in Jordan) and the Gulf (Kuwait being the obvious possibility), though not in the Far East. The need to be able to drop two parachute battalion groups simultaneously was stressed, but this was based not so much on the tactical imperatives of a specific operation as on the more dubious possibility of simultaneous drops by single battalions separately in Jordan and Kuwait. Reasonably enough, the Air Ministry left its Argosy order unchanged at 56 aircraft, less than the full airborne concept called for. The risk, such as it was, was all the more justified because previous assumptions about the maximum commitment to Army operations outside NATO were substantially altered. Whereas previously the Army could and did draw up its plans for air transport support (and much else besides) on the assumption that up to six brigades might be deployed, the new formulation was more modest: "we assume that Her Majesty's Government would not be prepared to embark on any operation requiring the employment, at least initially, of a United Kingdom force exceeding one brigade group with supporting naval and air forces, either alone or as a contribution to an allied force".⁸¹ On such a basis there could be no question of continuing to state the Army's requirements for light cargo aircraft and 'utility' helicopters in the terms that had so worried the Air Council, added to which was a belated

⁸⁰ Defence Committee (D(59)13th) 31 December 1959.

⁸¹ COS(60)200, para 181.

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recognition that an expensive and complicated helicopter such as the Rotodyne was a luxury of which few if any could be afforded. Thus, the requirement for the air supply of troops in the field was more than halved; that for a helicopter force capable of lifting ten companies simultaneously was reduced to five companies, offset somewhat by the assumption that naval helicopters would be able to assist to the extent of two companies.⁸²

These changes were reflected in the Air Council's plan of the early sixties. But if these were for smaller transport forces than the Council had been under pressure to adopt, they were nevertheless much bigger than had resulted from the proposals of the Bingley Committee some five years earlier. A comparison of the transport front-line in 1964, as planned in 1958, and that of 1966 as planned in 1962, brings out the difference:

TRANSPORT COMMAND		TOTAL UE
1964	9 Comet, 18 Britannia, 22 Beverley, 16 Hastings	65
1966	11 Comet, 5 VC10, 10 Belfast, 21 Britannia, 12 Beverley, 30 Hastings, 26 Argosy	115
MEDITERRANEAN		
1964	8 Hastings, 4 Sycamore	12
1966	6 Hastings, 4 Whirlwind	10
ARABIAN PENINSULA		
1964	8 Beverley, 12 Twin Pioneer, 3 Sycamore	23
1966	12 Beverley, 10 Argosy, 8 Avro 748, 6 Belvedere, 14 Wessex	50
FAR EAST		
1964	12 Hastings, 12 Belvedere, 9 Twin Pioneer, 9 Pioneer	42
1966	12 Hastings, 10 Argosy, 4 Beverley, 8 Avro 748, 14 Wessex, 6 Belvedere	54

To complete the picture, whereas no provision was made in the 1958 plan for support helicopters in Europe, that of 1962 provided for nearly fifty helicopters (Whirlwind, Wessex and some Belvederes) established in Transport Command but intended to support BAOR as well as Army training in Britain. As between the two plans, the number of aircraft of all types assigned to the transport role was more than doubled; and although neither the Rotodyne or the Caribou had survived (for different reasons)⁸³ a useful improvement in quality as well as numbers was in prospect.

The 1962 plan was realised to an extent that is remarkable in view of the heavy pressure on the Defence Budget in the early 1960s. Taking April 1966 as a point of reference, the numbers of front-line transport aircraft - about 270 - envisaged in 1962 were by then in service except for a smaller helicopter component - some seventy aircraft compared with the 1962 plan for about ninety aircraft - which was largely accountable to a further approved reduction in the requirement for Army support. Almost all the planned re-equipment had also been achieved, or was to be by the end of 1966 by which time VC10s and Andovers were in squadron service. And additional VC10s - to make a total of 14 - had been authorised. There were some difference in deployment plans. In particular, all Belvederes had been concentrated in FEAF, where Whirlwinds had not been replaced, as planned,

⁸² The deployment envisaged was a two-company lift in the Far East and also in UK/BAOR, two in the Arabian Peninsula and a half-company in Kenya and Cyprus. The last two requirements were later cancelled; and by the end of 1962 the RAF commitment was to a four-company lift.

⁸³ Decisions to order neither aircraft were taken in 1962. The Rotodyne's fate was sealed as much by opposition from the airline corporations as by the Air Staff's belief that it was unsuitable for military purposes. In contrast, the Air Staff thought well of the Caribou; but balance of payments and domestic industrial objections were too much for Ministers to stomach. The gap was filled by running on a number of Valettas for longer than had been intended and by the Avro 748 (Andover).

by the Wessex. Both changes were due to the demands of the Indonesian confrontation. In Europe, much more effort was being expended on helicopter support of the Army than had been intended when the first force plans resulting from the 1957 Defence White Paper were worked out.

Altogether, a heavier investment in air transport, in the tactical as well as strategic role, was one of the most obvious developments in the five year plan initiated by Mr Sandys in 1957. The White Paper⁸⁴ submitted by Mr Watkinson early in 1962 was in effect a progress report on that plan and also a statement of how defence policy was expected to evolve. What it did not say was that the forces that it had been intended to maintain five years earlier were proving to be financially insupportable; nor that there were serious doubts about the base structure on which the British presence overseas depended. Much was there to be read between the lines, for those who had eyes to see: the intimations that garrisons overseas would be reduced in strength; that rapid reinforcement by the Strategic Reserve in Britain was the key to dealing with emergencies; and that more amphibious forces were to be formed. It had been in this context that Ministers, whatever their misgivings (and those of their advisers) about other elements of the Services, had paid so much attention to improving the size and quality of the air transport force. This was a growth area: the only one, as far as the Royal Air Force was concerned.⁸⁵ Indeed, air transport stands out as one of the few features of defence policy which was free of serious controversy and which Ministers themselves addressed with some confidence. Otherwise, as the next chapter shows, the period from 1958 to 1962 is notable for a virtually continuous review of basic policy pursued, with something little short of desperation, with the aim of meeting all existing political commitments without exceeding limits on defence expenditure that were themselves open to argument.

⁸⁴ Cmnd 1639 February 1962.

⁸⁵ Air transport was a growth area in another sense. Although the Air Council was anxious to limit the number of formation headquarters it gave its approval in November 1959 (AC 22(50)) to the formation of a new group in Transport Command to control tactical transport exercises and operations; and No 38 Group (with its historical associations with this type of role) was revived. It ensured a strong central control of RAF resources available for the support of the Army. The case was made with air transport alone in mind; the use of No 38 Group to control DF/GA aircraft was a later development.

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CHAPTER 8 THE SEARCH FOR A GRAND STRATEGY

Introduction

During the first months of the Macmillan administration much attention was given to revising defence policy on lines which would obtain the maximum benefit - political, military and financial - from nuclear deterrence. If the Admiralty and, less vocally, the War Office saw this policy as a threat to their respective Services, they also had a genuine concern for its effect on the British world position; and there were others, with no military axe to grind, who shared their doubts. The Foreign Office wrote to the Secretary of the Cabinet in October 1957¹ with the suggestion that a Committee on Future Policy should be set up to look in the widest possible way at British objectives and commitments in the light of the smaller forces of all three Services that would be available in future. The letter referred gloomily to Britain's "international poverty". Sir Norman Brook recommended the suggestion to Mr Macmillan on the grounds that the position in the Middle East had undergone a radical change; a new phase of Anglo-American co-operation was opening; earlier conceptions of the Soviet Union's technological capability were having to be reviewed; there were renewed economic difficulties; and the defence programme was being drastically modified. The Prime Minister agreed and the first of several such broad-based reviews during the next five years was duly launched. Not all took the same form but a common feature was the involvement of a wide range of departmental and functional interests; there was no question of leaving the field of strategic studies entirely to the Chiefs of Staff. This was deliberate policy on the part of Sir Norman Brook.² Civil departments, administrators, diplomats and scientists - from the universities and the Civil Service - as well as the Chiefs of Staff were enlisted in the pursuit of sound and workable policies. Within the Ministry of Defence a triumvirate of CDS, Chief Scientific Adviser and Permanent Secretary³ formed a separate channel of strategic advice to the Minister. Sub-committees on specific subjects emerged under the authority of the Future Policy Committee or the Minister of Defence, whereas previously these would more usually have been set up by the Chiefs of Staff; examples were the British Nuclear Defence Study Group (BNDSG) and, as we have seen, the committee that debated the future of Coastal Command. There was inevitably some weakening of the standing of the Chiefs of Staff as the body collectively and individually responsible to the government for professional military advice; in turn, the Service Departments, accustomed to a system in which they contributed to the making of policy through the COS Committee, lost some of their authority and influence. The organisational ramifications of this process lie outside our scope. What is important is that during the period from 1957 to 1962 the tapestry of defence policy was being woven by numerous workers, with no clearly discernible chief designer responsible to Ministers. It is not surprising that in 1961 Mr Watkinson made a bold effort, similar to that of Mr Sandys a few years earlier, to persuade Mr Macmillan that a stronger central grip on defence affairs had become essential. When Mr Macmillan, agreeing to yet another comprehensive strategic review early in 1961, enquired "What is to be the scale of all this", he may well have been uttering a cry for help in a situation that was becoming increasingly difficult to control. Not the least perceptive of the various studies of strategic priorities that were produced during the period was a solo effort in a matter of days by the Deputy Secretary of the Cabinet which Mr Macmillan accepted and submitted to the Defence Committee later in 1961. Many hands make light work; many heads are not necessarily as productive.

¹ Sir Frederick Hoyer-Millar to Sir Norman Brook 9 October 1957 (Cabinet Office 30/22/83).

² He designed a framework of studies for one series of Future Policy Committee meetings "in such a way as to cover so much ground that was plainly for civil departments that the Chiefs of Staff could not take the bone away in a corner and gnaw it by themselves" (Cabinet Office 30/22/84/5 Pt 1).

³ Lord Mountbatten was CDS from July 1959 throughout the period. Sir Solly Zuckerman succeeded Sir Frederick Brundrett as CSA at the end of 1960; Sir Richard Powell was succeeded by Sir Edward Playfair in 1960, followed in 1961 by Sir Robert Scott. Sir Robert Scott was particularly active in offering his own strategic advice to the Minister of Defence - to Mr Watkinson up to July 1962 and Mr Peter Thorneycroft thereafter. Sir Thomas Pike succeeded Sir Dermot Boyle as CAS at the end of 1959. Mr George Ward remained S of S for Air until October 1960, followed by Mr Julian Amery and, from July 1962, Mr Hugh Fraser.

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One of the intentions of the 1957 defence policy had been to alter the balance of resources between those devoted to NATO and those required to maintain forces overseas. The political objections encountered in 1957 and 1958 to reducing BAOR to the extent proposed have been described in Chapter 5. Subsequently, these became, if anything, even stronger. The Kennedy administration's emphasis on more conventional (and associated tactical nuclear) forces in Europe; the pressure that the Soviet Union could always exert on West Berlin, and did - notably in 1960 and 1961; and the growing acceptance from 1960 that Britain could not remain outside the economic consolidation of Europe - against this background it was, as the Prime Minister put it, "virtually impossible to reduce our forces in Germany or even to insist on compensation in foreign exchange."⁴ Hopes remained: "as soon as the international situation allows, we must get our allies to agree that our obligation is now an unreasonable one". But with the negotiation in January 1962 of an agreement with West Germany on off-set costs such prospect as there had ever been of substantial savings on British forces in Europe receded yet again. It is also significant that the long-standing intention to withdraw all RAF fighter squadrons from Germany was to come to nothing partly because of the necessities of negotiations for entry into the EEC. Measures intended to reduce costs in Germany - stationing part of BAOR at home; the cancellation of the BLUE WATER SSGW - merely signify that while British Ministers continued to be restive about the contribution to NATO there was little they could do about it.

With no serious room for manoeuvre in NATO, the continuous debate about policy was largely concentrated on the world role and on investment in the nuclear deterrent and its defence. Availability of resources was an important consideration, for the Defence budget as a whole and overseas military expenditure. But its significance for the important decisions that were taken during the period has to be put in perspective. Economy was a reason, though not always the only one, for questioning particular projects and features of policy; but the selection of projects to be dropped and policies to be modified was largely argued on their merits. Taking the period as a whole, the Defence budget showed no major variations; and expressed as a proportion of GNP it remained remarkably steady.⁵ This was not easily achieved. The reduction in air defences described in Chapter 6 and the cancellation of BLUE STREAK in 1960 are examples of decisions on RAF policies and projects that kept current expenditure within broadly acceptable limits. The other Services were also obliged to cut their programmes during the period, if not so dramatically.

At the conclusion of the 1957/58 policy review by Sir Norman Brook the essential dilemma was presented to Ministers.⁶ On the one hand, it was vital to strengthen the external monetary position. On the other, existing plans to reduce military expenditure overseas had gone as far as was prudent: "no further substantial savings can be looked for short of major policy decisions concerning withdrawal from Germany or abandonment of the nuclear deterrent or unless a comprehensive disarmament agreement is achieved". To reduce even more overseas was considered positively harmful to the crucial objective of maintaining and improving the external financial and trading position. Recognising that there were areas of civil expenditure - social services and education - where it was difficult to economise, the committee nevertheless pointed to some heavily subsidised activities - such as agriculture and the nationalised industries - which, together with the improvement in earnings at home, involved sums "compared with which those required to sustain our present external policies are quite small."

⁴ Memorandum by the Prime Minister on "Our Foreign and Defence Policy for the Future", October 1961 (AHB ID3/1/70, Pt 1).

⁵ The table below shows the Defence budget in money terms and adjusted to constant prices, and also as a percentage of GNP, between 1957/58 and 1962/63:-

Year	Defence Estimates (£m)	% GNP	At 1962 Prices
1957/8	1421	7.3	1699
1958/9	1418	7.0	1605
1959/60	1502	7.1	1638
1960/61	1618	7.2	1705
1961/62	1656	7.0	1701
1962/63	1721	7.0	1721

(Source: MOD M08/2).

⁶ Report to Prime Minister by Sir Norman Brook, May 1958 (Cabinet Office 30/22/83).

This report was discussed by the Prime Minister and his senior colleagues in July 1958. No decisions were recorded but there was perhaps more than a hint that there was to be no shift of resources between domestic and overseas expenditure in the emphasis that the Chancellor of the Exchequer placed on the difficulty either of significantly cutting back on civil programmes at home or increasing taxation levels. Nor did such a shift take place. In money terms, civil expenditure was to increase at about twice the rate of defence expenditure. In real terms, the Defence budget in 1962/3 was only 1% more than in 1957/58; average annual expenditure over the period grew not at all. At no time after 1957/8 was there any likelihood of more resources being found for defence. The pressure was all the other way: to keep defence expenditure at existing levels or, better still, reduce it. Yet there was no failure to recognise that a stabilised level of expenditure, or even a constant allocation of GNP (which, assuming that the economy grew, would permit the Defence budget to grow as well), would eventually lead to a quantitatively smaller capability - in manpower, or weapons, or both. No other conclusion could be drawn from the inescapable fact that the cost of new weapons and equipment was rising faster than any likely increase in GNP (which grew at about 3% a year during this period).

Sir Norman Brook was not to be put off by the unenthusiastic response to his 1958 report. If Ministers were unwilling to increase defence resources they would have to face the problem of priorities, as between both weapons and commitments. In the winter of 1958/9 he worked towards a new initiative; and in February⁷ he formally minuted the Prime Minister setting out the questions that ought to be considered: economic and political developments over the next ten years; the prospects for nuclear weapons (not excluding a possible ban on tests and progress towards disarmament); the importance of the Middle East and whether this should be regarded as a British or a collective Western concern; whether there was an alternative to an independent British deterrent; if not, should the successor system be BLUE STREAK, BLUE STEEL Mk 2 or Polaris; reliability of overseas bases and communications; the balance between military support and economic assistance for underdeveloped countries; what prestige projects could be afforded - supersonic civil aircraft, new Cunarders, space research. The framework of the proposed studies could hardly be criticised for its inadequacy. Indeed, he later admitted that too much had been attempted and that the eventual report (early in 1960) was unduly delayed. Since one of the principal objects of the exercise was to examine 'the great unresolved questions affecting our global strategy' as the necessary basis for a sensible weapons policy, the ground covered seems excessive. But in proposing the review Sir Norman Brook was concerned to enlist a larger group than the Chiefs of Staff, and its wide terms suited this purpose.

Other concerns, including his remarkable mission to Moscow, delayed Mr Macmillan's agreement, and it was not until June that he met, with no other Minister present, a notable assembly of Whitehall talent.⁸ A programme of work on the lines proposed by Sir Norman Brook was agreed: to be controlled by a steering committee served by two sub-committees, one under a Foreign Office chairman (Sir Patrick Dean, chairman of the Joint Intelligence Committee) on political and economic aspects and one under the Permanent Secretary of MOD (Sir Richard Powell) on nuclear weapons. This work has to be regarded as a more wide-ranging survey of issues which, in their consequences for the size, range and deployment of British forces overseas, were being studied in parallel by the Chiefs of Staff Committee. The eventual report, and that of the Chiefs of Staff, formed the corpus of advice which the Defence Committee had to consider in the autumn of 1960 to try to determine what became known as the Strategy for the Sixties. The sub-committee on nuclear matters was to be crucial both for the future of BLUE STREAK and the characteristics of weapons systems to succeed the existing V-bomber force.⁽⁹⁾

⁷ Minute to Mr Macmillan 20 February 1959 (Cabinet Office 30/22/84/5 Pt 1).

⁸ The meeting took the form of a Chequers week-end. Sir Norman Brook, the Chiefs of Staff, the permanent heads of the relevant Government Departments and other senior officials attended. A cover story was considered necessary for the excited speculation that might arise. This was that all had assembled to mark Sir William Dickson's imminent retirement as CDS. It seems to have served.

⁹ A similar group had earlier attempted this kind of study but had been disbanded on Mr Sandys' instructions because he feared that it might prejudice the development and introduction of BLUE STREAK: see Ch 9

Forces Overseas

a. **Initial Studies.** During the autumn of 1959 the Joint Planning Staff was hard at work on two memoranda commissioned by the Chiefs of Staff in August: one on UK Force Requirements for Limited War,¹⁰ the second on the Strategic Reserve.¹¹ Both had their origins in some probing questions from the Chancellor of the Exchequer to the Minister of Defence which primarily had economy in Army manpower and equipment stocks in mind. Both accordingly confined their detailed examination of forces to the requirements of the Army: theatre by theatre, and against the possible threats. But some important general points were exposed. One was whether the major overseas bases such as Aden and Singapore would still be available in 1970: the JPS assumed that they would. Another was the duration of a limited war: the JPS thought that this would be weeks rather than months. Overall, the JPS memoranda pointed towards somewhat smaller ground forces even though the maximum commitment was expressed as the sum of the commitments that could arise in each overseas theatre. An important recommendation for both the Army and the RAF was that the Strategic Reserve should be some twenty fighting units strong, with administrative and support units capable of maintaining these forces from the outset of any operation: in short, a wholly regular force that could move quickly in any combination of units that a contingency might call for, and not reliant on the call-up of reservists to be fully effective.

Both studies were discussed by the COS Committee before the end of the year.¹² They raised particular difficulties for the Army because the emphasis on all-regular support ran counter to the current War Office policy of maximum civilianisation; and any increase in administrative units would inevitably mean a reduction in the strength of teeth arms. In any case, the CIGS (Sir Francis Festing) was reluctant to be committed to any change until the Future Policy Committee's survey had been completed and considered by the government. Nor was the Admiralty content, for while the JPS had mentioned the need for amphibious capability its assumptions about the availability of the traditional bases were ones which the Admiralty, and others besides,¹³ were inclined to question.

Neither JPS paper was acceptable to the Chiefs of Staff collectively. Yet they were under heavy pressure from Mr Watkinson who had obligations to the Chancellor of the Exchequer to discuss the resources to be devoted to the overseas role. The Chiefs had to plead for more time, on the grounds that the Future Policy Committee had not yet completed its work and that a deeper analysis of force requirements and their equipment implications would be needed in the light of its report.

One development affecting these further studies was the Defence Committee's provisional acceptance, on Mr Watkinson's submission, of the two assumptions mentioned in the previous chapter:¹⁴ the duration of any limited war might be weeks rather than months, except possibly in the Far East and, secondly, such a war would not take place in any of the overseas theatres at intervals of less than two years. It was to be a further six months before the Chiefs of Staff, after much labour by

¹⁰ JP(59)110(Final).

¹¹ JP(59)111(Final).

¹² COS(59)65, 20 October and COS(59)68, 3 November 1959.

¹³ One of the early contributions to the work of the Future Policy Committee was a Foreign Office memorandum which argued for an alternative strategy not dependent on bases and communications in politically unreliable territories. This implied "to some extent at least, a return to the sea". Recognising that a US Sixth Fleet solution would probably have to be ruled out as too costly, the memorandum envisaged one main overseas base - Australia seemed the best choice - and associated mini-bases on islands such as Masirah, Gan, Socotra, Seychelles, Mauritius, Cocos and Labuan which appeared to raise no problems of long-term tenure (Sir Frederick Hoyer-Millar to Sir Norman Brook, May 1959: Cabinet Office 30/22/84/1)

¹⁴ Ch 7 p190.

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themselves and their staffs,¹⁵ brought forth their major paper on Military Strategy for Circumstances Short of Global War.¹⁶

While this work was in hand the Future Policy Committee reported to the Prime Minister in February 1960.¹⁷ As an official as distinct from ministerial committee, it could hardly have had greater authority: Sir Norman Brook in the chair, CDS and the Chiefs of Staff, the Permanent Secretaries of MOD and the Foreign Colonial and Commonwealth Offices, Lord Plowden of the Atomic Energy Authority, and a senior official from the Treasury when required. Their report was as thorough as might have been expected. The Air Ministry, with either CAS or VCAS attending the meetings, observed its discussions on overseas policy with few qualms (its discussions on nuclear deterrence were much less to the Air Ministry's taste). Soon after he had read the report and before he had discussed it with senior Ministers the Prime Minister informally agreed that it should be used by the Chiefs of Staff "as a basis for planning". From what was a lengthy survey, much longer than that which had been submitted to the Policy Review Committee of 1956, numerous points emerged that were relevant to the parallel Chiefs of Staff study:

Military equilibrium between the Sino-Soviet bloc and the West would continue. Thus the main area of economic and ideological conflict would be the underdeveloped countries.

Britain would have a very important part to play but could do little save in combination with friends and allies: "perhaps the most striking conclusion which has emerged has been that the concept of purely national interests is, for the United Kingdom, largely dead".

The Atlantic Alliance was and must remain the core of British foreign policy; whatever might happen, there must be no question of having to choose between the two sides of the Atlantic. The American presence in Europe must be maintained, and Britain should not allow itself to be excluded from Europe. It was scarcely less important to avoid any conflict between the Atlantic Alliance and the Commonwealth but the identity of interest within the Commonwealth could not compare with that which existed within the Atlantic Alliance.

Britain could reasonably expect to prosper in the next decade but she would fall relatively further behind the big power groupings, including the EEC. In any case, it would be a vulnerable prosperity: "it will be a constant struggle to keep sterling strong". Whether the 8½% of GNP currently devoted to defence and economic aid could continue was problematical.¹⁸

The Committee's conclusions on defence policy began with a reminder that if there were no changes in commitments and in the plans of the Services to meet them, the Defence Budget would rise during the next decade by at least 10%; so there would be problems of priorities. No attempt was made to allot resources between the various elements of defence (determined though Sir Norman Brook was to discuss strategy in a wider forum than the COS Committee this would have usurped its function). However, there were two "general principles". First, and most important, British influence in the Atlantic Community and its cohesion as a whole would benefit if the United Kingdom continued to

¹⁵ At one particularly hard pressed period the JPS could not resist the temptation to date one of their drafts "Sunday 3rd April 1960".

¹⁶ COS(60)200, 8 July 1960. The aim was "to propose, in the light of the conclusions emerging from the Study of Future Policy, a co-ordinated United Kingdom military strategy for limited war, the tasks of all three Services and the consequent force requirements".

¹⁷ The final clearance of the report ran into difficulties, not least because of Sir Norman Brook's absence with the Prime Minister in Africa (the journey during which Mr Macmillan made his 'wind of change' speech) whence the party returned slowly but no doubt beneficially by sea. The report was circulated as a Cabinet paper (C(60)35 of 29 February 1960).

¹⁸ The Committee was much less forthright than its predecessor in 1958 in offering choices between social and domestic consumption and expenditure on defence. Even to continue with the existing allocation (7% of GNP to defence and 1½% to economic aid overseas) "would mean that the British public would have to deny themselves certain benefits such as lower taxation rates which they might be able to enjoy if we reduced the proportion of the national product devoted to these purposes".

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make "a significant contribution" both towards the Western strategic deterrent and the shield forces of NATO. This seemingly unexciting formulation concealed a serious difference within the Committee on whether the British deterrent should be capable of inflicting such damage on Russia as to be a deterrent by itself or whether something less would suffice. This debate and its consequences are described in the next chapter. That most of the Committee favoured a modification of existing deterrent policy signified another stage in the conflict of priorities between those who believed in the pre-eminence of the deterrent and the advocates of as strong a conventional posture as possible. This was where the second "general principle" was relevant: "forces will still be needed to safeguard the most important of the British and Western interests outside Europe". The two were not regarded as mutually incompatible¹⁹ but a proper balance had to be struck between what was spent on the deterrent and the modernisation of other forces. Believing as it did that forces assigned to NATO were for all practical purposes sacrosanct - "our allies already think that our contribution is too small" - the Committee's majority preference for a less stringent criterion for nuclear deterrence pointed to one way of achieving a better balance. This was consistent with the Committee's general approach. It recognised that the rationale for forces outside Europe might seem less convincing than the case for the strategic deterrent and the contribution to NATO. On the other hand, the existence of forces and bases in the Middle East and Asia meant that Britain was uniquely qualified to meet threats to Western interests in the world at large; and it could therefore be argued that this was the best contribution that could be made to the Atlantic Alliance. In any case, nobody else could be expected to take over existing British commitments.²⁰

The Committee did not offer the government a choice between European and overseas alternatives. But it was less worried about the prospects of holding firm in Europe than successfully resisting Soviet pressure elsewhere: "however dangerous [European difficulties] may seem they should not be allowed to distract us from the essential struggle to prevent the rest of the world from passing over to the communist camp". Future trends, particularly in the Middle East and Africa, were analysed with admirable foresight. There was no suggestion that sovereign territory overseas should be held at all costs; the emphasis was on co-operating with movements towards independence, although it would be difficult to provide as much economic aid as developing countries would need. Nor was there any complacency about the problems of overseas defence. The Committee produced what was in effect a list of broadly stated requirements and policies to serve as a basis for force structures and capabilities. In the Mediterranean and Middle East the bases in Cyprus and Aden should be maintained as long as possible and at much the same strength as in existing plans - for support of CENTO; for possible intervention in the Levant, though only jointly with the United States; and for intervention in the Gulf, with Kuwait as the heaviest commitment, where it was regretted that any operations would probably have to be undertaken by the British alone. In the Far East, support of SEATO was inescapable but the military commitment should be strictly limited, especially of forces to operate on the mainland of SE Asia. But it was in both the British and the wider Western interest that the Singapore base should be retained, if not indefinitely.²¹ A major new alternative base in Australia would be "enormously expensive and might be too far away" but there might

¹⁹ The Committee said that nuclear capability enhanced the value of conventional forces, particularly as the bombers and air defence fighters currently comprising the deterrent could be useful in conventional roles.

²⁰ At the highest levels in the US Government at this time there was no question of discouraging British from continuing in a world role. As one example of many, Mr Watkinson informed the Prime Minister shortly before the Bermuda Conference of December 1961 that "McNamara has formally confirmed to me... that the Americans attach far greater importance to Britain maintaining her position in SE Asia, the Indian Ocean, Aden and so long as we can, East Africa than to making a large contribution to NATO". The American administration may not have been united in this view (McNamara did not wish to be quoted) or unaware of its political disadvantages. At any rate, Mr Watkinson suggested that the President should be encouraged to "give instructions that we receive a little more encouragement down the line to pursue this kind of policy" (MOD MO 11/6 Pt 2).

²¹ In saying that "before the end of the decade we may have to abandon it as a base", the Committee had in mind the possibly excessive cost of the forces needed to ensure the internal security of Singapore against political opposition locally. This was not the view of the Commissioner-General, SE Asia (see p 199, footnote).

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be scope for reducing reliance on Singapore through the use of Borneo, Addu Atoll (Gan and the neighbouring islands) and Australia itself. The message was clear: the Far East is crucial: we must stay there; but we may not be able to do so on the present basis and at the present strength.

What was a massive and portentous report was received with the respect it deserved - up to a point. The Prime Ministers of Canada, Australia and New Zealand were sent copies of an edited version (references to the inadequate defence effort of these countries compared with the US and UK were toned down as was the view that the Singapore base might not be available in ten years time). But Ministers seem only to have met once to discuss it, when depressingly familiar and potentially divergent views were expressed. Mr Butler, supported by Lord Home and Mr Watkinson, thought it too defeatist and made too little of the Commonwealth and Colonial connection. In contrast, Mr Heathcoat Amory was worried about the defence burden overseas and about the prospects of continuing to devote as much as 8½% of GNP to defence and economic aid. In speaking on these lines he was following a Treasury brief which said that "it was difficult to see how the role we are trying to carry out in SE Asia (and also indeed in the Middle East) fits in with the problems and circumstances of the 1960s. This is of course tremendously important in relation to a large number of the very big issues on defence expenditure - the size and nature of the Navy, the transport requirements of the Army, the amount of stocks we should provide, and so on".²² Significant though these doubts were, the Chiefs of Staff had no option but to assume that their task was to recommend forces that would maintain British influence in the areas to which the Future Policy Committee attached importance.

b. **Chiefs of Staff Report 1960.** Military Strategy for Circumstances Short of Global War (COS(60)200): this was what the JPS and JIC had been engaged on for the first six months of 1960, making progress reports to the Chiefs of Staff at intervals during the period. When forwarding the report, which was some ninety pages long, to the Minister of Defence in July, the Chiefs provided as well a synopsis of its significance. This placed the main emphasis on the relationship between bases and force structures. Bases should not be vacated any earlier than necessary but the Chiefs assumed that these would eventually be lost; and they concluded that as the Future Policy Committee saw a continuing need for an intervention capability, the only course that seemed to be open was "to develop progressively towards a strategy based on the maintenance of small seaborne forces with floating stockpiles, and on the rapid movement by air over long distances of land and air forces". Many practical problems would have to be studied and, even if these were soluble, the speed of progress would have to be regulated so as to avoid prejudicing the retention of the existing bases: this mix of the old and new was christened the 'double stance'.²³ The Chiefs admitted that it would be very expensive, and even more expensive to rely on a wholly seaborne force. Even without moving to a 'double stance' they saw no prospect of reduced defence expenditure.

This synopsis posed the problem that the government faced and is reproduced at Appendix M. One passage in particular got to what the Chiefs thought was the heart of the matter:

Defence is an expensive business, and as long as the United Kingdom continues to belong to the present number of "clubs" and as long as we have to contribute to them on a fitting scale we can see little chance of any reduction. The "clubs"..... are all governed by political considerations: the nuclear deterrent club, the British Commonwealth, NATO, CENTO and SEATO; and in addition to these we have to keep our own house in order in our dependent territories overseas, and we must be prepared to fulfil our obligations to friendly Governments who seek our help.

²² The meeting of senior Ministers under the Prime Minister to consider the Future Policy report was held on 23 March 1960 (Cabinet Office 30/22/84/5 Pt 2 which contains a copy of the Treasury brief). The report had some influence on the decision to abandon BLUE STREAK but this was separately considered.

²³ When Lord Selkirk, who had become Commissioner General for SE Asia after being First Lord of the Admiralty, was told about this possibility he made strong representations about the counter-productive risks. If it became known, the British position in Singapore, which Lord Selkirk saw as much more solid and popular locally than some in London supposed, could be seriously damaged.

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We do not dissent from the recommendations in the report of the Future Policy Committee that we should continue to belong as long as possible to these various organisations for, in present circumstances, this is the only way to maintain peace and stability. But whether, if we have once been obliged to relinquish our bases for political reasons, we should aim to fulfil our previous commitments by the use of military force, or whether we should aim to maintain a military presence in the area, are other matters which we suggest should receive further consideration by Ministers; meanwhile we have indicated in this Study a possible strategy for the fulfilment of such commitments.

The Chiefs of Staff could not have agreed on an alternative strategy, not so reliant on the traditional bases, in other than these provisional terms. Even to go as far as they did was difficult for the CIGS (Sir Francis Festing) to stomach. He was deeply unhappy about any policy which supposed that an appreciable military influence could be exerted without effective bases reasonably close to possible areas of operations, and he would have preferred to make the retention of essential bases the first call on the resources devoted to overseas defence: "no effective base, no effective intervention".²⁴ Up to a point these views were shared by the Air Staff, who doubted whether an operation to protect Kuwait, from a main base in Australia and forward facilities in Addu Atoll, was feasible or affordable. On the other hand, their advice to CAS was that similar operations in SE Asia might be easier provided there were facilities in North Borneo. Whether it made political sense to assume that a useful base could be set up in Borneo (Labuan island was the preferred site) in circumstances where a complete or even partial withdrawal from Singapore had been announced, was debatable. The Colonial Office thought it made no sense at all.

CIGS's views were all the more strongly held because the outcome of the joint study for the size and shape of the forces overseas bore hardest upon the Army; not so much in reductions in total Army strength (these amounted to only two major units) as because moves towards a new and less base-dependent strategy meant even smaller garrison forces. He was also less than happy with the assumptions that the Defence Committee had blessed while the study was in progress: for example, that no operation would be in greater strength, at least to begin with, than one brigade group; and that any limited war would last only for weeks. So modest a capability made little appeal to him. Moreover, he was wary of a method of determining the size of the forces that depended more on futurology than on the lessons of the recent past. The Army had had bitter experience post-war of being heavily engaged in operations some of which had lasted a long time and none of which had been foreseen - Malaya, Korea, Kenya and Cyprus being examples. Some of CIGS's arguments were, in their detail, taken too far, and did not allow for the limitation on Army capability that was bound to result from the abolition of National Service. But they were not irrelevant and what they meant was that the Chiefs of Staff, for all that they had produced an impressively thorough strategic appreciation, were not as united as appeared in their view of the future.

c. **Recommended Forces.** The changes recommended in existing force plans fell well short of those that would be required under either the "double stance" concept or any still more radical strategy. Nevertheless, they took into account what was regarded as the long-term trend towards a situation of fewer bases, together with increasing difficulty in flying troops and equipment by the most convenient routes. Whether or not the time would come when the only main bases would be Britain and Australia, which would mean that intervention and influence could only be exercised by means of mobile self-contained forces, fewer garrison troops would be needed and internal security responsibilities would be reduced. This, the report said, "leads to certain clear requirements":

The Navy would have to plan afloat support facilities against the time when it could not depend on its present bases overseas.

All Army equipments essential to initial intervention would have to be air transportable.

²⁴ A copy of CIGS's note to his colleagues of 17 June 1960 is in AHB ID3/1/65 Pt 2.

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Tactical air mobility and logistic air support would be necessary to lessen the Army's dependence on MT.

Forces must be able to move over great distances by air and arrive at their destination ready and able to fight.

Ferry ranges of the order of 2000 miles would be desirable for all types of aircraft.

Range, load carrying capacity and speed would all be at a premium for both tactical and strategic aircraft.

Tactical aircraft and their first line maintenance backing must be able to move quickly by air to operate from short and rudimentary airstrips.

What was being affirmed was that a future in which there would be fewer forces and bases overseas would demand sophisticated equipment and expensive logistic and support systems.

As for the fighting capability of forces overseas, there was nothing in the threat assessment made by the JIC (and forming part of COS(60)200) that called for improvements in quality beyond what was already in hand - unless there was involvement in SEATO operations against China. In that event, the Army would need a few nuclear weapons though it was appreciated that serious Chinese aggression would be bound to succeed unless countered by nuclear air strikes (it was for this reason that both RAF and RN strike aircraft were seen as having their place in the Far East). Elsewhere, the Chiefs of Staff saw no need for nuclear weapons in circumstances short of global war. Air defence of bases overseas was essential and a small addition to fighter strength in Singapore was recommended. The most significant indication of the trend of policy was the requirement that was foreseen for stronger seaborne forces in the Indian Ocean and the Gulf to provide an assault capacity from Commando carriers to complement airborne forces. This was in substitution for a currently planned capability for amphibious assault over beaches by a brigade group - a requirement no longer regarded as valid. But it was expensive, and it called for an additional commando carrier and a second fleet carrier East of Suez to ensure that at least one would always be available. Inter-Service flexibility was the keynote: RAF helicopters and Army units as well as Royal Marines would be embarked on the commando carrier. Overall, the most important changes in recommended strengths and deployments were:

Royal Navy. Commissioning a second commando carrier (embarking a commando currently in Aden); deploying two fleet carriers East of Suez; manning three escorts from the operational reserve; using helicopters from the two commando carriers to provide part of the lift required by the Army.

Army. Moving a parachute battalion group from Cyprus to Aden; providing a nuclear and a SAGW unit in the Far East; more forces in North Borneo, mainly by redeployment from Malaya; earmarking up to two brigade groups from Germany for use elsewhere in emergency.

Royal Air Force. Reducing the helicopter lift planned for Army support (as described in Chapter VII); deploying a DF/GA squadron to FEAFF; more transport aircraft in numbers to be determined.

Ministerial Reactions: the Chequers Conference, October 1960

To leave COS(60)200 as described above does it less than justice as a strategic study. It was a formidable achievement, reflecting the high quality of staff supporting the Chiefs of Staff; and it also reflected - and accurately - the views on overseas policy of the Future Policy Committee. Whether it perceived the right balance of forces can be argued; it certainly did not offer any choices between different force structures. But what is clear is that the recommended forces were claimed to be the minimum needed to maintain existing commitments. This was underlined when the Chiefs told Mr Watkinson of their assumption that the government would be prepared to take the risk of not being able to mount an operation of brigade group scale in more than one theatre at any one time (it was this kind of assumption that worried CIGS). Even so, the fact remained that the Chiefs had produced a report which, taking one thing with another, offered no prospect of savings on the currently projected costings of the Defence budget and, moreover,

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sketched a possible future policy for overseas defence which would call for weapons and systems of the highest possible quality. They admitted this: "when figures are prepared, we have no doubt that they will not show any decrease on present costs; in fact the contrary is likely to be the case, particularly for the period from 1965 onwards when expensive new weapons will anyhow begin to come into production".

July 1960, when COS(60)200 was sent to the Prime Minister and other members of the Defence Committee, opened a lengthy period of uncertainty and controversy about the way ahead. The strategic issues themselves were far from easy. Until these were settled, sound decisions about future weapons and equipment were difficult to make; and even when settled, numerous subsidiary questions arose. If, for example, it was assumed that the traditional bases were bound to be lost, should it be further assumed that a capability to intervene should be retained? If so, would this be exercised only on the invitation of friends and allies, which might mean that ports and airfields could be entered without difficulty; or should it be assumed that intervention might meet immediate and serious opposition, calling for more sophisticated capability in all three Services? Certainly, in opening the debate in a paper to the Defence Committee²⁵ in July, Mr Watkinson did not accept the simple proposition "no bases, no intervention". He recommended that the question of the need for an intervention capability after Aden and Singapore were no longer available should be studied by official committees; and he also proposed that COS(60)200 should be accepted as "a basis of immediate future planning". But Mr Macmillan was not to be rushed. It was not until mid-October that Ministers and their principal advisers, including the Chiefs of Staff, met at Chequers to try to plot an acceptable course. Before then the Prime Minister had sent a minute to the Ministry of Defence giving his own reactions to COS(60)200.²⁶

Except at great length, it is impracticable either to describe all the different views which found expression at various levels in Whitehall during the autumn and winter of 1960/61 or to trace in detail the effects of Ministerial decisions on the plans of the Services. The Prime Minister's personal position and that of the Air Ministry are essential to the narrative as is the general significance of the Government's decisions and the ~~resettlement~~ ^{RESTATEMENT} - such as it was - of planning objectives that eventually emerged.

COS(60)200 had not convinced the Prime Minister. It would have been less than honest, and in any case unavailing, if the Chiefs of Staff had attempted to conceal their failure to make recommendations that would reduce future defence costs. But it was this that caused the Prime Minister to produce his own solution, or at least one in outline. On the evidence of his minute to Mr Watkinson and his recorded remarks at the Chequers meeting,²⁷ he thought that the Chiefs had paid too much attention to the quality of forces that would provide a comprehensive capability and too little to what was needed to deal with the actual threats that might arise. Thus, he made a case for less sophisticated as well as smaller forces overseas. Leaving aside, in the Far East, the British contribution to the Commonwealth Brigade, he questioned the need for ground forces for anything more than "police" actions, including jungle warfare against guerillas. He thought the same of the Middle East (leaving aside the ^{KUWAIT} Kuwait contingency), the Mediterranean and Africa. He also questioned the need for naval forces for the operation, which implied, as he conceded, that the operation could not be mounted if the Aden base could not be used. He saw no need for nuclear units in any of these regions, though he was later to agree to the facilities for the V-bomber force that were being prepared overseas. The RAF got off lightly. Mr Macmillan accepted that there might be a case for SAGW and fighter defence of Singapore; and his concern about the size of the forces in Cyprus was mainly confined to the Army. He was less convinced of the need for sophisticated aircraft to support the Army in the internal security operations that he envisaged but (and not all that consistently) he stressed the importance of air mobility. It was necessary to his case that he should express doubts about the risk of Britain becoming involved in a serious limited war. And while he recognised a possible problem in meeting overseas obligations if any of the main bases were lost he showed no desire to suggest a solution to it.

²⁵ D(60)33, 13 July 1960: papers on the effect of C)S(60)200 on the Defence budget (D(60)38) and on overseas military expenditure (D(60)36) were also submitted.

²⁶ Minute to Mr Watkinson 21 August 1960. Extracts from this were circulated as D(60)48.

²⁷ D(60)10th Mtg, 16 and 17 October.

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Judged by the brief that was provided for Mr Ward and CAS at the Chequers meeting,²⁸ the Air Ministry was disinclined to take up a strong and combative position (though what its PUS thought was a defeatist attitude to the tenure of bases has been mentioned earlier).²⁹ Neither the Chiefs of Staff proposals or the Prime Minister's reactions seriously affected existing RAF plans, and there was much to be said for adopting a low profile. But some concerns were apparent. If the views of the Chiefs of Staff were accepted the main beneficiary would be the Navy whose increased share of resources might well be at the expense of the RAF. With or without a change of strategy there were risks to the RAF programme since the forecast rise in defence expenditure was mainly on account of the plans of the other Services. Thus, there were no objections to the Prime Minister's search for economy. In contrast, the Air Ministry ranged itself with the strong opposition that had been building up in the Chiefs of Staff Committee to Mr Macmillan's ideas on "desophistication": "the Prime Minister's proposals for limiting our capabilities to police action and internal security would go a long way towards an open admission that the UK would not be prepared for a limited war, and might consequently make the possibility of a limited war rather greater". This was only one of the objections. Distortion of the Army's structure, possibly of the Navy's as well, was another.

As for the question of bases and their security, the Air Ministry could see no effective alternative to the retention of Aden. This was all-important for the British position in the Middle East. If Aden were to be abandoned - and even if some local facilities were retained, such as those at Bahrein and Masirah - the Gulf states could not be expected to have any confidence in British ability to provide protection, whatever might be spent on intervention forces based outside the region. In the Far East, some deployment to Australia from Singapore and Malaya was not ruled out, but only as a last resort and on a modest scale. An elaborate new base in North Borneo had little appeal. In either case, some expenditure on airfield development would be necessary. In general, and leaving aside the quality as distinct from the strength of the forces overseas, there was little difference between the Prime Minister's position and that of the Air Ministry.

Although the memoranda for the Defence Committee at its Chequers meeting covered a wide range of defence policy the Prime Minister directed it to concentrate on the position overseas where, as Mr Macmillan is recorded, "never before in our history had we attempted to maintain such large forces". Neither of the official committees that had been set up to consider the need for an intervention capability if the Middle and Far East bases were lost had reported in terms which justified an early move to a "strategy without bases"; equally, however, they had not challenged the view that eventually the bases would be lost. Perhaps partly because of the difficulty of looking well ahead, but certainly because of the Prime Minister's determination to make real economies in current expenditure, little was said at Chequers about broad strategy. The Defence Committee took some immediate decisions. First, a second fleet carrier should not be stationed East of Suez and secondly, the case should be separately made for commissioning a second Commando carrier and the additional escorts and supply ships that the Chiefs of Staff had recommended. The Prime Minister gave notice that he would issue a directive calling for a re-examination of the other forces proposed for deployment in the Far East. In the Middle East, the effect of the Defence Committee's discussions was that regional strategy had to be based on the retention of Aden, where it seemed likely that the British position would be secure until 1966, and probably longer; but an opening was given to those who thought differently to make their case. Consistently, the Chiefs of Staff's recommendations for the size of Army and RAF forces in Aden (including the forces still in East Africa) and the Gulf were accepted. The Mediterranean was a different matter. Some possible reductions were identified;³⁰ and, as with the Far East, the Prime Minister stated his intention of issuing a directive for a reassessment of force strengths in that region.

²⁸ AHB ID3/1/65 Pt 3.

²⁹ Ch 7, footnote p 168.

³⁰ One was the withdrawal of two of the four Canberra squadrons in Cyprus, holding these in Britain for despatch to Cyprus in emergency. This was successfully opposed by the Air Ministry. The savings would not have been substantial and, such as they were, could be better provided by reductions elsewhere in the RAF garrison. The proposal would have risked damage to the political and military credibility of what was the most important British contribution to CENTO forces.

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As far as the RAF was concerned, the Chequers conference had little effect on its front line plans, beyond some uncertainty about the size of the transport force in Far East Air Force, which largely depended on decisions about Army strength. It was clear, however, that the Chiefs of Staff had got little or no response from the Government to their painstaking strategic study. No political commitment had been dropped and the most important military commitment outside NATO, the protection of Kuwait, remained. On the face of it, the Chiefs had simply been ordered to make do with less, and in the year following Chequers they had to grapple with the consequences. They had no grounds for hoping that financial difficulties would recede.³¹ This was not something the Chiefs could or did ignore. What was ignored was the reluctance of the Government to face the possible loss of the main overseas bases, leading to a greater dependence on seaborne forces. Neither of the two directives - one on the Far East and the other on Cyprus - issued by the Prime Minister after Chequers mentioned the possible long-term need to change the strategic stance. Yet this remained a question which in the opinion of others besides the Chiefs of Staff had to be kept before Ministers. Defeatism, or realism, about the overseas bases remained.³²

Developments in 1961

If 1960 had been a difficult year for defence policy, 1961 was worse. It followed a similar pattern: strong pressure from the Treasury for economy, leading to yet another look at fundamentals; further studies of force structures by the Chiefs of Staff, which had to take into account precise targets for savings in the total defence budget and in overseas military expenditure as well; all culminating in an autumn conference to tour the whole horizon. Some pointers had emerged from the activities of 1960. Economies were called for in overseas garrisons: especially in the Army in the Far East, with the result that whatever else might be done in support of SEATO³³ no substantial ground forces would be supplied for operations on the SE

³¹ The heavy stress that was placed at the Chequers meeting on the importance of reducing overseas expenditure on the Services to relieve the strain on the balance of payments was questioned by Mr Julian Amery shortly after he succeeded Mr George Ward as Secretary of State for Air in October 1960. In a closely argued minute in January 1961 (AHB ID3/1/65 Pt 3) to the Minister of Defence he sought to demonstrate that this kind of expenditure was only marginally more liable to affect the balance of payments than expenditure at home and should not be an overriding consideration when determining the strength of overseas garrisons. Mr Amery wrote on his own initiative but with some help from the Air Ministry. His minute was not well received. The Treasury continued to be unreceptive to the argument that Services' overseas expenditure was so small a fraction of total transactions across the exchanges as to be insignificant in the strategic debate. Eventually Mr Amery received a reply from the Prime Minister in brief and non-committal terms.

³² In an internal note on the results of Chequers Sir Norman Brook said that Ministers were not prepared to look at all at what might have to be done if Aden was lost. Brook's view was that Aden might be held for five or even ten years but that the consequences of its loss should be considered. Sir Edward Playfair of the Ministry of Defence agreed (CO 30/22/84/3). In what was an admirable summary of developments over the previous year, sent to Commanders-in-Chief for their information at the end of 1960, Lord Mountbatten explained the strategic thinking of the Chiefs of Staff and the response and decisions of Ministers. He made it clear that further studies were in hand. A copy of this letter is in AHB ID3/1/65 Pt 3.

³³ The problem for the government was how to reconcile their political commitment to SEATO with their intention of avoiding major military involvement. This was far from easy: at this time in the context of the civil war in Laos. Such measures as the detachment of a squadron of Hunters from Singapore to Thailand in May 1962, followed by the use of the Royal Engineers to build the airfield at Mukdahan (Thailand), while not militarily insignificant, are to be understood as the least objectionable and expensive means of maintaining Britain's political credit within SEATO. A statement of intent for British contributions to SEATO is contained in a minute of 18 April 1962 from Lord Mountbatten to Mr Watkinson (MOD Records MO 13/2). Naval forces: under SEATO command - two frigates, four coastal minesweepers, one minesweeper support ship; under national command - one carrier and escorts, one destroyer for inshore fire support, and logistic support ships. Ground forces: under SEATO command - British elements of the Commonwealth Brigade group; under national command - nil. Air forces: under SEATO command - one DF/GA squadron and a small short-range transport force; under national command - one Canberra bomber squadron. Under certain circumstances, a Commando Brigade might also be available. V-bomber support with conventional or nuclear weapons and additional Canberras, was not ruled out but the government was adamant that nuclear forces should remain under US and UK command and control.

Asia mainland. Hence the government's rejection of the proposal that Far East Land Forces (FAELF) should be provided with tactical nuclear weapons. This was only one example of a policy of reducing the premiums to be paid to protect British interests in the Far East and elsewhere. What was to come more openly into question was whether even reduced premiums could be afforded.

a. **Financial Difficulties.** Grand strategy was a relatively quiescent subject in the early months of 1961 (when much of the attention of Ministers and the Chiefs of Staff was taken up by Russian pressure on West Berlin). One of the more far reaching studies, involving all three Services, was of the practicalities of a joint seaborne force - one of the concepts of COS(60)200 - but with the period from 1970 onwards as the time when it might be required. What triggered a further period of hectic activity was a deterioration in the national economic performance. In April Mr Selwyn Lloyd, the Chancellor of the Exchequer, concerned at the balance of payments position, wrote to Mr Watkinson.³⁴ He had, so he said, expected sizeable cuts in overseas expenditure as a result of the Chequers conference. These had not materialised (privately, his officials admitted that this would take time) and he asked in particular that the size of works programmes overseas should be scrutinised. But much more was in mind than such marginal economies. The real issue was commitments. The Treasury saw no merit in reducing direct expenditure overseas only to resort to expensive expedients such as increased mobility and seaborne support to meet unchanged commitments. Immediate action, with the Prime Minister's agreement, took the form of an examination by a committee of officials of means of reducing overseas expenditure from its current level of about £234m a year to £200m; but this was scarcely more than a device for exposing what the Treasury saw as the need not just for reduced overseas expenditure but a smaller defence effort as a whole. The eventual report³⁵ in June 1961 concluded that the only way of achieving the reduction was to cut commitments, and then withdraw and disband the forces involved.³⁶ Whether so drastic a policy should be adopted was left for others to consider.

From the narrowly financial angle, the effect of this report was to add urgency to the task of slimming down the overseas garrisons without changing either commitments or strategy that had resulted from the Chequers discussions in October; and in July the Minister of Defence was requested to put forward proposals for cutting annual overseas expenditure, including Germany, as quickly as possible by £35m, ie about 15%. In line with the Treasury argument that this would be of little value unless total defence expenditure was reduced, he was also asked to modify existing plans so as to reduce the forecast Defence budget in 1965/66 by £55m. This second feature of the savings target came to about 3% and represented no more than a reasonable margin of error to be expected in an annual budget of over £1700m. It was not this so much as the need for overseas economies that, in Mr Watkinson's view, demanded yet another review of defence policy: a curious conclusion in that early savings, such as were being called for, could not be expected to flow from such a review, however radical. Yet if current economic difficulties were an indication of persistent weakness rather than a short term emergency, there was a good case for cutting a different coat from a smaller piece of cloth. What was unpropitious was that Mr Watkinson, and his principal advisers in MOD, were thinking of the same style of garment as the Chequers conference in October 1960 had not found to its taste.

b. **Renewed Pressure for a Maritime Strategy.** On Mr Watkinson's instructions, the Chiefs of Staff in July were set the task of reorganising the forces overseas: 'to reduce largely the numbers of men

³⁴ Cabinet Office 30/22/84/5 Pt 3.

³⁵ AHB ID3/1/70 Pt 1.

³⁶ This admission that disbandment as well as withdrawal was necessary if substantial savings were to be made went a long way to vindicate the unpopular views of Mr Julian Amery (p 204 above footnote). There were others too who thought that, whatever the case for withdrawal on political grounds, the economic case was unsound; for example, Sir Maurice Dean to Sir Norman Brook in July 1961 - "major surgery in the overseas military field can provide no short cut to economic health".

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stationed overseas and to maintain instead larger forces in the United Kingdom and afloat, and to provide the necessary air and sea transport to enable our commitments still to be met but with much greater reliance on the "fire brigade" method'.³⁷ All at some lesser cost in total defence expenditure and considerably less overseas; and also at a speed sufficiently rapid to produce early relief to the balance of payments and to be completed before commitments overseas were likely to have significantly changed.

This was scarcely the easiest of remits and one to which different answers might be proposed. But even before the Chiefs of Staff could respond, Mr Watkinson had pinned his reputation to what he saw as the essentials of a new strategy and the forces to support it. He did so in a personal minute to the Prime Minister of 6 September 1961; he had shown this only to Lord Mountbatten, Sir Robert Scott (now Permanent Secretary MOD) and Sir Solly Zuckerman, "who agree in general with it".³⁸ He put it forward on the basis of his two years experience as Minister of Defence, which had convinced him that changes in defence policy and organisation had become essential. Historically, its importance lies as much in its advocacy of changes in the responsibilities of the Minister of Defence and his department (along lines that were in the main put into effect in 1964) as in its thoughts about strategy and force structures. Much ground was covered: the future of the nuclear deterrent - with the probability that the successor system to the V-bombers would be seaborne; NATO strategic doctrine, which ought to be revised with less emphasis on conventional capability (if some elbow room could not be secured the Army's manpower position could require the reintroduction of National Service); the need for European co-operation in new weapons (Mr Watkinson was no admirer of American arms policies towards Europe); a single air arm in future instead of three and, in general, far more flexibility between the Services, with the Army's corps and regimental system presenting the most difficult obstacle to change. The way ahead would not be easy, which was one reason for seeking greater authority for the Ministry of Defence.

It was a radical approach, not least for military capability outside NATO. Here, the imperatives requiring a new policy seemed self-evident to Mr Watkinson:-

We have to spend less money overseas and possibly less money in total anyway.

We shall clearly have fewer base facilities overseas of the type that we have hitherto enjoyed and it will be in our interest to reduce those progressively by our own action rather than be evicted by a regime hostile to our purpose.

If we are to go on with the concept of regular forces, we shall have clearly to think again about mobility, dispersal and the method of poisoning our forces.

Continuing the world-wide role lay at the basis of the policy Mr Watkinson outlined. He had beforehand told the Chiefs of Staff that he wanted, above all, to avoid having to propose "a whole set of total withdrawals, particularly in the Far East". Yet this would be inevitable unless some new and less expensive strategy could be evolved; and this had to assume that the historic overseas bases would not be available. A revolution in the outlook of the Services would be required and a new type of military unit. Mr Watkinson saw this as some form of commando for the Army and Navy, even affecting the RAF to a limited extent; completely independent and equally capable of being poised, seaborne, as of being transported airborne from one theatre to another. Its supply would require co-ordination of air and sea transport; the need to move heavy equipment and the political difficulty in emergency of using certain air routes made it impracticable to rely wholly on supply by air.

³⁷ Minute from Mr Watkinson to Lord Mountbatten, 6 July 1961 (AHB 1D3/1/70 Pt 3). This was discussed at COS (61) 43rd Mtg, 11 July, when terms of reference for a study based on the minute were agreed. Lord Mountbatten stressed Mr Watkinson's desire to avoid the precipitate relinquishment of any commitments "but instead to find a solution, which might take time to fulfil, whereby we could continue to make our military presence felt although in a different way".

³⁸ A copy is in Cabinet Office 30/22/84/5 Pt 3.

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As the concept called for three seaborne task forces (requiring four commando carriers and four assault ships as well as a fleet carrier replacement programme) and a larger Transport Command it was not a cheap option. Mr Watkinson recognised this and drew what, granted his priorities, was the logical conclusion: there would be few spare resources for global war and the existing British contribution to NATO would have to be reduced. How much easier this would be to negotiate, so he implied, if the Allies would recognise the importance of the British effort outside NATO to the aims of the Alliance. These ideas were developed at a private meeting with the Prime Minister on 13 September: future fleet carriers would be more akin to floating air bases than capital ships; more might be made of islands, such as the Seychelles, which could be held indefinitely; it was doubtful if a military garrison in Hong Kong could be afforded. It is also doubtful whether the Prime Minister was all that impressed by a package of proposals that raised fearsome political problems. He was kind enough to say that they were probably on the right lines,³⁹ but Mr Watkinson got little response to his proposals for a fundamental reorganisation of the defence departments: first get the policy right, was the Prime Minister's response. The Prime Minister's personal staff were far from persuaded that Mr Watkinson had charted the right course. It looked too expensive; the commando concept was doubtfully attractive in its recruiting appeal; and even if some of the overseas bases had to be reduced, there were other ways of maintaining influence. What is certain is that Mr Macmillan, instead of inviting Mr Watkinson to put forward his proposals in a memorandum to the Defence Committee, commissioned the Cabinet Office staff to produce an alternative view of strategy. In the meantime, the Joint Planners were completing their study of the force structures that would meet Mr Watkinson's instructions to maintain the overseas presence with fewer bases and at less cost in both overseas and total expenditure. Separately, marginal economies in overseas garrisons, to be achieved quickly, were being identified and agreed. And for good measure, the reconvened Future Policy Committee was also at work. It was turning out to be a long, hard summer.

c. JP (61)91. The JPS study - Limitation of the Future Cost of Defence - was sent to the Chiefs of Staff in mid-September. It was in many ways consistent with the concepts that Mr Watkinson had put to the Prime Minister in July. Anything markedly different would have been embarrassing. This is not to say that the study was deliberately distorted to suit Ministerial wishes; but riding to Mr Watkinson's orders as they were, the JPS had little room for manoeuvre as far as broad strategy was concerned. It is difficult to believe, however satisfied they were with their work as a staff exercise, that they were confident that their conclusions would be well received. These placed even more stress on the reduction of the Army overseas - offset to some extent by additional forces afloat - which had alarmed the CIGS (and, in some of the implications, CAS as well) when COS (60) 200 had been in gestation. Army reductions came to 20 major units, mainly in the Mediterranean region and the Far East. Some of those proposed in the Far East depended on the reasonable assumption that Greater Malaysia would be created and that British responsibilities for internal security in the area would then diminish. Moreover, the Army was having difficulty in recruiting to its manpower ceiling and, even if it succeeded, in meeting its commitments. Even so, such big reductions, coming on top of those flowing from the 1957 Defence White Paper, would obviously be hard for the War Office to accept. The RAF was less seriously threatened. Twelve squadrons were proposed for withdrawal from overseas, but not all were intended for disbandment and, to improve long range mobility, the JPS recommended increases in the currently planned VC10 and Belfast force. As for the Navy, it was inevitable, granted their instructions, that the JPS gave it most weight. The proposal for a second carrier East of Suez, which the Defence Committee had turned down in 1960, was put forward again. This was presented as a transfer from the Western Fleet but the total fleet carrier requirement was put at six ships, which raised the prospect of a replacement programme of uncomfortably expensive proportions. Other ships were similarly proposed for transfer from West to East of Suez where the planned Fleet would be almost doubled in strength, and precisely doubled in expensive amphibious forces. In sum, the increased emphasis on the Navy called for several additions to the approved construction programme, including major vessels such as an additional Commando ship and an assault ship. Whatever the case for the change in strategic stance that the JPS (and

³⁹ A record of the meeting was made by Mr T J Bligh, the Prime Minister's Private Secretary (Cabinet Office 30/22/84/5 Pt 3).

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Mr Watkinson) were advocating, the extra capital expenditure that their proposals involved⁴⁰ meant in effect that they were offering a financial prospect scarcely different from that in the ill-fated COS(60)200. The shift from land-based to seaborne forces enabled the JPS to claim that local overseas expenditure would be usefully reduced. But there was no concealing the fact that total defence expenditure would exceed forecasts, and almost certainly by substantially more than the estimates made by the JPS. However this might be, any increase in defence expenditure in what was turning out to be a difficult year for the national economy was hardly likely to be music to ministerial ears.

When the Chiefs of Staff considered JP (61) 91 at what was one of their more argumentative meetings,⁴¹ both financial and more strictly military objections were advanced by CIGS and CAS. Commando-style forces, poised at sea, were considered no substitute for land-based forces. Efficiency and morale amongst troops spending what could be long periods at sea would be difficult to maintain. Military capability in any case would not be impressive; as CIGS is recorded, "we were being asked to pay a large price to achieve, in fact, very little". CAS not only disagreed with the concept on military grounds; he saw little financial advantage in withdrawing or reducing military garrisons only to be faced with understandable claims from the countries concerned for economic aid to offset the loss of income. Trade, he thought, would suffer from withdrawal. All these points were to come up again as the strategic debate continued. In the circumstances, there was no question of the Chiefs approving, or of the government being presented with, what was yet another effort to ensure a continuing but weaker overseas presence.⁴² Mr Watkinson thought of presenting a paper of his own to the Defence Committee but the Prime Minister forestalled him. At the beginning of October he sent out his own memorandum under the splendidly definitive title of 'Our Foreign and Defence Policy for the Future'.⁴³

d. **Memorandum by the Prime Minister.** Nothing in the Prime Minister's paper spoke directly to the question of military capability on which the Chiefs of Staff were disagreed. But it has been in preparation during the late summer, after the intervention in July in Kuwait. At the time it was circulated, the last Army and RAF units in Kuwait were on the point of being replaced by token Arab League forces. The crisis has been defused, and the intervention had been a political and military success. But whether it could be repeated was, as the Prime Minister put it, "open to considerable political doubts"; and successful though it was, it had implications for military capability in future. In particular, difficulties in getting permission to overfly Turkey and the Sudan had seriously affected the movements plan and might have jeopardised the whole operation. Naval participation was immensely valuable but Bulwark, a Commando carrier from which the first troops were landed in Kuwait, was only fortuitously available; Victorious, whose presence was particularly useful in reinforcing what were otherwise flimsy air defences, only arrived eight days after the initial landings. One lesson was that more forces needed to be based locally if contingencies like Kuwait, south of the air barrier, were to be satisfactorily managed. Another was that it was dangerous to assume - as did the Kuwait plan and, as a general principle, JP(61)91 - that there would be at least four days notice of contingencies of this kind.⁴⁴

⁴⁰ Looking as best they could at future costs, the JPS estimated that Navy Estimates would increase over the period from 1962/3 to 1970/71 by over £300m (largely in capital expenditure); Army Estimates would reduce by about £290m; Air Estimates would increase by about £30m.

⁴¹ COS(61)62nd Mtg, 19 September 1961.

⁴² A paper by the JIC (JIC) (61)70 (Final)), commenting on JP(61)91, advised that if the recommended strategy was adopted such influence as British military power had on Russian policies would be reduced still further.

⁴³ A copy is in AHB 1D3/1/70 Pt 1.

⁴⁴ One of the criticisms that CAS (Sir Thomas Pike) made of JP (61) 91 was that "in an attempt to overcome the main disadvantage of sea movement, its relative slowness, it introduces a further disadvantage... that of subjecting land forces to prolonged confinement at sea".

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Whether the protection of Kuwait should continue as one of the tasks of the Services was debated at some length in the memorandum. Earlier, Mr Macmillan had commissioned a study of the balance between the military costs and the economic advantages. His view was that "in the short term - which may well last for several years - we may have to maintain a considerable military capability in the Gulf as a deterrent ... but in the long term .. should we not work towards a policy by which our interests in Kuwait would be protected by a combination of political and military arrangements, with increasing emphasis on the former, which would enable us considerably to reduce the size of the forces which we should have to maintain in Aden or elsewhere in the area?" Kuwait had been a success but Mr Macmillan clearly hoped that it would not have to be repeated.

Elsewhere, his approach was much the same. He thought it unlikely that any land operations would be mounted from Cyprus, which was important mainly as the best location for the Canberra squadrons supporting CENTO and its special signals facilities. Malta need be no longer a major naval base. The Libyan connection should be maintained, not least for its air transit facilities, but in the longer term political and economic support seemed the better answer. In Africa, there were severe political and geographic limitations on military action. In the Far East, the Hong Kong garrison should be reduced in size. In the region as a whole the British role, except in the very short-term future, should be reassessed. Greater Malaysia should make this easier: could we dispense with permanent, large bases; need we provide a land contribution at all to SEATO (he implied that sea and air contributions were a different matter); might not a nuclear capability, deployed in Australia, make it easier for allies to accept a reduction in land forces - these were some of his questions. Indeed, his memorandum was more a questionnaire than a firm statement of policy but its trend was consistent with the line he had taken in the previous year when reacting to COS(60)200: the political ends were the same but the means could be less expensive. And he was still hoping for an eventual reduction in the British contribution to NATO, which made it essential - when it could be done without endangering the alliance - to dispel the unreality of some of NATO's strategic doctrine, such as a lengthy period of war on land and at sea, and a succeeding period of broken-backed war at sea after a nuclear exchange. To all the overseas regions, Europe included, Mr Macmillan attached a price-tag showing what each cost in overseas expenditure.

Mr Macmillan's questions embraced what he considered the important issues on which the Chiefs of Staff needed guidance:-

Should the independent contribution to the strategic nuclear deterrent be continued? Here, he thought that the existing force was of very great significance and, with Skybolt, would remain so for most of the decade. Whether thereafter its replacement - by VC10s with Skybolt or Polaris submarines - was either necessary or affordable was questionable.

What manpower should be available to the Services? His firm answer was that the country could not afford to assign more than about 380,000 men, which might be more than a realistic view of commitments called for. Whatever the figure, manpower would be most efficiently used if it was all-regular.

What facilities under the control of other governments (bases, overflying rights etc) can be assumed as available for the next decade? Further questions arose: should plans be based only on facilities where sovereignty was retained or those provided by "reliable allies" - the US and the 'white' Commonwealth, and perhaps South Africa? Overflying was a difficulty; it might be enforced in an emergency but this was an unsound basis for a strategy. Should strategy therefore be primarily based on freedom of movement in, on or over the high seas?

How far will technological developments in weapons etc, be freely available, having regard to their expense? Mr Macmillan saw the advantages of greater power and mobility. He saw too the problem of cost. Interdependence was the way to keep R and D expenditure within reasonable bounds. Even so, forward costings must be realistic and take account of the rising costs of all equipment.

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What will be the future level of expenditure which can be afforded for defence? Can the military planners be given a ceiling? There was a ritual bow to the primacy of national defence but some limit was necessary, and thus some reduction in objectives and commitments, in the interest of the national economy. He suggested that a recent Treasury report on public expenditure provided the answer: (not an encouraging prospect since it was the target set by this report that JP(61)91 had failed to achieve).

How can the present organisation for defence be improved? Without going so far as to approve the proposals that Mr Watkinson had recently put to him, Mr Macmillan conceded that some changes were desirable; and he accepted the need for developing inter-service support for the Minister of Defence - "far reaching changes may be necessary, especially in the habit of mind of our defence organisation".

The Prime Minister's paper belied its title. It was no more than a sketch of policy that needed to be filled in. But the outlines were clear. The Services could expect no more manpower, nor any more financial resources. The nuclear deterrent was to remain at least for several years. Less reliance on facilities in territories that were now, or would become, independent, had to be assumed, from which it followed that satisfactory air routes from Britain for emergency reinforcements would become more difficult. None of this was new, except for rather more emphasis than the Prime Minister had been prepared to allow a year earlier on the impermanence of the existing major bases overseas. And what this implied - and the Chiefs of Staff as well as Mr Watkinson recognised it - was that the examination paper was much the same; what was needed was a different answer than any so far produced. No less was it recognised that much would turn on what answer was given to the East of Suez question: "he and his colleagues would have to take a view on how long and on what terms we should be staying in certain overseas bases ... in particular of how we could within our resources provide a military presence in the whole area South of the Barrier, making greater use for example of Transport Command and Commando carriers" - this was how Mr Watkinson was recorded at a meeting with the Chiefs of Staff early in October.⁴⁵ He was in no hurry to get out of the traditional bases but he thought this was so inevitable that a shift in stance could not be planned too soon - otherwise the weapon and equipment appropriate to a new strategy might not be available; and if influence overseas was to be maintained - and he believed this was necessary - then the corresponding shift in military capability involved giving more weight to seaborne forces.

e. **Air Ministry views.** Mr Julian Amery took a different view. At bottom, this was based not so much on his ministerial responsibility for the RAF as on his general view of post-imperial policy. At any rate, he attempted to influence the debate by sending a lengthy minute direct to the Prime Minister, arguing that to reduce the strength of overseas bases would mean taking major risks for the sake of minor economies; that a physical presence in the main bases was all-important and not threatened to any serious extent;⁴⁶ and that while some modest strengthening of air and sea mobility might be justified, it was "neither necessary to plan for a deliberate withdrawal nor prudent to go over to what must be a less effective strategy". Nobody in the Air Ministry would have tried to dissuade Mr Amery. Similar views were held by the PUS, Sir Maurice Dean, who earlier in the year had been invited by CAS to send him privately his views on the need for Naval forces in the years ahead. These could not have been more forcibly expressed: the only realistic basis on which to plan was that all or most of the existing bases were available; if not, drastic reductions could be made in all three Services and the British defence effort concentrated in Europe, because it was "utterly unrealistic" to think of maintaining the British position overseas by means of seaborne forces. There was no case for the most expensive category of ship - the fleet carrier - in global war, nor for cold war and internal security purposes; and precious little for their use in limited war. If some

⁴⁵ MM/COS(61)10th Mtg, 3 October 1961.

⁴⁶ A copy of Mr Amery's minute (5 October 1961) is in AHB 1D3/1/70 Pt 1. It makes good and persuasive reading but it was to be proved wrong in one of its forecasts: "there are only some 70,000 Arab males in Aden Colony so no resistance movement is likely to give us much trouble".

use in limited war. If some seaborne means had to be found for protecting intervention operations, it would be better to pursue the possibilities of much smaller ships with VTOL aircraft.

All in all, there was a strong body of opinion in the Air Ministry, as much civilian as Service, opposed on grounds of national as well as RAF interest to the current trends of thought in the MOD. These, however, had already been reflected in one Chiefs of Staff study - JP(61)91; and whether they would continue to be reflected in any further studies depended on the directions given by the Prime Minister. The position of CAS was not to be envied.

f. **Prime Minister's Directives.**⁴⁷ These were issued late in October, one for short term economies and the other outlining the basis for revising defence policy and strategy in what was described as the medium and longer term. Mr Watkinson was in a hurry. He needed a number of decisions so as to launch in the next Defence White Paper (usually published in February) a five-year plan succeeding and modifying that which his predecessor, Mr Sandys, had set out in the 1957 White Paper. His ministerial style was less abrasive and his relations with the Chiefs of Staff more comfortable; his demands upon them and the Service Departments, especially during this period, were at least as heavy.

The short term economies had the familiar target of cutting £35m from yearly expenditure overseas; and Mr Macmillan identified a number of bases where some of the required savings could be found. Gibraltar - to be a naval responsibility; the Army to be withdrawn; air facilities to remain. Malta - forward operating facilities only for the navy; staging facilities for the RAF; a garrison of no more than one battalion. Cyprus - headquarters and garrison to be reduced on the assumption that no land operations in the Mediterranean or Near East would be mounted from the island; the four Canberra Squadrons and special signals facilities to remain. East Africa - to be virtually vacated in view of Kenya's expected independence in 1963. Hong Kong - the garrison to be as small as possible but a stockpile of heavy equipment maintained for use by reinforcements in emergency. This was not an exhaustive list and all the Service Departments had to comb through their overseas establishments to find economies, each of them small but in accumulation contributing usefully to the total savings target.⁴⁸

The terms of the Prime Minister's directive for yet another strategic study followed the lines of his October memorandum. His views on the nuclear deterrent and on the manpower and money limitations on defence were repeated. In Europe, his hopes for a reduced contribution at a later stage to NATO, and also for more resources at home to deal with emergencies overseas, were reflected in an assumption that while four divisions (eight brigades) would continue to be contributed, two of these would be stationed in Britain. Much the greater part of the directive was taken up with the assumptions - most of them political but some more directly military - on which strategy and forces overseas were to be based. These were the more important assumptions:-

The Commonwealth. We have an obligation to come to the assistance of any Commonwealth country, dependent or independent, which is the victim of external aggression. We should not, however, seek on this account to keep British troops in emergent Commonwealth countries.

Mediterranean. Our objectives are to fulfil our commitments to NATO and CENTO; to retain the special wireless stations in Cyprus and Malta; to maintain our air staging and overflying rights in Libya; to provide for the internal security of Gibraltar and Malta ... and such parts of our sovereign base areas in Cyprus as it is necessary to retain. Malta will no longer be required as a major naval base. We shall not mount any land operations from Cyprus.

⁴⁷ Copies of the two directives, dated 23 October 1961 are in AHB 1D3/1/70 Pt 1. The one calling for a reassessment of defence policy and strategy was formally circulated as a Defence Committee paper (D(61)65).

⁴⁸ Mr Macmillan was especially keen on economies in the large British staffs in Washington. He was reported to have said that there were more there when the British burned down the White House.

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Middle East. Our objectives are to safeguard our economic stake in Persian Gulf oil, and for that purpose to support the independence of Kuwait; to discharge our obligations to protect the States in the Aden Protectorates and the Persian Gulf; to preserve the countries of the area from Communist influence; to retain air staging facilities in Kenya if possible; ... Kenya will not be available as a military base after 1963.

Far East. Our objectives are to prevent Chinese Communist expansion ... by support of SEATO and other means; to preserve our links with Australia and New Zealand and to contribute to their forward defence; to safeguard Hong Kong against internal subversion. Future plans should assume that (i) Greater Malaysia will come to fruition by 1963; within Greater Malaysia we shall retain naval and air facilities in Singapore; the Government of Greater Malaysia will assume responsibility for internal security in their territory (including Singapore); we shall maintain our contribution to the Commonwealth Brigade, which will for the time being continue to be stationed in Malaya; but we shall seek to secure the agreement of our Allies to a more realistic concept of land operations by SEATO on the mainland of South-East Asia.

The directive would have been flawed if it had not provided guidance on the difficult question of what overseas bases would be available, and for how long. It did, and with some precision, after stating a principle which the Chiefs of Staff had accepted for several years past: "we shall not be able to rely on using military bases or facilities in independent countries overseas for any purpose which is not in full accord with the policies and views of the Governments' and peoples of those countries". The point might have been made less ponderously: we won't stay if we have to put too much effort into ensuring our own security. Bases were allocated in the directive to two groups. One comprised those whose unrestricted use could be assumed - Gibraltar, Malta, Aden, Addu Atoll, Seychelles, Bahrein. The other included Libya, Cyprus, Greater Malaysia (including Singapore); here, restrictions on freedom of use were to be assumed though they might be available in global war and on a once-for-all basis for limited war.⁴⁹ Restrictions of another kind were dealt with in the directive: "we must expect increasing difficulty in securing the exercise of staging or over-flying rights for purposes with which the Government concerned are not in sympathy".

Here and there, the directive was not entirely to the Air Ministry's satisfaction. That the Government intended to restrict total defence expenditure was not a decision that could easily be challenged; but to set a separate target for savings overseas was regarded as an unnecessary constraint that could lead to bad strategy and the wrong kind of deployment. To include Cyprus (where sovereign base areas had been retained) and Singapore among the more restricted bases was another feature of the directive that was not to the Air Ministry's liking. And the reference to the increasing difficulties of overflying was considered overdone. In general, however, the assumption in the directive that the existing bases would be retained for at least some years to come was welcomed as inhibiting any new bid for the essentially maritime strategy that had been recommended in JP(61)91.⁵⁰

Any such hopes were to be short-lived. Shortly after the directive had been issued, the JPS asked for guidance on a number of points not covered in the directive or which seemed obscure. Should not the study look beyond 1970; if a contribution was to be made to the forward defence of Australia and New Zealand, did not this imply base facilities in Australia; involvement in SEATO land operations might be limited, but should there not be plans for heavy weapon support and stocks of equipment; what about forward operating facilities in Borneo in case existing bases in Greater Malaysia could

⁴⁹ One possible example of this type of use (and the subject at a later stage of delicate discussions with Malaysian Ministers) was a SEATO emergency leading to the despatch of British forces from Malaysia. The working assumption was that Malaysia would not hinder their departure but that there might well be difficulties over their return.

⁵⁰ There is evidence that this argument was used inside the Air Ministry to persuade Mr Julian Amery not to challenge the Prime Minister's directive (AUS(A) to PUS, 31 October 1961: AHB 1D3/1/70 Pt 1).

not be used; land operations in the Eastern Mediterranean possibly in co-operation with the United States, were not entirely ruled out, so should not the existing stock pile in Cyprus be maintained; presumably the two divisions withdrawn from Germany could not be considered part of the Strategic Reserve - these were their questions, and the Chiefs of Staff put them to Mr Watkinson. Some were given a clear answer. There was no going back on the ban on land operations launched from Cyprus. The Army was also warned off from any attempt to provide more support than the British element of the Commonwealth Brigade strictly needed; and Mr Watkinson insisted that the two divisions transferred from Germany should be part of the Strategic Reserve. None of these answers could have been welcome to the War Office. But Mr Watkinson agreed that the strategic appreciation should bear in mind the post-1970 position; he did not rule out a base in Australia (a possibility which had not been mentioned in the Prime Minister's directive); and he implied that if the Greater Malaysia concept could only be realised at the price of restrictions on the use of British bases the political advantages of the concept would prevail. All this meant that an opening was left for those who continued to believe in the correctness of the JP(61)91 strategy. It also meant that the Prime Ministers' directive had been amended in some respects. Whether this was justifiable on military grounds is debatable. It certainly involved a compromise among the Chiefs of Staff. At their meeting on 3 October (COS(61)67th Mtg), when a memorandum by CAS on the objections to the seaborne strategy of JP(61)91 was discussed, Lord Mountbatten took the line that the differences were largely matters of emphasis and that air-transported forces would be as important as seaborne forces when the historic bases could no longer be used. To meet the obvious weakness of this argument, he conceded the need to look at the case for small island bases (such as Addu Atoll, Seychelles and Masirah). CAS in return accepted the case for a seaborne military force to be accommodated in a "multi-purpose" aircraft carrier as one element of future capability overseas.⁵¹ It was presumably the degree of consensus at this meeting that enabled Lord Mountbatten to claim that the Chiefs of Staff had 'broadly agreed' the JP (61) 91 strategy and that all that had to be done was to modify this in the light of the Prime Minister's directives.⁵² But as these were expressed in terms of the next ten years and fell well short of assuming the loss of the major bases, whereas JP(61)91 was essentially a study of how power was to be exercised without the bases, the Chiefs - deliberately or not - were taking the risk that yet another strategic appreciation would run into trouble. If excuse were needed, it lay in their collective view that, whatever arrangements for bases in Greater Malaysia might be negotiated, absence of sovereign rights necessitated a strategy that would be effective if the bases were lost.⁵³

g. **COS(62)1 - 'British Strategy in the Sixties'.** This memorandum - at sixty pages somewhat less weighty than previous strategic appreciations - was submitted to the Minister of Defence in January 1962. However strongly at least some of the Chiefs of Staff believed that the concept underlying JP(61)91 was the right response to the likely future, there could be no question of persisting with the same set of detailed proposals. These had been unacceptable to the government, and less expensive forces had somehow to be identified. And as the previous study had been considered excessive in naval forces, it was in that area that COS(62)1 showed the biggest reductions. Compared with the fleet that would eventually have emerged in the seventies from JP(61)91, the new plan was smaller by two fleet carriers, two escort cruisers, three Commando and three assault ships; and eight support ships were also deleted. The submarine programme remained unchanged. In the shorter term, ie by 1965/66 (the target year for the economies that the government wished to make in current forward

⁵¹ This concept was to be short-lived. At a private meeting on 14 December 1961 the Chiefs agreed that it was impracticable to combine the functions of a Commando carrier and fleet carrier in one ship (Cabinet Office 30/22/84/5 Pt 4).

⁵² Meeting with Mr Watkinson, 14 November 1961 (MM/COS(61) 12th Mtg).

⁵³ The point was made at their meeting on 5 December 1961 (COS (61) 82nd Mtg) that although the Prime Minister of Malaya had agreed that Singapore should continue as a British base, it had to be remembered that similar facilities had been promised in Ceylon but the agreement had been abrogated by a new Government. The Committee formally recorded the need to make proposals to cover a situation in which Singapore would not be available.

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costings), the reductions were much smaller, the most important being three assault ships and one Commando ship. Nevertheless, these changes indicate the extent to which JP(61)91 had overreached itself. Correspondingly, a comparison of the force structures proposed for the other Services at the same date shows some recovery of ground. The 112 major units of the Army (compared with 137 in forward costings) recommended in JP(61)91 were increased to 124. In the RAF, the current plan for just over 100 flying squadrons (with 8 SAGW and 4 Thor squadrons) would have been reduced to 85 squadrons (with 6 SAGW and 2 Thor squadrons) under JP(61)91; COS(62)1 proposed 94 squadrons (with 4 SAGW and 2 Thor squadrons).⁵⁴ Indeed, RAF front-line plans were scarcely affected by COS(62)1. One DF/GA squadron and some tactical transport aircraft and helicopters were removed from Cyprus; this reflected the Prime Minister's ruling that land operations would not be launched from the island. The biggest change - a cut in the V-bomber force from fifteen to ten squadrons - was not a consequence of COS(62)1 but of the expected acquisition of SKYBOLT.

To what extent was COS(62)1 a retreat from JP(61)91? Clearly, the assumption in the Prime Minister's directive⁵⁵ that the bases West of Suez and Aden would be secure at least until 1970 as would those in Malaya and Singapore (though possibly with restrictions) meant that any proposals that looked - as did JP(61)91 - to a situation in which the only secure base outside Britain would be in Australia would have stood no chance of acceptance. But JP(61)91 was far from dead and Mr Watkinson's agreement to a perspective beyond 1970, as well perhaps as his own known view that the overseas bases must eventually be lost, provided an opportunity to present the period up to 1970 as one to which a transitional strategy should apply - transitional to an ultimate strategy indistinguishable from that of JP(61)91.⁵⁶ Accordingly, a section of COS(62)1 was devoted to the post-1970 period when "we see our eventual strategy as supported by two main bases - the United Kingdom and Australia". Mr Watkinson himself submitted the Chiefs' memorandum to the Defence Committee as "a transitional strategy which will enable us to continue to provide military support for our national policies in spite of the reduction of our overseas bases".⁵⁷ While he did not explicitly deal with the post-1970 prospects, he argued that the recommended forces were barely adequate even while the existing bases were still available and that if a different stance had to be adopted because bases were unexpectedly lost it might be very difficult to adjust to the new situation. This would present a problem as much to do with capabilities and deployment as with the size of the forces; and the Chiefs of Staff indicated what kind of insurance might be taken out, money permitting. Besides preliminary steps to obtain base facilities in Australia, this included the construction of an airfield in the Seychelles (originally an Air Staff idea of the mid-fifties) and improvements to other island airfields East of Suez; the equipping and training of RAF DF/GA squadrons for carrier as well as normal operations; and three additional major ships - an aircraft support ship (by converting the

⁵⁴ The continuing reduction in SAGW squadrons was a consequence of the air defence decisions already described in Chapter 6. All Thor units were planned to be disbanded by the end of 1965.

⁵⁵ The long-term directive: the short-term economies called for by the second directive were considered by the Defence Committee in December (D(61)18th Mtg). A number of reductions in garrison strength - mostly affecting the Army and Navy - were agreed, but not without argument. The Colonial Secretary was concerned about the political and economic consequences in Malta. Mr Amery, who had special knowledge of Cyprus, thought that reductions in the Army garrison went too far. In both cases, it seemed likely that claims for additional civil aid would arise. Altogether, about £15m a year were the estimated savings, but apart from the expected effect on the aid programme some unbudgeted capital expenditure would arise on accommodation for units brought back home. Even on an optimistic assessment, the expected savings would be less than half the target (£35m) set by the Prime Minister. Mr Amery continued to believe that too much was being sacrificed for too little real benefit.

⁵⁶ This view was clearly expressed by CNS to CDS (15 December 1961: AHB 1D3/70/1 Pt 2): "... the units of the Fleet envisaged [in COS(62)1] would all be a part of the Fleet required for a JP 91 type strategy and we would not therefore be jeopardising (other than in terms of time) our ability to effect a transition from the one to the other".

⁵⁷ D623 - Memorandum by the Minister of Defence.

carrier Centaur), a Commando ship and an assault ship. These were now formal recommendations but the type of capability they signified was of that sophisticated quality which had alarmed the Prime Minister in COS(60)200. This was no less so in the case of the RAF DF/GA squadrons, since the routine operation of RAF as well as naval aircraft was conceived as part of the capability of the next class of fleet carrier, which the Chiefs of Staff collectively agreed should be a large ship - of the order of the existing Ark Royal Class. And looking further ahead, the Chiefs were thinking of common types of RAF and naval aircraft, certainly with STOL and ideally with VTOL characteristics, capable of operating from primitive airfields as well as carriers. None of this offered much comfort to those who were concerned about the trend of defence costs. Even without this type of expenditure, which if it were to be incurred would begin in the pre-1970 period, the recommendations of COS(62)1 were no more successful than previous studies in meeting the financial targets set by the Government. On the face of it, the failure was not excessive: against a target for 1965/66 of £1787m the cost was estimated to be £1810m. It would have been somewhat higher if the Prime Minister's assumption that BAOR would be split equally between Germany and Britain had been adhered to. As this would have meant heavy capital expenditure on accommodation for the troops brought home it was dropped - without much argument; it had never been more than a hope for some indefinite future date. But in presenting the financial picture, Mr Watkinson said no more than was justified: "this estimate [£1810m] may well on past experience prove too low". He told the Defence Committee that he would re-examine the costings. But if these had to be reduced - although the forces they would support were avowedly the smallest possible if commitments were to be met, and even so at some risk - where were the economies to be made?

Cost was not the only problem inherent in COS(62)1. Put forward as a collectively agreed memorandum, it was nevertheless unsatisfactory to each Chief of Staff, CNS (Sir Caspar John) thought that a better report, moving more quickly to a JP(61)91 stance, could have been made if the financial terms of reference had not been disproportionately limiting. CIGS (Sir Richard Hull) thought that the framework for the study left no real choice of strategy and that the resultant land forces were so small "as to make it at least doubtful if we will in fact be able to retain our influence in world affairs".⁵⁸ CAS (Sir Thomas Pike) was likewise concerned at the overall capability of the proposed forces but he was also far from satisfied that the naval requirements had been convincingly justified.⁵⁹ There were features of the report that each Service could be grateful for: the Navy, a strategy in both the short and longer term that could be held to justify not just a substantial fleet but a "balanced" fleet, including fleet carriers; the Army, more manpower and a larger number of fighting units than had been proposed in JP(61)91; the RAF, no significant reduction in the planned size and shape of its front-line, a recognition that island bases (or 'footholds' as they were tending to be called) would be complementary to seaborne forces, and a bow in the direction of 'one element, one service'.⁶⁰ Even so, COS(62)1 was a manifest compromise between differing views in each Service of the forces and facilities that the strategy called for.

⁵⁸ Letter Sir Richard Hull to Lord Mountbatten, 18 December 1961 (AHB 1D3/1/70 Pt 2).

⁵⁹ There were several points, besides his doubts about the size of the carrier force. One was the requirement for an assault ship expressly to carry the tanks required against another Kuwait contingency; another was the value of amphibious capability once the main overseas bases had been vacated; yet another was the size of the investment required in Commandos and Commando ships in order to guarantee that one Commando could be permanently poised at sea.

⁶⁰ One of the more radical sections of the JPS memorandum (JP(61)149) on which COS(62)1 was based said: "We believe that in the future we should come to look on sea, land and air forces, not in terms of units provided by a particular Service, but in terms of applying complementary power from the three elements. The conditions we foresee will more than ever emphasize the joint nature of operations for meeting our commitments, short of global war. We feel the time will soon come, for reasons of flexibility, economy and maximum efficiency for joint effort, for each of the three services to operate all the units designed to fight in or on its own element". CAS considered this about the only hopeful feature of an otherwise depressing prospect. He was all the more disturbed when, as the JPS draft was processed, the section in question was watered down to mean little more than an arguable possibility in the indefinite future. Despite his representations, the bold last sentence of the passage quoted above emerged in COS(62)1 as: "it is possible that an extension of this trend, so that eventually each of the three Services operated all the units designed to fight in or on its own element, may be necessary to achieve maximum flexibility and efficiency with economy in the conditions of the future". The memorandum went on to say that the Chiefs were arranging for the question to be studied. No study worthy of the name emerged until 1965 when Sir Gerald Templer produced a report on Air Power.

Developments in 1962

a. **The Defence Committee and COS(62)1** What COS(62)1 merited was a determined Ministerial examination both of the strategy proposed and its implications, especially for future weapon systems. What Mr Watkinson asked for was Ministerial endorsement 'in principle' of a more mobile strategy based on seaborne and airborne forces; there was nothing in his covering memorandum (D(62)3) that encouraged his colleagues to think about the forces and weapons that the strategy required. The questions to which COS(62)1 gave rise were not identified; the report was merely circulated with Mr Watkinson's short covering memorandum, presenting a dauntingly detailed document for busy Ministers to master. Nor was it the best of times for making a supreme effort to get to grips with what were complex and inherently controversial issues. Air Ministry officials, having sounded out their Cabinet Office colleagues on the Prime Minister's likely tactics when the papers came before the Defence Committee, reported that "it is extremely unlikely that the Prime Minister, in his preoccupation with many other major policy issues, will tolerate a substantive discussion of the military proposals".⁶¹ They advised that the Air Ministry representatives should support those who were prepared to agree to the new strategy but only in the most general terms, leaving the detailed problems to emerge when the COS(62)1 forces were costed later in the year: a process which was expected to show that further substantial economies would be necessary. It was believed that Mr Watkinson was anxious for approval in some detail, allowing him to present a 1962 Defence White paper with some claims to new and radical thought. This, in the Air Ministry view, would be a mistake: "a year from now the Government might find themselves most embarrassingly committed to a defence policy which is not in many respects particularly effective and which we shall probably find we cannot afford".

The Prime Minister's task was being made no easier by the trend of opinion within the Cabinet Office. One memorandum in particular⁶² raised those searching questions about the tenure of bases and the cost and capability of seaborne forces to which the proposed policy was vulnerable. It deserves quoting:

Do we really believe that operations, in any part of the world, are only possible if the local population co-operate? If so, we don't need bases at all or do we believe that a resident garrison helps to maintain stability and to secure co-operation? In that case we should be honest enough to say that it is our policy to hang on to the bases as long as we can in the interests of world peace. On either hypothesis you can build up a reasonable military structure; you can't if you muddle the two.

If for defence purposes we want to retain the garrisons and if as a result of running them down we have to increase economic aid, I for one cannot see much sense in it If on the other hand we believe that we ought or will have to do without bases altogether we must accept that the only operations within our power will be police action with local support or a contribution to an allied task force.

What on earth is [the vague concept of a seaborne presence] supposed to do? If the fleet is required merely to transport troops and equipment to friendly hosts, with minimal opposition, let it be so designed. If it is seriously intended to mount assault operations against heavy opposition let us say so and count the cost. But if the idea is somewhere between the two, large seaborne forces steaming about to give comfort to our friends without being able to attack our enemies, there is a danger that we may get the worst of both worlds: the expense of maintaining, eg fleet carriers, without any prospect of being able to use them.

⁶¹ Brief for CAS and Mr Airey Neave (Parliamentary Under Secretary) January 1962. Mr Macmillan says in his Memoirs that he was exhausted after a difficult year, with little prospect of a quieter life. The West Berlin crisis was still active; General de Gaulle was proving difficult over British entry to the EEC; negotiations for a nuclear test ban treaty were going badly; and there were industrial difficulties at home, arising from the 'pay pause' introduced in the summer of 1961.

⁶² The author was Mr A L M Cary who soon afterwards was to suffer an awkward reversal of roles when he was made Permanent Secretary to the Admiralty. A copy of his memorandum is in Cabinet Office 30/22/84/1.

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In the early days of the V-force great play was made with its flexibility in limited war. Its ability, for example, to drop HE as well as any type of nuclear. If we are really contemplating local operations against opposition without bases in the area the role of the V-force ought at least to be considered.

Hard pressed though the Prime Minister was and concerned to avoid long and complicated arguments about detailed equipment programmes, the Defence Committee at which COS(62)1 was discussed proved to be one of its more thoughtful and perceptive meetings.⁶³ The strategy was approved in principle but, according to the record, on the understanding that if it became necessary to leave the existing bases the strategy would provide 'some capacity' for defending British overseas interests, using forward operating facilities at such locations as Labuan and Addu Atoll. Any public admission that withdrawal from bases would mean the withdrawal of military influence would prejudice relations within the three key alliances - NATO, CENTO and SEATO. But it seems to have been accepted that residual capability would have to be less than impressive; and there was even a hint that the current political reasons for keeping some intervention capability if the main bases were lost might not last for ever. What is certain is that the Committee refused to authorise the large sums (£120m) that had been included in the costings up to 1970 for aircraft carriers. These were argued as necessary mainly for cold and limited war purposes, as floating airfields to be used by aircraft common to the Navy and RAF. This came up against the counter-argument that if the main bases East of Suez had to be given up the scope for the employment of carriers might be limited. The Committee decided that it would look separately at another meeting at the proposed carrier programme.

Future costs dominated the meeting. The Committee formally decided that no provision should be made for a nuclear weapon to succeed SKYBOLT; otherwise, defence finance as a whole would have to be reconsidered. The Chancellor of the Exchequer (Mr Selwyn Lloyd) accepted the strategy provided that annual costs were reduced to the planned level, some three years ahead, of £1787m (manpower was a particular concern because keeping Service pay in line with pay generally was proving expensive). Mr Watkinson got the decision he wanted on strategy but only at the price of investigating what economies could be made in manpower, nuclear materials and the R and D programme.⁶⁴ The dubious trade-off between reduced military expenditure overseas and increased economic aid was inevitably exposed, with special reference to Malta; here the Colonial Office advised that the political reaction to a smaller garrison might be so strong that it would become military unusable.⁶⁵

b. **Defence White Paper 1962**⁶⁶ Mr Watkinson had set his heart on a Defence White Paper in 1962 that would bring up to date, for a further five years, the defence policies of 1957. His terms of reference from the Defence Committee were to produce a "fairly full" document which would set out the general principles governing long-term strategy but would avoid as far as possible commitments to specific weapons or to details of deployment. Against this background, and the Defence Committee's concern about the trend of defence costs, the White Paper was surprisingly forthcoming and definitive about many of the issues on which there had been anxious and still continuing debate. For the first time, a section was devoted to Overseas Bases and Garrisons. It was plainly stated that Gibraltar, Malta and Cyprus were no longer regarded as bases for Army operations, whereas Aden and Singapore were bases of more general utility, with the prospect of the Federation of Malaya offering relief from internal security commitments but also assured use of the facilities there. There would have been rejoicing in some Whitehall quarters, including the Air Ministry, if the White Paper

⁶³ D(62)1st Mtg, 12 January 1962.

⁶⁴ After this meeting the Rotodyne was quickly dropped from the programme - to the relief of the Air Staff.

⁶⁵ The Colonial Office continued to be sensitive about Malta, even to the point where one of its Ministers seems to have threatened to resign - a prospect that Mr Macmillan found quite undaunting, though whether for reasons of policy or because of the individual concerned is not clear.

⁶⁶ Cmnd 1639, February 1962.

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had said no more about bases, but it went on: "We may suffer restrictions on our freedom to use territories for military purposes, and we must accordingly adapt our strategy. We must insure against the possible loss of fixed installations overseas by keeping men and heavy equipment afloat, and by increasing the air and sea portability of the Strategic Reserve". Moreover, precisely the sophisticated equipments which had alarmed the Prime Minister at an earlier stage were either promised or not discarded. An amphibious joint task force East of Suez; an additional Commando carrier (Albion); two new assault ships; the first of a new class of Army Logistic Ships; the first orders for VC10s - these were among the certainties, together with some comments on contributions to NATO which, while carefully worded, scarcely held out any hope of economy. As for a new generation of aircraft carriers, the White Paper succeeded in saying both that there were difficulties in forecasting requirements for this type of ship ten to fifteen years ahead and that it would have to be designed primarily for the support of amphibious and land operations; and it would have a range of aircraft common to both the Navy and the RAF. The White Paper announced a decision to put the necessary design work in hand - a decision which could be defended as less than a commitment but was nevertheless a step along a road that Ministers had recognised as extremely costly. With the confirmation, elsewhere in the White Paper, of the TSR 2 as a weapon for the later sixties, the emphasis on a future generation of STOL and VTOL aircraft, and new weapons, including the Chieftain, for the Army, whatever else the White Paper may have been it was not a prescription for reduced defence expenditure. It did not claim to be: "Our task is not to cut defence expenditure but to contain it". This, it said, would not be easy. The aim was to see that the percentage of GNP absorbed by defence did not rise significantly but since GNP itself would grow, some increase in the absolute costs of defence was to be expected. As Mr Watkinson was already commissioned to look for economies, as yet unidentified, in the defence programme, and as it was well known that the costs of sophisticated equipment were rising more rapidly than GNP, this qualified optimism about defence finance seems oddly misplaced.

c. **Continuing Doubts** The 1962 White Paper was on the face of it a success for the alternative strategy to one dependent on overseas bases; for while the original formulation of such a strategy - in JP(60)91 - had been unacceptable in detail, its key feature - the need to take out an insurance policy, primarily if not exclusively in terms of seaborne forces, against the loss of the bases - had survived. Whether this was the right policy, whether its aims could be met more cheaply, or whether the strategic choices were even starker than those so far considered, were questions that were asked during what were to be the final months of Mr Watkinson's appointment and the early months of his successor as Minister of Defence, Mr Peter Thorneycroft.

Unusually, the White Paper and a digest of COS(62)1 circulated to Ministers generally led to representations to the Prime Minister by Ministers not currently involved in defence matters. It is difficult to say how widespread was this unease, but Mr Christopher Soames gave expression to it: "[the policy] could lead to very considerable expenditure on sea and air transport to provide logistic support for only a token force - like buying an expensive cannon which can only throw a small and rather ineffective shell ... it seems to me so different from what we have rested on hitherto that I would dearly like to hear more about it".⁶⁷ Sir Norman Brook had similar doubts about where the transitional strategy was leading and, on his advice, the Prime Minister put the suggestion of discussion in an enlarged group of Ministers to Mr Watkinson. Provided that did not go into the question of aircraft carrier replacements (which he intended to take in slow time), Mr Watkinson was willing if not enthusiastic; and it was agreed that a Defence Committee meeting arranged for mid-March would provide the occasion. It must be doubtful whether such a meeting would have met Mr Watkinson's proviso; the brief that Sir Norman Brook provided for the Prime Minister's use encouraged him to ask essentially the same questions as those already described (p394 above). In the event, the meeting was cancelled at short notice because of more urgent business. Another attempt was made in June - a Chequers weekend was in mind. Mr Watkinson successfully resisted this on the

⁶⁷ Minute from Mr Soames, who was Minister of Agriculture at the time, to the Prime Minister, 16 February 1962 (Cabinet Office 30/22/84/5 Pt 4).

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grounds that the broad strategy was now enshrined in the Defence White Paper and that he and his staff were too busy on the forward costings of the consequential programme to prepare adequately for a major conference. Whether or not this was merely an excuse for avoiding a difficult confrontation, it made sense to wait until autumn - as Mr Watkinson suggested - by which time the costings would provide a basis for judging how far ends and means were reconcilable. But events again confounded hopes. Mr Watkinson was replaced by Mr Peter Thorneycroft in June⁶⁸; and the new Minister has to be given time to size up the problems he had inherited.

The Chequers conference was eventually held in February 1963 - nearly nine months after Mr Thorneycroft's appointment, during which he laboured to produce an acceptable policy and programme. His starting point was a set of economy measures, worked out in Mr Watkinson's final months in office, to bring future spending into line with budget targets. The circumstances could not have been more difficult for him. Before his arrival, the gap between forecast expenditure and target in the key year 1965-66 had increased from some £20m to over £140m, this being a compromise figure which the Treasury believed to be too low. The inter-departmental arguments in the first six months of 1962 about future defence costs and the assumptions to be made in arriving at an acceptable level - most importantly, the rate of growth of GNP - were fiercer and technically more complicated than at any time in the previous five years⁶⁹. Mr Thorneycroft did not fail to grasp the point: whatever the precise size of the gap, it was clear that marginal economies could not bridge it. Most unusually, he joined with the new Chancellor of the Exchequer (Mr Maudling, who had replaced Mr Selwyn Lloyd) in putting a paper to the Defence Committee at the end of July⁷⁰. It struck much the same note as had been sounded at intervals since 1956, and even earlier:-

The truth is that we are overstretched. The attempt from a small island with limited resources to maintain our role in Europe, our contribution to the deterrent and a worldwide military presence is proving too much for us. To try to do all these things upon the scale already envisaged is plainly beyond our resources. Obviously we cannot immediately contract out of our worldwide obligations, but from now on a substantial part of our overloaded research and development programme will be devoted to meeting requirements which assume that our commitments ten years hence will be substantially the same as they are now, and for this reason we believe that radical review of those commitments is urgently needed.

At the Defence Committee and a subsequent meeting of the Cabinet on 3 August, some decisions were taken to relieve the pressure. The planning target for 1965/66 was increased to £1850m. This still meant that economies of about £100m had to be found, and the first steps were taken. The BLUE WATER project was cancelled (the decision turned on the duplication of ground and airborne tactical nuclear weapons, and the wider capabilities of the TSR 2 were a major reason for BLUE WATER'S cancellation); OR 351 - the Beverley/Hastings replacement - was re-examined to see whether the specification could be simplified; a decision about the ultimate size of the Lightning force, deferred from 1960, was reached - to limit it to ten squadrons; and the run-down of Thor squadrons was accelerated. Notice was given that the carrier replacement programme would be a crucial issue: "if we are to continue in the seventies to carry out our present commitments East of Suez it is difficult to see how we can do without them. On the other hand their cost will be enormous and it is hard to see how defence expenditure can be contained within tolerable limits unless major savings are achieved elsewhere".

⁶⁸ In his memoirs (Vol 6) Mr Macmillan says that Mr Watkinson was one of several Ministers who lost office in the Government changes in the summer of 1962 because they had decided not to stand again at the next General Election.

⁶⁹ Chapter X, C Wallworth - Impact of Financial Planning and Control on Defence Policies - contains a detailed account.

⁷⁰ D(62)43, considered at D(62)12th Mtg, 31 July 1962.

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Thus, some modest progress was made towards balancing the books. Unfortunately, some of the assumptions that were important for achieving the £1850m target were soon to be falsified. These included the restriction of the Army's UK manpower to 175,000 (which depended on hopes of reductions in BAOR which were yet again deferred by the conclusion of an offset agreement with West Germany); and the disbandment of the Gurkhas, which came to nothing, thanks to a skilfully conducted defence by the War Office. That TSR 2 development costs would be no more than £140m was another assumption that was soon to prove incorrect.

As a newly appointed Minister, Mr Thorneycroft was not so committed politically as his predecessor to the strategy and programmes set out in the 1962 Defence White Paper. He was determined to master the problems himself. Much of his first six months in office was devoted to discussions on strategy, and to the first serious moves towards the more centralised defence organisation that was to come into effect in 1964. That these moves were made at this time (whereas the efforts of Mr Sandys in 1957/58 and of Mr Watkinson in 1961 had come to nothing) signified what was only too obvious: all the efforts since 1957 to devise an acceptable defence programme had not succeeded. The hope was that the difficulties would be that much less and economies more easily achieved if power and authority were more completely embodied in the Minister of Defence⁷¹

Further studies by the Chiefs of Staff, this time of Strategy for the Seventies, were put in hand in the autumn of 1972. But well before these could be completed, Mr Thorneycroft had put his first impressions to the Prime Minister in a memorandum on Defence in the Longer Term. In preparing it he had to contend with important differences of emphasis between two of his principal advisers, Lord Mountbatten and Sir Robert Scott⁷². Whereas Sir Robert Scott was increasingly convinced that the main priorities should be NATO and the deterrent, with only residual forces for such maintenance of wider influence as might be possible, Lord Mountbatten believed that to reduce commitments overseas would put too much at risk and would be inconsistent with the Prime Minister's directive of October 1961, which, in effect, called for a continuing presence in all the traditional areas. The Kuwait commitment exemplified the differences between them. This, for Sir Robert Scott, was an anomaly that imposed such strains and distortions on defence policy that everything possible should be done to lessen the burden. For Lord Mountbatten, a power vacuum in the Persian Gulf would be so much to the disadvantage of the West that a capability to intervene should be maintained even though the continuing availability of Aden as an operational bases could not be assumed; and the capability had to be sufficient to overcome 'some opposition' (he conceded that an airborne or seaborne assault against serious opposition could only be mounted in co-operation with allies). Adding to Mr Thorneycroft's difficulties was a noticeable sharpening of Navy and RAF differences on how an intervention capability would be best organised. Mr Hugh Fraser (who had succeeded Mr Amery as S of S for Air in July 1962) sent in a paper on Island Strategy which argued against anything beyond a modest investment in amphibious forces but which duly provoked a countering paper from Lord Carrington (First Lord of the Admiralty) on the need for carriers if any worthwhile overseas strategy was to be pursued. Each paper has to be regarded as opening shots in a campaign that was to continue for some years. Other voices were contributing to the prevalent discord. Would there really be a Kuwait commitment if Aden had to be abandoned?; if so, the answer might not be expensive amphibious forces but a garrison within Kuwait itself - this was one suggestion from inside MOD. Another was that, if Singapore was lost, it was arguable that the only Far Eastern commitment would be to contribute to the close defence of Australia. And concurrently, so Lord Mountbatten informed Mr Thorneycroft, the Foreign Office were engaged in a study of policy based on withdrawal from all overseas commitments and a concentration on the area covered by the North Atlantic Treaty.

⁷¹ As Mr Wallworth puts it, "another conjuring trick was called for". It was also at this period that the works services of the three Service Departments were centralised under the Ministry of Public Buildings and Works. The aim, however, was not so much improved efficiency in carrying out the works programmes of the Services as of maximising the impact of MPBW on the national building industry.

⁷² MO 9/1/4 Pts 1 and 2 (MOD Records) and Cabinet Office 30/22/84 are the main sources for this section.

Making every allowance for the need to consider alternative policies, the fact remained that there was no consensus of official advice to help Mr Thorneycroft. So much was this so that he was advised by Sir Robert Scott not to evolve policy assumptions on the advice of the Service Ministers and Chiefs of Staffs, and to send his memorandum on policy direct to the Prime Minister. By early November this was all but ready, and Mr Thorneycroft discussed it with his two principal advisers. He could hardly please both of them and it was only after further argument that he produced a memorandum that tended towards the advice he had received from Lord Mountbatten. He presented a broad choice between continuing with the existing programme, which meant accepting that this would absorb a growing proportion of GNP (and even more if there was a change in the current assumption that there should be no expenditure on a deterrent to succeed SKYBOLT), and keeping defence expenditure within 7% of GNP. If the second choice was made, the alternatives were:-

Maintaining our support for NATO on about the present scale; greatly reducing the rest of our provision overseas (no balanced forces of our own, no operations on our own except internal security and Kuwait). The Kuwait burden might in time become insupportable. If we plan to have a successor deterrent, the reduction in forces outside NATO would be even greater and faster.

Maintain forces outside NATO on about the present scale; drastically reduce support for NATO (the cost per effective unit of forces East of Suez is very much greater than the cost in Europe and a much larger effective reduction would have to be made in Europe to produce the necessary saving). In either role, the scale of effort which we put into the deterrent will have some effect on the forces which we can deploy. We could not, however, by dropping out of the nuclear game put ourselves in a position to fulfil both roles.

Significantly, Mr Thorneycroft said little about the option of continuing with the existing programme. The real choice was between strategies respectively stressed towards NATO and overseas. He recommended the second: "I propose this because I do not see how the present Government can propose a major reduction in our worldwide role. I believe we can make a greater real contribution to the free world by maintaining forces outside Europe than by continuing to keep forces in Europe on the present scale".

Mr Thorneycroft sent his memorandum to the Prime Minister and other senior Ministers at the end of November. The principal difficulty was obvious and was discussed with the Chiefs of Staff.⁷³ the military as well as political objections to reductions in Germany:⁷⁴ Even if these were overcome, there was no unanimity on just how the forces for the overseas role should be organised. And were other Ministers prepared to think in terms of broad choices between Europe and the world role? The Foreign Secretary (Lord Home) did nothing to make Mr Thorneycroft's life easier: "I should have grave apprehensions as to the consequences [of reductions in Europe] on the international scene. I am not myself wedded to the forward strategy but Germany's alliance with the West is the key to European security and therefore to the security of Great Britain". This was scarcely a surprising view. What was more unusual, and in line with Air Ministry thought, was his view of the overseas position where he was less hypnotised than many by the possibility of losing the bases in Aden and Singapore. Staying in Aden was a matter of will; in Singapore the future was more secure as a result of

⁷³ MM/COS(62)8th Metg, 30 December 1962.

⁷⁴ In welcoming Mr Thorneycroft's emphasis on the worldwide rather than European role, Lord Mountbatten said that "this would be very strong medicine to some of your colleagues, and it is a matter of political judgement when NATO can be brought to accept it". What he envisaged was a change of direction, consistent with the capabilities needed for the wider role, in the contribution to NATO. "Do we not tend to be mesmerised by the North German plain where the nuclear deterrent is in any case more likely to be effective in stopping a battle? there would be much to be said for directing our NATO contribution particularly to the defence of at least the Northern flank ... in particular it would remove some of the very difficult problems the Army faces owing to its dual role" (Minute of 9 November 1962 to Mr Thorneycroft: MOD Record M09/1/4 Pt 1).

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the Malaysia agreement. He was not yet convinced "that it is necessary to plan now to provide alternative military substitutes, at enormous cost and risk, for the bases on which our present overseas deployment depends, when the eventual commitments cannot be precisely determined". He asked whether the V-bomber could not play an effective and continuing part in sustaining worldwide influence (though he did not ignore the overflying problem); and he concluded that "we should be able to contrive a world presence which is worthwhile and within our ability to pay".

These views were expressed in January 1963, two events having occurred during the previous month: first, the decision at the Prime Minister's meeting with President Kennedy at Nassau to replace SKYBOLT with the Polaris system; secondly, the revolt in Brunei which had been effectively put down by British forces based in Singapore. The first, among other consequences, aggravated the problem of defence funding. The second was a text book example of the value of the overseas presence, and particularly of the speed at which forces from an established land base could react to an emergency which developed even more quickly than that in Kuwait eighteen months earlier. It gave point to Mr Thorneycroft's emphasis on the overseas role, and to Lord Home's hopes for sustaining the role from land bases. But if for Lord Home the question of choice between Europe and overseas did not arise, it did for the Chancellor. Mr Maudling set his face against any higher allocation of GNP to defence than 7%; the Nassau agreement had added to the difficulties (MOD estimated that compared with the costs assumed for SKYBOLT Polaris would add at least £200m to the defence budget in the sixties); and while he did not come down expressly in favour of the European role, he pointed out that future costs East of Suez, including a carrier replacement programme, would be more than twice those forecast for Europe. An early decision between the alternatives was necessary; "if we do not, we shall do everything badly and nothing well".

To these divergent views about choices were added those of the Chiefs of Staff. Although Mr Thorneycroft in his November memorandum had seen no way in which the overseas role could responsibly be abandoned, he recognised the danger of oversimplifying the issues; and in December he had commissioned a study by the Chiefs of Staff not just of the implications of distinctive European and overseas roles but also of the residual capabilities in either role. If the European role had priority, he expected the economies to lie mainly in carriers and long range transport aircraft; if the emphasis was overseas, the economies would be in Army manpower and the TSR 2. The study⁷⁵ was completed by the end of January - a considerable achievement but, even so, leaving little time for the depth of discussion needed, since by then Mr Thorneycroft was committed to presenting a comprehensive policy paper for consideration at a Chequers weekend early in February.

Bearing in mind the assumptions the Chiefs had been given - no more money and less manpower - they could not have been expected to produce a palatable memorandum. What this amounted to was an affirmation that the choice, either way, would lead to disastrous results. If it fell on the overseas role the Army in Germany would have to be reduced to two brigades and the RAF to three squadrons (two TSR 2 strike squadrons and one reconnaissance squadron, with the existing three Bomber Command Valiant squadrons assigned to SACEUR replaced by two TSR 2 squadrons). Withdrawal on this scale would impose "severe strains on the military structure of NATO and convey the impression of political and military disarray"; and it could lead to pressure from West Germany for its own tactical nuclear weapons (for several years this had been regarded as excessively provocative to the Soviet Union). In saying that the continued cohesion and strength of NATO was vital to the defence of the United Kingdom, the Chiefs of Staff were implying that no alternative force dispositions would be justified unless sufficient resources were available to maintain the existing contribution to NATO or something sufficiently similar in capability as to be credibly equivalent.

If the choice went the other way - with priority to NATO - the Chiefs saw no alternative but to cut a major commitment or capability. As between Middle East and Far East commitments, the first

⁷⁵ COS 42/63.

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(including NATO's southern flank) was the more important. Otherwise there would be a power vacuum in a crucial area, with the risk of communism spreading throughout Arabia and in East and Central Africa. Yet if significant forces were retained in the Mediterranean and Middle East the books could be balanced only by an almost complete withdrawal from Malaya and Singapore or by giving up a major capability. What that capability might be was obvious enough, and the COS memorandum contained a digest of the respective naval and air force views on how the overseas presence could be maintained with and without fleet carriers. The chain of island airfields necessary to provide a secure route round the North African air barrier as well as to provide launching areas for intervention forces was described. The case for the carriers was discussed in the context of support for a sizeable intervention operation which might meet significant opposition from the outset. Such an operation was not one that CIGS (Sir Richard Hull) was prepared to rule out; it would require a line of supply by sea for heavy weapons and equipment, which would need protection. CAS's view was not that this kind of operation was inconceivable. Indeed, his recorded view⁷⁶ was that the Navy should retain the smaller Commando carriers both for their amphibious capabilities and as a suitable landing platform for the STOL and VTOL aircraft that could be available in future. But he thought nothing of the concept of protecting sea lines of communication by carrier air power: "outdated and reminiscent of last war thinking". Predictably, the Chiefs of Staff could not come down in favour of either concept:

The divergence between these two views is so fundamental that no agreed recommendation can be made solely from the military point of view The issue to be resolved is whether the capability [of fleet carriers] is worth the expense, or the saving justifies the risks. We believe that a decision in principle on the carrier replacement programme should be taken now.

Chequers, February 1963

It would be a poor sort of Minister who expected plain sailing, but as Mr Thorneycroft prepared for the Chequers conference on defence he was well aware that the waters were choppy indeed. His memorandum to the Prime Minister in November had insisted that, if no more resources could be found for defence, a broad strategic choice had to be made. In those circumstances, his own choice fell on the worldwide role. By the following February he had made no headway with the Foreign Secretary, to whom NATO and the worldwide role were both essential, and none with the Chancellor on the question of more resources. His chief military adviser, Lord Mountbatten, joined him in preferring the worldwide role. On the other hand, the Joint Chiefs of Staff in Washington, who were consulted by Lord Mountbatten early in 1963, will keen enough on the British presence overseas were equally keen that there should be no change in the contribution to NATO. One of the Joint Chiefs (General Maxwell Taylor) thought that the British difficulties would be overcome only by an increase in Defence resources or by withdrawing from nuclear deterrence. Mr Thorneycroft's chief civilian adviser, Sir Robert Scott, placed the strategic emphasis heavily on NATO, and for him Nassau gave added weight to the need for economies overseas.

Moving from policy to future force structures, none of the discussions of early 1963 gave grounds for hope that the form of the current British contribution to NATO could be so radically changed as to be consistent with the requirements of the worldwide role. Within that role no consensus was at all likely to emerge about the relative place of carriers and island bases. A report by a group meeting under Sir Solly Zuckerman to study the merits of both concepts for supply of intervention operations left much scope for further argument⁷⁷. And even if a bold decision against a carrier replacement programme were to be made

⁷⁶ Meeting of Mr Thorneycroft and Chiefs of Staff, 3 February 1963 (MM(63)2).

⁷⁷ The group's more important conclusions were that carriers were unnecessary for the most likely situation: one where an airhead was available and the opposition to a landing only light. Carriers would be too vulnerable against heavy and sophisticated opposition but could have advantages in some circumstances over an expedition supported from island bases against "moderate opposition". To ensure carrier support, four ships all told would be needed of which two should be permanently available East of Suez. The financial cost of adding to and improving existing island bases would be much less than a replacement programme for carriers. But in saying that "the political cost might be prohibitive", the group was drawing attention to the risk that such a chain could become a target for political pressure and subversion.

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be made - and Sir Robert Scott pressed hard for such a decision - the Admiralty gave notice that a major programme of ships and missiles would be needed to replace carrier air power.

Against this background of division and controversy Mr Thorneycroft had to decide on the line to be taken at the Chequers conference. Since his November memorandum, in which he had come down in favour of the overseas role, he had changed his mind about securing economies by means of strategic choices. The political realities had proved too much for him. This left him in the same dilemma as his predecessors: how to maintain effective forces to meet all existing commitments at a cost that the government was willing to afford. That the cost would be too high for some Ministers was recognised by Mr Thorneycroft before the Chequers conference assembled. He hoped, however, that by exposing the difficulties of making substantial reductions in any of the three main roles - nuclear deterrence, NATO and the overseas role - and by offering such economies as might be made, he would move his colleagues to decisions of principle that would permit an unanswerable case to be made for the allocation of a higher proportion of GNP to defence. He was warned beforehand by Sir Robert Scott that these tactics were unlikely to be successful. Nevertheless, he made the effort.

Mr Thorneycroft's memorandum was sent to the Prime Minister on 6 February and was discussed at Chequers by the Defence Committee, with the Chiefs of Staff in attendance, three days later. The all-important note was struck at the beginning of the memorandum: there would be difficulty in securing any really worthwhile adjustment in any major commitment, which meant that the government must think in terms of an increasing proportion of even a rising GNP. As to economies consistent with existing roles and commitments, some reductions in BAOR might be possible: a reorganisation into two divisions of two brigades, with three brigades withdrawn to the Strategic Reserve (some units housed in Britain, others in Malta) or used to bring other Army units up to strength. If this could not be done the Army's UK manpower would have to be allowed to rise from 175,000 to 180,000. As the Defence Committee had been over this course so often and with no useful result it is difficult to believe that Mr Thorneycroft expected approval. It is more likely that he was illustrating the difficulties of living within an inadequate budget; and a predictable decision was reached, not at the Chequers conference but at a later meeting of the Defence Committee in April, to leave BAOR well alone.⁷⁸ As was patently required, the memorandum paid most attention to the overseas position, as that which gave most scope for what Mr Thorneycroft termed "adjustment". Equally obviously, it gave most scope for argument; and the difficulties were duly recited.

The first question that the Defence Committee was invited to consider was what kind of battle might have to be fought East of Suez. This was set against the most general of backgrounds, the issue being presented in terms of the ability to take independent action defined as the capacity to put ashore at least a brigade group and a parachute battalion against opposition, to do this quickly and at short notice and to follow up quickly with further forces. Where and in what circumstances such an expedition might be necessary was not argued. As described, it was more taxing than was expected to be needed for a second Kuwait expedition; whether it was likely to be called for elsewhere East of Suez or whether any lesser capability would be acceptable were questions unconsidered in the memorandum. So, having stated the need "to think very deeply" about what was required East of Suez, Mr Thorneycroft cannot be said to have helped his colleagues to do so. What he affirmed - reasonably enough, granted the scenario - was that an expedition so defined would need support from both the Navy and the RAF and that this necessitated early decisions on island bases as well as carriers. In the meantime he recommended that design work should be continued and long lead items ordered for one new carrier to replace Victorious; that a simplified version of OR 351 should be developed as the Hastings/Beverley replacement; and that the P.1154 should be the replacement for the Hunter and Sea Vixen, the naval version to be phased in after the RAF version if warranted by the final decision on a carrier replacement programme. Looking further ahead, he proposed, in the interests of avoiding role duplication, that the TSR2 should go ahead but that the Fleet Air Arm's long range strike role should be dropped when the BuccaNEER Mk 2 went out of

⁷⁸ The Nassau Conference had an important influence on this aspect of defence policy. It had only been with difficulty that the Prime Minister and his team, which included Mr Thorneycroft, had avoided a commitment to increase the British conventional contribution to NATO. In the aftermath of the conference, and with many details of the Polaris agreement still to be negotiated, there could be no question of antagonising the US Government by moves to reduce BAOR.

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service. In sum, Mr Thorneycroft put before his colleagues, as was only right, the need to decide on the most appropriate force structure if the overseas role was to be continued. But he carefully avoided recommending choices which could be represented as unduly favouring either the Navy or the RAF. The inevitable result, as he admitted, would be increased defence expenditure unless some major commitment or capability was abandoned. He had set the scene for an interesting discussion but had drawn back from challenging his colleagues to make the hard decisions that the situation demanded.

The Chequers conference was a two-part affair:⁷⁹ a general exchange of mainly ministerial views at its first session, with the Chiefs of Staff given an opportunity at a second session to state their respective cases and to stand up to questioning. One thing was clear from the beginning. The Chancellor (Mr Maudling) was not to be moved from his opposition to a bigger defence share of GNP. Negotiations for entry into the EEC had by now failed. This was a serious setback to economic prospects which were not improved by a world role which meant in effect that Britain was carrying the burden of defending the economic interests of her European competitors. Mr Maudling posed the question that the Prime Minister himself had asked in the past: against what enemy, in what circumstances and with what allies, might the Services be called on to act? In response, Ministers were again afflicted by a temporary itch to reduce in Europe but in addition they agreed on studies relating the cost of maintaining the Aden base to the value of the economic interests in the Middle East that the base was intended to protect. As for the Far East, other studies were to be made of the economic and political consequences of a withdrawal or of substantial reduction of the forces based in Hong Kong and Singapore, though in general discussion the difficulties of withdrawal were recognised as was the pointlessness of the commitment to SEATO if, despite the difficulties, the Far East bases were abandoned.

Little discussion of military capabilities seems to have taken place at the first session beyond the need to make an opposed landing East of Suez, at least against opposition by guerilla-type forces. At the later session the CIG's claim for rather more manpower for the Army seems not to have been argued in detail; nor that of CAS that the two most pressing needs of the RAF were decisions on the Hastings/Beverley and Hunter replacements.⁸⁰ It was the role of the Navy that was at once most vigorously argued and challenged. Protection of trade routes and armed intervention - alone or in support - were put forward as the key tasks of the Navy. Maintaining a contribution to NATO was another even though, as CNS (Sir Caspar John) admitted, there were some unsound features to NATO's maritime strategy, such as a "broken backed" war continuing after a nuclear exchange and the deployment of a powerful naval strike force to attack Russia from northern waters. On the other hand, he argued that the contribution to NATO involved only marginal additions to the fleet required for the key tasks. That of trade protection had to be set against the massive expansion of the Soviet Fleet and merchant marine - in worldwide facilities as well as strength; the threat this constituted to trade was one that "we must be prepared to deal with appropriately and from our own resources". As for the task of armed intervention, there was no alternative to carriers and it would be most economical to think in terms of a big ship of 50,000-60,000 tons.

The naval case was left to CNS to argue. Lord Mountbatten, as CDS, is not recorded as contributing. But his emphasis on the need to maintain forces that were "properly balanced" and adequate to meet any probable demands was one that connoisseurs of this kind of debate would have recognised as supporting the concept of an all-purpose fleet. How deeply the Defence Committee was divided cannot be discovered from its records. That some members were unconvinced by the naval case is clear. Acts of piracy against merchant ships might still occur but a Soviet threat to peacetime trade was hard to believe: "it would not be justifiable to provide ships purely for the trade protection role, especially since any determined attempt by the Soviet Union to disrupt our maritime trade would inevitably lead to war". The need for new carriers was also disputed. They would be costly and vulnerable and it would be preferable to have larger numbers of smaller ships with an appropriate range of missiles.

⁷⁹ D(63)3rd and 4th Mtgs, 9 February 1963.

⁸⁰ In the interest of getting what he wanted, CAS said that by a modernisation programme the life of the Shackleton could be extended and its replacement deferred. He also said that the C130 would not meet the need for improved air transport capability, nor would the purchase of more Belfasts.

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Ministerial Decisions

The conclusions of the Chequers Conference were a reflection of ministerial uncertainties as well as of those few areas where the way ahead seemed clear. The Army was allowed a small increase in its manpower and some equipment decisions, including Chieftain tank production, were made in its favour. CAS got the two decisions he wanted: the P.1154 to replace the Hunter and a transport aircraft to a modified specification based on OR 351. In addition to the studies on Middle and Far East policy that had been agreed at the first sessions Ministers decided in principle that Aden should become an unaccompanied base (to little or no useful purpose). Mr Thorneycroft's recommendation that the Fleet Air Arm's long range strike role should eventually be abandoned was accepted; the question of a replacement for the TSR2 was deferred. On what had been the most controversial item on its agenda the Defence Committee took no decision; it could bring itself to go no further than call for urgent studies of possible methods, other than carriers, for defence at sea and support of assault operations. All its conclusions, such as they were, about the size and shape of the forces in future were subject to the principle for which Lord Moutbatten had argued: "the overriding regard to maintain properly balanced forces within the permissible level of expenditure".

But the most important outcome of a conference that had been long in preparation and, in some quarters at any rate, big in expectations was that the Chancellor's statement that in existing circumstances defence expenditure should not be allowed to absorb more than 7½% of GNP was neither rejected or approved; it was merely noted. The problem that had been recognised when Mr Macmillan had come into office in 1957 was still there. He had hoped, in his own words, "by skill and ingenuity" to continue the world role as well as the nuclear deterrent and support of NATO, despite limited resources. Six years later he and his colleagues were still making the attempt without the necessary willingness either to increase resources or to make any serious reductions in capabilities or commitments.

When Mr Thorneycroft, a few weeks after the Chequers Conference, was obliged to utter a fresh warning on the rising trend of defence costs, Mr Macmillan replied that his minute made "gloomy reading".⁸¹ No more cheerful claim can be made for this chapter which has inevitably been a record of hard endeavour but essential failure. The decisions at Nassau were one of the factors contributing to that failure. Events leading to those decisions are the subject of the next chapter.

⁸¹ Exchange of minutes, Minister of Defence and Prime Minister, 24 April and 2 May (MOD Records, MO8 Pt 2).

CHAPTER 9

SUCCESSOR SYSTEMS FOR NUCLEAR DETERRENCE

Introduction

No objective of government defence policy in the spring of 1957 was more clearly proclaimed than the maintenance of an independent British deterrent. As to the means, the V-bomber force with free-fall bombs would be improved by what the 1958 Defence White Paper described as "propelled bombs" and - by a date which was never publicly announced - by a British ballistic missile. The weapons in prospect were the two marks of Blue Steel - to be carried by Mk 2 Victors and Vulcans - and the BLUE STREAK IRBM (initiated in OR 1139 of August 1955). Each mark of Blue Steel was a separate response to prospective improvements in Russian air defences. The first had been specified as early as September 1954 (OR 1132) as a short range system to avoid the direct defence of possible targets in Russia by first generation SAGW; the second (OR 1159 June 1958), with its much longer range, to counter an expected improvement in strength as well as quality in the Russian air defence system. As the RAF programme stood at the end of 1958, both weapons were planned to come into service before BLUE STREAK. They were conceived as at once prolonging the effective life of the V-force and ensuring that there was no gap in credible deterrence before BLUE STREAK became available. This weapon was expected to be an effective deterrent for many years. Even if the formidable difficulties of ABM defence were solved, BLUE STREAK's more than adequate range (2500 nm) would make it practicable to trade off range for devices that would so complicate the defensive problem that its destruction could never be a certainty. The programme¹ promised a progression of systems that would meet the political requirement of independent deterrence until at least the early seventies, with the added advantages of variety and insurance; variety to complicate Russia's defensive tasks and insurance against delays and difficulties that might arise on any item in the programme. In this context, the strategic capabilities of the TSR2, although this aircraft was considered justifiable solely as a replacement for the Canberra, were a useful bonus. Some features of the programme involved co-operation with the United States but it was nevertheless a programme under effective British control. As conceived, the combination of land-based and airborne systems would be sufficiently flexible to be effective worldwide as well as in defence of Europe. Britain would remain in the business of deterrence on its own terms.

This programme was to be progressively revised and almost wholly abandoned by the end of 1962. Blue Steel Mk 1 survived but work on the later and strategically more important version of the weapon was stopped at the end of 1959. Insofar as it was replaced in the revised programme by SKYBOLT, strategic deterrence was still to be maintained by an airborne system but not one that the British would be responsible for developing and producing. BLUE STREAK was abandoned as a military weapon in the spring of 1960 and with it the concept of a mixed deterrent of landlaunched and airborne systems. Such possibilities as remained of diversifying the deterrent depended on introducing a seaborne system which in practice could only mean acquiring Polaris. Whether Polaris was preferable to an airborne system, if one system alone was to be relied on, was fiercely argued from 1959 onwards. No decision to acquire it had been taken before Mr Macmillan's meeting with President Kennedy at Nassau in December 1962. It remains true that well before then one American weapon, Polaris, had become the main contender to replace another, SKYBOLT, if this failed to materialise. Even if SKYBOLT came into service, the merits of Polaris were being strongly advocated as its long-term successor rather than another airborne system.

It would be an over-simplification to regard the period from 1957 to 1962 as one in which the government moved from an all-British to an all-American programme. More precisely, the issue was the type of vehicle in which British nuclear warheads could best be installed. It is in the accumulation of

¹ The Thor system cannot be considered a component in this programme of the same significance as British weapons. For the Americans it was only a system of short-term value, and in any case its control was not exclusively British. Its successful deployment in Britain and the high levels of serviceability and readiness which Bomber Command achieved with the weapon proved, however, to be a temptation to some to argue its merits as a substitute for BLUE STREAK, provided it could be obtained without political strings.

doubts about British missiles - their escalating costs, delays in development, and their effectiveness and credibility as deterrent systems when in service - that the origins of the dismantling of the original programme are to be found. This is the main theme of this chapter. There were other important considerations. One was whether the scale of deterrence achievable in the early sixties by the V-bomber force should be the criterion for future deterrent systems, irrespective of what weapons were to be adopted. This itself derived from doubts about the realism for Britain of a truly independent deterrent: one that had a recognisably overwhelming capability to deter Russia in a situation where the United States might be less than resolute. The argument was not to come to a head until 1960 but it had been foreshadowed by the differences between the Chiefs of Staff on the extent of the investment in the nuclear deterrent that have already been described.² And as the heavy investment in the V-bomber force could be seen as excessively beneficial to the RAF and correspondingly damaging to other Services, there was a tendency in some quarters to propose or support changes in deterrent policy which would reduce the RAF share of future defence budgets.

Yet another influence on policy was the search for a deterrent system as near complete invulnerability as possible. This was a factor in the abandonment of BLUE STREAK. BLUE STEEL Mk 2 also fell out of favour because of forecast developments in the effectiveness of Russian air defence, though there were other, less speculative reasons for its cancellation. These assessments assumed that weapons theoretically open to destruction on the ground or in flight would not be a credible deterrent to either those who possessed them or an enemy. This may have missed an essential point of nuclear deterrence: an aggressor must take the appalling risk of assuming that his defensive as well as offensive weapons will achieve in practice the perfect performance they are capable of in theory, whereas those who would only retaliate can set themselves a less demanding standard. Such a view is itself open to argument, as is so much else in the difficult business of deterrence. Certainly, what marks the period following the 1957 announcement of a deterrent policy is the wide range of views within Whitehall on the political and military implications of the policy as well as on the best means of continuing the policy after the V-bomber force and its first-generation weapons were considered to be no longer effective. These differences were most marked at the official level - amongst administrators and scientists as well as in the Services; Ministers collectively showed fewer signs of second thoughts about the policy itself. Their concern was mainly about what should be spent and on what weapons; and with little relief during the period from economic and financial pressures, the less spent the better.

Economy and the search for the best possible system led to a series of decisions on weapons which effectively placed the continued independence of the British deterrent at American disposal. The risk did not go unrecognised but that it was more serious than had been expected became uncomfortably clear during the Nassau Conference in December 1962. It was only after three days of tense and difficult negotiations that Mr Macmillan came home with a barely acceptable agreement. He had no grounds for complaint; the decisions that sowed the seeds of the Nassau talks had been taken by him and his colleagues. Each key decision, however, was reached only after detailed official study, and dissenting voices were in a minority. Mr Macmillan later accepted full responsibility for what he described as "many costly decisions and mistakes",³ but it cannot be said that these were due to spurning the advice he was given.

Outline of Deterrent Programmes

In September 1958 the Air Council discussed the latest of a series of regular progress reports on new weapons and projects.⁴ It can serve as a guide to the main features of the deterrent programme. Some were no longer debatable. By this time the full order of Valiants and most of the Mk 1 Vulcans and Victors had been completed. The first flight of the first production Mk 2 Vulcan had taken place and that of the Mk 2 Victor was expected shortly. A range of ECM equipment was in production; more advanced jammers and warning equipment were under development and were expected to come into service in 1961. An automatic landing system was under development for the Mk 2 V-bombers to ensure that

² Ch 1 pp 16-21, Ch 5 pp 131-134.

³ *Pointing the Way* (Vol 5 of Mr Macmillan's Memoirs).

⁴ AC(58)61.

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they could operate in bad weather (in the event, this was not a success). Kiloton and megaton weapon production was proceeding, with US weapons available as well. The first-generation of deterrent strike force was emerging, not to the strength originally planned but satisfactorily enough.

Missiles under development were the key to the future. The Air Council was told at its September meeting that Blue Steel Mk 1 might be given a full release in 1961/62 and that some improved missiles, in advance of main production, would be available to Bomber Command by the end of 1960. BLUE STEEL Mk 2 was at the stage of design study; no decision had been taken to place a development contract. An earlier intention to include a low level terminal phase of 100 nm in the specification had been dropped. It would have required a new type of engine, extended the development period by two years and added about £10m to development costs. This was nevertheless an early recognition of the optimum characteristics of a cruise missile. As for ballistic missiles, preparations to receive and deploy Thor were described in the report to the Air Council. The first squadron at Feltwell in Norfolk was all but complete. A second squadron had begun its training in America, where the first missile of the type with which the force was to be equipped - to a total of 60 deployed missiles - was due for its trial launching. (From this point, the programme was to proceed to completion, with relative ease;⁵ by the end of 1959 twenty SM (Strategic Missile) Squadrons, grouped round four stations at Feltwell, Hemswell, Driffield and North Luffenham, had been formed). Thor, however, was an interim weapon, each squadron having its resident USAF team which would need American as well as British authority if the weapons were to be armed and prepared for firing in a crisis. As such, it was not an acceptable substitute for BLUE STREAK. But it was only too clear from the Air Council report that the future of BLUE STREAK was in question. There were several concerns. A plan for accelerating the development programme in order to provide an initial operating capability (IOC) by 1963 had not received Treasury approval. An even more ambitious and expensive programme proposed by the Minister of Defence (Mr Sandys) was in abeyance pending an examination into whether Thor could be obtained under arrangements (including a British warhead) which would meet the requirements of an independent deterrent. Alternatively, a second generation missile, better than BLUE STREAK, might be developed in collaboration with the Americans. Either possibility might lead to a decision to abandon BLUE STREAK. The Air Council was told that progress with BLUE STREAK's development was satisfactory (tests of the full scale motors had exceeded expectations) but slow. The contractors (de Havilland) and the Air Ministry were setting up a joint team to design an underground site but the specification for its capacity to resist damage might have to be relaxed. Otherwise, it would be too costly. All the bedevilling questions were present in this brief report: how soon would BLUE STREAK be ready; at what cost; how and where should it be deployed; would it be too vulnerable; was there an alternative?

With these persistent doubts about BLUE STREAK, no programme for its introduction into service in specified numbers and deployment can be said to have been finally agreed, even by the Air Council and certainly not by the government. But insofar as the 60 Thor missiles and the V-bomber force, at a front line strength of 144 aircraft and with free fall bombs, provided a pattern and a capability for a successor deterrent system, it is not misleading to regard a maximum force of 60 BLUE STREAK missiles as the aim, if not an agreed programme, for the ballistic missile component. Each missile would have its own underground site, administered in groups of six from ten main bases. As it came into service so the Thor force would be reduced and finally withdrawn in 1965. On much the same time scale the Mk 1 V-bombers were to be phased out, leaving a front line of 104 Mk 2 Vulcans and Victors by the end of 1966. Blue Steel Mk 1 would begin to replace free fall bombs early in the sixties, with the improved Mk 2 version coming into service in 1965. Whether this should wholly replace the Mk 1 was never decided. What is clear, however, is that until the end of 1959 the Air Council intended to discharge its responsibility for meeting the future requirements of independent deterrence by a mixed force of indigenous land-based ballistic missiles and air-launched cruise missiles, at least until the early seventies. This intention was not final. The possibility of replacing BLUE STEEL Mk 2 in the plan by an American air-launched ballistic missile was one that the Air Council acknowledged and did not rule out.

⁵ During 1958 the author had the task of persuading planning authorities not to object to the use of a number of inactive airfields. Although it came to be a working assumption that each would be represented as raising 'the best corn crops in the county' there was remarkably little opposition.

Early Doubts about BLUE STREAK

Like all major projects, BLUE STREAK had come under scrutiny during the Policy Review of 1956 when, according to a report made to Mr Sandys after he became Minister of Defence, the very existence of the project had to be defended against savage attacks by the Treasury.⁶ Costs alone - estimated in 1956 at over £70m for R and D but soon to increase - could justify Treasury opposition. The concept itself continued to have the formal support of the Minister of Defence (Sir Walter Monckton) and his scientific advisers, the Air Staff and the Chiefs of Staff. It was the key feature of future deterrent policy in the 1957 Defence White Paper; and if its advocacy by the operational requirements staff at the Air Ministry was a little too enthusiastic for CAS and DCAS, there was no significant opposition to the case for developing and deploying a ballistic missile on land, and preferably underground. The project was not, however, exempted from the economies in the R and D programme which were important to the government under Sir Anthony Eden as well as Mr Macmillan as a means of diverting scientific and engineering resources to the civil sector. Irrecoverable delays in the motor test programme were one consequence. The cancellation of technical options to certain features of the design was another. More serious still in their implications were the economies in R and D expenditure that were imposed early in the life of Mr Macmillan's administration. These limited the number of test firings, leading in turn to changes in the dates forecast for the completion of key stages in the programme. Before these economies of early 1957 were made, the development programme was expected to cost £105m over seven years and lead to an IOC by mid-1963. The changes reduced the cost to £75m, extended the programme to ten years and the IOC to 1965.

Economy aside, some extension of the programme was considered justifiable because, during 1957, the deployment of Thor some years in advance of BLUE STREAK became increasingly likely. Whereas the Air Ministry was not alone in the view that Thor was too vulnerable and too slow in reaction time to serve as a deterrent system for more than a few years, as early as February 1957 Mr Macmillan spoke in the Defence Committee of abandoning the British weapon if Thor proved a success. Costs were his concern rather than the concept itself. As 1957 wore on, these increased dramatically. By autumn the Minister of Supply (Mr Aubrey Jones) was reporting that the cost of even the less ambitious programme had been seriously under-estimated; £150m would be a prudent assumption. By the beginning of 1958 the estimate had increased to £160/200m.⁷ This was unpalatable but so were the consequences of running the programme deliberately at half-throttle: inherently inefficient, bad for the morale of those engaged in it, and producing results so late as to run the risk that a technically better alternative would be difficult to resist. Mr Sandys did his best to solve the dilemma, one way or the other. A joint working party of MOD, MOS and Air Ministry representatives⁸ was set up to report on what was necessary to complete BLUE STREAK on time. In July Mr Sandys informed the Prime Minister and the Chancellor of the Exchequer (Mr Heathcoat Amory) of its findings. These were that the programme of test firings would have to be intensified; more facilities provided at the test grounds at Spadeadam in Cumberland and Woomera; a prototype underground site should be built; management of the project should be strengthened; and in general a greater show of governmental confidence than had so far been forthcoming. All this at an extra cost, over the £160/200m estimate, of £40/50m over the next five years. Mr Sandys got no change from either of his colleagues. No authority to accelerate development could be given until the future of the defence programme as a whole had been discussed - this was Mr Macmillan's reaction; and at a meeting of the Defence Committee on 23 July, the Chancellor argued strongly against the currently projected levels of defence expenditure.

By September Mr Sandys had completed his review of all the possibilities, and he put before the Defence Committee what was at once a reminder of the origins of the BLUE STREAK project and a description of what might take its place.⁹ By this time, Polaris had emerged as one of the possibilities, if a few years later

⁶ Report of 22 October 1957 (MOD Records MO 26/10/2 Pt 1).

⁷ (a) Minute from Mr Jones to Mr Sandys 18 October 1957) MOD Records.
(b) Letter of 24 January 1958) MO 26/10/2 Pt 1.

⁸ There were some non-departmental members, including Sir Edward Bullard of Cambridge University who was also the chairman of a US/British committee overseeing the project. As its strong supporter he feared that American support for it would wane unless it was allotted more resources.

⁹ D(58)47.

than BLUE STREAK.¹⁰ Mr Sandys reminded his colleagues that a ballistic missile was a necessary successor to the manned bomber if an independent deterrent was to be maintained and that at the time the BLUE STREAK project was begun there was no choice open to the government. It had to go for a home-produced weapon because although American missile technology was superior no US weapon could be obtained, or if it could, not without political 'strings' inconsistent with the concept of independence. In any case, it was desirable 'that the British should not go out of rocketry, with its as yet unpredictable potentialities for the future'. Now, however, amendments to the McMahon Act¹¹ had changed the nature of the problem. Information on lightweight warheads, on which the Americans had a lead, could be obtained and it might also be possible to acquire American missiles, in which British-produced warheads could be installed, without unacceptable political conditions. Against this background, Mr Sandys proposed an investigation into a radical revision of the ballistic missile programme:-

- a. Stopping the development of BLUE STREAK.
- b. Developing, with American help, a better medium range missile.
- c. Exploring whether b. might be possible with European collaborators.¹²
- d. Designing on the basis of US information a lightweight warhead for b.
- e. Extending the effective life of the V-bomber force by developing BLUE STEEL Mk 2 to bridge the gap in effective deterrence between the obsolescence of the bomber and the introduction of the new missile.
- f. If, despite e., a gap opened up, filling it by using Thor or another US weapon, with British warheads.

Any proposals which envisaged, if only provisionally, the abandonment of BLUE STREAK were consistent with the advice the Prime Minister had been getting from the Cabinet Office where the alternative of Thor 'without strings' had much support. A decision to this effect would have been welcomed by the Chancellor of the Exchequer. Certainly, the project came very close to cancellation at a meeting in September 1958 between Mr Macmillan and his senior Ministers, the record of which is unusually full and frank.¹³ Concern about defence costs and doubts about the realism of pursuing a deterrent policy indefinitely were balanced by fears of the unsettling effect on NATO and especially on American opinion of any radical change. The balance came down in favour of continuing a deterrent policy but possibly on a different basis, with less emphasis on independence and more on Anglo-American partnership. BLUE STREAK itself might become a joint project to mature later than currently planned. This would spread costs over a longer period and reduce the investment in deterrence, as would major economies in ADUK which the meeting also discussed.

How much scope there might be in practice for a revised policy depended on American co-operation, and Mr Sandys duly went to Washington later in the month, with DCAS in his team of advisers, for a series of meetings with US Ministers and officials.¹⁴ In some respects the visit was satisfactory, particularly the

¹⁰ Mr Sandys formally called for an examination of the merits of the Polaris system in a minute of 3 April 1958 to the First Lord of the Admiralty (AHB ID3/193/14 Pt 1).

¹¹ The McMahon Act of 1946 effectively ended the wartime Anglo/American nuclear collaboration. The process of relaxing its provisions began in 1954 with the Atomic Energy Act which led to a bilateral agreement that year for the development of nuclear energy for peaceful purposes. Corresponding action in the defence field came with a bilateral agreement negotiated in 1958 which permitted co-operation in nuclear weapons R and D. This was extended in the following year to facilitate exchanges in special nuclear materials.

¹² Mr Sandys had been advised that European countries would not be interested in the type of missile that would meet British requirements. This would be bigger than even strategic deterrence from bases on the European mainland would call for. From time to time in the next few years the possibility was discussed in NATO, without much enthusiasm. When France decided to go her own way the subject was effectively closed.

¹³ Meeting of 10 September 1958 (Cabinet Office 19/10/205/2).

¹⁴ The minutes of these meetings, 22-25 September, are in MOD Records (MO 26/10 Pt 1).

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unqualified American assurances of their commitment to NATO. As expected, the prospects for technical co-operation in the nuclear field were much improved, and the British were given a full briefing on the American weapon programme, including Polaris and the embryonic SKYBOLT. Nevertheless, the talks left Mr Sandys far from convinced that it would be wise to cancel BLUE STREAK. Thor, with British warheads, could be obtained but not with complete certainty that its operational control would be independent of SACEUR. As for a joint European project, which would need American assistance, the position of the American government could not have been clearer: no matter where the missiles and warheads were manufactured, their control should be assigned to SACEUR.

Before deciding what line to take in the Defence Committee, Mr Sandys on his return first considered what was the most that might be made of Thor - lighter warhead, longer range, emplacing it underground. The balance of advice was against this. An improved version would be expensive and probably later into service than BLUE STREAK; and the Americans had no intention of developing an intermediate range weapon to replace Thor. Mr Sandys' conclusion, in a memorandum¹⁵ to the Defence Committee, was that "if we wish to maintain an independent British contribution after the mid-sixties we must proceed with the development of BLUE STREAK and aim to be in a position to start deploying these weapons in 1965." This meant adopting the accelerated programme he had put forward in July, at an estimated cost of up to £230m plus the cost of production missiles and underground sites, tentatively estimated as about £300m. It was not the most digestible dish to set before the Defence Committee, and very different from what had seemed likely before the visit to Washington. Its chances of approval were not helped by an intervention by the First Lord of the Admiralty (Lord Selkirk) who minuted the Prime Minister the day before the Defence Committee met¹⁶ with a familiar objection: a decision to press ahead with BLUE STREAK would "underwrite the nuclear deterrent element in our defence programme until at least 1970, whilst, in contrast, we have no assurance of what can be provided for other forces even for a year ahead". The advantages of Polaris over BLUE STREAK were described: flexible, invulnerable, requiring no elaborate defences and, not least, a deterrent system not deployed in Britain. And most temptingly for those Ministers whose concern was economic prospects over the next few years, why not delay a decision on a replacement for the V-bomber force? The Americans were spending vast sums on Polaris; "if we pause for a moment before committing ourselves, we may well have a better weapon at less cost". Mr Sandy's contrary view was clearly stated in his memorandum. As an addition to the deterrent programme Polaris would be very desirable, but it was too early to stake everything on it: its warhead yield would be smaller than that of BLUE STREAK; accuracy would be less; it would call for more fissile material; and the boats in which it would be installed would be very expensive. Better the bird in hand: this was the essence of his position.

On the evidence of a minute from Mr Macmillan to Mr Sandys,¹⁷ following a discussion at the Defence Committee on 5 November, Mr Sandys failed in his main contention. Mr Macmillan continued to press for an alternative policy under which BLUE STREAK would be abandoned and a decision on its replacement delayed for a year on the assumption that the effective life of the V-bomber force, supplemented by Thor, would be extended as far as possible. Here a new factor was emerging; the two Ministers agreed that "it is an open question whether we should use an American weapon instead of developing BLUE STEEL Mk 2."¹⁸ Defence costs were much in Mr Macmillan's mind, and for good reason. At this point in the financial year, the Defence Estimates for 1959/60 were under negotiation; and the claims of the Services Departments and the Ministry of Supply exceeded the budget target by over £50m, all on Admiralty and War Office account. But if Mr Macmillan was determined to economise Mr Sandys was no less determined that this should not be at the expense of the deterrent strike forces. He had some success. At the Defence Committee on 18 November he succeeded, if only provisionally, in resisting

¹⁵ D(58)57 of 3 November 1958.

¹⁶ Lord Selkirk to Mr Macmillan 4 November 1958 (MOD Records MO 26/10 Pt 1).

¹⁷ PM to Minister of Defence 6 November 1958 (MOD Records MO 26/10 Pt 1).

¹⁸ Correspondence between PM and Minister of Defence November 1958 (Cabinet Office 19/10/205/2). It was agreed at the Defence Committee on 5 November (D(58)24th Mtg) that the commitment to BLUE STEEL Mk 2 should be limited to design studies.

reductions in the size of the V-bomber front line, but at the same meeting, despite arguing strongly for BLUE STREAK, he was instructed to present an analysis of BLUE STREAK and BLUE STEEL costs in the next two years. For good measure, he was also asked to examine the possibilities of economy in all the main components of the deterrent, not excluding the V-bomber force.

All in all, the Defence Committee's several discussions in the last months of 1958 of both the deterrent and the associated air defences are notable for their indecisiveness. All the weapon options had been identified. Those which were most speculative - Polaris and what was to be SKYBOLT - were ones over which the government had no control; whereas it was put plainly to the Defence Committee that to make additional economies in the BLUE STREAK programme would halve its effectiveness (already less than it might have been) and delay the arrival of the weapon in RAF service until the end of the sixties. Even so, at its last meeting of the year (D(58)31st Mtg) Mr Macmillan decided that more time was needed. The formal conclusion of the meeting was "that the Prime Minister would arrange for further consideration to be given to the issues involved in deciding the level of defence expenditure in 1959/60."

Remarkably, neither the 1959/60 Defence Estimates or the future of BLUE STREAK were referred back to the Defence Committee during the following year. The size and distribution of the estimates were settled direct by the Ministers concerned, with the result, in the case of BLUE STREAK, that money was included for its continued development to a programme aimed at an IOC in 1963: in other words, one similar to the accelerated programme that Mr Sandys had proposed in mid-1958. For the time being at least, he had won his battle. In the Defence White Paper of 1959 he announced that, having reviewed the ballistic missile programme, the government had concluded that "on present knowledge" BLUE STREAK was the type of missile most suited to British needs; and in the ensuing Defence debate he said that the missile would be emplaced underground. But might "present knowledge" be succeeded by something better? It was the search for an answer that explains why deterrent weapons did not return to the Defence Committee agenda until early 1960.

Official Committees on Deterrent Policy and Weapons

Two committees in particular were the focus of official debate on deterrent policy and weapons, each producing reports which had a major influence. One was Sir Norman Brook's Committee on Future Policy, some of whose work has been described in earlier chapters; the other was the British Nuclear Deterrent Study Group (BNDSG). The significant report of the first - on Future Policy 1960-70 - was produced in February 1960, as a result of work begun in June 1959. The BNDSG's first interim report, which was important for BLUE STEEL Mk 2 as well as BLUE STREAK, was circulated somewhat earlier after a similar period of activity. There were some who served on both bodies, including Sir Richard Powell (MOD), who was the chairman of BNDSG at its inception, and Sir Edmund Hudleston (VCAS).

Joint studies of the future deterrent programme might well have begun earlier. In April 1958 the Admiralty had submitted a general case for a submarine-launched deterrent, to which the Air Ministry responded with some broad criticisms, suggesting that the Chiefs of Staff should be asked to carry out an examination.¹⁹ Mr Sandys accepted the suggestion and asked the Chiefs of Staff for their opinion on:

What would be the consequences for Britain and the United States when Russia had this type of weapon.

What changes in British defence plans, if any, would be required.

¹⁹ Lord Selkirk to Mr Sandys 21 April 1958). AHB ID3/193/14 Pt 1.
Mr George Ward to Mr Sandys 2 June).

Whether, having regard to Britain's military and economic resources, it was desirable and feasible for her to develop such weapons (in addition to, or instead of, BLUE STREAK) or to seek to secure them from the United States.²⁰

These questions were remitted to the Joint Planning Staff who made little or no progress: not surprisingly, for the intrinsic difficulty of the questions, especially the third, was compounded by the tendency of the two Services most concerned to take up inflexible positions.²¹ In any case, much more urgent matters - the Anglo/American intervention in Jordan and Lebanon, and the Middle East generally - were engaging the attention of Ministers and the Chiefs of Staff during the summer and autumn. But Mr Sandys returned to the subject in November, again provoking wide differences of view from the Admiralty and Air Ministry and a further plea from Mr George Ward for a study to be made of future deterrent weapons. Both Ministers were at one in seeing the study as much more than a weighing of the merits of BLUE STREAK and Polaris. Mr Sandys became more reconciled to it, and saw it taking at least six months for a relatively leisurely examination of the problem, once he had successfully resisted the pressure he had been under in the autumn of 1958 to abandon BLUE STREAK. Even so, although the Chiefs of Staff discussed in January 1959 the composition of a suitable group to undertake the study, it was not until June that Mr Sandys formally authorised the formation of the BNDSG. According to a senior Air Ministry official, the delay was deliberate; Mr Sandys feared that any earlier enquiry 'might take the heat off BLUE STREAK'.²²

By the time the BNDSG reported, the 1959 General Election had taken place. Mr Macmillan continued as Prime Minister but Mr Sandys was moved to the Ministry of Aviation: still much concerned with BLUE STREAK but no longer responsible to the same extent for defence and deterrence.

Work of the BNDSG

The BNDSG was a powerful group²³ headed by the Permanent Secretary MOD and acting as a sub-committee of Sir Normal Brook's Future Policy Committee. Its terms of reference could not have been simpler or apparently less controversial: "to consider how the British controlled contribution to the nuclear deterrent can be most effectively maintained in the future and to make recommendations". In fact, there was argument within the Air Staff about the phrase "British controlled contribution to the deterrent". This had been adopted on the suggestion of VCAS²⁴ as a more acceptable form of words than the more usual formulation - "the British independent deterrent" - whose implications Lord Mountbatten and Sir Gerald Templer had found objectionable. In so doing, VCAS had increased the risk of challenge to the purpose of the deterrent - so his staff thought. They argued that a "contribution" might be a smaller force than was needed to deter Russia by itself; that as this would then be no more than a supplement to much larger American forces, it need not be under British political control; and that this would play into the hands of Lord Mountbatten who wished to remain in the deterrent business with no more than a small force of Polaris submarines, thereby reducing expenditure on the deterrent to the benefit of conventional forces. This concern was understandable in the light of past disagreements and the claims for Polaris that Lord Mountbatten was currently making. On the other hand, if so distinguished a group as the BNDSG

²⁰ Mr Sandys to Sir William Dickson 24 June 1958.

²¹ A report was eventually produced by the JPS (JP(59)41 (Final)) on the first of Mr Sandys' questions. Its main conclusion was that Russian Polaris-type submarines were unlikely to be targetted against the UK which was already more than adequately threatened, from the Russian point of view, by bombers and IRBMs.

²² Letter from Mr R H Melville to CAS, 1 July 1959, in which he said that the information came from Sir Richard Powell (AHB ID3/193/14 Pt 1). MOD records (TS 407/101/024/63 Pt 1) confirm that Mr Sandys agreed to the study group reluctantly. The effective decision seems to have been taken at the meeting at Chequers between the Prime Minister and senior official advisers (Mr Sandys was not present) when it was also decided that the Future Policy Committee should be reconvened (see Ch 8, p195).

²³ Chairman Sir Richard Powell, Sir William Strath (Ministry of Supply), Sir Frederick Brundrett (MOD), Sir Patrick Dean (Foreign Office), Sir William Cook (AEA), Mr Bruce Fraser (Treasury), DCNS, VCIQS and VCAS.

²⁴ COS(59)4th Mtg 13 January 1958.

decided that its duty was to recommend major changes in deterrent policy it would not be prevented by its terms of reference; and VCAS, while conceding the sincerity of those who disliked his formulation, made no attempt to alter it.

When the BNDSG began its work the accepted time frame for future deterrent systems was the later sixties and beyond. The V-bomber force, with Blue Steel Mk I, was considered a credible deterrent up to about 1965. BLUE STREAK was the nominated successor for the main burden of deterrence. Even allowing for some delay in its development programme its deployment could safely be expected to have begun by 1965 and be completed by the end of the decade. But whether it should bear the whole burden was open to argument. As far as the Air Staff was concerned, there were good reasons for looking still further ahead: to a period after 1970 when effective Russian ABM defences might have to be faced. The case had been stated, on CAS's advice, in a minute from Mr Ward to Mr Sandys in December 1958.²⁵ This affirmed that a defence against the ballistic missile would certainly be developed eventually and that "the ballistic missile in any form will become invalid as a deterrent". It went on to describe the essential characteristics of a manned aircraft system which would be effective in the long term: a VTOL or VSTOL aircraft, optimised for endurance rather than speed, with a cruise missile of variable trajectory, part of which at least would be at low level. With memories of 1957, the minute disclaimed any resemblance between such an aircraft and the cancelled supersonic bomber (OR 330); the aircraft in mind, besides having the advantages of a poised and recallable deterrent, would be generally useful with conventional weapons. The merits of this concept could be argued at length. Set in its context, it was significant in two respects. First, it constituted a counter-proposal to Polaris as a deterrent system valid in the long term; secondly, it rationalised the opposition within the Air Staff to a possible future in which strategic deterrence was based entirely on a non-airborne system, even if that system was BLUE STREAK. Mr Ward's minute claimed that if BLUE STREAK, instead of totally replacing the V-bombers, was deployed to supplement the V-bombers (which would later be replaced by a more advanced aircraft) only about half the planned number of BLUE STREAK would be needed; programme costs would be much the same over the next ten years and thereafter would be less. It was on this approach that the Air Council in 1959 assumed that the BLUE STREAK force would be of 60 missiles whereas previously as many as 120 had been considered necessary if BLUE STREAK alone was to maintain the weight of strike of which the V-bomber force and the 60 Thor missiles were capable.

At the time - December 1958 - of Mr Ward's minute to Mr Sandys, the Air Council regarded itself as fully committed to BLUE STREAK. Serious work was in hand on the design of a prototype underground site, and the geological and military criteria for a comprehensive pattern of deployment had been identified. Nevertheless, when the BNDSG began its meetings in July 1959 there were signs that a kind of schizophrenia was developing within the Air Ministry. To argue for BLUE STREAK on the grounds that it would not be vulnerable to pre-emptive attack might damage the prospects of a successor aircraft to the V-bomber; yet to admit that BLUE STREAK would eventually be vulnerable would amount to capitulation to those who were willing to abandon it, if only on cost grounds, and would bring deterrent policy into disarray. What might be the extent of this vulnerability had been quietly studied by an Air Ministry working party which began work in 1958 and reported in the summer of 1959. Whether underground siting was necessary, despite the expense, was not the most difficult question to answer; the case for this was overwhelming if BLUE STREAK was to have any credibility as a retaliatory weapon. Even so, the time would come when, in the words of the report,²⁶ "in the absence of air defence and/or a clear political decision to fire BLUE STREAK before a nuclear explosion on the UK, the enemy may have the means at his disposal to eliminate a high proportion ofsites". This conclusion was not more definite only because of uncertainty about the rate at which the Russian atomic stockpile would grow. But the essential point was clear enough - and a separate group reporting to the Chiefs of Staff took the same view: by 1970 (which was when the BLUE STREAK force was due to be fully deployed) Russia would have the numbers and accuracy of ballistic missiles to launch a heavy attack on the BLUE STREAK sites. To look to improved air defences, including an ABM system, to provide reasonable assurance of the effectiveness of BLUE STREAK would have been to ignore the heavy pressure that was being imposed

²⁵ S of S for Air to Minister of Defence 16 December 1958 (AHB ID3/193/14 Pt 1).

²⁶ A copy of this report is in AHB ID9/193/5/Pt 1.

imposed on the Air Ministry to economise in this area. In these circumstances, the conclusion of the Air Ministry working party - that BLUE STREAK, if its use as a first strike weapon was ruled out, would be open to attack - is wholly understandable. This was to be a crucial point for the BNDSG.

If there were question marks against BLUE STREAK as the successor to Thor, so there were against the weapon to succeed Blue Steel Mk 1 as the means of prolonging the life of the V-bomber force. The possibility of replacing BLUE STEEL Mk 2 for this purpose by an American weapon was in mind before the end of 1958. At that time the Air Ministry was anxious to place a full development contract for the British weapon, but the Defence Committee decided that no more than design studies should continue in the expectation that these could be cancelled by the summer of 1959 "if the suitability of the American weapon was confirmed".²⁷ Economies in defence expenditure in the year immediately ahead seem to have been the main reason for this decision rather than the potential superiority of the American project for a ballistic missile over the British cruise missile. Mr George Ward tried to persuade the Prime Minister to a different decision, without success, pointing out that the saving in money in the year ahead would be insignificant and that the British development should be undertaken "until and unless an effective American weapon can be seen to be available with certainty".²⁸ This continued to be the Air Ministry's position for much of 1959, sustained against a growing momentum in MOD in favour of the American weapon. As early as January 1959, on a visit to North America, Sir Frederick Brundrett, the MOD Chief Scientific Adviser, signalled his belief that the British project should be cancelled because the American weapon would be better. That he reported at the same time that the Americans had not made up their minds on which of a number of technical solutions should be adopted suggests that this advice was premature and inadequately considered.²⁹ Six months later it was still doubtful whether the Americans would find room in their programme for the new weapon. The best intelligence available to Whitehall suggested that the Eisenhower administration would make a decision in the autumn when it would be considering the US defence budget for 1960/61. Again Mr Ward made representations, this time to Mr Sandys, for the design studies of BLUE STEEL Mk 2 to be funded at least until the end of the year as they were. On this occasion, however, as a result of more than one discussion in the Air Council,³⁰ Mr Ward agreed that "if the Americans decide to develop a weapon, and provided that arrangements can be made for the RAF to be supplied with it and with warheads on terms which are compatible with the continued independence of our deterrent, I would certainly accept it".³¹

So SKYBOLT, at any rate as an option, was blessed by the Air Council on what were recorded as "technical and economic grounds": technical, in the sense that a successful ballistic missile would be a more formidable deterrent than a relatively unsophisticated cruise missile such as BLUE STEEL Mk 2; economic, because it would reduce expenditure on the R and D programme in the years immediately ahead. And by extending the operational capability of the V-bomber force beyond what seemed likely with the more vulnerable British weapon it offered more promise of the deterrent remaining with the RAF.³² Two warning notes were sounded: by the Controller of Aircraft, that allowing for the development

²⁷ D(58)31st Mtg 22 December 1958.

²⁸ MOD Records MO 26/10 Pt1.

²⁹ Telegrams to MOD from Washington and Ottawa 8 and 10 January 1959 (MOD Records MO 26/10 Pt 1). What may well have influenced him was the hope that BLUE STREAK, which he had always strongly supported would stand a better chance of survival if BLUE STEEL Mk 2 was taken out of the overstretched UK R and D programme.

³⁰ AC(13)59 and AC(14)59 (the minutes of the later meeting were given a specially restricted circulation).

³¹ Mr Ward to Mr Sandys, 24 June 1959 (MOD Records MO 26/10/2 Pt 1).

³² Considerably longer airframe life for the Mk 2 V-bombers than had earlier been assumed was beginning to be predicted at this time, as a result of engineering studies. Forecasts of up to 6000 flying hours - over 15 years service at normal flying rates - were to prove fully justified.

and production of a British warhead. SKYBOLT could not be expected to be in service before BLUE STEEL Mk 2; and by PUS, that "it was vital not to abandon the British weapon unless it was quite clear that a satisfactory alternative had been adopted."³³

Against this background, the issues to be faced by the BNDSG were clear. First and foremost, they had to consider the relative quality - and with this went credibility - of several possible weapons: BLUE STREAK, Polaris, BLUE STEEL Mk 2 and SKYBOLT, each of which had to be measured against Russian offensive and defensive capabilities as foreseen over the next ten to fifteen years. Costs were another consideration, as was the time scale within which new weapons should be introduced. Discussion of deterrent policy could hardly be avoided, although strictly outside the group's terms of reference, if only because they inherited an assumption about the scale of threat - in other words, a criterion for what was considered necessary for effective deterrence - of which the currently planned strike forces were capable. They were well of the unfavourable financial climate which meant that the RAF, as the custodian of the deterrent, was in the position of a defendant required to justify his claim on scarce resources. Following the Air Council's current policy, VCAS had to argue the case for a weapon, BLUE STREAK, about which there were misgivings even within the Air Ministry and another weapon, BLUE STEEL Mk 2, for which a better alternative might be available. It was not a comfortable position for him.³⁴

Interim Report of BNDSG

After six months of intense application to numerous memoranda and analytical studies the BNDSG made its crucial interim report at the end of 1959.³⁵ This had emerged only after several redrafts, with the Air Ministry finding most cause to object to the successive attempts of the hard worked secretariat to produce an agreed document. The difficulties were not so much about the facts - such as the capabilities of weapons, whether defensive or offensive, and whether British, American or Russian - as about the conclusions to be drawn from them. A description of its discussions and debates might be an interesting case study of the committee method of problem solving, but it would be excessively detailed. Instead the formal conclusions and associated recommendations of the BNDSG are described, with the factors that came into the argument.

a. **The V-force and Blue Steel.** The relevant conclusions (para 50 of the report) were:-

The V-bombers, armed with Blue Steel Mk 1, will be increasingly ineffective after 1965.

If BLUE STEEL Mk II were developed and put into production, it would only extend the effective life of the V-bombers by two or three years after 1965.

If the United States airborne ballistic missile WS 138A (SKYBOLT) were successfully developed and produced and could be fitted to the V-bomber force, the effective life of the force could be extended until about 1970, when the frontline strength would begin to run down.

The V-bombers, irrespective of the weapons with which they were equipped, would be vulnerable to a Soviet pre-emptive attack on their bases, though part of the force would escape.

³³ It is unlikely that Sir Maurice Dean meant that work on BLUE STEEL Mk 2 should continue until SKYBOLT came into service with the USAF; agreement to pay the heavy premium needed for this degree of insurance would have been unobtainable. It is more likely that he was against cancellation until substantial funds had been voted for the SKYBOLT project. This had not happened at this time.

³⁴ An anonymous paper in VCAS's files showed awareness of the defensive position in which the RAF found itself: a situation in which "no weaknesses can be admitted either to the other Services or to the Treasury". The author suggested an examination of weapon options based on the premise of a mixed strategic offensive force. He saw this as probably leading to a role for the Navy as well as the RAF and to a better balance within the RAF between deterrent forces and those needed for conventional tasks. This interesting memorandum, dated 7 July 1959, is in AHB ID9/193/5 Pt 1.

³⁵ BND(SG) (59)19(Final) 31 December 1959 (MOD Records TS 407/101/024/63 Pt II).

The first of these conclusions was never challenged, though the point was frequently made that the process would be gradual. It was not in any case an assertion that the Air Ministry saw any point in debating. For one thing, in the context of the BNDSG task - to consider what systems might succeed the V-force - it was a reasonable assumption; the V-bombers would undoubtedly become progressively more liable to very heavy losses if they penetrated Russia at high level, and at this period the Air Staff had no thoughts of operating the force at low level. For another, it implied that Blue Steel Mk I, the first new weapon in the Air Ministry's programme for maintaining the deterrent, would be brought into service. This was duly recommended: "the development of Blue Steel Mk I should continue and the weapon should be put into service as soon as possible".

The conclusion about BLUE STEEL Mk 2 was debatable. Until well into November VCAS had protested against what he considered a serious underrating of the effectiveness of this weapon. As currently conceived, its range (900 nm) would massively reduce the vulnerability of the launching aircraft; and its speed (Mach 3) and short time of flight after radar detection (3 to 4 minutes) would make its interception so difficult that if any effective surface-to-air defence could be mounted against it the weapons would have to be nuclear-tipped. These would have to be deployed on a large scale; could the Russians allocate sufficient fissile material? At a later stage, decoys and ECM could be embodied in a developed Blue Steel and its flight profile varied to include a low level terminal phase, making its interception even less likely.³⁶ VCAS argued that the system would be effective in itself and even more useful as one of two means of maintaining the deterrent, the other being BLUE STREAK; and he was willing to reduce the contemplated scale of BLUE STREAK deployment, in the interest of retaining BLUE STEEL Mk 2. He did, however, concede that if SKYBOLT could be obtained on acceptable terms and within the required time-scale the Air Ministry would accept the abandonment of the British weapon.³⁷

That in no more than a fortnight after VCAS had made the case for BLUE STEEL Mk 2 the project had been effectively cancelled was not because of a sudden loss of confidence in the Air Ministry or because the SKYBOLT possibility became more certain. As late as 27 November VCAS was arguing for a diversified deterrent - a deployment of 30 rather than 60 BLUE STREAK and BLUE STEEL Mk 2 for the V-force - which would be valid at least until 1970. Thereafter, the airborne component would be armed either with SKYBOLT, if obtainable on the right terms, or a British ballistic missile. Three days later, however, the Ministry of Aviation representative (Sir William Strath) on the BNDSG announced that the resources available at the Royal Aircraft Establishment (RAE) and the Royal Radar Establishment (RRE) were inadequate to achieve satisfactory progress with the development of the two marks of Blue Steel and TSR2 as well. He proposed that priority should be given to the first mark of Blue Steel and the aircraft.

Judging by the icy response of VCAS³⁸ it seems unlikely that the Air Ministry had been forwarned. But there was nothing to be gained by continuing to press for the development of an expensive weapon (the current estimate was £50 - 60m, with substantial further expense for the improvements which would extend its operational life) which had few supporters outside the Air Ministry. The options were more theoretical than real. Blue Steel Mk I was needed to maintain the effectiveness of the V-force in the mid-sixties, and its development could not be allowed to languish: TSR2 was regarded as crucial to both the operational effectiveness of the RAF and the health of the aircraft industry. By the end of the year the Air Ministry had formally accepted the the position. It made no protest against the unqualified recommendation of the BNDSG that "BLUE STEEL, Mk II, should be cancelled"; and in the final stages leading to the completion of the BNDSG report most of VCAS's

³⁶ Even so, one distinguished scientist continued to maintain that nuclear-tipped SAGW would be an effective counter to the low level threat - whether from cruise missiles or aircraft such as the TSR2. To put it politely, the Air Ministry doubted whether the Russians would think this a good idea.

³⁷ Minute from VCAS to Sir Richard Powell 19 November 1959 (MOD Records TS 407/101/024/63/Pt II).

³⁸ Letter to Sir William Strath, 1 December 1959 (AHB ID9/1/26 Pt 1).

efforts were directed to promoting the V-bomber/SKYBOLT concept: not without difficulty, particularly over the question of the vulnerability of the V-force to pre-emptive attack. And if the V-force was arguably vulnerable, how much more might be BLUE STREAK?

b. **BLUE STREAK.** The conclusions of the BNDSG on BLUE STREAK were:-

Until the Soviet union had deployed an efficient system of defence against ballistic missiles, BLUE STREAK would not be vulnerable once it had been fired and had successfully got away from the launching point. It would, whether deployed underground or on the surface, be vulnerable to pre-emptive attack. It would therefore be effective only if it were fired first, for example, in reply to a Soviet attack with conventional weapons.

Because BLUE STREAK missiles could only be successfully fired before a Soviet nuclear attack on this country, it would not strictly be necessary to deploy them underground. An underground deployment would however considerably complicate the task of the Soviet forces in return for a proportionary small increase in cost.

The full text of the section of the report that was held to justify these conclusions is at Appendix M. Calculations of the scale of attack that would be required to destroy the BLUE STREAK system, or at least reduce its retaliatory capability to an acceptable level,³⁹ were based on a 60-weapon deployment. How quickly the system could react; how much time would be available, depending on the method of attack open to the Russians; what types of weapon could be used against it - these were the main features of the problem of survivability, as the BNDSG saw it. Some assumptions were made that were as much political as military. One was that it was not necessary to assume a 'bolt from the blue'. At least 24 hours warning could be expected, in which time all deterrent forces could be brought to the highest possible state of readiness. Even so, taking the worst case - a pre-emptive missile attack on the United Kingdom alone at short (650 nm) or medium (1000 nm) ranges on the lowest practicable trajectories (to reduce radar warning) - the BNDSG reported that "very few BLUE STREAKS could be successfully launched, even though they were at 30 seconds readiness". VCAS thought that this was too pessimistic: reasonably enough, in view of the analytical work that had been submitted to the BNDSG.⁴⁰ Nevertheless, on the all-important assumption that a pre-emptive strike would be made against BLUE STREAK, even its most enthusiastic supporters would have been bound to admit that the system was open to serious damage, if not total destruction. And, granted the assumption, the possibilities of evading attack would depend on extremely rapid response. In particular, the notional reaction time allowed only 25 seconds for simultaneously communicating the warning that an attack was on the way to the BLUE STREAK sites and to the command post at which the political decision to retaliate would be taken if delegated authority had not already been given. The BNDSG's conclusion was that to avoid successful attack on the sites, ~~"authority would need to be delegated authority had not already been given. The BNDSG's~~

³⁹ The BNDSG could have had no idea of what level of retaliatory damage, if any, a Russian government would regard as acceptable. At an early stage of the study much time was spent on the ability of Russia to absorb and survive physical damage and casualties, as evidenced by its losses between 1941 and 1945: a doubtfully relevant examination but one which the Air Ministry did not discourage in the belief that it would justify the criterion of deterrence represented by the existing V-force.

⁴⁰ In what was his last effort to achieve what he considered a better balance to the report, VCAS asked unsuccessfully for this wording to be changed to "some BLUE STREAKS might not be launched successfully even though they were at 30 seconds readiness". The analysis of warning and reaction times presented to BNDSG was based on the two possible readiness states of BLUE STREAK: 4½ minutes, which could be maintained indefinitely, and 30 seconds, which could be maintained for 10 hours with a further 3 hours elapsing before the missile was again ready to be launched. To each readiness figure had to be added the time - estimated at 1¼ minutes - during which BLUE STREAK would be vulnerable after launch to a 3 MT ground burst. Assuming that all the command and control procedures went as planned, the analysis concluded that the time available for action before missiles landed in Britain would be 4¾ minutes if the attack was from 650 miles range and 7¾ minutes for 1000 miles. It followed that BLUE STREAK at 4½ minutes readiness could not be successfully launched to evade the first type of attack but, in theory at any rate, this could be achieved in all other cases, including the 650 mile case, if BLUE STREAK was at 30 seconds readiness.

~~conclusion was that to avoid successful attack on the sites.~~ "authority would need to be delegated to order nuclear retaliation on radar warning alone"; they went on to say, in the one purple passage of an otherwise unemotional report, "we do not believe that any democratic Government would be prepared to delegate authority on issue of such appalling magnitude".⁴¹

If reaction to a pre-emptive attack would be problematic, what problem would confront the aggressor? The BNDSG had received much advice about Russian missile capabilities, as these were expected to develop during the sixties. Reliable intelligence beyond the next few years was lacking, and analysis was based mainly on the assumption that the Russians would lag little behind the West. Summing up this aspect of its work, the BNDSG said that between 300 and 400 missiles with warheads of at least 3MT would have to be delivered to an accuracy of about half-a-mile if the Russians were to be confident of destroying almost all (95 per cent) of the BLUE STREAK sites. They added that allowing for nuclear-tipped air defence weapons and for the need simultaneously to pose a serious threat to the United States, the Soviet stockpile would be sufficient by 1967 to provide the necessary number of warheads.

No reader of the BNDSG report could doubt that it called into serious question the credibility of BLUE STREAK as a deterrent, on grounds that involved two assumptions: that the British deterrent, whatever form it took, would only be used in retaliation and that, if it took the form of BLUE STREAK, it could be destroyed by a pre-emptive strike. With the improvement in Russian nuclear strike forces, the first of these assumptions was scarcely any longer a matter of argument, though this was not to say that it should be publicly conceded. But whether the second assumption was itself credible was not self-evident to all who were associated with the work of the BNDSG. Even if Russian capabilities were matched by their intentions (and the JIC continued to advise that the Russians would not launch a global war), was it credible that Russia would attack on a scale which, to destroy the BLUE STREAK system, would also make a desert of the United Kingdom? Would Russia discount the possibility of retaliation from the United States? The BNDSG itself drew attention to this factor but without commenting on what the Russians might make of it⁴². In any case, could the Russians ever be sure that not enough BLUE STREAKS would survive to launch a serious retaliatory attack? All these doubts were raised, several times by VCAS who was concerned as well at what he considered a tendency to exaggerate the pre-emptive threat to V-bomber bases and dispersal airfields. And within MOD there were doubts, as the report began to take shape, about where it was leading.⁴³

⁴¹ The BNDSG is perhaps open to criticism here, for misleading itself and possibly Ministers. In the circumstances envisaged, the government would be managing an apprehended crisis, and the decision to fire would be one that the government could keep in ministerial hands with no significant loss of reaction time.

⁴² There was some discussions in the BNDSG of the retaliatory prospects if the Russians attacked the United States as well. Would such an attack be so timed that missiles exploded simultaneously in the US and the UK? If so, more warning time would be available to launch BLUE STREAK. If, however, missiles were launched simultaneously against both countries, a heavier retaliatory attack by the Americans would be more likely.

⁴³ Sir Solly Zuckerman, who was consulted by Sir Richard Powell in view of his forthcoming appointment as Chief Scientific Adviser, agreed, granted the crucial assumptions, that there was no case for BLUE STREAK; on the other hand "if the Russian attitude is what it is supposed to be, there is every reason to press on". (Minute of 30 November 1981, MOD Records TS 407/101/024/63 Pt II). Mr R C Chilver, another senior MOD official, was in no doubt that what the BNDSG were moving towards saying would lead to the abandonment of BLUE STREAK. Less prophetically, he went on to say that "after a period spent in toying with the idea of getting the Americans to supply us with the means of acting independently of themselves [Ministers] would come to the conclusion that the whole operation was too difficult and expensive to be sustained". But one formulation which he proposed, without success, for inclusion in the report was placed in a wider context than the speculative "war game" scenarios of the BNDSG report: "if BLUE STREAK is regarded as a component of the Western deterrent forces its vulnerability to pre-emptive attack is not of cardinal importance, because the Soviet Union could not make a pre-emptive attack on Western forces as a whole until well after 1970, if ever. How far its vulnerability is important if it is considered in isolation, goes beyond the scope of our enquiry. It is certainly not obvious that its value as an instrument of national policy is undermined by the fact that the Russians will be able by 1970 to prevent its being used against them by their taking the initiative in launching a forestalling attack" (Minute to Sir Richard Powell 7 December 1959, *ibid.*).

SECRET

The proviso that the BNDSG attached to continuing with the development of BLUE STREAK amounted to a vote of no confidence in it: it was that Ministers should regard it as a "fire first" weapon. Their recommendations then followed logically enough, the more so as BLUE STEEL Mk 2 was on the point of cancellation:-

Ministers should consider whether it would be acceptable for this country to be seen to be wholly dependent between 1965 and 1970 upon the United States for the weapons (apart from the warheads) used by the British contribution to the nuclear deterrent.

If the answer is "Yes", an approach should be made to the United States Government with a view.

- (i) to securing that the V-bombers should be armed with WS 138A (SKYBOLT) by 1966; or
- (ii) to obtaining a number of POLARIS-firing submarines by a comparable date.

If.....and when satisfactory dates and quantities on either.....have been negotiated, BLUE STREAK should be cancelled.

If the answer is "No" or if satisfactory arrangements cannot be negotiated, a thin period for some time after 1965 will be inevitable and the choice will be between

- (i) accepting the limitations of BLUE STREAK and proceeding with its development and deployment; and
- (ii) cancelling it and accepting whatever gap there may be in the continuity of the British-controlled contribution to the nuclear deterrent in order to free resources to develop an effective mobile weapons system as soon as possible.

These recommendations offered the government a provisional choice between relying on American co-operation and either a dubiously credible system in BLUE STREAK or a new British weapon - air-launched or submarine-launched - which could not be available, according to the report, until the early seventies even with American assistance in development. It followed that unless the government took a risk on BLUE STREAK or accepted a gap in deterrent capability, it had no other choice than to decide between Polaris and SKYBOLT.

c. **Polaris and SKYBOLT.** Memoranda on the characteristics of these two systems had been submitted to the BNDSG, and were discussed and argued at some length. On the face of it, there was inconsistency in the report between its unfavourable view of BLUE STREAK because of its vulnerability and its acceptance of SKYBOLT as a possible alternative. Once airborne and successfully launched, SKYBOLT would pose a threat against which no effective defence could be mounted, certainly until some time in the seventies and almost certainly for much longer. But what about the vulnerability of its carrier to pre-emptive attack? In dealing with this question the BNDSG made no greater claim than that "some of the bombers would probably be able to escape" and that the risk of destruction on the ground could be reduced in a time of tension by "maintaining a proportion of the force on standing patrol" - for short periods. Even if this assessment was, as VCAS said (as he had said about BLUE STREAK), too pessimistic the case for an airborne system, as presented by the BNDSG, was only marginally stronger than that for BLUE STREAK.

There were in fact advantages in an airborne deterrent which the Air Ministry regarded as crucial. One was the ability to signal unmistakeably by appropriate alert procedures, including aircraft on airborne alert, the intention to resist aggression; another was the inherently smaller risk of over-reaction in a crisis, since aircraft could be launched under positive control. These arguments would probably not have prevailed with the majority of the BNDSG in a straight argument about the respective merits of SKYBOLT and Polaris. Nevertheless, it is clear from the working papers of the group that a consensus of view favourable to SKYBOLT began to emerge during the last weeks of 1959. This was that the case for BLUE STREAK could not be convincingly argued; that SKYBOLT would be a useful interim weapon from the mid-sixties until early seventies; and that the prospects for Polaris would be best considered as part of a further examination of the deterrent system to be adopted for the seventies onwards.

It was a view which the Admiralty representative (VCNS, Admiral Durlacher) shared. Polaris was still under development, and though the Admiralty were confident that adequate range and accuracy would be achieved, there was much to be said for waiting on events. If Polaris was adopted, the Admiralty had a strong preference for building the boats in Britain which would mean that building could not begin with 1965 and that, if BLUE STREAK was cancelled, some other weapon than Polaris would have to be introduced to fill the deterrent gap between 1965 and the early seventies. To achieve the accepted criterion of deterrence with Polaris would call for nine boats at a cost currently estimated (underestimated, in the view of the Air Ministry) at £350m - less, but not all that less, than the cost of completing BLUE STREAK, and not easy for Ministers to defend when added to the expenditure already committed to BLUE STREAK. Whether the criterion would continue was coming into question as a result of the activities of the Future Policy Committee. These were indirectly referred to in the BNDSG report: "nuclear forces with some lesser capability might still be regarded as constituting a significant contribution to the western deterrent, provided that the forces were large enough to be operationally viable". All in all, as seen from the Admiralty, there was much to be said for not pressing the choice of Polaris at this time, even though this strengthened the case for SKYBOLT, and for leaving deterrence in the longer term to be argued afresh, possibly in terms of a smaller capability.

The position of the Air Ministry was altogether more difficult. During the BNDSG discussions VCAS had been consistently advised that the case against BLUE STREAK was predicated on an assumption of a massive Russian pre-emptive attack for which such indications as could be discerned were all the other way. In short, BLUE STREAK - as one Air Ministry official put it - had been unfairly treated. But this was not to say that the Air Ministry's plain duty was to advocate the completion of its development and its deployment as the best way to maintain deterrence. It had already come close to cancellation; the costs were formidable and Mr Sandys as Minister of Aviation was encountering similar difficulties over its funding as when he was Minister of Defence; and difficult siting problems were looming, even with a smaller deployment than 60 weapons.⁴⁴ There was a case for hedging the bet; and the possibility of acquiring SKYBOLT provided the means. It offered greater assurance that the V-force would remain in business for several years after 1965, and thereby retain the experience that Bomber Command was accumulating, in co-operation with the USAF, of operating the deterrent - target co-ordination, special training and all the procedures associated with readiness, dispersal, reactions to the Anglo/US and NATO warning systems, and the obtaining of political decisions. These were strong arguments, in the national as well as RAF interest, for presenting Ministers with an alternative RAF-manned system to BLUE STREAK; and even more compelling when, as some of the Air Ministry staff believed, a majority of the BNDSG favoured Polaris as the long term deterrent system.⁴⁵

⁴⁴ The geological and political requirements of underground emplacement, which was the most sensible mode of deployment, were proving difficult to satisfy. Deployment in the more sparsely populated eastern half of the country was politically desirable but geological conditions were in general more unfavourable than in the western half, which was also the better area for military reasons. Unfortunately, there were strong Home Office objections based on evacuation plans that were doubtfully sound, if indeed even consistent with a policy of deterrence. Nevertheless, it was very apparent by the end of 1959 that severe practical and political difficulties would have to be overcome if BLUE STREAK was to be satisfactorily deployed in substantial numbers.

⁴⁵ A long list of amendments which VCAS was advised to make to one of the later drafts of the BNDSG report was illuminated by this preface:-..... "the report, as at present drafted, is so damaging and misconceived that it could in time jeopardise the continued existence of the Royal Air Force as an independent service. On virtually no evidence it advocates a submarine deterrence and dismisses in greater or lesser degree (and mainly on false premises) every deterrent weapons system which could be deployed by the RAF. If we have no deterrent, a fortiori we need not defend it. The breakup of those Commands of the Royal Air Force whose primary role is support of maritime or land/air warfare may then only be a matter of time". (Minute by Mr R C Kent, 15 December 1959 - AHB ID9/1/26 Pt 1). VCAS forwarded the majority of the amendments, most of which were directed to the long term feasibility of airborne deterrence, first by SKYBOLT and V-bombers and later by introducing a new long-endurance aircraft. The one amendment of substance which VCAS did not accept argued for basing the deterrent on an airborne component and a smaller number of BLUE STREAKS than currently planned.

Whether or not these suspicions were justified, the BNDSG report expressed no preference between airborne and submarine systems. Its conclusion that no reliance could be placed on bases such as Gibraltar, Malta, Cyprus and Aden for deterrent operations even up to 1970 was curious, if only because this cast doubt on the facilities for V-bombers at certain overseas airfields which Ministers had already authorised. But nothing was said that might prejudice any final decisions as between Polaris and an airborne system, nor was it suggested that Polaris was a conceivable alternative to SKYBOLT if arrangements could be made to purchase submarines at some early date from America rather than build them in Britain. The field was left clear for a decision to acquire SKYBOLT. For the longer term, the recommendation was simply that "the Study Group should complete its investigation of the most suitable form of long endurance mobile ballistic missile system".

Views of Future Policy Committee

It is rarely easy to be sure about the extent of the influence of official committees, however distinguished their membership, on decisions of government but the report of the BNDSG, which had been set up with the personal approval of the Prime Minister, was bound to be taken seriously.⁴⁶ When it was circulated at the end of December 1959 Mr Macmillan was about to leave for his African journey, and the issues it raised could not be considered by the Defence Committee until late in February. Mr Macmillan made this clear at the final meeting of the Defence Committee in 1959; and at a private meeting with the new Minister of Defence, Mr Watkinson, he discouraged him from trying to formulate a deterrent policy for the next decade and beyond. Mr Watkinson could, however, look forward to a period of several weeks in which he could consider his own position, obtain the advice of the Chiefs of Staff Committee and also take into account what the Future Policy Committee had to say about nuclear matters. This committee, even more high-powered than the BNDSG, had addressed the question of nuclear deterrent policy at a meeting in December.⁴⁷ Much of the discussion was on familiar lines. Deterrence - yes, said Lord Mountbatten, but provided that sufficient resources were allotted to world-wide commitments and conventional forces, a view which he said the Americans supported to the point where they were concerned that nuclear expenditure might reduce the British effort overseas. He was supported by the Foreign Office and CNS. No less familiar was the response of CAS. He agreed that US weapons, on acceptable conditions, would make it possible to economise in R and D expenditure, but the British deterrent should be capable by itself of inflicting unacceptable damage on Russia; this need not cost more than 10% of the defence budget, either in the next five years or for a longer period. He was supported by Sir Richard Powell and, to some degree and possibly to his surprise, by Sir Roger Makins of the Treasury who agreed that the size of the British deterrent should be sufficiently significant to weigh with the Americans as well as the Russians. Semantics continued to be a difficulty: 'the maintenance of the British independent deterrent' meant one thing; 'a significant contribution to the western deterrent' meant something else - certainly less in terms of size, possibly less in terms of unfettered political control.

Summing up the discussion, Sir Norman Brook - the closest of all those present to the Prime Minister - claimed unanimous agreement for the view that a policy of unilateral nuclear disarmament should not be adopted but neither was there any hope of maintaining sufficient strategic nuclear forces "to take on Russia on our own": a formulation⁴⁸ which signified no more than the belief of the majority of the committee that a smaller nuclear capability could still achieve the political objectives of a deterrent policy, whether considered in national or NATO terms. No one country - Brook said - not even the United States, could on its own prevent the position of the Free World being eroded by the Russians, and later by the Chinese.

⁴⁶ It was printed with the standard instruction designed to ensure that highly classified documents were issued only to a named minister or official. The copy used by the author is subscribed - "issued for the personal use of HISTORY". So someone thought it of more than passing importance.

⁴⁷ FP(A)(59)7th mtg 4 December 1959 (AHB ID3/1/60 Pt 2). Sir Norman Brook was chairman; CDS (Lord Mountbatten), the three Service Chiefs of Staff, the permanent heads of the Treasury, Foreign Office, CRO and MOD, and Lord Plowden of the AEA were present.

⁴⁸ In his copy of the record of the meeting CAS put a large question mark against these words.

Most of the differences that arose between Sir Dermot Boyle and his colleagues were matters of detail and could be, and were, settled by careful wording which avoided the need for a dissenting minority report. One important difference remained. CAS believed that the ability to threaten Russia to the extent that the V-force would be capable (the 40 cities criterion) should be maintained in future as an insurance against any aberrations, whatever form these might take, in American policy. Insofar as this was an expression of the real purpose of an "independent deterrent" the majority of the committee disagreed. Their preferred formulation was that the force should be of a size which was accepted by the Americans and the NATO nations as a whole as a significant contribution to the western deterrent. Just what different size of force this difference of view signify was not identified. The Committee's report suggested that this should be left for further study and for discussion with the Americans. But the stress placed in the report on maintaining "a proper balance between the modernisation of other forces and what we allot to the deterrent" can be seen as encouraging a further review of defence priorities. This was not a point of view favourable to continued expenditure on BLUE STREAK, especially when the report also made much of the importance of an Anglo/American co-operative approach to deterrence.

The trend of the report (not circulated in final form until the Prime Minister returned from Africa in mid-February 1960), together with the BNDSG report, was well enough known to Mr Watkinson and was taken into account in the advice he was given by his own staff.⁴⁹ The by now obvious points were made: Ministers should make up their minds not just about the deployment of BLUE STREAK but also about whether the country should stay in the business of large rockets, if only for space exploration; if they baulked at totally abandoning the project, about £50m a year would have to be spent anyway; and if this argued for making some military use of BLUE STREAK, a small deployment of about 20 weapons might be appropriate provided a second deterrent weapon was available (Mr Watkinson had already concluded that it would not be right to depend wholly on BLUE STREAK). Most remarkably, in view of the emphasis the BNDSG had placed on the vulnerability of BLUE STREAK to pre-emptive attack, the minute said this:

From a practical standpoint, this vulnerability is irrelevant because there is no foreseeable circumstance in which the Soviet Union could launch such a pre-emptive attack. BLUE STREAK is therefore valid as a deterrent. But obviously an invulnerable system would be better.

In sum, the burden of this advice was that Ministers might find it extremely difficult to go as far as complete cancellation of BLUE STREAK, to the total loss of all that had been spent on it; and that, if Ministers came to that conclusion, the deterrent value of the weapon in conjunction with an airborne weapon such as SKYBOLT should not be underrated. The minute nevertheless contained a warning that in view of the latest information about the likely availability of SKYBOLT the Chiefs of Staff were likely to conclude that, on military grounds alone, there was no justification for continuing with BLUE STREAK.

Views of the Chiefs of Staff Committee

The Chiefs of Staff gave their views early in February.⁵⁰ They could not have been clearer:

We need a new strategic nuclear weapon system to replace the V-bomber/Blue Steel Mk 1 in about 1966, but since we regard BLUE STREAK as a "fire first" only weapon we do not consider that it meets this need. We therefore recommend the cancellation of its further development as a military weapon. We also recommend the cancellation of the planned deployment.

⁴⁹ Minute to Mr Watkinson 24 January 1960 (MOD Records TS 407/101/024/63 Pt II). This was said to carry the agreement of Sir Solly Zuckerman (now in post as Chief Scientific Adviser) and the DCDS (Air Marshal Sir Alfred Earle).

⁵⁰ COS(60)28 of 6 February 1960. This memorandum was produced after the Chiefs had held two meetings - on 26 and 27 January - a record of which is in the Secretary's Standard File. From what was clearly a lengthy discussion two points are particularly notable. One is that the Chiefs recognised the risk, military as well as political, in changing to a policy of dependence on American weapons. Secondly, CDS (Lord Mountbatten) envisaged SKYBOLT as an interim system, with deterrence in the longer term taking the form of Polaris submarines.

The BNDSG report, which the Chiefs of Staff had received, had pointed in the same direction but the Chiefs went further. One of the options presented by the BNDSG was to continue with BLUE STREAK, accepting its limitations, if SKYBOLT or Polaris could not be obtained. The Chiefs disagreed: "if, in the event, it transpires that we cannot obtain [SKYBOLT] or Polaris from the Americans on acceptable terms, we will have to accept a gap in our nuclear capability, whilst doing everything in our power to reduce it." In other words, a gap of several years in effective deterrence would be a lesser evil than going on with BLUE STREAK. No project could have been more thoroughly disowned.

Taken with the trend of the Future Policy Committee's report, the views of the Chiefs of Staff meant that any decision by Ministers to continue with BLUE STREAK for anything other than space and satellite exploration (which the Chiefs supported so long as the cost to the defence budget was restricted) would have been against the concerted advice of their most senior military and civil advisers. An alternative was offered to them by the Chiefs of Staff: an immediate approach to the Americans to acquire SKYBOLT "to ensure the prolongation of the useful life of the V-force, in which such a great deal of money has already been invested". Deterrence in the longer term should await an assessment of the two most likely contenders - a new aircraft with SKYBOLT or Polaris submarines.

For once, the Chiefs of Staff Committee had given clear and unanimous advice, open neither to misunderstanding or misinterpretation. There was some advantage in this to all its members. Each of them, including CAS, could welcome the promise of relief to the military R and D budget over the next few years; at least three of them could hope for a reduced emphasis on the hitherto overriding priority given to the independent nuclear deterrent; the question of long term deterrence was left to another day, with ground for believing that a seaborne weapon would be the answer; and if BLUE STREAK, a RAF weapon, was cancelled, its immediate replacement would probably be an airborne weapon which would keep the V-force in business at least through the next decade. But it was not advice with which all the Air Ministry staff most concerned with strategic policy were content. A week before the Chiefs met to discuss the BNDSG report VCAS had advised the Secretary of State and CAS that BLUE STREAK should be deployed, if only on a limited scale.⁵¹ Senior civilian staff were also far from convinced that the case against BLUE STREAK had been made, except on premises that were at best arguable and at worst false. Too much attention had been paid to what its utility would be if deterrence failed; too little to what would suffice to ensure that deterrence succeeded; too little as well to what was likely to be the purpose behind the growth of Russia's missile forces (which the Future Policy Committee itself saw as more a means of retaliation than aggression). And there was concern because "so much of Whitehall is mesmerised by the 'invulnerability' of the nuclear submarine deterrent".⁵²

Whatever the merits of those views, once CAS was committed to the collective advice of the Chiefs of Staff it was not practical politics for the Air Ministry to argue the contrary case. The most that supporters of BLUE STREAK in the Air Ministry and MOD could plead, short of opposing their respective Chiefs, was that its development should continue against an unfavourable outcome to discussions with the Americans. Both Ministers - Mr Ward and Mr Watkinson - accepted the view that BLUE STREAK had to be assessed as a 'fire first' weapon and that, as such, it was politically and militarily unacceptable. Mr Sandys was not so constrained; and such future as BLUE STREAK might have after the Chiefs had so firmly opposed it depended on his advocacy.

Ministerial Decisions

Within a few days of his return from Africa in mid-February Mr Macmillan held the first of several meetings on the subject of nuclear deterrence. In the 1960 Defence White Paper, published earlier in the month, a hint had already been dropped:

⁵¹ Minute by VCAS 19 January 1960 (AHB ID9/193/5 Pt 2). The Air Ministry continued to claim, up to the crucial Defence Committee of 24 February, that a mixed deployment of V-bombers/SKYBOLT and BLUE STREAK would be the cheapest way to ensure continued deterrence.

⁵² Brief for Secretary of State for Air's use at Defence Committee, 24 February 1960 (ibid).

The development of the British ballistic missile BLUE STREAK is continuing. However, it may be decided not to rely exclusively on fixed-site missiles as the successor to the medium bomber armed with the stand-off powered bomb. Therefore the possibilities of mobile launchers, whether aircraft or submarines, for long-range delivery of nuclear warheads are being investigated.

By now the press was becoming well informed - uncomfortably so,⁵³ if only in the context of the Australian interest in the use of the Woomera range for BLUE STREAK trials. Mr Robert Menzies was not one to take kindly to reading all about it in the newspapers, and Mr Macmillan took great care in the weeks ahead to keep him informed. This was one external complication. Another was the current American obsession with a scheme to provide NATO with Polaris to meet the case for medium-range missiles which SACEUR had stated but to which the British government was opposed. The danger here was that the American response to an approach for the supply of SKYBOLT or Polaris under British sovereign control would be delayed until the NATO question had been dealt with. Worse still, supply might be forthcoming only on terms which would give operational control to SACEUR.

But the prior question was whether on political and military grounds any approach to the Americans was necessary. Before putting this to the Defence Committee, at which the Chiefs of Staff and Service Ministers would be present, Mr Macmillan held meetings on 20 and 23 February with a select group of senior Ministers.⁵⁴ In essence, these meetings were a confrontation between the Prime Minister and Mr Sandys, with all other Ministers present either supporting or not opposing Mr Macmillan, with one exception. This was Lord Hailsham whose interest as Minister for Science chimed with what Mr Sandys saw as the damaging industrial effects of cancelling BLUE STREAK, specifically on Hawker Siddeley (who had just acquired the de Havilland company, the main BLUE STREAK contractor) and more generally on the national potential for advanced technology. It was not, however, an interest that could only be satisfied if BLUE STREAK was completed for deterrent deployment. This, the key issue, Mr Sandys had to argue alone, and he submitted a memorandum,⁵⁵ confined to the military aspects of the problem, which was considered at the special ministerial meeting on 20 February.

The outstanding feature of Mr Sandys' paper was its challenge to the significance that was being attached to the vulnerability of BLUE STREAK and to the deduction that it was militarily and politically unacceptable to rely on a 'fire first' weapon. As he saw it, this view had been asserted but without any supporting reasons.⁵⁶ Against it, Mr Sandys argued that such a massive scale of attack would be necessary to destroy BLUE STREAK that the Russians would never believe that this would not provoke American retaliation. In the no less unlikely event that Russia decided to attack Britain and American simultaneously, "a handful of British Polaris submarines could hardly be expected to affect the decision." If, having written this, it occurred to Mr Sandys that he was in danger of arguing against any British deterrent force, he corrected himself by considering the possibility that the Russians might think that America would not start a nuclear war to repel a purely conventional attack against Western Europe. In that event:

They would have to assure themselves that Britain would allow Western Europe to be over-run without using her nuclear power to defend their neighbours and herself, although she must know that her own turn would inevitably follow. Since for the reasons already given, Russia would not dare to make a preventive nuclear attack upon Britain, the fact that our deterrent was based on a "fire first" weapon, would in nowise diminish its effectiveness.

It followed that the government, if it was to make the most of its deterrent policy, should not give the impression that it would never be the first to launch a strategic nuclear weapon to repel a conventional attack.

⁵³ An accurate and comprehensive article on the issues appeared in the Daily Mail on 4 February. This has all the signs of being based on an unattributable but thorough briefing by either a Minister or a senior adviser.

⁵⁴ A record of these meetings is in D(60)7 and D(60)8.

⁵⁵ A copy is in AHB ID9/193/5 Pt 2.

⁵⁶ This was fair comment. The author has found no contemporary expression of a rationale. This is not to say that an argument on general grounds could not be sustained, if only as a political judgment that a deterrent system that could be destroyed, even on a theoretical and exaggerated scenario, would be open to continuous pressure from political opponents at home and convey an impression of irresolution to a potential enemy. As the departmental advice to Mr Watkinson (p.244 above) had conceded, "an invulnerable system would be better".

Mr Sandys went on to question the wisdom of relying on SKYBOLT: "an immensely complex and entirely novel weapon system, which stretches the techniques of guidance and propulsion to the utmost limit". It would be less reliable than either BLUE STREAK or Polaris; there could be no certainty at so early a stage of development that it could be carried by V-bombers;⁵⁷ and the ability of a SKYBOLT force to avoid a pre-emptive attack depended on expensive readiness arrangements or mounting an even more expensive airborne alert. The mobility of a SKYBOLT (or Polaris) force got short shrift. It was only a theoretical advantage that it could be deployed in the Middle East or Far East. In practice, strategic deterrence by a British force was politically relevant only in the West. As for costs, Mr Sandys claimed that BLUE STREAK would be the cheapest means of maintaining the deterrent.⁵⁸

Despite these arguments, a consensus emerged at the preliminary meetings which reflected both the majority view of the Future Policy Committee about the purpose (with implications for future size as well) of a deterrent force and the unanimous view of the Chiefs that BLUE STREAK was not an appropriate weapon. This was set out as a basis for decision in a memorandum⁵⁹ which the Prime Minister himself put to the Defence Committee. First, the case for modifying deterrent policy was presented. In contrast to the previous decade a position of "nuclear equipoise" would soon be reached, which might affect the shape and size of the British contribution to the Western deterrent. Britain should, however, stay in the nuclear business; otherwise her standing in the North Atlantic Alliance would suffer and she would lose a valuable means of influencing American policy in the event of a serious disagreement over the importance of a particular Communist threat. This did not mean that she should maintain a force capable by itself of deterring Russia; it should be large enough to be significant to the Americans as well as the Russians - "a viable force in being, under our ultimate control, which is sufficiently large to accomplish our political purposes". And while it was an obvious requirement that British warheads should be provided for whatever weapon systems might be adopted, it could be accepted that there might be periods during which the British deterrent would be of diminished effectiveness if this could only be avoided by introducing costly new weapon systems which would have only a limited life.

This statement of principles, as they were termed, was admitted to be a gloss on current deterrent policy but not one that need be presented as a fundamental change. It served as a preamble to Mr Macmillan's support for the view which Mr Watkinson, as Minister of Defence, had already reached, that BLUE STREAK should be abandoned as a military weapon. The V-force, with Blue Steel Mk I, would be fully effective until 1966; with SKYBOLT, its useful life would continue for several more years; and in the seventies a mobile system would appear to be the best means of maintaining the deterrent. On such an approach, BLUE STREAK would be a wasteful investment: "it would not become effective until 1968 and would be outmoded a few years later".

Discussion by the Defence Committee was on predictable lines. From Mr Watkinson came a stress on the difficulty facing any democratic government of any prospective use of a static 'fire first' weapon, whereas the V-force, and still more a fully mobile system, had greater credibility: "an adversary would recognise that the threat of retaliation would remain even if an overwhelming attack had first been launched on this country". From Mr Sandys came a repetition of the case for BLUE STREAK that he had put to the preliminary ministerial meetings. As for the Chancellor, there was no attraction in spending £500m on BLUE STREAK - "out of date when it became operational" - whereas the SKYBOLT solution would

⁵⁷ The Air Staff, who were in close touch with the USAF, were advising that this would not be a problem. This confidence was justified in the event but not as originally expected. It was first thought that the Vulcan, not as things turned out the Victor, would be unsuitable.

⁵⁸ The figures he produced were in fact misleading because they made no allowance for the costs of the V-force in the years before BLUE STREAK could be deployed; and this omission was pointed out by the Air Ministry. Other costings of the various options were presented to the Defence Committee but some of these were unavoidably highly speculative and not easily compared. Cost, however, does not seem to have been the rock on which BLUE STREAK foundered. Mr Macmillan's subsequent claim that a lack of credibility was the chief reason is supported by the records of the several ministerial meetings that were held at the time. Whether the deployment of BLUE STREAK would have saved money in the long run is not a question that can be answered with any certainty. For what it is worth, the author's judgment is that it would.

⁵⁹ D(60)2, which was considered at the Defence Committee on 24 February 1960.

enable a decision to be deferred on the choice of a mobile system for the longer term. In general discussion it was argued (despite the generally unexcited public reaction to the deployment of Thor) that deployment on fixed sites would have an adverse effect on public opinion and that sites in the west of the country would be a particular problem.

In the light of the discrediting of BLUE STREAK before the Defence Committee meeting the only surprising outcome would have been a decision positively in its favour. Even Mr Sandys, although he had not finally reconciled himself to its abandonment as a military weapon,⁶⁰ said that he would not dissent provided its development continued as part of a programme of research into outer space. A decision on this point was not necessary at this stage because, in one respect, the government could hardly follow the advice of the Chiefs of Staff: whatever the alleged limitations of BLUE STREAK, to abandon it for deterrent purposes without reasonable assurances about the availability of SKYBOLT would lead to political turmoil from which the government would find it difficult to emerge with any credit. The Defence Committee's conclusions were duly circumspect. A provisional decision only was taken to cancel BLUE STREAK as a military weapon; guidance on the background to this decision and the terms in which an approach should be made to the US government were agreed for despatch to the Ambassador in Washington; and a study by officials of the implications of restricting the development of BLUE STREAK to scientific and technological purposes was commissioned.

A favourable outcome to negotiations with the US government could not be assumed. There was the complication of SACEUR's bid for medium-range missiles, the political purposes of which was to give the European members of the Alliance a stake in nuclear deterrence. It was questionable whether the Americans would consider the supply of SKYBOLT for a sovereign British force consistent with this purpose. Supply of Polaris, the weapon the Americans had in mind for SACEUR's proposed force, was more doubtful still. A second difficulty lay in SKYBOLT itself. The project had been given its initial allocation of substantial funds as recently as January, but not without opposition.⁶¹ Any agreement, however carefully drafted, would put a political premium on its completion, whatever the difficulties. Whether the "special relationship" could deliver a satisfactory response was something that only heads of government could decide.

Mr Macmillan went to Washington at the end of March for talks with the President. He had a few useful cards. One was the American anxiety to construct a Polaris base at Holy Loch in Scotland; another was the V-bomber force, which was working and training in co-ordination with SAC and would benefit from SKYBOLT; yet another was friendship and mutual respect. The outcome was as good as Mr Macmillan could have hoped. He discussed Polaris as well as SKYBOLT and reported to his colleagues that he was "fully satisfied that we shall get what we need".⁶² The President agreed with the British preference for mobile deterrent systems rather than missiles on fixed sites, and an understanding was reached that was set down in a note to the President from the Prime Minister:

I am grateful to you for expressing your willingness to help us when the time comes by enabling us to purchase supplies of SKYBOLT without warheads or to acquire in addition or substitution a mobile MRBM system in the light of such decisions as may be reached in the discussions under way on NATO.⁶³

The reference to NATO in this formulation was significant, reflecting as it did the American policy of dealing as even-handedly as possible with all the NATO allies; and it was for this reason that the President could not be as forthcoming about Polaris as about SKYBOLT - a weapon of no interest to any other

⁶⁰ He was to continue the argument at a meeting with Mr Macmillan and other ministers on 18 March 1960.

⁶¹ It seems doubtful whether London was aware of the extent and nature of the opposition in Washington to SKYBOLT. In particular, the President's own Scientific Advisory Council - under both President Eisenhower and President Kennedy - seems never to have been convinced of it. The impression given by British records at this time is that the prospects for SKYBOLT were good, though Mr Sandys for one warned of formidable technical problems.

⁶² Telegram from Washington 30 March 1960 (MOD Records MO 26/10/7 Pt 1)

⁶³ Ibid.

European ally. Mr Macmillan was making as good a case as he could for the success of his mission in reporting, in a further telegram to London, that the President was committed to providing SKYBOLT "without any conditions as to use other than a general understanding with respect to the North Atlantic Treaty and the MDAP provisions".⁶⁴ Nor could there be any argument about another condition attached to the American offer: that this was necessarily dependent on the successful and timely completion of the SKYBOLT development programme. On the other hand, Mr Macmillan only showed the Holy Loch card; he kept it in his hand to play if necessary when the more detailed financial and technical agreement for the supply of SKYBOLT came to be negotiated. This was not something to be delayed but first the domestic political process had to be completed.

The Defence Committee's provisional decision to abandon BLUE STREAK was confirmed shortly after Mr Macmillan's return from Washington.⁶⁵ Mr Sandys appears at last to have conceded that there might be some political and financial advantages in the V-bomber/SKYBOLT combination even though, in his view, there was little to choose between the two systems in military terms. Whether BLUE STREAK should be used for space research was left for further study as was the less urgent question of the long-term successor to V-bomber/SKYBOLT. On 13 April Mr Watkinson announced the decision, by now an open secret, in the House of Commons. On that occasion and in a censure debate a fortnight later he and Mr Sandys put up a stout and skilful defence of the decision and the government's record on the BLUE STREAK project. There were dissentient voices even in their own party: from Mr Aubrey Jones who had been responsible for the project until recently and who would have preferred a deployment of BLUE STREAK if only on a small scale and as much for the technological as military benefits; and from Mr Antony Head who voiced much the same doubts about the balance between strategic nuclear forces and other forces as had led to difficulties within the Chiefs of Staff Committee. From what was one of the more thoughtful defence debates of this period came one unmistakeable message: fixed site missiles - in Britain, whatever might be the case in geographically bigger countries - were not a credible means of mounting a deterrent threat. They had to be regarded as 'first-strike' weapons and this was their fatal weakness. That V-bombers, with whatever weapons, suffered from the same weakness was not conceded by the government (nor had it been in discussion within the Chiefs of Staff Committee). Their ability to maintain an airborne alert of variable size, depending on the nature of the emergency, and their flexibility under positive control weighed the balance of argument in their favour. But it was not a self-evidently strong case. The truth had been perhaps as well put as it could be in a minute from Mr George Ward to the Prime Minister: 'in terms of deterrence as distinct from actual hostilities with Russia, it does not matter whether the V-bombers could or could not escape a Russian attack within a theoretical margin of one minute or less. I do not believe that the Russians could or would decide to attack us on the basis of such a fine but potentially suicidal calculation'.⁶⁶ If this was a key consideration then BLUE STREAK itself could not easily be rejected; and it is not surprising that Mr Macmillan was to say later that the decision had not been easy to take. It is rather more surprising that he went on to say, 'I am not now convinced that it was wise'.⁶⁷ He has never explained this statement but it is difficult to believe that the awkward position in which he was to find himself at the end of 1962, when the consequences of foregoing an all-British deterrent system had to be faced, was not among his reasons.

⁶⁴ Ibid. The Mutual Defence Assistance Programme (MDAP) derived from an Anglo/US agreement of 1950 which had provided funds for substantial parts of the RAF equipment programme. In the context of SKYBOLT, the important MDAP proviso was that equipment was supplied only for promoting an integrated defence of the North Atlantic area. It could be waived but only with American consent.

⁶⁵ D(60)3rd Mtg, 6 April 1960.

⁶⁶ Minute of 1 March 1960 (MOD Records MO 26/10/7 Pt 1).

⁶⁷ Pointing the Way (Vol 5 of Mr Macmillan's memoirs).

CHAPTER 10

THE SKYBOLT POSTSCRIPT

Introduction

The linking of the abandonment of BLUE STREAK with SKYBOLT as its most suitable replacement marked a new phase in the development of deterrent policy, one in which success depended on American co-operation. But there were differing views within the British government on the extent to which hopes of maintaining an effective deterrent force should be pinned on SKYBOLT. For its supporters the next objective was the earliest possible conclusion of an agreement to purchase the missile on acceptable terms. Such an agreement, if not all its details, would have to be announced and would become a political as well as military commitment to a particular method of deterrence. This worried the Chancellor of the Exchequer (Mr Heathcoat Amory) as much for political as financial reasons. He argued for 'keeping our hands free as long as possible'.¹ To those who wanted to keep up the momentum because otherwise an impression of uncertainty about deterrent policy might be given his answer was that a different conclusion was just as likely: 'that we were plunging wildly from one weapon to another (which is still, as I understand it, very far from developed and which surely presents problems of vulnerability), that we were running risks of having to reverse engines again, and that our statements of intentions could not be relied upon'.² Mr Watkinson, in contrast, while recognizing the possibility of failure, saw no alternative but to assume that SKYBOLT would be a success. He had the full support of Mr Macmillan. In all their dealings with their American colleagues British Ministers continually stressed the need for SKYBOLT; and this was reflected in numerous practical measures of co-operation on the project between British and American scientists as well as between the two air forces.³

Yet if this commitment to SKYBOLT is one feature of the period between the abandonment of BLUE STREAK in April 1960 and the Nassau Conference in December 1962, another is the oscillation between confidence and uncertainty in the reports that the government received about the progress of the project. The doubts that Mr Sandys had earlier expressed about its technical complexity might have seemed at the time to have lost nothing in the telling, coming as they did from an ardent advocate of BLUE STREAK; but well before the end of 1960 it had become clear that SKYBOLT was not the most assured item in the American R and D programme. Several studies were accordingly made of what measures might be open to the government if the project turned out to be a failure. A revival of BLUE STREAK was never contemplated.⁴ Investigation was mainly directed to the scope for improvement of Blue Steel Mk 1 and other air-to-surface missiles that might be developed by Britain. The strategic potential of TSR2 was not ignored.

There was also the Polaris possibility. For a number of reasons this weapon was not as prominent as SKYBOLT in the discussions in March 1960 between Mr Macmillan and President Eisenhower. The NATO IRBM complication was one; costs were another because, even allowing for a substantial increase in the current assessment of the price to be paid for SKYBOLT, the V-bomber/SKYBOLT combination promised to be much the cheapest option; doubts about the mark of Polaris (the A3 missile) that might

¹ Minute of 22 April 1960 (MOD Records MO26/10/7 Pt 1).

² He did not mention another Treasury concern which was that the choice of SKYBOLT would lead to a demand for a new and expensive aircraft to succeed the Mk 2 V-bombers. The Air Staff in fact were already seeing the VC10 as the next carrier of SKYBOLT.

³ Shortly after the announcement about BLUE STREAK Mr Watkinson wrote to the S of S for Air: 'I look to you to do all you can to press on with our cooperation with the Americans in the development of SKYBOLT as a weapon for our V-bombers. I am most anxious that our interest in this should not appear to diminish'. (ibid. 29 April 1960).

⁴ Despite some suspicions to the contrary outside Britain, there is no evidence that the development of Blue Streak as the first stage of a European satellite launcher was considered to offer a possible re-entry into the static deployment of ballistic missiles. At a critical stage of the Nassau Conference a member of the British team desperately suggested that Britain might go it alone with a system based on the Black Knight rocket. Whatever the technical merits might have been, it would have been extremely difficult to revert to a concept which the government itself had so publicly and thoroughly rejected; and the suggestion came to nothing.

meet British needs were yet another. Nevertheless, if only because the Defence Committee had agreed Defence Committee had agreed that a study should be made of the respective merits of airborne and submarine systems. Polaris was never out of the reckoning. And it had powerful support, not least within the BNDSG which had now been given the task of studying a long-term successor system. Unavoidably in the circumstances, BNDSG discussions became largely a confrontation between the Admiralty and the Air Ministry. Something similar was taking place in Washington; and at some risk of over-simplifying the issues, the eventual preference for Polaris over SKYBOLT in the United States can be seen as a defeat by proxy for the RAF. The British aspect of these events was one in which the weight of official opinion tended towards the submarine and against the aircraft but whether this was a factor in the American decision to abandon SKYBOLT is not determinable from British official documents. For British Ministers, however, a free choice between the two types of system was never a serious issue. SKYBOLT was selected in 1960 partly because it was relatively cheap but more because it was expected to be available several years earlier than Polaris. So at that stage Polaris was not a competitor. Ministers would have faced a real choice when the V-force, having been re-equipped with SKYBOLT, was seen to have a finite life. That stage was never reached. For that reason the efforts that were made between 1960 and 1962 to evaluate the two systems might seem to have been wasted. Nevertheless, the attempt had to be made; the clash between the antagonists has its own interest; and it affected the climate of opinion in which the decision whether or not to adopt Polaris was taken.

One factor in the BLUE STREAK decision had been a stronger emphasis on partnership in deterrence, from which stemmed a greater willingness to rely on American produced weapons. A decision to amend the existing criterion of deterrence - the ability to strike some forty Russian cities - might logically have followed as well. The case for this was more than implicit in the January 1960 report of the Future Policy Committee and Sir Normal Brook was later to regret that it was lost sight of at the time in the more immediately important discussions that culminated in the abandonment of BLUE STREAK. This was only a temporary omission. The question inevitably came up again: in the context of the number of SKYBOLT missiles that should be bought and also in the discussions in the BNDSG about subsequent deterrent systems. By the time Mr Macmillan went to Nassau, the government was prepared to settle for something less than the V-bomber force, at its peak, was thought to be capable of achieving. But granted the acknowledged American predominance, was there a need for the British to maintain indefinitely a strategic capability? It would not be true to say that the question was never debated. It was - by Ministers⁵ and by the Future Policy Committee - and the conclusion was that there was greater danger to the Alliance as well as to British security in a unilateral renunciation of nuclear weapons than in staying in the business. A partial renunciation - of strategic weapons - but retaining American tactical weapons under the same arrangements as other European allies, seems not to have been considered.⁶ At one stage during the discussions about strategy in 1960-62 Mr Macmillan would not allow it to be assumed that there would be a successor to the V-bomber/SKYBOLT system, but when faced, as he was at Nassau, with the loss of that system he argued skilfully and obstinately for its replacement by Polaris. The case he chose to make was more political than military. As for the Chiefs of Staff, whatever their differences in the past their position as the Nassau Conference opened was summarised in a memorandum to Mr Thorneycroft:⁷

There is a continuing military requirement for a strategic nuclear capability under our sovereign control both to deter attack on this country and to preserve our world-wide freedom of action.

There is no military reason why we should not commit such a strategic nuclear capability to or integrate it with that of our Allies.

⁵ See for example Ch. 9 p.231.

⁶ Not at any rate by Ministers. One group of eminent scientists, who under Sir Solly Zuckerman constituted the Technical Sub-Committee of the BNDSG, doubted whether a British deterrent should be maintained but made no recommendation to that effect. Sir Solly Zuckerman's anxieties lay more in the tactical than strategic area. His 'Twenty Propositions' - a series of arguments put forward in 1962 against the case for battlefield nuclear weapons - were not well received by the Chiefs of Staff (AHB ID3/190/33).

⁷ COS(62)486 of 19 December 1962.

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Our continued possession of strategic nuclear strike forces may ensure the provision of information to our warning and intelligence systems which is of great importance to our security.

The SKYBOLT Agreements

Mr Watkinson went to Washington in June 1960 to formalise with the American Secretary for Defense (Mr Thomas Gates) the understanding about SKYBOLT that President Eisenhower and Mr Macmillan had reached the previous March. By now there was a clearer view of the objectives. Difficult installation problems would arise if SKYBOLT was to be carried in the Victor, and the Air Ministry recommended that only the Vulcan should be adapted. It had also been established that the Vulcan would be able to carry two weapons, which determined both the size of the V-bomber/SKYBOLT front line⁸ and the appropriate number of SKYBOLTS that would have to be purchased. Making a virtue of necessity, Mr Watkinson approved the division of the V-force into SKYBOLT and Blue Steel components as a way of diversifying the deterrent and thereby complicating the task of the Russian defences. He also saw the advantages of maintaining Blue Steel as one of a number of possible insurances against the possible need to develop an alternative to SKYBOLT. This was based on more than mere prudence. There was evidence before the visit to Washington that the completion of SKYBOLT could not be taken for granted. Mr Watkinson was aware, as he told the Prime Minister,⁹ of powerful forces in the Polaris lobby in Washington that would like to see the project cancelled. His brief for the visit warned him that the US government was not supporting the project to the extent that the technical difficulties demanded.¹⁰ It was only too clear that he had to try to convince his American colleagues of the importance that the British government attached to SKYBOLT. This was not just another weapon but the chosen means by which the British could maintain a deterrent policy.

Nothing occurred during the Washington visit or in the months that remained to the Eisenhower administration to justify complacency about the project. But the political imperatives were inescapable. There could be no question of a withdrawal of British interest; equally, on the American side, no question of letting down an ally, especially with the Presidential election looming. Two agreements were accordingly arrived at: a Memorandum of Understanding (MOU) signed by Mr Watkinson and Mr Gates on 6 June, which itself provided for the second - a detailed financial and technical agreement which was signed on 27 September. The MOU¹¹ expressed the determination of the two countries to co-operate in the development of the SKYBOLT missile for adoption by the USAF and RAF; the US government would 'make every reasonable effort' to ensure its successful and timely development and its compatibility with RAF V-bombers; the British government committed itself, assuming the development was successful, to an order of about 100 missiles and their associated equipment and to the provision of warheads.¹² Provision was made for British participation in the project and for liaison arrangements through which London could be kept informed of progress. The technical and financial agreement allocated costs and responsibilities, the most important for the British being the work involved in modifying the Vulcan. It was during the somewhat niggling negotiations leading to this agreement that the Holy Loch card was at last played, giving the US Navy a base in Scotland for its Polaris boats. Together, the two agreements registered as strong a commitment as could be expected of both governments. There

⁸ The Defence Committee approved the plan for a force of 72 Vulcan Mk 2(8 squadrons) and 24 Victor Mk 2 (3 squadrons) on 25 July 1960. This plan was adopted for costing purposes by the Air Council though with no definite date for the introduction of SKYBOLT. The three Victor squadrons were expected to be reduced to two in 1966 (AC(61)27).

⁹ Minute of 12 May 1960 (Cabinet Office 59/24/1 Pt 1).

¹⁰ MOD Records MO 26/10/7 Pt 1: 'although reasonably well based on tried techniques, Skybolt will in the MOA view meet the predicted standard of performance, accuracy and reliability only by a sustained high level of US Government investment in the project, financial and technical, in order to solve the very difficult technical applications of these techniques in time. It will be difficult to rely on this sustained support if, as is reported, the Skybolt programme is to subject to a four-monthly review'.

¹¹ A copy is in MOD Records MO/26/10/7 Pt 1.

¹² The full requirement at this time was 144 missiles (2 for each front line Vulcan Mk 2), plus 26 for training and spares. Warheads presented a separate problem. Existing British warheads could have been fitted but at the price of seriously reduced range. It was later decided that a lighter warhead should be developed by the Atomic Weapons Research Establishment.

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was more to this than the expressed intention to develop and introduce SKYBOLT. At any rate, British Ministers thought so. These wider implications were summed up by Mr Watkinson in a minute to the Prime Minister in September 1960: 'it is important that the Americans should recognise that if Skybolt should meet with serious trouble and has to be abandoned they would have a moral obligation to help us to overcome, in one way or another, the difficulties which this would cause for us. After all, they have got the Holy Loch and we certainly have not got Skybolt for some years yet. This would get us the necessary standing to reopen the Polaris submarine question or take any other action that seemed necessary if Skybolt fails'.¹³

Further Doubt about SKYBOLT

Significantly, Mr Watkinson's minute was written shortly after he had been warned by Sir Solly Zuckerman that the inherent difficulties of the SKYBOLT project were such that progress could falter to the point where (according to an American informant) it could fall out of the projected time-scale for the US strategic deterrent and be dropped from the strategic weapons programme. Other information to the same effect became available in the autumn, sufficiently worrying for the Prime Minister to write to President Eisenhower towards the end of October. The reply was reasonably reassuring in its terms; but doubts remained, not least when it became known that the President had been advised by the Department of Defense to send a considerably less optimistic message.

Obviously, there were opposing lobbies in Washington, with the Department of Defense tending to be unconvinced about SKYBOLT. Some additional funds were allotted to the project in the last budget of the Eisenhower administration but less than the Douglas company, the main contractor, considered necessary to meet a target date of 1964. The last word of the outgoing administration came from the Secretary of Defense who foresaw the project continuing at less than the optimum rate for a further two years when a decision would be taken either to cancel it or speed it up. On the British side, Sir Solly Zuckerman continued to report a lack of technical confidence in Washington in the project; and Lord Mountbatten went as far as to advise Mr Watkinson to use the money allotted to SKYBOLT 'to buy a couple of American-built submarines by 1964 when Blue Steel Mk I runs out'.¹⁴ The best that can be said of this proposal is that it was premature. Nevertheless, as things stood in the last months of 1960, SKYBOLT was scarcely a promising infant, and in some quarters no tears would be shed if it failed to survive. One move had been seen to be necessary since the summer: a British representative who believed in SKYBOLT but had the necessary professionalism to provide objective progress reports should be placed at the heart of the project. A senior RAF officer, Group Captain G V Fryer, was selected and took up a new post as Skybolt Progress Officer in September 1960, with instructions to report through the Head of BJSM Washington to the three Ministers concerned - Minister of Defence, Minister of Aviation and Secretary of State for Air. This was an exceptional arrangement, by-passing the usual reporting channels; the value of the subsequent reports - on the financial as well as the technical aspects of the project - fully justified it.¹⁵

Possible Alternatives

Shortly after President Kennedy came into office the new Secretary for Defense, Mr Robert Macnamara, reviewed all major development projects. The first intimations in London of the impact on SKYBOLT were that it would probably continue in development with a bigger allocation of funds than the previous administration had been willing to devote to it but that, even so, its entry into USAF service might be delayed by as much as nine months. This meant that the RAF might not receive it until 1965, the year which was commonly accepted as marking a serious decline in the effectiveness of the V-bomber/Blue Steel combination. Any further slippage would be unwelcome; cancellation could be a catastrophe. Although the Gates/Watkinson MOU was confirmed by the new administration in March 1961 there was every reason for the British government to see what other means were open to it to maintain the credibility

¹³ Minute of 27 September 1960 (MOD Records MO 26/10/7 Pt 1).

¹⁴ Letter of 1 November 1960 from Lord Mountbatten to Sir Solly Zuckerman (MOD Records MO 26/10/7 Pt 2).

¹⁵ The selection of Group Captain Fryer also had some unusual features. He was due to leave the RAF with redundancy benefits; and this arrangement was allowed to stand. He carried out his SKYBOLT duties as a Senior Principal Scientific Officer but with the right to wear uniform.

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of the V-force. Ideally, an alternative would be British because Polaris was open to the objection that the Americans, if they wished and if no British alternative was available, would be in a position to dictate the terms of a sale; the political price could be high and, in any case, Polaris would be expensive.¹⁶

Two questions fell to be considered. The first was whether an improved Blue Steel Mk 1 could be developed to be effective in 1965 and for a few years thereafter. This would give time to see whether a still better weapon could be produced, to come into service in the early seventies. This was the second question. An aircraft solution to the first question could be dismissed. It would mean developing special weapons for the TSR2 which was unlikely in any case to be available in substantial numbers before 1969. If TSR2 was to be given any strategic role it would be as an answer - or more realistically, a partial answer - to the question of how deterrence could be maintained in the longer term.

There were several ways of improving Blue Steel Mk 1. The least difficult would extend its maximum range from 120 to 250 nm; the most ambitious, while notionally giving a range of about 400 nm, involved so many innovations, including a new type of fuel, as to be virtually a new weapon. There were other possibilities between the two extremes. All, however, in the aftermath of the abandonment of BLUE STEEL Mk 2, fell to be considered in a climate unpropitious for the cruise missile concept; and none provided sufficient range for the V-bomber force to attack all its targets without coming under fighter or SAGW attack or sufficient performance for the missile itself to be invulnerable to the defences that Russia was presumed to have by the later sixties. Those that offered a substantial improvement were correspondingly more expensive: so much so as to stand no chance of acceptance as an insurance against the failure of SKYBOLT. Only the simplest and least costly improvement (BLUE STEEL Mk 1A) was for a time seriously considered by the Air Ministry, but by November 1960 the following conclusions had been reached and were sent to the BNDSG by VCAS:

Because of the increasing effectiveness of Soviet air defences, from about 1964/65 onwards V-bombers launching BLUE STEEL 1A should launch their weapons from about 100 nautical miles from Soviet territory.

Under these conditions a total of 23 cities of populations in excess of 100,000 would be within range. Of these only 11 are included in the Target List and by far the greater proportion of the major centres of the USSR would be beyond reach.

It must be concluded, therefore, that although some operational advantages would accrue from the use of BLUE STEEL Mk 1A the results to be expected from attacks on targets within range are insufficient to justify the effort involved in developing a system which would possess only marginal advantages over Blue Steel Mk 1.

These conclusions had a significance beyond the immediate question of whether Blue Steel Mk 1 should be improved. They did not mean that the V-force with the improved weapon would have no military capability, even against targets deep in Russia. Rather, they expressed a judgment on whether the force could pose an overwhelming and totally convincing threat to all major Russian cities west of the Urals which was the current criterion of deterrence. Granted - though only granted - that criterion, no case could be made for weapons whose performance was limited to the capabilities of first generation cruise missiles. There was another and entirely practical consideration. Blue Steel Mk 1 was not going all that well; and ministers as well as the Air Staff were concerned that the development teams, in MOA and AVRO, should not be distracted from the task of bringing it into service without further delay.¹⁷ Thus, at the end of 1960, British weapons had been effectively ruled out as a means of avoiding a serious deterioration in the quality of the deterrent during the second half of the decade.

¹⁶ Exchange of minutes between Mr Macmillan and Mr Watkinson, 16 and 23 November 1960 (Cabinet Office 59/24/2 Pt 1).

¹⁷ Ministers took a close personal interest in its progress, to the point of over-reacting to the delays that were almost inevitable in what was the first British project of its kind. Indeed, at one stage its possible cancellation was discussed by the Defence Committee on the grounds that its useful life would be too short to justify the cost. The weapon came into squadron service in 1963, eighteen months to two years later than had been expected when the Air Council reviewed the missile programme in 1958. This was a better achievement than could be claimed for most of the major projects of this period.

There remained the question of a British weapon for the seventies. This was remitted by the BNDSG in November 1960, on the instructions of Ministers, to a joint Air Ministry/MOA working party which was required "to examine urgently the technical possibilities and the operational value (having regard to the development which must be expected in enemy defences in the time scale) of a long range weapon with or without low altitude capability". The TSR2 was not ruled out as one possible solution. As the working party was instructed to report by the end of year it could do little more than evaluate the broad possibilities, including such ideas as industry could put forward. Military guidelines were necessary, and the Air Staff duly produced some (ASR 1182). These envisaged a cruise missile with a maximum range of 1000 nm; a variable trajectory; a low level terminal phase of at least 100 nm at a height of no more than 300 feet; cruising speed of at least M3 at high level and M2 at low level and an accuracy of no worse than 2½ nm; Mk 2 V-bombers should be able to carry four missiles, the TSR2 two missiles. This was a formidable requirement, and in conceding that a simplified version of the weapon, with no low level capability, might be acceptable, the Air Staff were tacitly admitting that it could not be met in full before 1970.

The working party was not impressed by one proposal from industry - a ramjet propelled missile put forward by BAC (Bristol) - that claimed to meet the requirement. Much more work was considered necessary if this was to provide a sound basis for the detailed design of an acceptable alternative to SKYBOLT. As specified by the Air Staff, the missile would be less vulnerable than the abandoned BLUE STEEL Mk 2 but, in view of the history of that project, as much attention as time would allow was given to the defences that might be encountered. Here a difference emerged between the two departments, with the Air Ministry representatives unconvinced by analytical studies by MOA and its agencies which appeared to show that at relatively modest cost the Russians could mount a highly effective defence. However, on the balance of the argument the working party concluded that the weapon would be a valid contribution to the Western deterrent: not the ideal weapon - as their report¹⁸ said, with a realism that was sometimes lacking in this type of study, "the situation is not one of black and white, of the perfect deterrent or the perfect defence". With no less realism the report also said that it would take seven to eight years to develop the weapon, which would demand such an effort that some other major project might have to be abandoned. The most that the Air Ministry expected and requested was ministerial approval for a feasibility study to be put in hand. Mr Watkinson gave this in January 1961¹⁹ - "press on with all speed".

As envisaged, this long range stand-off weapon would be carried by the TSR2 as well as the V-bombers and any successor aircraft. The possible use of the TSR2 in a strategic role had its critics. Earlier in 1960 the BNDSG had reported that the TSR2, even with free-fall bombs, offered a degree of insurance against the failure of SKYBOLT,²⁰ though this would not be practicable until the end of the sixties; and it would mean developing a megaton bomb and a bigger production order for the aircraft than currently planned. Extra costs; doubts (which were mistaken) about whether UK-based TSR2s would have the range to reach all the listed targets and about its advantages compared with V-bombers armed with Blue Steel - these were some of the reasons why the Admiralty in particular opposed the idea. This came as no surprise to the Air Ministry. The TSR2 had been under criticism for some time as an excessively sophisticated and

¹⁸ The report was submitted on 15 December 1960: copy in AHB ID9/1/26.

¹⁹ Minute by Secretary BNDSG 24 January 1961 (ibid).

²⁰ BND(SG)(60)10(Final) of 30 September 1960.

expensive replacement for the Canberra. Adding a strategic dimension to its roles would, from the point of view of its critics, only make things worse, adding to the risk of pre-empting for the RAF a disproportionate share of future defence budgets.²¹

At this time - early 1961 - no decision was needed on whether the TSR2 should be given a strategic role and the weapons to go with it. This could be left until SKYBOLT and TSR2 itself had gone further down the development road. The question was left open, with some members of the BNDSG content to regard the strategic potential of the TSR2 as a threat that the Russians would not be able to disregard, which did not mean that the TSR2 would be a fully adequate replacement if SKYBOLT were to fail. Others were not prepared to take a view, one way or the other, until further studies had been made of the likely future effectiveness of Russian defences - against ballistic missiles as well as low level attacks by aircraft and cruise missiles. These studies were already in hand, on the instructions of the BNDSG.

There was a further reason for delay. Increasingly, the issue attracting most attention was the comparative merits of airborne and seaborne deterrent systems, which had been remitted to the BNDSG by the Defence Committee in April 1960. If the V-bomber/SKYBOLT combination came into service, a new system would not be needed until some time in the early seventies. Yet the examination of successor systems could not be all that leisured. Polaris - if that were the eventual choice - would be less expensive as well as more acceptable politically if installed in British boats, which would take several years to design and build. So would a new aircraft to replace the V-bombers, if that was necessary to give SKYBOLT the longest possible life. Moreover, the case for buying a small number of American-built Polaris boats (which Lord Mountbatten had earlier pressed upon Mr Watkinson) was still being advocated, even though Ministers had let it be known that they had no wish to introduce Polaris as an insurance against the failure of SKYBOLT.²² By the end of 1960 the Polaris lobby was as vocal in London as it was in Washington. And it was being heeded, at least in official circles: not all that surprisingly, in view of the limited life that was being assumed for Blue Steel, the persisting doubts about SKYBOLT and the time and expense that would be involved in producing a British airborne weapon to take its place. As one Air Ministry official testily put it, "a Gadarene devotion to Polaris seems to be permeating Whitehall".

It was only too obvious that the Air Ministry had another battle on its hands.²³ But what should its objectives and tactics be: to make the strongest possible case for airborne deterrence coupled with all

²¹ This was certainly a worry to Lord Mountbatten who appears to have reacted sharply to a memorandum by Mr Julian Amery early in 1961 which described, with approximate costings, how an airborne deterrent could be maintained over the next decade. He told Sir Edward Playfair (Permanent Secretary MOD) that the other Services had stood aside after the war in order to let the build-up of the RAF deterrent have a clear run (this was hotly disputed by the Air Ministry), the implication being that it was now their turn (MOD Records CDS25). He was in any case unconvinced by the TSR2. At a meeting of the Chiefs of Staff in April 1960 (COS(60)22nd Mtg) he questioned whether so expensive an aircraft could be committed to the close support of ground troops, where losses might be heavy. Instead, two types of aircraft were needed: one with a 1000 miles radius of action as a replacement for the Canberra for interdiction and reconnaissance tasks and a cheaper short range aircraft for close support. (The first aircraft would not have had the strategic potential of the TSR2). As the TSR2 advanced in development and the government became increasingly committed to it, Lord Mountbatten's argument could be stood on its head. As Mr Watkinson perceived, a strategic role would help to justify the heavy investment in the TSR2 programme (Minute to Sir Robert Scott 3 July 1962, MOD Records A1/05 Pt 1).

²² BNDSG records.

²³ The Air Ministry learned from a confidential source in MOD early in 1961 that the Admiralty had recently put a detailed scheme direct to Mr Watkinson for the purchase of three American Polaris boats in substitution for SKYBOLT. According to the US Navy, the first could be available by 1965 and the others by 1968. It is not clear whether this had the consent of the US Government but, together with the pessimistic reports he had had about the prospects for SKYBOLT, it could explain why, according to the informant, Mr Watkinson felt obliged to "keep the Polaris kettle boiling" even though he hoped that the more economic airborne deterrent could continue. Something akin to a conspiracy was alleged to exist to denigrate airborne deterrence in the interest of Polaris; and a plea was made for a well considered RAF scheme to be put forward, otherwise a victory for Polaris as the deterrent system for the longer term, if not as an early substitute for SKYBOLT, was likely (AHB ID9/1/26, Minute to DCAS 6 January 1961).

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the arguments, sound and not so sound, against a submarine system, or a more dispassionate approach which conceded that each had its advantages and disadvantages? If the emphasis was placed on the most effective pattern of deterrence, there was a case for a bit of each. This was the view of VCAS (Sir Edmund Hudleston) who submitted two memoranda to the Air Council in January 1961,²⁴ the first devoted to the organisation, capabilities and cost of a 72UE Vulcan/SKYBOLT force. The second, however, compared the two types of system and, while criticising in detail the case that was currently being made for Polaris, concluded that the best deterrent would be a small number of Polaris submarines supplementing an airborne deterrent. The aircraft would be an insurance against a breakthrough in the techniques of submarine detection; the submarines would remove any temptation to an aggressor to make a pre-emptive attack against airfields; and the diversified threat from the two would complicate the problems of defence. VCAS proposed that this judicious line should be taken in the BNDSG discussions. It was not. After much discussion between Air Council members, in which Mr Julian Amery as Secretary of State played a major part, VCAS's paper was re-written, eventually taking the form of a memorandum which Mr Amery sent to Mr Watkinson.²⁵ This made a case solely for an airborne deterrent force, capable of maintaining an airborne alert for long periods. No mention was made of the desirability of diversifying such a force by means of submarines.

This attitude can be explained by the Air Ministry's belief that the scales were weighted against airborne deterrence and in favour of Polaris. The majority of members of the BNDSG were known, on the strength of the earlier discussions that had led to the cancellation of BLUE STREAK, to be so inclined, but as these were representatives of departments which had a legitimate interest there was nothing the Air Ministry could do. What aggravated the Air Ministry's defensiveness were the manoeuvrings that accompanied the formation of a Technical Sub-Committee which the BNDSG in November 1960 had decided to set up to carry out "a technical study of the possibilities of implementing a deterrent policy during the 1970-80 decade". Whereas the BNDSG had previously relied on papers and analyses prepared by government scientists and the Air and Naval Staffs, Sir Solly Zuckerman was now advocating the formation of a group of independent scientists who had no official interest in future weapon systems. Coming as it did from someone who was known to be a strong supporter of Polaris, this proposal was inevitably suspect. In any case, the Air Ministry was distrustful of a body that might be excessively academic in its approach and would have preferred one in which operational and administrative experience was represented. A compromise was reached, after discussion in the BNDSG;²⁶ and scientists from the government service as well as the universities were enlisted. Even so, the Air Ministry remained distrustful, especially after special representations had to be made before its own Scientific Adviser (Mr H Constant) was included in the group. Whether or not these suspicions were justified, the Air Ministry decided that any concessions to the merits of seaborne deterrence would fatally damage such chances as it had of getting a fair hearing; as VCAS said to Mr Constant, it would be necessary "to develop every conceivable counter-argument".²⁷

The Polaris/SKYBOLT Debate

With the formation of the Technical Sub-Committee²⁸ most of the detailed discussions about the two systems of deterrence took place there rather than in the BNDSG itself. If the informal reports on its meetings that the Air Ministry's Scientific Adviser made to VCAS are reliable evidence, it was hardly a band of brother scientists engaged in a dispassionate evaluation. Much of the paper work presented to the sub-committee was objective and factual but its consideration was allegedly affected by preconceptions

²⁴ These two papers are in AHB ID9/1/26. The first was circulated as AC(61)5; the second was not registered as an Air Council paper but was considered as such.

²⁵ Ibid., dated 15 March 1961.

²⁶ 3rd, 4th and 5th meetings October/November 1960.

²⁷ Minute of 28 February 1961 (AHB ID9/1/26)

²⁸ Sir Solly Zuckerman (Chairman); independent members - Sir Edward Bullard, Professors W R Hawthorne, R Hanbury-Brown, D C Christopherson and Dr F P Bowden; government scientists - Sir John Carroll (Admiralty), Sir Robert Cockburn and Mr M J Lighthill (MOA), Sir William Cook (AEA) and Mr H Constant (Air Ministry).

and prejudices. According to Mr Constant, most members were not convinced of the need for an independent deterrent in future but, if this continued to be government policy, the submarine was the right answer.²⁹ Certainly, he and Mr Lighthill were dissatisfied at the conduct of the sub-committee's business, and complained about the chairman's partiality. Only after they had threatened to enter a minority report was the sub-committee's main report sufficiently improved in balance and presentation as to be just acceptable. Even so, they were left with the uncomfortable feeling they they had compromised too much.

The report in question was completed in the summer of 1961 and reflected several months of study concentrated mainly on the relative vulnerability of airborne and seaborne systems to pre-emptive attack. This was ground on which the Air Ministry had no alternative but to fight. Its belief continued to be, not that vulnerability was of no consequence - a deterrent that was wide open to attack would carry no credibility with the public - but that a totally invulnerable system, besides being unattainable, was not necessary. The rationale, as set out in an internal Air Ministry paper, was:-

The risk to the Russians [of initiating a nuclear attack] would be so appalling and their chances of success so speculative that their obvious policy is to maintain stalemate while pursuing their campaign of subversion and competition in the political and economic fields. This policy has already paid off handsomely. It follows that provided we possess a nuclear deterrent of our own the Russians must be expected to regard their own strategic nuclear weapons as weapons of retaliation rather than pre-emption.³⁰

But this view had been effectively rejected when BLUE STREAK had been cancelled on grounds of vulnerability. The Air Ministry had therefore no choice but to fall back on a second line of defence which, accepting the possibility of pre-emption, claimed that aircraft could continue to be effective vehicles for deterrent weapons because of their extremely fast reaction times and because at least part of the force could be put on airborne alert. Several papers were sent to the Technical Sub-committee, with analyses of all aspects of the capability of such a force, from a situation in which all serviceable aircraft were on the ground when an attack was detected to one in which all were on airborne alert.

The Air Ministry claimed that a force poised on airborne alert with tanker support would provide ample time for a political decision to retaliate and that in this respect it would have as much immunity - and credibility - as a Polaris force. But it was here that the Air Ministry representatives met most opposition and, in reaction, were themselves guilty of producing some highly speculative arguments: such as the allegedly serious risk of submarines being lost to covert attacks in peacetime or of the Russians building a special fleet equipped with nuclear missiles to locate and destroy submarines once they had disclosed their position by launching the first of their weapons. The truth was, and this was recognised if not openly admitted by the Air Ministry, that short of a major improvement in submarine detection techniques, Polaris submarines could be so deployed and operated as to be virtually immune from attack. If there was an operational weakness in the Polaris case it lay more in the adequacy and vulnerability of UK-based systems for communications and control; and the Air Ministry made as much as they could of this. As for relative costs, neither side could convincingly demonstrate that its system would be significantly less expensive. By selecting the VC10 as the appropriate aircraft to succeed the V-bombers, each capable (it was claimed) of carrying six SKYBOLT missiles, the Air Ministry justifiably argued that the capital expenditure on a successor system to the V-force would be greater, especially if the VC10 force was

* substantially less than for a Polaris fleet of similar striking power.
on the other hand, annual running costs would be

²⁹ "That this should be so in spite of the facts and arguments that have been presented makes me feel that there must be some strong psychological appeal in the submarine. It may be that most people recoil from the idea of the bomb, that they want to put it out of their minds and the best way of doing this is to send it safely to sea in a submarine. On the other hand, if the bomb is air launched, every time an aircraft goes overhead they will be reminded of it": Constant to VCAS 25 April 1961 (ibid). A contemporary American jingle made the same point:

Put the deterrent out to sea
 Where the real estate is free
 Where it's far away from me.

³⁰ Memorandum of 1 March 1961 (ibid).

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airborne in peacetime for lengthy periods. The Air Ministry believed that this would not be necessary except for the occasional exercise and in an imminently threatening emergency; but the assumption that the chosen system should be as invulnerable as possible meant that the airborne option had to be costed on the basis that part of the force would be permanently airborne.³¹ In short, there was not much in it; and any decision between the two systems, if rationally arrived at, would have to take into account other factors: such as the more assured control of an airborne force; its usefulness in the conventional role and, if the government decided to abandon strategic deterrence, its convertibility to air transport; and not least the retention of the experience the RAF had accumulated in operating a deterrent force. Each of these factors was relatively marginal. Together they amounted to a good case for an airborne system, with the added advantage that the aircraft component would be British.

A good case for the concept of airborne deterrence was one thing. Its realisation within an acceptable time-scale was another; and what was crucial here was that SKYBOLT should come into service, preferably by 1965 when V-bombers with Blue Steel Mk 1 would begin to be excessively vulnerable. Feasibility studies of a possible British alternative - the long range cruise weapon to ASR 1182 (by now known as PANDORA) - were in hand but even if money was found for its development it could not be completed before 1970. Such chances as it stood were not helped by a report issued by the BNDSG Technical Sub-Committee in July 1961.³²

Report of Technical Sub-Committee

This report set out to provide a basis for decisions about future weapons. Whether it was a prejudiced report is debatable; its chairman and those members who consistently argued for Polaris would no doubt claim that theirs was a reasoned conviction. On some aspects of the problem all members were agreed. One was that only two types of weapon were worth considering - the ballistic missile and the cruise missile. Defence against these weapons was the key; and whereas the sub-committee, looking as far ahead as 1980, saw no reason to believe that an effective counter to ballistic missiles would be economically and technically possible, a cruise missile system "would not have a very long period of viability" if the Russians chose to build the appropriate radar and missile defences. Events and the pace of events, rather than the sub-committee's report, were to frustrate the PANDORA project. It remains true that a promising line of development in which Blue Steel Mk 1 was a first and successful step was blackballed for reasons which were valid only in the context of a search for perfection.

It was in this same context that the sub-committee assessed the merits of submarines and aircraft as vehicles for ballistic missiles, though only after dismissing all other possibilities: space vehicles would be too costly and unreliable and vulnerable, even to existing weapons; and any form of land vehicle, however mobile, would be open to the enveloping pre-emptive strike which had been the objection to the deployment of BLUE STREAK. The sub-committee made no clear recommendation in favour of submarines rather than aircraft. It could only have done so at the price of a minority report by the Air Ministry and one of the MOA members. But by implication the Polaris system was preferred to the aircraft/SKYBOLT combination. For most members this followed inevitably from the key assumption: "for our own forces to pose a credible threat of retaliation over a prolonged period in the future, they must, for practical purposes, be invulnerable to pre-emptive attack". Much was made of the limitations of the BMEWS and of a supporting system (MIDAS) which at this time was planned to be introduced by the USAF.³³ No form of deterrent could be recommended which was dependent on the successful operation of an early warning system. By this token, only a force of on airborne alert or

³¹ To meet the 1961 criterion of deterrence the Air Ministry envisaged a front line of 35 VC10, each with six SKYBOLTS, operating at an annual rate of 3200 hours per aircraft, with 15 aircraft permanently airborne. A supporting tanker force, initially of 24 Valiants, was also proposed. Later, in response to changes in the criterion, a somewhat smaller VC10 force was costed.

³² BND(TSC)(61)15(Final).

³³ The alleged vulnerability of BMEWs to jamming and deliberately induced false alarms wrung no withers in the Air Ministry. Operations of this kind would themselves constitute a warning and lead to reactions throughout the Alliance which the Russians could not hope to control. The MIDAS system, involving infra-red detection by satellites of missile launchings, was not in the event deployed in Britain.

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a submarine force would be acceptable. There was, however, a difference which the majority of the sub-committee considered crucial: an airborne force could escape attack but a decision to use it or order it back to its airfields would have to be taken within a few hours; whereas a decision to use a submarine force could be delayed without any operational penalty. In saying that "to be able to retaliate immediately to an attack is not essential but the enemy must clearly see that retaliation would be inevitable if he attacked", the sub-committee indicated its own preference. This did not go unchallenged. Outside as well as within the Air Ministry there were those who believed that an ability only to retaliate instantly was a positive advantage. But if this was an argument for an airborne force it was not one against the submarine which, for all an enemy knew, could retaliate just as quickly - if necessary, on predetermined orders.

In general, the report gave the impression - with adequate reasons, if the search for the least vulnerable system was a paramount factor - that the submarine had an advantage over the aeroplane. This was certainly the initial view of Sir Robert Scott who, as the newly appointed Permanent Secretary of MOD, became chairman of the BNDSG in October 1961 and who faced the task of making a report to ministers. If he hoped to present an agreed report he must soon have been disillusioned. At his first two meetings as BNDSG chairman³⁴ he encountered the widest possible variety of opinions: drop SKYBOLT and move quickly to bring in British-built Polaris boats by the end of the decade; go for a different and less expensive seaborne deterrent, a hybrid submarine with hunter/killer weapons as well as Polaris; look again at the case for an independent deterrent, the argument being that the Kennedy administration would be most impressed by improved conventional forces; keep the deterrent going because it might lead to the creation of an independent European deterrent; drop it because it encouraged France and Germany to go for their own nuclear strike force - as alarming to the Americans as to the Russians; reduce its size because the cost of replacing the existing capability of the V-force would unbalance the defence budget. Of these various opinions, the one that was easiest to deal with was the abandonment of SKYBOLT. The political objections were obvious; they included not only damage to the government's credibility but the risk that, having made so much of the importance of a weapon which otherwise the Americans might have cancelled, the necessary co-operation to provide Polaris in its place would not be forthcoming. This concern was to prove real enough, if for other reasons.

The Damage Criterion: Sir Robert Scott's Report

Sir Robert Scott was now faced with a difficult task. A majority of the BNDSG Committee as well as of its Technical Sub-Committee preferred Polaris to SKYBOLT, if there was to be any long-term deterrent system at all. On the other hand, there were doubts about the availability of Polaris (and also of any improved version of SKYBOLT, the need for which might well arise if the Russians developed an ABM system).³⁵ Costs of either system would in any case be heavy; and Mr Macmillan was known to be reluctant to take any decision which would commit resources, even hypothetically, to anything beyond the V-bomber/SKYBOLT combination. Indeed, he had said at a meeting of the Defence Committee in January 1962 that a system based on SKYBOLT should be maintained for as long after 1970 as possible. As Sir Robert Scott saw it, this called into question the existing criterion of deterrence. Was it crucial to effective deterrence that Britain alone should be able to attack as many as 40 Russian cities? If some lesser criterion was adopted the required force might be smaller, the stock of V-bombers and SKYBOLTS would have a longer life, and a difficult and controversial decision about a long-term deterrent system could be deferred.

Much effort was devoted at the turn of 1961-62 to this question of damage. The Joint Intelligence Committee was called in and in a report that had given them much difficulty advised, with some qualifications, that a 5-cities criterion might suffice. Scott himself posed the problem as that degree of damage that would deter Russia from launching an attack on 'interests considered by us to be vital' and

³⁴ BND(SG) 2nd and 3rd meetings, 29 November and 18 December 1961

³⁵ The technical and practical problems of a comprehensive ABM system were never underrated. Nevertheless, if the Russians devoted the necessary effort to it the Polaris A3 was considered potentially less vulnerable than SKYBOLT.

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concluded that to be able to eliminate 10 Russian cities, including the five largest, would be more than enough.³⁶ He did not claim that to change the criterion to this extent would proportionately reduce the size of deterrent force and he warned Ministers not to jump to hasty conclusions. Nevertheless, he was in effect inviting them to restate deterrent policy in terms which might prove to have at least some financial advantages. As these would flow from a longer life for V-bomber/SKYBOLT (and then from VC10/SKYBOLT) he might have expected support from the Air Ministry. He was, however, obliged to include in his report a note by VCAS (Sir Edmund Hudleston) expressing 'fundamental disagreement' with his approach: "it is unsound as it is unnecessary to propose to tinker with the damage level of our strategic nuclear strike force".³⁷ The unsoundness lay partly in departing from a criterion that was sufficient, in view of what Russia had suffered and recovered from in the last war, but partly also in the effect that a reduction would have on British influence on America. And it was unnecessary because it would be practicable to extend the life of the existing strike force without changing the criterion of capability. The Admiralty in contrast favoured a reduced criterion.³⁸

Mr Watkinson, who accepted Sir Robert Scott's advice, put the issue to his colleagues and a meeting of senior Ministers under Mr Macmillan agreed that a study should be made of the implications of selecting, not 10 - as Sir Robert Scott had proposed - but 15 Russian cities instead of 40.³⁹ This was not a final decision. Rather, it was an alternative assumption whose budgetary and other consequences would be assessed. But it reflected the anxiety of Ministers at once to maintain a deterrent force and to cut future costs as far as possible; and it was consistent with a policy of nuclear deterrence which aimed at no more than a significant contribution to the strategic capabilities of the Alliance.⁴⁰ The outcome, in the RAF case, was a plan for a force with the same front line strength - 72 Vulcans - as currently planned but with substantially fewer SKYBOLTS - just over a hundred compared with 170.⁴¹ A comparable capability was claimed by the Admiralty for a force of seven hybrid submarines, each carrying eight Polaris missiles; the '40 cities' criterion would have called for at least eight boats each with the standard number of sixteen missiles.

No decision between the two types of force was sought. None was needed so long as SKYBOLT remained the chosen weapon. But what became increasingly worrying during 1962 was whether SKYBOLT would be completed and whether in any case American policy towards the British deterrent was changing. The focus of interest moved away from the BNDSG and its efforts to provide Ministers with a sound basis for future deterrence. Much more immediately important was what was happening in America.

Progress of SKYBOLT

Whether SKYBOLT would succeed was not and could not be taken for granted but one encouraging sign was the heavier investment that had been authorised early in the life of the Kennedy administration. Group Captain Fryer reported in May 1961 that the development programme was aimed at the delivery of the weapon by the end of 1964 and that "a long life for the B52/SKYBOLT combination now seems to be reasonably assured". By this date too a Vulcan had successfully completed compatibility trials and a

³⁶ Report to Minister of Defence, BND(SG)(62)5, 6 February 1962.

³⁷ This was one of the last contributions of Air Marshal Hudleston who after four difficult years as VCAS was about to be succeeded by Air Marshal Sir Wallace Kyle.

³⁸ First Lord of the Admiralty to Minister of Defence 18 December 1961 (MOD Records TS407/101/024/63 Pt 4).

³⁹ Meeting at Admiralty House 7 March 1962 (BND(SG)(62)6).

⁴⁰ This, rather than a British deterrent capable on its own of deterring Russia, had been the recommendation of the Future Policy Committee in January 1960 (Chapter 9, pp 446-447).

⁴¹ It was only after much detailed staff work and, in view of ministerial hopes for economy, with some reluctance that the Air Ministry concluded that the smaller damage criterion still required the same size of front line. The explanation lay in the operational and logistic management of a force which hypothetically and so as to meet the requirement of invulnerability, was assumed to be on airborne alert for about one-fifth of the time. It was estimated that the force, with Vulcans, could be maintained well into the seventies.

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programme of modifications to the Vulcan fleet was going ahead. In November Fryer reported that Mr McNamara was much more impressed by the project than his predecessor had been but a note of doubt crept into his report of March 1962 by which time the more difficult technical problems were being encountered: "we must wait and see if the administration's intentions remain unchanged".⁴² The first programmed launch of the missile in April 1962 was reasonably successful (the second stage motor failed to ignite but this was not considered a serious setback). But the real technical hurdle, so Sir Solly Zuckerman reported to Mr Watkinson after a visit to Washington in the following month, was a fully guided launch. This was scheduled for December. Although Zuckerman's contacts told him that the President's Scientific Advisory Panel doubted whether SKYBOLT would meet its specification his report seemed to Mr Watkinson to be generally reassuring.

SKYBOLT was not going to fail for lack of technical effort or financial support: so much was clear from Fryer's reports. Yet evidence of uncertainty, especially within Mr McNamara's own department, continued to reach London. So much so that in August 1962 Mr Thorneycroft (who had now replaced Mr Watkinson as Minister of Defence) sent a personal message with the intention of helping Mr McNamara against the anti-SKYBOLT lobby. He said that the future of the V-bomber force was completely dependent on the successful development of SKYBOLT and he asked for a requirement of a hundred missiles for the RAF to be taken into account in the production plan. Mr McNamara was duly grateful for 'such definite reassurance'. But while the flow of information to London was sufficient to alert British Ministers they were not privy to all the difficulties that SKYBOLT was encountering. Not until later in the year was it known that at this time - summer 1962 - the Department of Defense Weapons Evaluation Group had recommended the cancellation of the project. Mr McNamara had rejected the advice but he had given warning that he would be looking very carefully at the project when he reviewed the strategic retaliatory programme as a whole in the context of the 1963-64 Federal budget. Political considerations aside, there was scope enough in Washington for genuine debate. The previous administration had not been enthusiastic about SKYBOLT. The Kennedy administration was even less likely to persist if the project ran into trouble. It had inherited a strategic weapons programme which showed all the signs of overreaction to the unexpectedly rapid missile achievements of the Russians that had become apparent in the late fifties. Thor and Jupiter, the medium range missiles; Atlas, the first ICBM; Polaris and Minuteman, the first solid fuel missiles; the airborne cruise missile Hound Dog and SKYBOLT its ballistic replacement; a supersonic bomber to replace the B52 - together these amounted to a programme ripe for the techniques of evaluation and cost-effectiveness of which Mr McNamara was the great exemplar; and ripe too for a display of authority by the Department of Defense over the individual US Services. The escalating costs during 1962 of both the development and production of SKYBOLT reinforced the doubts that many had about the technical performance of the missile. That SKYBOLT's early record of test failures (three tests in the summer of 1962 had been disappointing) was no worse than, for example, that of Polaris - as British Ministers more than once pointed out to their American colleagues - was not as effective an argument as it would have been if there had been fewer options for future strategic weapons. Polaris was in any case much further down the development road (the early marks were already in service) and Minuteman, according to the DOD experts, would be more cost-effective than SKYBOLT.

What made the position precarious, from the British point of view, was uncertainty about the alternatives if SKYBOLT failed. The rejection of BLUE STREAK meant that land-based missiles such as Minuteman were out of the question. Hound Dog was by now in service with the USAF but its speed (Mach 2) and range (600 miles at high level, 300 at low) were such as to make it at best a short term expedient; in any case, it was too big to be carried by V-bombers. Much was to be heard of Hound Dog during the Nassau Conference but it was never regarded by the Air Staff or anyone else in London as a serious alternative to SKYBOLT.⁴³ Short of developing a weapon themselves only the A3 version of Polaris would meet the

⁴² Copies of these reports are in MOD Records MO 26/10/7. These papers and those in Cabinet Office 59/24/2 are the main sources for the remainder of this chapter.

⁴³ The brief provided for Mr Macmillan's use at the Nassau Conference said that it would take about seven years to modify the V-bomber force to carry Hound Dog. By that time the force would be nearing the end of its useful life and in any case would have to release Hound Dog at high level to escape the Russian air defences. In those circumstances, Hound Dog itself would be vulnerable to the defences.

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British requirement. But for all that Mr Macmillan believed, on the strength of his discussions with President Eisenhower in March 1960, that the Americans had a moral obligation to supply Polaris, there was no formal understanding, much less any written agreement to this effect. Deliberately, no attempt was made to reach such an agreement, the fear being that this might only be forthcoming on terms which would mean surrendering independent control. Typical of the advice that the government received from its military and diplomatic representatives in Washington is this extract from a letter at the beginning of 1962:

The consensus of opinion is that we must not take it for granted that we will have the option of buying US weapons for our deterrent after Skybolt. No one is prepared to say that we will never be able to get them, but all predict great reluctance on the part of the Americans to let us have them unless they are very tightly tied in to NATO The ~~changes~~ of getting any successor to Skybolt, or Polaris or its successor are extremely thin, and this must be a major factor in any consideration of our deterrent force in the future. Indeed, I believe a third alternative comes into the picture, namely to conserve the life of the Skybolts when we get them, so that we could have the option of matching them with a later type aeroplane while developing a delivery system of our own.⁴⁴

The supply of Polaris to the British when proposals were under discussion for a NATO Polaris force under the control of SACEUR had been seen as a difficulty in President Eisenhower's time. It worsened under the new administration which brought fresh minds to bear on all aspects of American and Alliance strategy. Politically, the problem was one of resolving contradictions between features of policy each of which was desirable: any greater European contribution to nuclear deterrence must not be at the expense of maximum involvement of the United States in European defence; an Alliance deterrent force, while an answer to any German national aspirations, might be inconsistent with the need which first Britain and now France claimed for at least some degree of independent nuclear power; national deterrents usefully shared the responsibility (and odium) of nuclear power but made crisis management more complicated and non-proliferation harder to negotiate. In what was a situation difficult enough, the negotiations currently in train for Britain to join the EEC - and anxious therefore not to antagonise France - were a further complication. Too close the accord between the British and the Americans, too obvious the 'special relationship', and the risk of a French blackball would be that much greater⁴⁵ - a consideration to which the Kennedy administration attached as much importance as did the British government.

How skilfully American policy was conducted at this time is questionable. A speech by Mr McNamara in June 1962⁴⁶ exemplified the inherent contradiction between helping the British to maintain an independent deterrent while discouraging the similar aspirations of other countries, France in particular. In it, Mr McNamara strongly criticised "limited nuclear capabilities, operating independently": these were "dangerous, expensive, prone to obsolescence, and lacking in credibility as a deterrent a general nuclear war target system is indivisible." Whether or not Mr McNamara was objecting to British as well as French nuclear forces (he later denied that Bomber Command, tied in as it was with SAC, was the kind of force he had in mind) his speech was scarcely welcome to the British in either the context of the EEC negotiations or in its implications for the future of the British deterrent. It was only too clear that American assistance would involve compromising their belief that if there were to be any strategic forces beyond their own these would be best organised and controlled within the framework of the Alliance rather than nationally.

Abandonment of SKYBOLT

How far political as distinct from technical and financial factors affected the SKYBOLT project cannot be authoritatively established from British documents. To the extent that they did, they would have arisen

⁴⁴ Air Chief Marshal Sir George Mills, Head of British Defence Staffs Washington, to Sir Robert Scott, 22 January 1962 (AHB ID9/1/26).

⁴⁵ 'Problems of Nuclear Defence', a paper by the Foreign Office circulated in September 1962 admirably described the political background (AHB ID9/1/26).

⁴⁶ At Ann Arbor, Michigan, 16 June 1962.

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from internal rivalries, inter-service and industrial in nature, as well as from considerations of external policy. But once a provisional decision had been taken not to go ahead with SKYBOLT as a weapon for the USAF - a decision that appears to have been reached early in December 1962 - the remaining area for debate in Washington was not so much about whether some alternative form of assistance should be offered to the British as about the price to be exacted for it. The State Department, so it was reported to London, was strongly in favour of arrangements that would commit British nuclear forces to Alliance command and control.

The SKYBOLT programme was still alive, if not all that well, when Mr Thorneycroft visited Washington in September 1962. Sufficient funds had been allocated to cover flight tests and all other development work for the next six months; and Mr McNamara told Mr Thorneycroft that his plans assumed delivery of SKYBOLT for half the SAC B52 force, the other half to be equipped with Hound Dog. From October onwards, however, the news was anything but good. On 31 October Group Captain Fryer reported that Mr McNamara had threatened to cancel the programme out of hand unless the first guided launch (scheduled for the following month) was an unqualified success; he went on:-

It seems that this hostility is the direct consequence of the fourth programmed round which Mr McNamara considered to be thoroughly bad whereas conservative analysis of that event would in my view assess the flight as at least 60% successful this reversal of form indicates plainly to me that McNamara is still being subjected to pressure from those elements within his own organisation that are unenthusiastic about Skybolt a tangible success has now become paramount.

This disturbing report marked the beginning of six weeks of hectic activity in London and Washington; and in Paris as well because Mr Macmillan was punctilious, in the interest of the EEC negotiations, in keeping General de Gaulle informed.⁴⁷ Mr Thorneycroft's first reaction (encouraged by the Secretary of State for Air) was to send a message to Mr McNamara on 5 November reaffirming the importance of SKYBOLT as a central feature both of British defence policy and Anglo/American collaboration and reminding him that disappointments were to be expected. To his credit, Mr McNamara recognised that although no decision could be reached in less than a month - the critical test of a guided launch had not yet taken place - the time for a frank exposure of his difficulties had arrived. He saw the Ambassador (Sir David Ormsby Gore) on 8 November and gave him what was the first formal intimation from the US government that the project was in danger.

This encounter - as was no doubt intended - set the stage for the ensuing drama. Mr McNamara gave the cost escalations - from \$200M to nearly \$500M on development (with more in prospect) and from \$1.75 billion to over \$2 billion for production; and the in-service date had slipped by several months. If all the strategic projects went ahead there would be a huge (by implication, excessive) first strike capacity in a few years time. Minuteman would be a relatively cheap weapon. So, as Mr McNamara worked on the defence budget for the next financial year, SKYBOLT gave him particular concern. Before a final decision was taken the Joint Chiefs of Staff would be giving their recommendations; he would report to the President; and there would be consultation between the two governments. He fully recognised US obligations, including moral obligations, to the United Kingdom.

In return, the British Ambassador could not have been more frank about the effects of cancellation. A major part of UK defence policy would be in ruins; there would be serious internal and external political difficulties; there would be people who would question US motives in arriving at such a decision - these are only examples of some notably straight talking. When asked to confirm that the SKYBOLT system was technically feasible Mr McNamara replied that it could eventually be made to work but there had to be a limit to the investment in it; in any case, a system "so incredibly complicated" was likely to prove

⁴⁷ The importance that the British and American governments alike attached to the French interest may have been misplaced. The author's impression - on a less than complete study of the diplomatic telegrams - is that General de Gaulle probably never regarded the particular issue of Britain's dependence on American strategic weapons as relevant to the EEC negotiations, though it confirmed him in his policy of self-reliance for his own country.

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unreliable and difficult to maintain in a serviceable condition. As for the choices open to the British if SKYBOLT was removed from the American programme, the first was to continue its development on their own (this was a provision of the inter-governmental agreement) though this would make it prohibitively expensive; secondly, to take Hound Dog which Mr McNamara considered a credible weapon up to about 1970; or to take Minuteman or Polaris. As for the political context, Mr McNamara, according to the Ambassador said that "there was no question whatever of the United States wishing to put pressure on us to abandon our nuclear effort a disastrous reaction would result from any such pressure not only in the UK but in the rest of Western Europe". If he was choosing his words with care, so as not to rule out a continued British effort but one that was not politically independent, he was quickly made aware that this would lead to trouble. Having read the Ambassador's telegram about the discussions, Mr Thorneycroft telephoned Mr McNamara from London to say that any replacement for SKYBOLT must have the same degree of independence.⁴⁸

Some action was taken in London in advance of the guided SKYBOLT launch. First, and with as few as possible let into the secret, the BNDSG again met to review the alternatives to SKYBOLT.⁴⁹ Nothing, aside from Polaris, had much appeal. No British project - whether a sophisticated cruise missile or versions, possibly simplified, of SKYBOLT or Polaris - could possibly be in service for eight years as a minimum and more likely at least ten. So if SKYBOLT was cancelled, a gap in deterrence with all its political dangers would open up. TSR2 would not be available in time to fill the gap. In any case, while a TSR2 force that in theory could meet the 15-cities criterion could be envisaged, this in itself was not the sole test of a credible deterrent. The honest view of the Air Staff, as VCAS (Sir Wallace Kyle) put it to his BNDSG colleagues, was that they would not be able to offer a serious alternative to SKYBOLT. In short, it was SKYBOLT or Polaris. If Polaris, deterrent credibility would begin to diminish from 1965 onwards and would have disappeared before a force of British-built Polaris boats could be fully operational.⁵⁰ A modified Blue Steel and a lay-down bomb for the Vulcan force operating at low level would narrow but not entirely close the gap. Another expedient, the one the Admiralty preferred, was the hire of two or three American-built Polaris boats, to come into service in about 1966.

This last possibility, as the lead in to a British-built Polaris force, was beginning to be the British negotiating objective, should SKYBOLT fail. Mr Thorneycroft advised Mr Macmillan to this effect in mid-November. However, it was too early to assume that all was lost and, after a meeting of senior ministers on 20 November,⁵¹ Mr Macmillan asked President Kennedy to defer a decision on SKYBOLT until it had been discussed with Mr McNamara in London (he was due to visit Europe for the annual meeting of the NATO Council). Before then the guided launch trial had taken place. According to the British Ambassador it was "a complete failure".⁵² Within a few days a signal from Group Captain Fryer

⁴⁸ In recording this conversation Mr Thorneycroft's Private Secretary, Mr A P Hockaday, wrote 'McNamara took this point'.

⁴⁹ BNDSG/M(62)5, 14 November 1962. The official record of this meeting was deliberately unrevealing and was given a very restricted circulation. A full account of the discussion is in MOD Records TS407/101/024/63 Pt VII.

⁵⁰ The actual date was considered to turn on the choice between a force of seven (possibly eight) hybrid submarines or four (possibly five) dedicated Polaris boats. The Admiralty preferred the former. It would be cheaper because fewer hunter/killer submarines would be needed and the dual role would be more satisfying for the crews. The operational penalty (the boats would have a lower maximum speed than those of the hunter/killer class) was regarded as acceptable. The Air Ministry thought that the hybrid force would be more vulnerable and therefore less convincing for its primary role of deterrence. On the American side Mr McNamara, for one, thought little of it and in the stress and urgency of the Nassau negotiations it dropped out of the reckoning.

⁵¹ Gen 778/1st Mtg.

⁵² Mr Macmillan was displeased that the Ambassador had so described the trial in discussion with Mr McNamara. The language was indeed exaggerated; the trial in fact was like the curate's egg. But as Mr Thorneycroft perceptively told the Prime Minister, the Americans would merely be stimulated to further efforts if SKYBOLT was crucial to them. As it was not, coming on top of earlier disappointments, the results of the trial increased the risk of cancellation.

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confirmed the seriousness of the situation. Based on what he had been told by one of his American friends he reported that Mr McNamara was now unwilling to entertain any operational argument for the system (although by this time the Joint Chiefs of Staff had recommended in its favour) and had decided to recommend cancellation. SKYBOLT, his informant said, could now only survive on political grounds. The trend of events was clear from other sources, including the American press. An article on 7 December, in the New York Times, obviously based on guidance from Washington, said that the USAF would not be getting SKYBOLT and that Mr McNamara was expected to suggest that the programme should be taken over by Britain. Mr Thorneycroft was unimpressed.⁵³ He advised the Prime Minister in a minute of 7 December that "the only efficient alternative for us is a submarine-borne Polaris weapon system" with the resultant credibility gap filled by "borrowing two or three complete Polaris-carrying submarines from the Americans". With or without the stop-gap, the financial implications would be unwelcome.

By the time Mr McNamara met Mr Thorneycroft in London - on 11 December - the British government would have been taken aback only if he had said that all was well with SKYBOLT. Briefs were already being prepared for the Prime Minister's use at Nassau - where a meeting with President Kennedy in the third week of December had been scheduled for some time - on the assumption that the Americans no longer wanted the weapon. As expected, Mr McNamara opened the talks by saying that his government had tentatively concluded that SKYBOLT should be abandoned. Nor were his suggested replacements unexpected: British acceptance of responsibility for the programme; or adaptation of Hound Dog for carriage by V-bombers; or British participation in a seaborne missile force under multilateral manning and ownership (the latest, not the most sensible, and eventually discarded idea for a NATO MRBM force). Nor could he have been surprised that two of these were regarded by Mr Thorneycroft as non-starters and the first as unsatisfactory.⁵⁴ The best alternative to SKYBOLT, said Mr Thorneycroft, would be Polaris - hired to begin with and later in British boats. The heart of the matter had now been reached: would there be objections, technical or political or both, to the supply of Polaris?

Information in advance of Mr McNamara's arrival had given no clear guidance. At a recent meeting with Sir Solly Zuckerman (see footnote below) Mr McNamara had been discouraging about the supply of Polaris, seeing this as causing problems in the EEC negotiations. On the other hand, the Ambassador in Washington had reported President Kennedy's view that a straightforward replacement for SKYBOLT, such as Minuteman or Polaris, would be obligatory. According to the Ambassador, the Americans "are determined not to be accused of using the technical failure of SKYBOLT in order to bring pressure upon us to abandon our nuclear independence." But he also reported that the President had not given the matter much thought; and this suggests, in the light of later events, that Mr Kennedy did not wish or was unable to disclose the full extent of current thought in Washington about the British deterrent.

That SKYBOLT had little chance of surviving as a USAF project was clear enough. A long memorandum about its history and technical feasibility was formally handed to Mr Thorneycroft at the conclusion of his meeting with Mr McNamara.⁵⁵ This set out the occasions when the cancellation of the project had been recommended by various groups of American scientists, even as early as July 1959. Against the possible criticism that the British had been kept in the dark it also mentioned the dates when they had been told of the difficulties that were being encountered. Whereas the balance of previous arguments had come down

⁵³ The possibility had been discussed in the BNDSG, with the Air Ministry anxious that it should not be dismissed out of hand. The Minister of Aviation (Mr Julian Amery) took a similar view, if only as a tactical move to ensure that the Americans would provide a deterrent without strings. Mr Thorneycroft, and probably Mr Macmillan as well, was not to be tempted. However carefully presented, and even with American financial help (such as President Kennedy was to offer at Nassau), no government could take the risk of continuing the development of a weapon that the Americans had decided to do without.

⁵⁴ Mr McNamara said nothing about another suggestion which had been mentioned in a discussion a few days earlier with Sir Solly Zuckerman. This was that a number of US-based Minutemen could be targeted in such a way as to blaze a path for the V-bomber force (without SKYBOLT). Whoever put forward this suggestion could have had no understanding of the political aspects of deterrence that were important to the British government.

⁵⁵ This was necessary because of the formal inter-governmental agreement covering the British interest in the project. A copy is in MOD Records MO26/10/7.

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against cancellation because of uncertainties about the success of other strategic projects, doubts about SKYBOLT had now strengthened while hopes for other systems had been largely fulfilled. The basis of these doubts was explained in some detail, with the data processing and display system receiving most attention: "this equipment has grown in size and complexity by a factor of approximately three since the system was begun." Reliability in service was another major worry.

So damaging to SKYBOLT was the memorandum, so rational the conclusion - though still "tentative" - that the programme could not be considered a sound use of resources for American defence purposes, that it is hard to believe that to continue the programme on British account was put forward as a serious option. Rather, it was conceived as helpful in dealing with a political outcry in the United States as well as Britain. This was the strongest card in the British hand and Mr Thorneycroft played it. According to the record of his meeting with Mr McNamara he told him that the United States would be accused of letting Britain down, and the British government would be in an impossible position unless agreement could be reached on means by which the position of the United Kingdom as an independent nuclear power could be maintained. He got a less than satisfactory reply from Mr McNamara, whose claim that the efforts to make SKYBOLT work, despite all the doubts and difficulties, reflected American willingness to maintain the British deterrent was beside the point. The key question was whether they were still willing, to the extent if necessary of providing an acceptable replacement for SKYBOLT on the same terms. Mr McNamara's answer was that the continuance of the UK as an independent nuclear power raised problems in the EEC and NATO context; and he admitted that personally he felt unable to come out in public in support of the independent deterrent.⁵⁶ Polaris as a replacement for SKYBOLT was not turned down outright but the emphasis Mr McNamara placed on the high cost of the system was not encouraging.

Whether as a result of these talks all hope of SKYBOLT had gone is unclear. Mr Julian Amery, for one, was unconvinced by Mr McNamara's gloomy recital of SKYBOLT's difficulties. There had been just as many disappointments during the development of Polaris and Minuteman: "I cannot regard Mr McNamara's aide-memoire as a true bill".⁵⁷ Moreover, Mr Macmillan's brief for Nassau advised him "to put it to the President that there is a very strong case for the US continuing to give its full support to the SKYBOLT programme and to see it through the stages of complete development". On the other hand, he went armed as well with a draft communique which assumed that he and the President had agreed to the cancellation of SKYBOLT and to the supply of Polaris instead, without strings, for installation with British warheads in British-built boats, with up to three American-built boats hired as an interim arrangement. So British expectations that the answer might after all be SKYBOLT were scarcely high. And as the British cupboard was both bare and unreplenishable for years to come, the Prime Minister's briefs necessarily concentrated on the political case for another American weapon which, since Hound Dog was not considered an acceptable or even practicable system, could only be Polaris. Difficulties were foreseen over the hire of Polaris boats but this was not considered a crucial point since, by one means and another, the V-bomber force could remain adequately credible as a deterrent for most of the sixties, especially if a more effective system was known to be in hand to take its place. What would be politically intolerable would be an American refusal to provide Polaris missiles for installing in British boats by 1970 and beyond. This would mean, as the Prime Minister's brief put it, that the cancellation of SKYBOLT would have to be presented as a unilateral American decision "with most damaging consequences for Anglo-American relations". In particular there could be no question of Britain taking part in a multilateral deterrent system; and the USN base at Holy Loch and possibly even the long standing arrangements for USAF

⁵⁶ This remark was not included in the British record of the talks but Sir Robert Scott reported it at a meeting of the Permanent Secretaries of the defence departments the following day (MOD Records TS407/101/024/63 Pt VII).

⁵⁷ The competence of MOA to make a reliable judgment was challenged by Sir Solly Zuckerman but Mr Amery had sufficient confidence in his staff to send a minute to the Prime Minister just before his departure for Nassau. In this he described the extent to which MOA scientists and technicians had been involved in SKYBOLT. Zuckerman's doubts about SKYBOLT he considered "ill based".

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bases in Britain would be in jeopardy. In other words, the negotiating brief sought to offset Britain's self-imposed inability to provide an indigenous deterrent by making the most of the political and military consequences if the American support essential to the future of the deterrent was withdrawn. Whether the Americans would take the same view was the key question at Nassau. A public speech by President Kennedy shortly before the conference opened, in which he expressed his concern at any proliferation of nuclear forces in Europe, was not the best of omens for its success.

The Nassau Conference

The conference began on 18 December 1962, the first day being spent on other issues than the future of the British deterrent. A large party accompanied the Prime Minister but the formal negotiating sessions were restricted to the President and Prime Minister, each with a small number of advisers:⁵⁸ the Foreign Secretary (Lord Home), the Minister of Defence (Mr Thorneycroft) and the British Ambassador in Washington (Sir David Ormsby-Gore) and, on the American side, Mr McNamara, the American Ambassador in London (Mr David Bruce) and Mr George Ball, were the chief participants. Mr Sandys was also in the Prime Minister's team. The British objective was clear: to obtain an effective deterrent system under sovereign control. The American objective, if President Kennedy's statement, at the conference are taken at their face value, was no less clear: to make any assistance conditional on the subordination of the British deterrent to Alliance control. His position was apparently strong. American weapons (to be precise, the vehicles in which British warheads would be installed) were the only means by which the British deterrent could be maintained. Without that help, the least unpalatable consequence would be that a credibility gap would be exposed, one that Britain on her own could only belatedly close at heavy cost in money and effort. More unpalatable would be the political consequences. The charge would be that the government had been humiliated and its mistaken efforts to maintain an independent deterrent had failed; and if it sought to rally opinion round some new British project a fierce and divisive controversy would be unavoidable. That despite these considerations the Prime Minister was at one stage advised to break off the talks is an illustration of the difficulties he encountered. Yet the President's position was not as strong as appeared. A decision to abandon SKYBOLT without some compensating arrangement would be criticised at home as well as abroad. His concern to curb the growth of national deterrent forces had political appeal but if the outcome was that France alone had an independent capability he could expect trouble within the Alliance. The strength of the President's position was in reality its weakness. He could use it to prevail but at the price of weakening an alliance which was crucial to American security.

A detailed account of all the arguments that were advanced by each side during three days of intensive negotiations would be excessively long. Two areas received most attention. One was weapons and the other the terms on which a political compromise might be reached. Dealing first with SKYBOLT, the President made it disarmingly clear at the first session on 19 December that he had no intention of being criticised for abandoning SKYBOLT because he was opposed to the British deterrent. SKYBOLT would go ahead, if that was what the British wanted and if they would meet half the costs - estimated at \$200M - of the outstanding development programme. The estimated cost of each completed missile was \$1½M. If this offer was accepted the President did not rule out the possibility that the USAF itself might later place an order. But what with him making this conditional on developing an aircraft 'which would stay aloft for several days' and with Mr McNamara damning SKYBOLT with faint praise, withdrawing none of the criticisms in his London memorandum, its effect on the British team was less than impressive. As the Prime Minister put it, "while the proposed marriage with SKYBOLT was not exactly a shotgun wedding, the virginity of the lady must now be regarded as doubtful. There had been too many remarks about the unreliability of SKYBOLT for anyone to believe in its effectiveness in the future".

⁵⁸ Two of the new Comet 4s of No 216 Squadron were used to convey the British party. Lord Mountbatten was present but no other member of the Chiefs of Staff Committee. Air Marshal C H Hartley (ACAS(OR)) represented the Air Staff. Sir Robert Scott, who attended one of the negotiating sessions, and Sir Solly Zuckerman were also present. A detailed record of the meetings was made by the Prime Minister's Principal Private Secretary, Mr T J Bligh (Cabinet Office 59/24/2 Pt 1).

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At the end of the first day the SKYBOLT offer was still on the table. So was the offer to supply Hound Dog, though Mr Thorneycroft had firmly stated that this weapon would not do. There had been much discussion of Polaris as well. As expected the President was extremely reluctant to supply Polaris as a straight replacement for SKYBOLT. He described it as a 'new weapons system giving a new type of power'; and while, according to the record, he did not enlarge on this there is little doubt that he regarded Polaris as unique amongst strategic weapons in the prospect it offered of long term invulnerability. This only aggravated the President's political difficulties. He found it hard enough to contemplate any arrangement that would maintain the British deterrent because France might request help as well.⁵⁹ If this was conceded, what would be the effect on the Federal Republic? if it were not, French antagonism to an American-dominated Alliance would only be confirmed; and in any case the cause of non-proliferation would not be helped. All these uncomfortable political possibilities would be that much more difficult to handle if a deterrent system effective for not less than twenty years ahead (the President's own estimate) was made available to the sovereign control of another country - the essential feature of the existing SKYBOLT agreement.

Against this background the political argument at Nassau was crucial; hardly any time was spent on strategic and military questions. And as the Prime Minister was so obviously doubtful about the acceptability of any system other than Polaris the key question emerged at an early stage: could the two sides agree on the political terms on which Polaris might be supplied? In his opening remarks Mr Macmillan sketched a possible compromise: an independent British deterrent from which a contribution would be made to a NATO-controlled force; those members of the Alliance which made no contribution would be brought into consultation on nuclear planning. "The truth was", Mr Macmillan said, "that until a single supernational State was formed there would have to be a combination of independence and inter-dependence". He offered to make available to SACEUR a squadron of V-bombers so as to register Britain's support for this dual approach to deterrence.⁶⁰

Some progress was made in the morning session, if only in identifying those deterrent policies which would create as many problems as they would solve, an example being a joint Anglo/French/US force. It was also clear that while the British were willing to make part of their deterrent available to the Alliance there must be an element that could be convincingly claimed as independent. There had been some movement on the American side as well: the supply of Polaris was not wholly ruled out but its implications needed careful study. As the President saw this taking at least several weeks it raised the unhappy prospect for the Prime Minister of a return to London with nothing settled. Yet this was precisely what he was faced with at the beginning of the afternoon session when the President produced two drafts, one of a communique and the other a confidential memorandum of understanding. The 50/50 deal for SKYBOLT, with Hound Dog as an alternative, was offered. Failing these, there would be a study, with other members of the Alliance, of the feasibility of a NATO missile force. Britain would contribute to such a force and the United States would make at least an equal contribution. In addition, both countries would contribute to a NATO multilateral force (MLF). Except for warheads, the weapons for the British contingents would be American but they would be under NATO control; only in what the President described as "a case of real emergency, of mortal peril" would they revert to national control. To make matters worse, from the British point of view, a new commitment was proposed: each country would agree to meet the prescribed NATO targets for conventional forces.

There was yet another American draft, suggesting the answer the Prime Minister might give if asked (as he certainly would be) whether the President's proposals meant that Britain would be giving up its independent deterrent. Its language was such as to make it doubtful whether the American side had fully

⁵⁹ France would be entitled to make such a request, under the revised McMahon Act, once she had proved her ability to produce nuclear weapons.

⁶⁰ Mr Macmillan may have forgotten that three Valiant squadrons of Bomber Command were already assigned to NATO. In this sense his was not a new offer. Nevertheless, in terms of the negotiations it signified willingness to find a compromise between full independence and total subordination of the deterrent to SACEUR's control.

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appreciated British sensitivities.⁶¹ However, Mr Macmillan's team had not been idle during the lengthy break - some four hours - between the morning and afternoon sessions. The Prime Minister too had the draft of a communique to offer (based on the one prepared beforehand in London). This explained the American decision not to complete the SKYBOLT programme for their own purposes; the American 50/50 SKYBOLT offer and the reasons for the Prime Minister's decision not to avail himself of it; and also the reasons for rejecting the Hound Dog offer. Then came the main dish: the United States agrees to sell Polaris missiles to the United Kingdom which would construct the necessary submarines and warheads, the 'primary task being to contribute to the defence of the NATO area'; followed by the dressing to make it palatable to the Americans: the two countries agree on the importance of striving to bring a NATO MLF into being and would work with the United States and other members of NATO to this end. Finally, the agreement to supply Polaris was in no way inconsistent with such a force. There was no response to the President's proposal to improve the contributions to NATO conventional forces.

It was obvious from these competing drafts that the two sides were still some distance apart. The Americans wanted an agreement that would commit - "assign" in NATO terminology - a British Polaris force to NATO, with no more than an annotation that it might be used for exclusively national purposes. This would be the desired prophylactic against the proliferation of national deterrents. The British wanted a Polaris fleet that was as much a part of the forces of the Crown as the Brigade of Guards. It would normally be deployed in support of the Alliance but it would be an independent contribution which, so the British government could claim, could be operated for purposes in which the Alliance was not directly involved.⁶²

After a relatively short discussion of their respective positions the two sides broke off until the following morning. On the British side there was something close to dismay at the way the conference had gone. So much so that Mr Thorneycroft formally minuted the Prime Minister setting out his objections to the American proposals. These would mean that Britain would neither have nor could even claim to have an independent deterrent; and Mr Thorneycroft was strongly opposed to any attempt to find a formula which would merely gloss over "the very wide and deep chasm between us". For him, the President's reference to fulfilling NATO targets for conventional forces compounded the difficulties. It would present the government with a choice between reintroducing National Service (and a heavy bill for conventional equipment) or withdrawing from East of Suez. He advised that the talks should be wound up.⁶³

The Prime Minister sent a courteous and considered reply, his main point being that if the British were to break off the conference they must do so on grounds which reasonable people would recognise as sound. Opposition to some form of Alliance deterrent would not be a good enough reason; many would be attracted by it. Others would consider the President's offer of contingent independence acceptable. But his formula was too restrictive. The aim should now be to negotiate something better. Mr Macmillan thought that by Friday (this was Wednesday evening) the Americans might have given in: "I have not given up hope".

Thursday proved to be a difficult day. Although at an early stage President Kennedy said he was no longer worried about British control of a Polaris force in a national emergency no formula could be found that

⁶¹ The American formulation put the emphasis on the indivisibility of Western defence - "it is this very unity which is our best protection". Hence, "only in the event of a dire national emergency - an emergency in which it might be necessary to act alone - an emergency which we cannot envisage and which we must all trust will never occur - would HMG be faced with a decision of utilising such forces on its own - of course after adequate notice to all its partners". No British Prime Minister would have expected to persuade public opinion that this was not a change of policy.

⁶² The ghost of colonialism was still abroad. President Kennedy reacted sharply when Mr Macmillan mentioned areas such as the Far East and the Gulf as ones where a potentially dangerous situation might be defused by the presence of Polaris submarines.

⁶³ A copy of this minute, dated 19 December 1962, and the Prime Minister's reply, is in MOD Records MO26/10/7. It is highly unlikely that he sent it without discussion with his principal advisers - Lord Mountbatten, Sir Robert Scott and Sir Solly Zuckerman.

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gave sufficient emphasis both to the American multilateral approach and to the British need for a credible degree of independence. More than once the President said that the crucial test of any deal would be the answer to the question, "Is this an independent national deterrent?". A typical response by Mr Macmillan - that it would be 'an independent contribution to the Western deterrent' - was not acceptable; if this was what it was, the President felt he would have to make the same offer to General de Gaulle.

Yet further drafts of a possible communique were discussed during Thursday when there was a formidably eloquent expression by Mr Macmillan of the importance - as much to America as her allies - of interdependence between nations which while unequal in strength must be seen to be equal in esteem. This was his point: not that a British independent force was needed because America might not stand by her European allies but because the Alliance would thereby be morally and politically stronger. And for the first time the conference record shows him speaking of the consequences of failure if the principle of independence was not conceded. Specifically, the idea of a Polaris purchase would be dropped and some other way would have to be found to maintain the British deterrent; more generally, a reappraisal of British defence policies worldwide would have to be made.

During Friday 21 December, which was largely spent in cobbling an agreement together, Mr Macmillan heard from his Cabinet colleagues in London. They were as concerned as Mr Thorneycroft had been at the credibility of any claim that the kind of Polaris force the President had in mind would genuinely be British-controlled; and if it had no such independence could the heavy expenditure be defended? They were concerned too at the President's insistence on improving conventional forces in NATO. Compromise formulations on both points were suggested that in the event were included in the final communique. ⁶⁴ This - described as a Statement on Nuclear Defence Systems ⁶⁵ - set out in general terms the American reasons for deciding not to go ahead with SKYBOLT for USAF use and the British reasons for not accepting the American 50/50 offer to complete the development programme for British purposes. The offer of Hound Dog was turned down because of "technical difficulties". Whether Polaris should be supplied was set against the political background that was all-important to the President: "this issue created an opportunity for the development of new and closer arrangements for the organisation and control of strategic western defence". According to the statement, this was common ground; so much so that it was at the Prime Minister's suggestion that a start could be made in this new direction by subscribing to NATO some of the existing forces, including allocations from SAC, Bomber Command and the tactical nuclear forces in Europe. These would be "assigned" as part of a NATO nuclear force and targeted in accordance with NATO plans. Consistently with these first steps, the President and the Prime Minister agreed that the purpose of providing Polaris missiles to the United Kingdom "must be" the development of a multilateral NATO nuclear force.

That such a force had not yet been formed and would require the agreement of other NATO allies does not affect the judgment that, up to this point in the communique, the President had got his way, especially as the two sides agreed that a British Polaris force would be assigned to NATO and targeted under Alliance arrangements. What the Prime Minister got in return seems at first sight little enough. The formulation of the extent to which the deterrent could be claimed to be independent was no more than this: "except where Her Majesty's Government may decide that supreme national interests are at stake, these British forces will be used for the purposes of international defence of the Western Alliance in all circumstances". This wording, with its obvious emphasis on 'British', had been suggested in a message from the Cabinet in London. The Cabinet had also influenced the form of words on conventional forces which figured in the statement: "The President and the Prime Minister agreed that in addition to having a nuclear shield it is

⁶⁴ There was also a plea from the British team in Nassau not to become too committed to a multilateral force. Sir Robert Scott and Sir Solly Zuckerman jointly minuted the Prime Minister on 21 December, their main point being that MLF was a political cosmetic which neither the British or even the Americans considered militarily sensible and which might not materialise: "for six years or more we shall be spending vast sums of money [on Polaris boats] without being certain that we shall in the end get the missiles".

⁶⁵ Published in London as Cmnd 1915.

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important to have a non-nuclear sword. ⁶⁶ For this purpose they agreed on the importance of increasing the effectiveness of their conventional forces on a worldwide basis". This avoided a commitment to increasing British conventional contributions to NATO, which until late in the negotiations had threatened to be part of the price for Polaris.

Looking at the Nassau conference as an attempt by Mr Macmillan to reach as satisfactory an understanding on Polaris as he had reached with President Eisenhower on SKYBOLT, he had not done well. A limitation to the purposes of the Alliance would have applied no less to SKYBOLT; hence the plan to ensure that part of Bomber Command's strategic forces - the Victor squadrons with Blue Steel - could be deployed outside the NATO area. But there had been no question of subordinating or assigning SKYBOLT squadrons to NATO or regarding them as an element in some future multilateral force. Yet the Nassau agreement should not be considered a failure. The American commitment to supply Polaris (and "on a continuing basis"), together with their responsibility for the demise of SKYBOLT that led to this new commitment, meant that even if the idea of a multilateral NATO force came to nothing - as it did - the odds on the British still getting Polaris would be very long indeed. And if it was only in exceptional circumstances that a British Polaris fleet could be operated independently of the Alliance, the likelihood of those circumstances arising was small enough. The essential issue at Nassau was whether anything could be obtained to replace SKYBOLT. It was, coupled with sufficient independence of action to meet the government's political requirements. That this was considered significant, by the President as well as the Prime Minister, explains why urgent action was taken to inform General de Gaulle of the main features of the agreement before it was published ⁶⁷

Immediate Consequences of Nassau

Action to justify the terms of the agreement was quickly put in hand after Mr Macmillan's return to London. Parliament had risen on the last day of the conference and not until late in January 1963 was the government required to defend its actions there. In the meantime, guidance to the press at home and overseas made the best of the agreement: it would ensure that the deterrent was armed with a fully effective weapon instead of the uncertain SKYBOLT, ⁶⁸ one with a long life (with later improvements available if necessary) and better suited to the needs of a small island country. ⁶⁹ It was claimed as well - with some if not total relevance - that the arrangements for targeting the Polaris force would not be dissimilar from those on which SAC and Bomber Command had collaborated. But even taking the merits of a Polaris force at their face value, it was several years away. Moreover, the Nassau agreement was in broad terms; it had been reached only with difficulty; and common prudence demanded an examination of what could be done both to improve the existing deterrent until Polaris came into service and to guard against difficulties that might arise when detailed terms for the supply of the missiles came to be negotiated. On the same day as agreement was reached at Nassau the Air Ministry and Ministry of Aviation were once more reviewing the possible choices. They were encouraged, shortly after his return, by Mr Macmillan who was in no mood to count his chickens. He foresaw an American attempt to attach conditions to the detailed agreement on Polaris that would weaken the independence of the force; and he needed to know whether "if we were driven into a corner we could either as a bluff or as a reality make a Polaris missile, perhaps of a simpler kind, ourselves". ⁷⁰ And would it be possible, and if so at what cost, to resurrect BLUE STEEL Mk 2?

⁶⁶ If deliberate, this was an interesting and possibly significant transposition: usually, the Anglo/American nuclear strike forces were referred to as NATO's sword; its tactical nuclear/conventional forces as the shield.

⁶⁷ President Kennedy sent a personal message and the British Ambassador in Paris called on the General on 21 December. As the British had forecast, the General showed no interest in a similar deal for France. He also said that it would be interesting to know how the British would be able in practice to withdraw from a NATO force if they judged their national interests to be at stake.

⁶⁸ A satisfactory test launch of SKYBOLT on 22 December, by which time the two governments had publicly passed a vote of no confidence in the weapon, had to be rationalised as no more than one success in a development programme which still had a long way to go and could no longer be justified.

⁶⁹ The Air Ministry was never less impressed by the case for Polaris than when it was argued as appropriate to the British maritime tradition and as making it less likely that Britain itself would suffer nuclear attack.

⁷⁰ Prime Minister to Minister of Defence 26 December 1962 (MOD Records MO26/10/7/Pt 2).

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Shortly before Nassau the BNDSG had addressed essentially the same question and had advised that for long-term deterrence only SKYBOLT or Polaris would be satisfactory. Much the same advice emerged from the post-Nassau review. Even the Air Ministry did not consider the Prime Minister's invitation an opportunity to restate the claim for airborne deterrence. It doubted whether any British project would be worthwhile except for some relatively inexpensive measures to provide the V-bomber force with the capability to attack at low level.⁷¹ This was not to say that a major project was inconceivable, as a last resort. Mr Amery set out the theoretical possibilities in mid-January: a similar missile to SKYBOLT might be developed in about nine years; a Polaris-type missile in about ten; a cruise missile (based on OR 1182) or a land-based ballistic missile - where there was practical British experience - could be more confidently expected to be developed in less than ten years. Each would absorb substantial R and D resources; each would raise political difficulties, some more than others. Notwithstanding his strong patriotic preferences, Mr Amery concluded that "at the moment a British project is not in question".⁷²

It was no less clear that only modest resources would be available for ensuring that the deterrent remained credible during the pre-Polaris period, until 1970. At Nassau a satisfactory arrangement had been provisionally reached on the price to be paid for Polaris, including a modest percentage addition to the cost of each missile as a contribution to American R and D costs. Total expenditure on the complete programme showed every sign of being substantially bigger than had been estimated in the BNDSG studies of 1961/62. The choice, after some debate, of a 16-missile boat rather than a 'hybrid' boat with 8 missiles both added to costs and meant that expenditure would build up more quickly; and there were other areas of unexpected or previously undisclosed expenditure. Nevertheless, measures for improving the existing deterrent emerged from what was to be the last meeting of the BNDSG.⁷³ As eventually approved, these were, strengthening the Vulcan airframe and improving its navigational and ECM equipment; a high-yield lay-down bomb for the Vulcan (and possibly at a later stage for TSR2); and modifying Blue Steel Mk 1 for release at low altitude. The object was low-level penetration by the Vulcan force, giving it a valuable additional capability but not one that the Air Ministry regarded as significantly extending its useful life as a credible deterrent in itself. Nor was it considered a force capable of mounting an effective airborne alert. Its future, after Polaris came into service, was seen as part of the nuclear strike forces assigned to NATO - as had been agreed at Nassau. In the meantime, it would also fill the independent deterrent role for which it had originally been created.

In the event, Mr Macmillan's concern that a fresh attempt might be made to commit the Polaris force wholly to NATO came to nothing. The final terms for the supply of the missile were negotiated in the early months of 1963 without encountering serious political difficulties and concluded in a formal agreement in April.⁷³ The way was clear for the eventual transference of responsibility for strategic deterrence from the Royal Air Force to the Royal Navy.

⁷¹ Sir M Dean to Sir R Scott 11 January 1963 (MOD Records TS407/101/024/63 pt 7).

⁷² Minister of Aviation to Minister of Defence 15 January 1963 (ibid).

⁷³ BNDSG/M(63)1, 21 January 1963.

CHAPTER 11

CHANGE AND DECAY: THE AIR COUNCIL RESPONSE

Introduction

What will have emerged from previous chapters is the extent to which the assumptions on which plans for the Royal Air Force had been based at the beginning of the period were belied by changes in the government's defence policy. In the six years after the publication of the 1957 Defence White Paper every Command experienced important and unexpected changes in strength, equipment and tasks. If this was not the first such period in the history of the RAF it was still one of uncomfortably rapid change which presented the Air Council with a formidable task of maintaining what one CAS called 'the fabric of the Service'. The major differences between plans at the beginning of the period and reality at its end will by now be clear but these need to be restated to set the scene for the response of the Council.

Bomber Command in 1963 was very different from what had been envisaged in 1957. Twenty-three V-bomber squadrons, five Canberra light bomber squadrons, four reconnaissance squadrons and a small tanker force had been the Air Council's initial response to Mr Sandys' White Paper.¹ If the Command, including as it did Valiants and the first marks of Vulcan and Victor, was not expected to be maintained at such a strength indefinitely, this was because the second phase of strategic deterrence was intended to be achieved by a dual force of at least one hundred Mk 2 V-bombers, armed with updated British air-to-surface weapons, and sixty BLUE STREAK ballistic missiles. But by 1963 the force was planned to be no more than 86 aircraft for the rest of the decade, for which only the first mark of Blue Steel would be available; SKYBOLT had been blackballed, likewise BLUE STREAK; and Thor, the stop-gap ballistic missile, was close to withdrawal. Canberras in the bomber role had been withdrawn from the Command; and the reconnaissance force had been reduced to one squadron of Canberras and one of Valiants. Relatively, the position of the tanker force had been improved - two squadrons of Valiants were in the front-line in 1963 and were planned to be replaced by three squadrons of Victor Mk 1 - but this was due more to the needs of overseas reinforcement than the bomber role in Europe. RAF strategic forces were drastically smaller in capability as well as numbers than had been planned in 1957.

Changes in plans for Fighter Command can be even more briefly described. Twenty squadrons were planned in 1957, supported by at least a similar number of SAGW squadrons. By 1963 there were three squadrons of Javelins and five of Lightnings which, after the planned disbandment of the Javelin squadrons by 1965, were seen as the total interceptor force for the rest of the sixties and beyond. The ten squadrons of Bloodhound Mk 1 deployed in ADUK in 1963 were no more than a wasting asset; they were expected to disappear by 1965 leaving two Bloodhound Mk 2 squadrons (one a training squadron) as a paltry reminder of the original and substantial plans for SAGW defences.

These big reductions in strength in Bomber and Fighter Commands were in part offset by increases in the other home-based Commands and in Germany. Coastal Command was stronger by two squadrons than the Air Council had planned in 1957. RAF Germany had suffered no reductions in its planned strike and reconnaissance force. Against expectations, two fighter squadrons had been retained; and a beginning had been made in building a helicopter force. Increases had also been made in Transport Command. Here the two Britannia squadrons of 1957, a half squadron of Comet 2s, four Beverley squadrons and a solitary helicopter squadron had increased by 1963 to three Britannia/Comet squadrons, six tactical transport squadrons and three of helicopters, with further expansion in mind. Two squadrons of Hunters had been formed in No 38 Group - itself an indication of the wider role of the Command.²

Outside the NATO area, there had been significant improvements. By 1963 there were thirty-two squadrons in the three overseas Commands - Near East, Middle East and Far East - compared with twenty-one in the plans of 1957. Most of the additions were transport squadrons.

¹ Ch 3, pp 55-56. The planned force there described is the baseline for comparing each RAF Command in 1957 and 1963. Strengths in 1963 are taken from AC(63)20.

² The appointment of Air Marshal Hudleston as Commander-in-Chief in 1962, after his long and difficult stint as VCAS, would have been unthinkable a few years earlier.

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These changes had occurred without seriously affecting the total number of squadrons - about ninety-five - or the personnel strength - 150,000 as a maximum - envisaged in 1957. There would have been little prospect of a force of this size if the missile plans of 1957 had been put into effect. Indeed, before the crucial decisions of 1959 and 1960 on missiles and ADUK had been taken the Air Council expected the long-term force to be substantially less. This was based on a realistic view of the financial prospects for defence: correctly enough, because it was only after fierce annual battles over the Defence budget that the allocations were maintained throughout the period at a reasonably level proportion of GNP; and it was far from certain that this proportion would not be reduced. For those who regretted the demise of the BLUE STREAK and BLUE STEEL Mk 2 programmes and the drastic reduction in orders for Bloodhound there was some consolation in the release of resources to reshape and equip the RAF front-line squadrons at a strength which would otherwise have been unobtainable without economies in the other Services or an increase in the Defence budget. Either solution would have met strong and almost certainly successful opposition. Nevertheless, as one important feature after another of its original plans was altered or discarded, the Air Council faced severe problems of reshaping the RAF programme without damaging the morale and structure of the Service.

As in the earlier chapter (Chapter 4) dealing with management problems, a selection has to be made from the wide range of business that came to the Air Council for decision. It is notable that only in 1959 was the Council as active, in terms of the memoranda presented to it, as it had been in the exceptionally difficult first years of Mr Sandys' time as Minister of Defence. After 1959 there was still much to do but the weight of business was distinctly smaller. As an example of the trend Appendix O lists the papers considered by the Council in 1962 - scarcely half as many as in each year from 1957 to 1959. This was not entirely because the RAF was no longer at the centre of the stage; the late fifties had seen numerous important decisions about weapons, equipment, deployment and personnel policy that did not call for change or review.

Personnel Problems

a. **Aircrew Recruiting.** One of the more obvious effects of the policy changes of 1959 and 1960 - pointing to a larger force of flying squadrons and far fewer missile units than the Air Council had anticipated - was the aircrew requirement. At the end of 1958 the Council had approved annual intakes of some 400 pilots (96 from Cranwell) and 230 navigators (14 from Cranwell). By early 1960 it had become clear that these would be quite inadequate to sustain the future front line and the associated flying posts in training and other non-operational roles. Looking ahead to 1970, 700 more pilots and 500 navigators would be needed than had seemed likely two years earlier. Increased annual intakes were called for - another 200 pilots and nearly 100 navigators - and also, so AMP recommended, the reintroduction of recruiting of NCO aircrew, a controversial subject.³ The Air Council proceeded with caution. The planning factors were far from straightforward. There was no immediate shortage of aircrews; many trained between 1939 and 1945 and during the expansion resulting from the war in Korea were still serving. Shortages would be likely to show themselves towards the end of the sixties. But this was no reason to ignore the trend. Intakes against even the inadequate targets laid down in 1958 were disappointingly low. NCO aircrew, short and medium service non-pensionable commissions, possibly accompanied by some relaxation of standards, could contribute to overcoming a future shortage. Each would tend, however, to increase the cost of aircrew training because of higher failure rates and shorter periods of productive service in squadrons than were being achieved under the current policy of attracting the maximum number of GD officers willing to serve for at least sixteen years so as to qualify for a pension.

Some progress was made. The Air Council was obliged to accept that short and medium service commissions were a necessary part of the recruiting spectrum.⁴ Early in 1961 they agreed to the

³ These proposals were submitted in AC(60)19. An earlier paper (AC(60)10) had recommended even high intakes. The argument for NCO aircrew was based mainly on the results of aptitude tests at the Hornchurch Aircrew Selection Centre. These showed, or appeared to show, that significant numbers of candidates were being rejected solely because of a lack of officer qualities.

⁴ AC15(60).

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recruitment of NCO aircrew, but to a specified and limited quota which was expected to be filled by serving airmen. This was not the same thing as a fully publicised scheme for recruitment from civil life. There was, however, serious questioning of whether new inducements would alone provide the answer. However many were brought in at the bottom of the aircrew ladder only a small proportion could be offered promotion beyond squadron leader; and it was doubted whether enough young men of the right quality would consider this an attractive prospect. Most worrying of all the difficulties was the problematical future, as the general public was believed to see it, of the RAF itself. As the Parliamentary Secretary put it:

The public at large have the wrong image ... What precisely should we try to put in its place? It would clearly be wrong, for example, to project an image of the RAF fighting to maintain its declining strength; nobody wants to join a sinking ship. It would be equally wrong to give people the impression that the RAF will turn into a force whose main function, apart from a small nuclear section, will be to carry troops from A to B.⁵

A Study Conference at Cranwell in October 1961 was one result of this concern. This was a representative assembly from education, industry and public life. Numerous problems and difficulties were discussed. Few came as a surprise; some, such as the limited career of the majority of aircrew, were unavoidable in an efficient flying service; others, such as doubts about the future of manned aircraft, called for a positive but long-term campaign of public education. What was entirely clear was that the aeroplane had long ceased to be a novelty and that young men of ambition and nerve (and their parents) were weighing the advantages of a flying career more dispassionately. Good pay, good gratuities and pensions and, if redundancy again struck the Services, good severance terms and resettlement schemes, had become essentials.

Not without argument, the Air Council acknowledged the need to compete more energetically for the services of the larger number of young men who looked to a university degree as essential equipment for life. A University Cadetship scheme for the GD Branch (schemes were in being for the Medical, Dental and Technical Branches) was debated in May 1961,⁶ with the Council divided between those who were reluctant to put at risk the traditional pre-eminence of the Cranwell-trained officer and those who saw positive advantage, as well as no alternative in practice if the necessary numbers were to be recruited, in a much larger proportion of graduates in the GD Branch; and no less in all officer branches. The Air Council took over a year to reach a decision.⁷ The reformers prevailed and University cadetships for the GD Branch were introduced. In parallel, the Council set in hand a review of the current Cranwell syllabus. This had been changed in 1959 to improve its academic content but had not been a success either in that respect or in maintaining the quality of professional training. Both questions - graduate entry to the GD Branch and policy for the College - were to return to the Council's agenda. A Council decision of 1960 - that the Technical College should move from Henlow as soon as the necessary measures to accommodate it satisfactorily at Cranwell were complete⁸ - was to encounter many of the difficulties that have attended proposals for radical change at Cranwell: not surprisingly, since the problems were inherently difficult.

b. **Airmen and Airwomen.** Despite some early worries, total numbers in the ground trades throughout the period were more than sufficient. Some trades, particularly those classified as non-technical, tended to be under strength but the general position was healthy enough for some progress to be made towards increasing the proportion of long-service regulars. From 1961 most airmen were recruited for a minimum engagement of at least five years. The WRAF continued to make a useful contribution, at a strength of about 5,000, though only small numbers - about 450 - had been attracted to local service engagements.

⁵ AC(61)16. ⁶ AC 11(61). ⁷ AC15(62).

⁸ AC 19(60). Developments at Cranwell after the early sixties are traced in E B Haslam's history of the College (HMSO 1982). The two Colleges were not amalgamated until 1966.

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If numbers were not a problem, quality was. An important decision for future careers of airmen as well as the working efficiency of the Service was taken at an Air Council meeting in August 1962, when joint proposals by AMP and AMSO for a new ground trades structure were approved.⁹ Existing policy since 1951 offered most airmen a continuing choice of alternative career patterns within their trade: between promotion by selection against vacancies - the so-called 'Command Ladder' - and promotion determined by time and associated trade tests - the 'Technician Ladder'. In theory, those with qualities primarily of leadership and command and those whose skills were mainly technical had broadly similar opportunities to advance. In practice, the system had not worked well. It was complicated in detail; command responsibilities were often unclear, especially where skilled tradesmen were supervised by lesser skilled NCOs; and the better airmen had tended to choose advancement on the Technician Ladder rather than the Command ladder where they were most needed. The basis of a solution was to group trades into more and less skilled. List 1 tradesmen would advance, by trade test and time, to Chief Technician; List 2 by selection against vacancies (though trade tests were also required). Airmen in either list could advance beyond Chief Technician and Sergeant respectively to Flight Sergeant and Warrant Officer. More easily understandable than the old system, and opening the way to a very substantial reduction in the number of trades (from approximately 300 to 100), the new structure was undoubtedly a big improvement and better designed to meet the needs of an all-regular, long serving, and increasingly skilled Service. It was approved by the Air Council in August 1962¹⁰ but as the assimilation of airmen to the new system would be a complicated process, the date of introduction was set at April 1964.

c. **Manpower Economy.** Extra expense was expected to arise from the new ground trades structure: not large in itself and, it was hoped, offset by savings in training costs which would in a few years be enough to show an overall economy compared with the old system. This was just as well. As the Service moved steadily to an all-regular basis the price to be paid became increasingly apparent. Between 1957/58 and 1962/63 the average cost per head increased by 60%, largely because of the replacement of national servicemen by more expensive regulars. The average cost of regulars increased by 35%; that of Air Ministry civilians by 23%. That manpower costs increased over the period by only 12% was because total numbers had been reduced by nearly one-quarter. Inflation was expected to continue and there could be no question of avoiding its reflection in Service pay and allowances (linked as these were to civilian analogues) if recruitment was to remain healthy at a time of full employment. What caused concern was the underlying disparity between growth in the national economy - of the order of 3% annually - and a comparable rate of increase in the cost of regular manpower of nearly 6%. As it was a cardinal feature of Government policy that increases in the Defence budget must not exceed, and better still be less than, the rate of growth in the economy, the patent risk was that manpower costs would take an increasing share of the resources allotted to the Services.

The impact of escalating manpower costs on RAF policy is best considered (as is done later in this chapter) as one element in a scrutiny taking account as well of the trend of equipment costs. Within the personnel field, however, the efforts to economise that became imperative in 1957 could not be relaxed. Contract servicing, to take one example (and one not popular within the RAF), had been introduced by 1962 at seven non-operational stations and another five contracts were expected to be placed before the end of the year. Manpower savings were estimated to be over 3000. Contract catering (another unpopular measure) saved over 300 service posts. In contrast, investigations were begun to see whether financial economy might flow from carrying out some servicing and repair tasks in the RAF that were currently and expensively being done in industry, including contractors' working parties. The consequences fall mainly outside our period, as they do of the efforts that were made to improve the quality of line management and the control of manpower and equipment establishments. But it was significant that, towards the end of the period, the Air Council decided that a Manpower Committee should be formed, with a Council Member (AMSO) in the chair, to co-ordinate all existing Air Ministry committees (there were eleven at the time) working in various sectors of the manpower field.¹¹ It became a permanent feature of the Whitehall scene.

⁹ AC 12(62): the joint memorandum was AC(62)23.

¹⁰ AC 12(62).

¹¹ AC 1(63): the preamble to the committee's TOR referred to "the high proportion of the total resources allocated to the RAF which are absorbed by manpower costs, and the competition for resources between manpower on the one hand and modern weapons and equipment on the other."

In case there were any illusions about what the Manpower Committee could achieve, it made an early report to the Air Council in April 1963.¹² It saw no prospect of a switch between manpower and equipment expenditure sufficient to arrest the decline in the size and quality of the RAF equipment programme: "large savings could be achieved only by policy cuts of a drastic kind, affecting the size and shape of the Force, and this we regard as being outside our scope". The committee saw its task as a continuing one, gradually yielding savings which would be worthwhile irrespective of the size and shape of the RAF. It was a reminder that changes in defence policy coupled with, and to some extent derived from, scarce resources were far more relevant to the Air Council's current problems than inadequacies within its own control.

The Budgetary Background

a. **Costings Assumptions.** The long term costings for the 10-year period from 1962 illustrate the range of issues the Air Council had to take into account when measuring plans against financial prospects. The costings were compiled early in 1962 against a background of policy described in earlier chapters. Strategic assumptions and the consequential size and deployment of the RAF front line were governed by the 1961 Chiefs of Staff review that had culminated in COS(62)1:¹³ "necessarily so, even though Ministers had still to be convinced by it and, in the event, were not. As one consequence, the costings included a programme for a chain of island bases east of Suez. One important part of the ground on which the costings were based - the entry of SKYBOLT into service - was to shift even before the year was out. Other assumptions were to be belied by events over a longer period: such as the introduction of TSR2, a new short-range strike/reconnaissance aircraft (the P1154) and the prospective new transport aircraft (to OR 351). Such major changes are only examples of the instability which bedevilled RAF planning over the whole period. Yet the costings of 1962 have their own importance; for while previous years had not been free of budgetary difficulties, 1962 was a year in which the Air Council itself recognized that cost trends were imperilling the fundamentals of the RAF programme.

The assumptions on which the 1962 costings were based are shown in detail at Appendix P. As so many of these, many more than those mentioned above, were either unrealised or substantially altered, the conceptual thinking of the Air Ministry may seem to have been defective. This would be a superficial judgement. What was happening at the Air Council level merely reflected doubts and dilemmas from which the government itself was suffering. In a situation plagued with uncertainty and irresolution the Air Council could only hope that the course it was charting would not be too drastically altered. That the risk existed was recognized. Compared with expenditure of about £550M in 1961/62, the costings showed annual expenditure rising to nearly £640M by 1965/66, falling thereafter but still well above the current level. Production of new aircraft, especially the TSR2, was the main reason for an increase well beyond the offsetting effect of any 'natural growth' such as would flow from allocating to defence a constant proportion of GNP in a growing economy. Moreover, the Air Council was well aware that the lower forecast that had emerged from the 1961 long term costings had been unacceptable to the government. As the PUS (Sir Maurice Dean) saw the position:

"We seem likely to be confronted by suggestions on the part of the Ministry of Defence and Treasury for either or both of the following:-

- (1) A further strategic reappraisal, possibly designed to shed a major commitment (eg the deterrent or our current responsibilities in the Far East).
- (2) All round economies in an attempt to go on meeting our commitments even less adequately than at present."¹⁴

¹² AC(63)18.

¹³ See Ch 8, pp 213-217.

¹⁴ AC(62)15. As Ch 8 has described, a further strategic reappraisal was put in hand in 1962 but without leading to the radical decisions that were called for unless the government was willing to increase the Defence budget.

In these circumstances, the plain duty of the Air Council was to put itself in a position in which it was demonstrably impracticable to make substantial economies without damage to current programmes and policies. But even Sir Maurice Dean, who had been in the van of the drive for economy, had to concede that the scope was limited. Rising wages and prices were affecting every area of expenditure. Personnel costs had increased in real, not just inflationary, terms. So had the cost of the crucial items in the equipment programme. At this time - spring 1962 - the estimated unit cost of the TSR2 had risen from £1.5M to £2.1M; total programme costs were expected to increase by at least £90M over the costing decade. Early estimates of the cost of the new tactical transport and strike /reconnaissance aircraft (it was assumed for costing purposes that this would be the P1154 though no final decision had been taken by this date) were also being exceeded, as they were for the Shackleton replacement.¹⁵ Much of this was the inescapable price to be paid for technological advance and improved capability, and there was little to be done about it. Such possibilities as there were, such as slowing down one or more of the replacement programmes, might produce short term economies only at the price of bigger expenditure in the long term. In any case, in the light of experience of underspending on the equipment Vote, the 1962 costings assumed a substantial shortfall in expenditure - by over £300M - compared with what would arise if planned production was actually achieved. Some specific economies were costed, at the request of MOD: Thor to be withdrawn earlier than planned;¹⁶ the full order of VC10s in the transport role, required by the current strategic concept, put in suspense; part of the short range strike/reconnaissance force to be P1127 (Harrier) rather than the adumbrated P1154. An accumulation of small economies in support and reserve stocks over the whole range of equipment could make a useful contribution.¹⁷ Even so, on the basis that the cost of the Defence programme as a whole had clearly risen above levels acceptable to the government and showed every sign of increasing beyond those levels, the Air Council recognised that it could only balance its own books by unilaterally proposing major economies in the two most important elements, Bomber Command and the planned TSR2 force. To do this, as Sir Maurice Dean advised the Air Council, "would merely place us at a tactical disadvantage in further inter-Departmental discussion." The costings in any case assumed a reduction in front-line strength: from 97 squadrons with 950 aircraft in 1962/63 to 90 squadrons with 820 aircraft by 1973, mainly due to reductions in Fighter Command, Germany and the Mediterranean. It was too much to expect of the Air Council that it should offer more.

As a result of its discussion of the 1962 costings, one potentially large saving was agreed.¹⁸ This was in RAF manpower. The more severe cuts in bomber and fighter forces than had earlier been expected were the main reasons for the emergence of a future surplus of manpower, of between 4000 and 5000, arising from 1964/65. But even when the consequential savings, amounting to over £50M, in the costing decade were credited the prospects of budgetary sufficiency remained gloomy. Smaller but useful savings flowed as well from a decision to substitute AVTUR for AVTAG as the fuel for Mk 2 V-bombers and all jet trainers.¹⁹ Otherwise there was little to be done for the present. An instruction that all future proposals involving expenditure beyond what was included in the costings should identify how offsetting savings would be made is notable more for its psychological than practical utility. More to the point was the Council's recognition that no further economies were possible without detailed study; and it agreed that special arrangements for this would be necessary. Amongst those arrangements was the setting up of a Committee for the Scrutiny of Estimates. Another was the formation of a group of the Air Staff which, under VCAS, looked at a future that was unpropitious even early in 1962. By the time these two bodies reported to the Council early in 1963 the Nassau Conference had taken place and the future looked even less attractive, to such an extent that air power as an effective component of defence policy was considered to be in jeopardy.

¹⁵ This had tripled in cost because of a recent decision to go for a 4-jet aircraft rather than a variant of the turbo-prop Vanguard.

¹⁶ The eventual withdrawal of Thor at the end of 1963 represented a two year acceleration of an earlier plan.

¹⁷ Later in 1962 a similar pruning of TCM aircraft to that described in Ch 4 was put in hand (AC 12(62)).

¹⁸ The costings report was AC(62)15 and was discussed at a special Council Meeting (AC 7(62)).

¹⁹ See also Ch 3, p 59 (footnote).

b. **Aircraft Equipment.** Many of the major equipment issues confronting the Air Council from 1957 to 1963 will have become apparent from earlier chapters. Summarised, and taking as a point of reference the situation after the crucial decisions on BLUE STREAK, BLUE STEEL MK 2 and ADUK had been taken but before the Nassau Conference, they were as follows:

Bombers. Eight squadrons of Mk 2 Vulcans were expected to provide the core of the strategic strike force at least until the early seventies; armed with Blue Steel Mk 1 and then SKYBOLT, and supplemented by two squadrons of Mk 2 Victors with Blue Steel Mk 1. One squadron of Victors for strategic reconnaissance, one of Canberras for tactical reconnaissance and, by 1967, three squadrons of Victor tankers completed the force. Much had been made of the merits of the VC10 as a SKYBOLT carrier during the debates about future deterrent systems. But even before the Nassau Conference it had begun to fall out of favour; the costs involved and confidence in the durability of the Vulcan argued against it. Two squadrons of TSR2 in the strike role and one for reconnaissance were planned for Bomber Command by 1966. Nearly all the Canberra squadrons in Germany, the Mediterranean and Far East were expected to begin re-equipping with TSR2 in 1967.

Stocks of British free-fall nuclear weapons were adequate by 1963; supplementary American weapons for Bomber Command had by then been withdrawn though others were retained for SACEUR-assigned strike forces. For most of the period Blue Steel Mk 1 was in its pre-service stages of development and trials. The first weapons cleared for service use were not delivered until early 1963.

Fighters and Ground Attack Aircraft. Against the background of Ministerial objections to more than minimum investment in air defence, it would have been pointless to seek approval for a new aircraft in the interceptor role until the case was self-evident. The only practicable course in the meantime was to make the most of the Lightning and its air-to-air weapons. Much attention was paid to optimising the Mk 3 version, particularly in improving its supersonic endurance and ferry range. Firestreak, after many disappointments and delays, had come into squadron service in Fighter Command by the middle of our period; Red Top was not expected until the end of 1964. As with all other important items of new equipment, the progress of both missiles was formally reported to the Air Council at least twice a year. No British air-to-surface missiles for the conventional ground attack role were in the programme but a substantial order had been placed for the French AS30. A new weapon in this role was the SNEB rocket which had reached an advanced stage by mid-1963 and was expected to be in squadron service by early 1964. Much the most exciting project, with ground attack and support of the Army as its nominal justification, was the P1154. By 1963 plans for this aircraft were sufficiently firm for it to be shown in Air Staff plans as coming into service in 1968 to begin replacing the eight Hunter squadrons, a process to be completed by 1971.²⁰ The plans made no provision for the Harrier (P1127).

Maritime Aircraft. The Air Council could have been excused a degree of cynicism as it sought to maintain an effective force of maritime aircraft. Mr Sandys had insisted in 1958 on a larger Shackleton force than the Council had planned but had denied it any additional resources to meet the cost. The existing stock of aircraft, which began to suffer fatigue problems and had to be progressively withdrawn from squadrons to be reconditioned, proved inadequate and an order for more aircraft of the Mk 3 version was necessary in 1960. The resultant force could be expected to suffice until the mid-sixties but by then a better aircraft with improved weapons and equipment would be needed to match the numerous nuclear powered submarines that could be expected to be in service in the Russian Navy. As a relatively inexpensive solution, first thoughts were to adapt an existing civil aircraft, the Vanguard. But this would not have met the technical and operational challenge for sufficiently long to justify the expense. A new approach began to emerge in 1962. This was to keep the Shackleton force in being, by a further programme of reconditioning and minor improvements, until the early seventies by which time a large 4-jet

²⁰ AC(63)35 Appendix B.

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aircraft would be brought into service. How this might be done had not been finally decided by the end of 1963. What the Air Council had agreed was a detailed specification of tasks and performance.²¹ The resultant aircraft (to OR 357) was bound to be expensive: not so much in terms of airframe and engines (MOD were insistent that a civil aircraft would have to be adapted) as in the wide range of sophisticated equipment and weapons for navigation, search and attack. One hope of reducing costs that was still lively as our period closed lay in a joint development with Canada (the existing RCAF maritime aircraft, the Argus, was an adaptation of the Britannia). It was to come to nothing.

Transport Aircraft. The Belfast, Argosy and VC10 programmes that emerged between 1960 and 1962 represented no greater expenditure either up to the end of the 1963 or beyond than was to be expected under any sensible re-equipment policy. The Argosy, however, was seen as an interim aircraft that would help to overcome the inadequacies of the Beverley/Hastings force while a new heavy tactical transport was developed and brought into service. None of the strategic studies described in Chapter 8 had weakened the case for such an aircraft. Its broad specification (OR 351) was approved by the Air Council in May 1961 and reaffirmed with some modifications a year later at the request of the Minister of Defence (Mr Watkinson) who had doubts about the need for so advanced and novel an aircraft.²² What underlay the concept was the Air Staff view, to quote OR 351, "that ultimately all tactical transport aircraft should have the ability to land and take off vertically and thus be able to operate from unprepared landing zones on an opportunity basis." Within a time scale, beginning in 1967, for replacing the Beverley/Hastings force a VTOL capability was recognized as unattainable. But in specifying a STOL aircraft (with the possibility of a later VTOL version) able to take off and land within 1500 feet from unprepared runways on missions up to a 1000 mile radius of action with loads of nearly 20 tons, the Air Staff were asking a lot of the British aircraft industry. And as a minimum of sixty aircraft would be needed they were also pre-empting a substantial fraction of the future RAF equipment budget. Nevertheless, out of an examination of responses from different firms the Hawker Siddeley 681 had by 1963 emerged as the future heavy tactical transport and as such was written into future plans and costings.

The major new aircraft - TSR2, P1154, the Shackleton replacement and the HS681 - that the future seemed to demand were only the most expensive of the numerous items in the aircraft programme as this stood in 1962/63. The Belfast was in production and expected to come into service in 1965; an order for 11 VC10s, with the likelihood of more to follow, had been placed and the Argosy order had some way to go before completion. The first Lightning Mk 3 was due off the production line in mid-1964 and the first of a substantial order for the Andover in 1965. Wessex 2 helicopters were in production by the end of 1962, though none had yet been delivered to the Service.²³ In the training area, the DH 125 had been selected to replace the Varsity as a navigational trainer: a good but much more expensive choice. And in parallel with the escalation of aircraft costs those of supporting systems over the whole range of operational functions were increasing as well. The equipment programme was not so much full as overflowing. This was a major reason for an Air Council review of the future in the first half of 1963 which was no less a summation of the impact of events since 1957.

²¹ AC(63)25.

²² The 1961 consideration is recorded in AC(61)21 and AC 7(61); that of 1962 in AC(62)19 and AC 9(62) (SPECIAL).

²³ Initial deliveries by 1962 had been promised and the firm came in for heavy criticism, so much so that an attempt was made in 1962 to cancel the order and purchase Chinooks instead. A strong case was made by DCAS (Air Marshal Sir Ronald Lees) in a memorandum to the Air Council (AC(62)18). The Air Council accepted it, at least to the extent of being willing to contemplate a mixed Wessex/Chinook force, despite the obvious political difficulties. There were practical disadvantages to this alternative and it was not pursued. The Service was still nearly twenty years away from getting its first Chinook.

The 1963 Legacy and the Future

a. **Effect of SKYBOLT cancellation.** If the 1962 costings exposed a serious situation, the cancellation of SKYBOLT only aggravated it. Over £100M had been included in the costings for the purchase of SKYBOLT missiles; with nuclear warheads and other costs total expenditure on the system over the costing decade was expected to be about £350M. Cancellation at once meant that these amounts were removed from future RAF costs and that the larger sums required for the Polaris programme would have to be absorbed by a Defence budget which, expressed as a proportion of GNP, was already as big as Ministers were willing to afford. And while the Polaris force was being built up - against a target date of 1970 - Bomber Command had to maintain the strategic deterrent, with extra expenditure necessary on weapons, aircraft and equipment so that the force could operate at low level from 1965.²⁴ This was a strictly limited extension. The Air Ministry was directed by MOD to assume that the force would be phased out by 1970, leaving the TSR2 as the only long range strike aircraft.

As well as the prospect of tighter budgets for the RAF, the cancellation of SKYBOLT and the adoption of Polaris instead led to renewed concern for its public standing. One of the twin pillars - the air defence of the United Kingdom - had already been severely weakened; that the other - the strike forces - might also seem to the general public to be threatened with erosion if not destruction was deeply worrying. The Air Council's immediate response was to strengthen its public relations directorate and the arrangements for recruiting and liaison with schools.²⁵ But more than this was recognised as necessary: a hard look at where current trends had led, where they were leading and what measures were open to the Air Council to influence future policy and safeguard the future of the RAF.

b. **The Backward Look.** A report to the Air Council²⁶ at the beginning of 1963 distilled the collective wisdom of the policy staffs of the Air Ministry. It brought out the trend of manpower costs mentioned earlier in the chapter and also the consequences of rising equipment costs. These, in terms of aircraft and major equipments of the fifties, were set against the comparable equipments in the current programme. Even though the comparison made no allowance for inflation (which in any case had been relatively modest) it was inescapably obvious that current frontline strengths could not be maintained at a high level of quality unless more resources were allocated to the RAF. These were some of the comparisons:

1956		Current	
Aircraft			
Hunter F6	£ 90,000)	Lightning F3	£520,000
Javelin 4	£180,000)		
Canberra	£160,000	TSR2	£2.1M
Comet 2	£640,000	VC10	£2.6M
Beverley	£465,000	(Belfast	£2.3M
		(Argosy	£575,000
Vulcan Mk 1	£710,000	Vulcan Mk 2	£1M
Ground Radar			
Type 80	£200,000	(Type 84	£400,000
		(Type 85	£2.5M
Type 13	£ 14,000	Decca HF 200	£133,000
Weapons			
Set of Aden Guns	£2,150	(Firestreak (2)	£26,700
		(Red Top (Set)	£41,000

²⁴ An agreed programme of weapons for low level delivery, additional navigation aids and ECM and airframe strengthening was discussed at the Air Council's meeting of 14 March 1963 (AC 4(63)).

²⁵ AC 4(63).

²⁶ AC(63)1.

Measured by front-line strengths alone, the effect of the cost trends had not by 1963 been too severe. Whereas in 1957 Air Council plans provided for some 980 aircraft and nearly nine hundred missiles by 1963, the achievement was 950 aircraft and four hundred missiles. But this concealed a substantial fall in fighting strength. The 1957 expectations were 850 combat aircraft and about 130 transports; the actual strengths in 1963 were 704 combat aircraft and 244 transports. The balance could not be redressed so long as a much smaller Army was required to meet an unchanged range of political commitments. The Army needed the strategic and tactical mobility that the transport force provided. As the report said, "this increase in the size of the transport force represents, in some degree, a subsidy for our manpower policies." It also cast doubt on whether current front-line strengths and capability could be maintained. Even on the assumptions underlying the 1962 costings (see Appendix P) the prospects were poor. And as these had made no provision for replacing the Hunter, regarded as already virtually obsolete, before 1968/69, the Beverley and Hastings before 1969/70 and the Shackleton before 1972/73, there could be an unpalatable choice between keeping numerous out-dated aircraft in the front-line or replacing them by fewer but better aircraft. There was a dilemma, and the report discussed the possible escape routes. One was identified only to be dismissed: "it would be unreal to expect any significant increase in the proportion of the Gross National Product which is allotted to defence." Another was a reduction in commitments. The authors of the report thought that this was inevitable. But as the government showed little sign of making the necessary strategic decisions to relieve the strain, all that was left was such scope as there might be for better management. So the first section of the report called for a concentration upon the deployment of resources in ways which would minimise reductions and obsolescence in the front line: "the extent to which we succeed will depend upon the practical limitations of our efforts to economise in manpower." Its second section dealt with various possibilities for savings in the use of manpower. Its second section accordingly dealt with various possibilities for savings in the use of manpower.²⁷

c. **The Look Ahead.**

(1) **Independent Advice.** Historically, the Air Ministry could make a good claim to be one of the pioneers in Whitehall in enlisting people of distinction from the universities and elsewhere to advise and criticise. The range and timescale of problems and situations on which an independent view can be helpful is so wide that it would be dangerous to generalise about how the uncommitted specialist can best make a contribution. At a time of rapid technical progress an expert look into the far future may help to identify discontinuities which, when perceived, argue against wasteful interim projects. Equally, apparently self-evident solutions to more immediate problems can benefit from independent examination. For both long term and short term proposals the Air Council had for many years looked to the Air Ministry Strategic Scientific Policy Committee for what was in effect a second opinion on matters which were crucial to basic policy. Appropriately, the early sixties saw a number of reports by this committee on subjects that were exercising the Air Council. These included one on the role of the RAF in limited war and another on the shield forces of NATO. The importance of the first report lies in the support it gave to a development programme that was to prove vulnerable to changes in political and strategic assumptions. The second illustrates the differences that could and did arise on what was considered necessary for effective deterrence in Europe.

The first report was submitted to the Air Council in August 1960, at a time when the Chiefs of Staff were studying the strategy and forces needed to meet existing commitments overseas.²⁸ That these commitments would continue was a necessary assumption; and the committee

²⁷ Few of the committee's ideas were new. Multiplicity of personal allowances was one of their concerns, as was the effectiveness of the machinery for controlling and amending personnel establishments. Postings policy also came in for criticism: appointments should be for longer periods and there could be a reduction in the number of training courses. The committee calculated that, taking families into account, the annual number of movements equalled the population of Bournemouth (about 150,000).

²⁸ See Ch 8, pp 199-204.

addressed the question of how the RAF should prepare itself for defending overseas interests against attack from outside. It was also assumed that, unless China was an active belligerent, limited war meant limited weapons. The full report is in the Air Council archives.²⁹ It reached the view that any limited war involving the United Kingdom was likely to require a swift response, be essentially defensive and directed to restoring stability rather than invading an enemy's territory and destroying his forces. It saw little likelihood of such a war in Europe. The risks were more serious in the Middle East and North Africa. In the Far East, the SEATO commitment could mean limited war, though only until such time as China acquired a nuclear capability. There were other possibilities in the region, such as Indonesian aggression against Malaya, but the report couched its advice in careful terms: "in practice, we should adjust our commitments in these eventualities to our capability, not vice versa." Similarly, when recognizing the risks of trouble in British Honduras and the Falkland Islands, the report said "we see no particular such contingency likely, important and militarily onerous enough to be worth treating as a major factor in limited war planning." Whatever else might be said of the report, it rattled no sabres. Its flavour can be appreciated from its enunciation of four cardinal principles:

1. It is vain to make military plans for wars which it will be politically impossible to wage.
2. Speed of action is much more important than weight, and we must be ready to take military risks for the sake of quick response.
3. Though we must undoubtedly seek to reduce our dependence on a close-knit network of bases, we shall never be able to fight limited wars entirely without bases; and if for political or economic reasons we want to retain military influence in a particular area, then we must be prepared to take the political consequences of keeping or acquiring the necessary bases.
4. Limited wars will generally be fought for limited interests, and few if any military needs for limited war can therefore be absolute. The value of particular plans and weapons must be weighed constantly against their cost.

Platitudinous though these principles were - as the committee itself recognized - they were important; and what was implied was that the contemporary debate about existing bases, how long these might remain effective and whether there should be a shift to an expensive sea-based strategy, should be settled by reference to them.

The report was far from being a tract for air power. It was notably realistic about the deepening problem of maintaining secure air routes along which reinforcements could be despatched from Europe. Nevertheless, practical considerations led to the conclusion that successful operations demanded a range of sophisticated aircraft for transport and combat purposes and an associated system of staging posts which (if the existing main bases had to be abandoned) could be developed to launch quickly the initial and all-important intervention. The report thus offered a rationale for the 'island strategy' solution to the problem of overseas defence. From this flowed its recommendations for aircraft for the overseas role; and it was these that most engaged the Air Council when it discussed the report with its authors.³⁰ What emerged was agreement on the need for long range strategic transport of troops and freight (though not in total substitution for sea transport), for a theatre STOL transport of the type specified in OR 351 and a VTOL strike/reconnaissance aircraft (supersonic and with some fighter capability as well) which was by this time being specified in OR 345. Air defence by missiles of troops in the field remained a difficulty as did the development or acquisition of a large helicopter which have the long ferry ranges that certain emergencies could call for. In sum, the committee's advice supported all the more important and costly features of the emergent aircraft programme, including the TSR2 since the committee made a strong case for an aircraft with an operating radius of not less than 1000 miles and able to use rudimentary airfields.

²⁹ AC(60)42: it was signed by Professor W R Hawthorne, Sir William Cook and Mr M J Lighthill.

³⁰ AC 18(60).

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Support for the aircraft programme - or parts of it - emerged as well from the report on NATO shield forces which the Strategic Scientific Policy Committee submitted to the Air Council in April 1962.³¹ Basic to the report was its answer to the question that had been exercising NATO strategists (and certainly the British Chiefs of Staff) for some time: whether in the impending situation of nuclear equilibrium the threat of nuclear retaliation against Russia would continue to be a credible deterrent to all levels of military aggression. The committee could not reach a unanimous view but the majority of members believed that in the new situation, Russia might be tempted to engineer a military incursion of a kind which would not provoke a nuclear response but which, if successful, would badly damage the solidarity of the Alliance and, if a failure, could be manageable. By definition, any such move would have to be made by a Soviet satellite, with Russian involvement so organised as not to amount to total confrontation with NATO. Whether in those circumstances escalation could be avoided was another question on which the committee was divided. Some thought that there was no level at which the Russians could afford to accept defeat and that if serious fighting began, even with a satellite, either NATO would have to give in or escalation to global war would be certain. Others thought that even if nuclear weapons were used - against strictly defined targets - the situation could be stabilised without escalation. What all were agreed on was that the deterrent system would be incomplete unless it was apparent that nuclear weapons were available for tactical use, even against limited and conventional aggression. Surprisingly, however, the committee concluded that NATO need not develop special weapons and delivery systems for this purpose. If the conventional battle was going badly a small number of high yield weapons, delivered by the strategic strike forces on military targets outside the Russian homeland should be a sufficient signal that the aggression must stop.

It is clear from the record of the Air Council's discussion with the committee³² that neither the CAS or VCAS of the day were persuaded. Like so many discussions of what might be done if deterrence were to fail, the meeting served only to emphasise the need to ensure, if necessary by over-insurance, that no failure was likely. Certainly, the Air Staff remained convinced that conventional, tactical nuclear and strategic nuclear forces had each a discrete place in the spectrum of deterrence. As for the characteristics of RAF conventional forces in NATO, there was much in the report that was consistent with Air Staff policy. For conventional strike/reconnaissance, the committee thought that a less sophisticated aircraft than that specified in OR 345 would do. But as it had recommended such an aircraft for the overseas role it recognized the sense of its development for use in Europe as well; in other words, there was a better case for the P1154 than the P1127. For longer range strike and deep reconnaissance (which the committee thought vitally important in the context of limited aggression) the TSR2 was plainly needed. Transport support for the Army in Germany was looked at in terms of resisting relatively minor incursions; a small force of helicopters was recommended.

2. **The Air Staff View of the Future.** With the benefit of advice from the Strategic Scientific Policy Committee which, on the whole, accorded with its own views, the Air Staff addressed itself in the spring and summer of 1963 to a thorough-going study of the future size and shape of the RAF. This emerged as a report by VCAS (Sir Wallace Kyle) to the Air Council in October 1963.³³ It reflected the impact of the previous five years; the state of current thought about the strategic imperatives of the next ten years; and set out what ought to be done to ensure that the RAF made an effective contribution to defence policy. It was realistically conceived, recognizing that any attempt to forecast strategic requirements for ten or more years ahead

³¹ AC(62)14.

³² AC8(62).

³³ AC(63)35.

could become "bogged down in speculation about an infinite number of permutations and possibilities." It also recognized a fundamental conflict -between the stability needed for effective long term military planning and the volatility of the political and economic factors - and it was realistic about the awkward gap that was likely between commitments and resources.

Although recent discussions of future strategy had raised questions about the permanence of a world role,³⁴ the report assumed that there would be no change in British military objectives as currently defined.³⁵ It was thought that, if anything, the world as distinct from European role could become more important. With stability in Europe reasonably assured but China and Indonesia aggressively inclined, the centre of pressure could well move towards South-East Asia, with obvious danger to Commonwealth interests and security. Regions nearer home were also unstable. If CENTO collapsed and the Malta and Cyprus bases were lost there would be pressure to maintain the British contribution to the defence of NATO's southern flank. In the Gulf the Aden base was vital to a continued commitment to Kuwait; without it the commitment would be "no longer economically practicable or militarily sensible". Even so, as there were no indications of change, the report assumed that the government would put great pressure on the Services to resort to any expedient to retain the Kuwait commitment so long as there was a political and economic balance in its favour. In the Far East there were difficult problems. Security of the Malaya and Singapore bases was in doubt; yet their availability was essential if current treaty obligations were to be met. A base in Australia would not be an effective substitute. On the other hand, any government would have to be in the last ditch before it abandoned the British position in the area.

In general, overseas commitments called for the ability to reinforce rapidly forces already in the area; neither would be much use without the other. The report contained a significant admission. Much attention had been paid at the highest level to meeting the air transport needs of the Army; too little to what was needed if intervention was to be successful in a situation in which hostile air forces could be encountered, although numerous possibilities of this kind had been identified. The report said: "while we must retain, and indeed improve our ability to move forces of up to Brigade Group strength very quickly over long distances, it is vital to provide also the combatant air power without which the operation cannot take place and our expensive transport forces will avail us little."

Looking back over the last ten years, front-line strength had declined at an average annual rate of 3 per cent. Looking ahead, VCAS saw no reason to assume that the trend would change for the better. Increasingly complex equipment had much to answer for: "complexity and versatility have often in the past been pursued without full knowledge of the cost/effectiveness equation". TSR2 in the strike role would cost at least 15 times as much as the Canberra (30 times if amortised R and D were taken into account) but no one could claim that it would have 15 times the striking power. Front-line patterns assumed a decline from 950 aircraft currently to 850 in 1969 and 688 by the early seventies. The notional force for the second half of the seventies, as set out in the report, was smaller still - 618 aircraft. On these assumptions there was clearly

³⁴ Ch 8, pp 220-222.

³⁵ As laid down by Mr Macmillan (D(61)65) these were:-

- a. The maintenance of an independent contribution to the strategic nuclear deterrent.
- b. The obligation to go to the aid of any dependent or independent member of the Commonwealth.
- c. The maintenance of treaty obligations in NATO, CENTO and SEATO; and to assist in the external defence of Malaysia.
- d. The maintenance of internal security in British-administered territories.
- e. Protection of our economic stake in the Persian Gulf.
- f. Contribution to the forward defence of Australia and New Zealand.

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little room for manoeuvre over the size of the front line. And scarcely any over its various components since a major portion of the aircraft required were already on order; some were under examination; and others would be needed at a later stage.³⁶ Even though declining strengths would be offset to some extent by greater effectiveness, anything less than the numbers provided for in the front-line patterns would mean so small a physical presence, particularly overseas, that political credibility as well as military significance would be prejudiced.

VCAS made the case in detail. Strike power was his biggest concern. The existing strike force was still formidable: 200 in the strike role and 70 for strategic reconnaissance for the rest of the sixties. From 1970 onwards, when the Polaris force would provide the strategic deterrent, the picture was very different. Under present plans, some ninety TSR's would have to suffice for both strike and long range reconnaissance. Their capability in the conventional role (and the emphasis indicates what kind of conflict was thought to be most likely) would be a small fraction of what the existing strike force could achieve: "the decision to transfer the strategic nuclear deterrent to the Navy has deprived the nation of a weapons system of great power and flexibility and substituted one of no limited war potential."

The implications were most serious in the Far East, to which only one TSR2 squadron was allocated in current plans. TSR2 strike squadrons in NATO and CENTO might, but only might, be available for reinforcement, but at four and two squadrons respectively none could be spared for permanent deployment with FEAF. Unless something was done about the total size of the TSR2 force the RAF's offensive capability in the Far East would hardly be more than a token. VCAS proposed increasing the planned force by three squadrons - one extra in the Far East and two in Bomber Command. He regarded this as the minimum needed to raise overall striking power above the inadequate level presently planned, provide more capacity to react to emergencies in any area and in particular improve deterrence in the Far East. With this change, the planned front line from 10 years ahead onwards would comprise:

	TSR2	AWF	FGA/Recce (P1154)	Strat Transport	MRT	SRT	MR Tanker
NATO	72	84	24				48
CENTO	24	12					4
FEAF	20	24	36		12	21	8
Strat Reserve	24		36	30	40	21	24

With SAR helicopters and a few aircraft for special front line duties, the grand total came to 618 aircraft (and four missile squadrons). Of the all-weather fighters in NATO, 60 would be based in Britain and 24 in Germany. Two P1154 squadrons would be stationed in Aden so long as it was available; the table above, reflecting the position expected to be reached in the mid-seventies, assumed that Aden would have been abandoned and the two squadrons redeployed - one to the Far East and one to the Strategic Reserve in Britain.

If Aden or any other main base was lost any consequential pressure to reduce the front line should be resisted. The force as hypothetically deployed would be overstretched and dependent on mutual reinforcement. To lose a commitment would merely relieve the tension. It would only be if the government of the day reduced the maximum scale of military intervention that any front-line reductions might be justified. In any case, the capabilities of the force would be

³⁶ The three categories as set out in the report were:

On Order Lightning, TSR2, Belfast, VC10, Wessex, Andover, Beagle and Gnat.

Under Examination P1154, HS681A, Shackleton replacement.

Proposed Lightning replacement, Strategic Transport replacement, new training aircraft.

limited so long as the Air Council's policy of providing no war reserves of aircraft remained unchanged. At that time of that decision - 1958 - the nuclear superiority of the West had been regarded as a safeguard against limited as well as general war. This could no longer be assumed. VCAS said:-

In an operation of any magnitude against any but the most primitive enemy the Royal Air Force could be reduced to impotence in a very few days. I believe that this fact is not appreciated by ministers, nor by the Chiefs of Staff, nor even, possibly by the Air Council The strategic climate is such that we must be prepared in the next 10 years to face anything from Indonesian border incursions, through a Korea-type operation against China, to possibly even a full-scale "delaying" war in Europe, with resources so slender that we cannot afford any losses at all. In this situation it is no longer sensible to do without War Reserve backing, and I consider that we must revise our policy without delay.

Modest in size though the ultimate force would have to be it would still be difficult to fund within the financial constraints to be expected. Looking to the remaining years of the decade, during which development and production of the new aircraft in four main roles - strike/recce, FGA, maritime and transport - would make increasing demands on the Defence budget, VCAS drew attention to a widening gap between needs and resources. He put this at up to £60M a year. It might be bridged by an increase in the 7% GNP currently allotted to defence, by an increase in the RAF share of a Defence budget which would remain at 7% of GNP, or by a radical remodelling and reorganisation of the RAF itself. The first possibility was, as on earlier occasions, dismissed: understandably since there was nothing in the record of the Macmillan administration and certainly nothing emerging from the recent Chequers conference on defence³⁷ to warrant any other view. Additional resources on which long term plans could be securely based could come only from either according defence a relatively higher priority than other areas of major public expenditure or increased taxation. To state the choices was to state what was politically out of the question so long as the world scene remained reasonably stable. VCAS had some hopes of the second possibility, if only on the obvious merits of reversing what he described as "the frightening reduction in our striking power and our total inability to sustain combat losses even for a few days." But the other Services would make similar claims, and although the Air Council was recommended to seek an increase in the RAF share there was no expectation of the kind of success that would have a major impact on the basic problem. This left the third possibility: a radical reshaping and reorganisation designed to achieve economies of some £30M a year by the end of the decade, which would be used to relieve the financial pressure on the aircraft programme. But economy was not the sole motive. Unless the RAF was reorganised on a less elaborate basis it would be that much more vulnerable to the financial shocks that the future might hold; and unless it reorganised itself it might have damaging changes forced upon it.

A New Model Air Force

Some of the ideas of 1963 for reshaping the RAF were much the same as those which had engaged the Air Council under the impact of the 1957 Defence White Paper and which have been described in an earlier chapter. Economy in the controlling organisation - what was the justification for a command structure hardly unchanged from that required for World War II; concentration on essentials - why should the RAF have ground defence and airfield construction units which could be provided by the Army; economy in aircraft maintenance - once more the case for centralised rather than squadron servicing was aired; economy in training, especially flying training - expensive in the fifties and prospectively even more expensive. These and numerous other possibilities for saving resources were common to both periods. But there were important differences of context. The Air Council at the end of the fifties was managing a Service that provided some of the basic elements of national defence: the deterrent itself as an instrument of policy worldwide, and the defences necessary to the deterrent. By 1963 the deterrent was to be transferred

³⁷ Ch 8, pp 223-226.

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and its defence had already been dismantled to the point where ADUK had a vestigial and largely peacetime role. That the RAF over the same period had got better at moving passengers and freight hardly offset the losses. The Air Council had been disturbed in 1957 at some of the implications of the Defence White Paper. That the 1963 discussions showed even more concern for the future of the RAF reflected the extent to which its standing and prospects had been reduced in the years between. The new model that the Air Council was invited to approve was influenced by the experience and lessons of those years.

a. **The Concept.** Granted that there were no indications of any changes in the government's political objectives, the force outlined by VCAS had to be one appropriate to tasks outside as well as within the NATO area. In this respect, the aircraft with which the force would be equipped had such a rationale. Moreover, each was being, or would be, developed and produced by the British aircraft industry. This had political appeal. On the other hand, there were obvious objections to proposing a future force of such size and cost as would be bound to antagonise Ministers. In the circumstances it was wholly in the RAF tradition that the primacy of quality over numbers was asserted. No greater claim was made than that a front line of little more than six hundred aircraft would offer a reasonable prospect of meeting commitments in Europe and overseas. The separate theatres would need mutual support: "strategic mobility, flexibility and speed of reaction will be absolutely fundamental requirements", which postulated high quality equipment. It was also in the RAF tradition that the crucial importance of strike forces was stressed; hence the inclusion of a larger component of TSR2s than was provided for in current plans.

b. **The Price to be Paid.** Even though the proposed force was less by one-third than existed in 1963, and so could be considered invulnerable to criticism of its excessive size, cost projections showed that its funding would be increasingly difficult. 'This stark fact', said the report, 'imperils the whole future of our national air power, and drastic measures will be needed to remedy the situation.' A claim should be made for more money; but much depended on the extent to which the RAF could save itself.

Command organisation was one of the obvious targets. Little could or needed to be done about the overseas commands in the Middle East and Far East which would need reshaping if and when the Aden and Singapore bases were lost. The structure elsewhere was a different matter and VCAS put forward some radical proposals:

Fighter and Transport Commands to be merged into Tactical Command;

Flying Training and Technical Training Commands to be merged;

Bomber Command (when the V-force disappeared) to be joined with Coastal in a single Metropolitan Command;

Maintenance and Signals Commands to become Logistics Command;

NEAF to be reduced in size (VCAS was doubtful about the future of CENTO);

Malta to come under Coastal Command.

In the context of maritime operations, the long standing criticism of the top heavy naval command structure was aired again; and the Air Council was invited to call for a joint Admiralty/Air Ministry review. But whereas there was a strong case for fewer commands, subordinate functional groups with genuine responsibilities should be formed. As an example, the new Tactical Command should have separate groups for Air Defence, Transport Support and Long Range Transport.

Another major target for reform was the number of RAF stations. Analysis of running costs had exposed that as much as a quarter was absorbed by stations, irrespective of the cost of the squadrons based on them. A policy of fewer, if larger, stations made more sense. Overseas station costs (and the foreign currency outflow that so alarmed the Treasury and Ministers) might best be tackled by rotating squadrons for short periods in substitution for resident squadrons with their overheads of accompanying families and associated medical, educational and other expenses. VCAS had much to say as well about the post-war proliferation of specialist officer branches, each "with their attendant

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paraphernalia of career pyramids"; civilianisation might be the answer in some cases, and certainly cheaper. The impression the report gives is of a senior officer and his staff, deeply concerned by the setbacks of the last few years and by missed opportunities to ensure that resources were concentrated on essentials. No cows should be sacred, as instanced by VCAS's readiness to rationalise the UK SAR services, with the Navy taking full responsibility for areas where there were conveniently located naval air stations; and in any case was this - and was meteorological reconnaissance - a task which should be financed from the Defence budget? If such a change ran the risk of damaging the concept of a unitary shore-based air force VCAS was willing to take it in the wider interests of the Service.

An animal of no less sanctity was also questioned: the British aircraft industry as virtually the RAF's sole supplier. Heavy R and D costs, coupled with small production runs, imperilled even the modest front-line strength of the new model; and there was no prospect of a change for the better under existing procurement policy. The report said:-

We must examine this problem in detail as a matter of urgency with a view to bringing it to the notice of Ministers, and as a corollary we must give the most serious consideration to a change in policy whereby we buy our front line equipment from whatever source provides the most suitable equipment at the cheapest price. We cannot hope to maintain a reasonable front line if we are forced to go on supporting the British aircraft industry at the expense of the front line of the Royal Air Force. Equally, I suggest that for most major new projects the only practicable alternatives open to us will be either to buy abroad or to limit major developments to those done in concert with our allies, despite the difficulty of reconciling operational requirements.

In sum what was presented to the Air Council was a sober and sombre view of future needs: a smaller RAF capable of meeting worldwide tasks only if the quality of its equipment was first-class but with serious concern about whether this could be afforded under a "Buy British" policy. If the proposed front line was to be achieved at all, let alone sustained, a number of measures, including a less chauvinistic procurement policy, were necessary:

A comprehensive review of Command and Group structure.

An examination of the control of maritime operations.

A review of requirements in the Near East, with the object of reducing overheads in Cyprus.

A review of the rest of the RAF's organisation to secure economies in deployment and in training and to eliminate inessentials.

Servicing and repair, provisioning and financial control, and works programmes should be scrutinised for whatever economies could be achieved.

In these ways the RAF could help itself, though a case should also be made for an increased share of Defence funds. Special machinery would be needed for the remodelling task, and special people as well who would not shrink from radical change or from tackling those interests within the Service which might be in favour of economy in general but would fight against the particular economies affecting them. The report ended by saying that nobody should doubt that the future of national air power was the issue at stake.

The extent to which the force envisaged in VCAS's report and the strategy to which it was relevant was affected by future events must be left to a succeeding volume. What is significant for a concluding survey of the period from 1956 is that the report, discussed at three meetings of the Air Council in November and December 1963, was in general approved, as it was at a conference of the domestic Commanders-in-Chief.³⁸ A wider but still limited distribution of the report within the Air

³⁸ AC 18(63), 21(63) and 22(63). The report and the record of Air Council discussions were given a very limited distribution. Commanders-in-Chief who were given advance copies of the report for comment, were instructed not to show it to any of their staff (AHB VCAS/TS90/40).

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Ministry was authorised and instructions were given for a recasting of its proposals for the future front line and a revised command organisation, in a form suitable for presentation to MOD early in 1964. A senior officer (Air Marshal Spotswood) was appointed both for this purpose and as a Project Officer to oversee the studies of the numerous areas where economies should be sought.

One proposal on which the Air Council decided to move with caution was that dealing with the procurement of aircraft and equipment: nothing should be said outside the Air Ministry about changing the policy of buying British. This did not mean that the Air Council was opposed to change; but it would have been untimely and unwise to put forward politically unattractive proposals when so much effort and argument had been expended on plans for a new generation of aircraft, all of which were conceived as products of British industry. The TSR2 in particular was already sufficiently controversial, both as to role and its escalating cost. Any expression of Air Council misgivings about procurement policy would only have provided more ammunition for critics of the aircraft; all the more so when the front line of the new model envisaged a bigger TSR2 component.

Undoubtedly, these 1963 discussions and decisions marked the Air Council's recognition that a difficult period for the RAF had come to an end - with an outcome very different from what had been expected when the period began - and that another had opened. Debates about strategy and weapons had dominated the last five years; and air power had not come well out of them. One lesson was that the RAF should not price itself out of the market, as a combination of political and cost considerations had done in the case of BLUE STREAK. The Air Council remained concerned at the continuing trend of equipment costs; hence its views on future procurement policy. Another lesson was that an objective assessment of the military threats to British interests and of what was needed in military terms to meet them would not produce an answer that any British government would be willing to pay for. As far as the RAF was concerned, the aim was relatively modest: a force which could produce a reasonable amount of striking power and air defence wherever it might be needed. As such, the new model would be a flexible instrument of national policy, essentially deterrent in purpose, and valid even if radical changes were made in defence policy.³⁹

The most important lesson of all was the need to break out of the conventional mould. In the past the RAF had operated foreign equipment, but only under the stress of war and cold war when domestic resources were lacking. In future it should do so if British industry could not match its competitors. In the past it had organised itself for a major war, with a consequentially large supporting infrastructure. In future, with deterrence the keynote of defence, this had to be reorganised on a much more modest basis.⁴⁰ And with equipment costs escalating, yet with good quality equipment the life blood of an effective air force, every section of the Service needed to be ruthlessly examined to see where manpower - itself increasingly expensive - could be saved in the interest of the front line. To the criticism that this might mean another redundancy scheme and a setback to recruiting the Air Staff's answer was that the merits of the new model would speak for themselves and attract the smaller numbers of high class people that would be needed.

If the previous years had been ones of disappointment, almost to the point of disaster, the period comes to an end with a healthy dose of realism about the present state of the Royal Air Force and with many signs of clear thinking. The question for the future was whether actions would match aspirations.

³⁹ It is clear from Air Staff records that the possible advent of a government with a different view of nuclear weapons and of post-imperial requirements was taken into account in devising the new model (AHB VCAS/TA90/40).

⁴⁰ The Air Staff's cautionary example was the Joint Service Headquarters in Cyprus: "a large Headquarters headed by an Air Chief Marshal is quite unnecessary to control the operations of a few Canberra squadrons and a couple of battalions of soldiers. It is all really a hangover from the days when we were trying to defend the Middle East, from the Egypt base, against land invasion by the Russians. The whole concept went overboard years ago, but we became so used to upholding the sanctity of the Egypt base and later of the Cyprus base, that we have not adjusted our higher thinking to the facts of life." (AHB VCAS/TA90/40).

THE WORK OF THE CHIEFS OF STAFF COMMITTEE

As an illustration of the range and variety of the work of the Chiefs of Staff Committee this appendix lists the memoranda considered by the Committee during 1957, when it held nearly a hundred formal meetings. Many of the memoranda were discussed, sometimes more than ^{ONCE} ~~one~~, in draft - often in the form of submissions under a Joint Planning Staff reference - and received the Chiefs of Staff imprimatur after agreement had been reached.

COS(57)1	Proposed Service Liaison Staff for the United Kingdom High Commissioner in Malaya After Independence
COS(57)2	Not issued
COS(57)3	Malayan Defence Agreement
COS(57)4	Command Structure in the Federation of Malaya after Independence
COS(57)5	Operation Hermes - Outline Plan
COS(57)6	Anzam Defence Committee Minutes
COS(57)7	Reinforcement of British Somaliland - Implications of Prepositioning LST, LCT, and Certain Vehicles and Stores South of the Suez Canal
COS(57)8	Future of the West Africa Allied Joint Staff Committee
COS(57)9	Control of Army Anti-Aircraft Weapons in the Army Combat Zone
COS(57)10	The Reinforcement of Aden by One Infantry Battalion from Kenya
COS(57)11	Anglo-American Interests in Libya
COS(57)12	NATO Military Agency for Standardization
COS(57)13	Milford-Haven - Implications of Industrial Development on Naval War Planning
COS(57)14	Service Attaches of Katmandu, Manila and Vientiane
COS(57)15	Anti-Aircraft Defences - Cyprus
COS(57)16	Review of the Commitments of the United Kingdom's Strategic Reserve
COS(57)17	Operation Requirements for Emergencies or Limited War in the Ministry of Defence
COS(57)18	Commanders-in-Chief Committee, United Kingdom - Composition and Terms of Reference
COS(57)19	Anzam Intelligence Meeting - Singapore, November 1956
COS(57)20	The Importance of the Arabian Peninsula
COS(57)21	Brief for the United Kingdom Member of the Anzam Defence Committee
COS(57)22	Withdrawal of the Bermuda Garrison
COS(57)23	Not issued
COS(57)24	Sixth SEATO Military Advisers' Meeting, Canberra 8th March 1957
COS(57)25	Inter-Departmental C-E Policies and Plans
COS(57)26	Release of Information to SHAPE
COS(57)27	Propaganda in the Middle East
COS(57)28	Disarmament

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COS(57)29	Anti-Aircraft Defences - Cyprus
COS(57)30	The Duties and Responsibilities of the Forward Planning Officer (FE)
COS(57)31	Withdrawal of the Bermuda Garrison
COS(57)32	Sixth Military Advisers' Conference Canberra, March 1957
COS(57)33	Long Term Defence Review
COS(57)34	Long Term Defence Review
COS(57)35	Hong Kong Garrison
COS(57)36	Establishments/Complement of Amphibious Warfare Headquarters
COS(57)37	The Safeguarding of Royal Air Force Radar C & R Stations in an Emergency in the Absence of the Home Guard
COS(57)38	Machinery for the Allocation of Air Transport Capacity
COS(57)39	Services Chain of Command
COS(57)40	Sixth SEATO Military Advisers' Meeting, Canberra 8th March 1957
COS(57)41	ditto
COS(57)42	Situation on the Aden/Yemen Border
COS(57)43	Milford Haven - Implications of Industrial Development on Naval War Planning
COS(57)44	The Fleet Air Arm
COS(57)45	Brief for the UK Military Adviser to SEATO
COS(57)46	Military Requirements in Cyprus
COS(57)47	Long Term Defence Policy
COS(57)48	Effect on Bagdad Pact of Termination of the Anglo-Jordan Treaty
COS(57)49	Policy in the Falkland Islands
COS(57)50	Propaganda and Information
COS(57)51	Service Liaison Staff for UK High Commissioner in Malaya
COS(57)52	Services Transmission Security
COS(57)53	Proposed Engineering Integration - Services' Trunk Wireless Communications
COS(57)54	Responsibility of the Royal Navy for the Arabian Peninsula
COS(57)55	Operation Hermes - Outline Plan
COS(57)56	Reinforcement of Singapore
COS(57)57	Proposed New Terms of Reference for the London Communications Security Board
COS(57)58	Relationship of the Federation of Malaya to ANZAM
COS(57)59	Disarmament

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COS(57)60	Withdrawal of Commonwealth Contingent, Korea
COS(57)61	Machinery for Allocation of Air Transport Capacity
COS(57)62	US/Anzam Conference held in Melbourne 7-12 January 1957 to Discuss the Control of Merchant Shipping in South-East Asian Waters and the Revision of the Radford/Collins Agreement
COS(57)63	Special issue
COS(57)64	UK Strategic Interests in the Falkland Islands and Antarctica
COS(57)65	Deployment of the Strategic Reserve Airlift Availability and Alternative Air Routes 1957
COS(57)66	Report of the Committee on Inter-Service Co-operation in Training
COS(57)67	Jamming Broadcasts
COS(57)68	Military Requirements in Cyprus
COS(57)69	Anzam Defence Committee Minute
COS(57)70	Directive to the United Kingdom High Commissioner in Malaya After Independence
COS(57)71	Strategic Basis of Australian Defence Policy
COS(57)72	Protection of British Lives in Jordan During Our Withdrawal
COS(57)73	Role of the FARELF Long Term Garrison
COS(57)74	The Overall Strategic Concept
COS(57)75	Measures to Implement the Strategic Concept
COS(57)76	The Supply of Refined Oil Products from Indonesia to the South East Asian Area and Far East
COS(57)77	Directive to the United Kingdom Senior Planner, SEATO
COS(57)78	Reinforcement of Singapore
COS(57)79	The Future of Compromised Persons Ex-Jordan
COS(57)80	Army Deployment in the Arabian Peninsula
COS(57)81	State of the Air Defences of the United Kingdom, December 1956
COS(57)82	Accommodation for Stockpile in Cyprus
COS(57)83	Disbanding of Certain Far East Defence Committees
COS(57)84	Reinforcement of Cyrenaica, Tripolitania and Malta
COS(57)85	Release of Information to SHAPE
COS(57)86	The Bagdad Pact
COS(57)87	Staff Talks between the Royal Air Force and Royal Rhodesian Air Force -Conclusions and Recommendations
COS(57)88	Directive to the Commander-in-Chief, British Army of the Rhine
COS(57)89	Protection of Oil Supplies in the Persian Gulf
COS(57)90	Evacuation of British and Friendly Nationals from Jordan

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COS(57)91	Federation of Rhodesia and Nyasaland
COS(57)92	Northern Ireland Railways
COS(57)93	Executive Planning for Emergency Operations
COS(57)94	Provision of LAA Guns for the Defence of Airfields Overseas
COS(57)95	Protection of Military Facilities in Cyprus
COS(57)96	Command Organisation in Middle East and Arabian Pensinsula
COS(57)97	Ghana - Functions of United Kingdom Officers and Non-Commissioned Officers Seconded to the Ghana Armed Forces
COS(57)98	Denial Policy in the Federation of Malaya and Singapore
COS(57)99	Policy for Static Camouflage in Air Defence Overseas
COS(57)100	Withdrawal from Jordan
COS(57)101	Jamming Operations at Bahrein
COS(57)102	NATO - Higher Military Structure
COS(57)103	United Kingdom Force Reductions: NATO Annual Review and SHAPE Planning Guidance
COS(57)104	Deployment in Malaya of FARELF Long Term Garrison
COS(57)105	Visit of the Commander in Chief, Middle East Air Force to Tehran April 29th to May 2nd
COS(57)106	Anzam Defence Committee Minutes
COS(57)107	Record of a Conversation Between the Prime Minister and General Heusinger on 8th May 1957
COS(57)108	Increase in Establishment - Deputy Director of Forward Plans (Middle East)
COS(57)109	SACLANT's Provisional Guidance for earmarked UK Forces
COS(57)110	Employment of Overseas Commonwealth Forces in Malaya
COS(57)111	Deployment of the Army Garrison in Malaya
COS(57)112	Permanent Accommodation in Malaya for the Commonwealth Strategic Reserve Brigade
COS(57)113	Bagdad Pact - Brief for UK Military Representative
COS(57)114	Permanent Accommodation in Malaya for the Commonwealth Strategic Reserve Brigade
COS(57)115	Overflying and Staging in the Middle East for Aircraft under RAF Control
COS(57)116	The Deployment in Malaya of the FARELF Long Term Garrison
COS(57)117	Allied Naval Command Arrangements in the Baltic
COS(57)118	Higher NATO Military Structure
COS(57)119	Future Force Requirements in Cyprus
COS(57)120	Naval Communications in the Indian Ocean
COS(57)121	Air Corridors
COS(57)122	Anglo/French Liaison - Retention of W/T Link Between Nairobi and Tananarive

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COS(57)123	Preservation of Security in the Eastern Aden Protectorate
COS(57)124	Outline Strategy for the Middle East in Global War
COS(57)125	Anzam Defence Committee Minute
COS(57)126	Protection of Oil Supplies in the Persian Gulf
COS(57)127	Short-Term Proposals for Command Organisation in the Arabian Peninsula
COS(57)128	Proposals for Changes in NATO Military Organisation
COS(57)129	Transfer of Command of Flotillas on the Rhine to National Land Forces
COS(57)130	Disarmament: United States Informal Proposals
COS(57)131	Combined UK/US Planning for the Defence of Hong Kong
COS(57)132	Evacuation of British and Friendly Nationals from Jordan
COS(57)133	Effect of Withdrawal of RN Rhine Squadron on Ferrying Ability
COS(57)134	Disarmament - US Informal Memorandum to Soviet Delegation
COS(57)135	Allied Naval Command Arrangements in the Baltic
COS(57)136	The Light Anti-Aircraft Artillery Defence of the United Kingdom Control and Reporting System
COS(57)137	South Africa - Defence Policy
COS(57)138	Naval Communications in the Indian Ocean
COS(57)139	Pattern of New Zealand's Defence
COS(57)140	Attitude of Malayan Communist Party after Malayan Independence
COS(57)141	The Outlook in Singapore up to 1960
COS(57)142	The Outlook in Malaya up to 1960
COS(57)143	Role of Anti-Aircraft Units in the Air Defence of Malaya
COS(57)144	Commonwealth Prime Ministers Conference with Sir Roy Welensky
COS(57)145	Likelihood of War up to 1961
COS(57)146	Draft Directive for Commander, British Forces Arabian Peninsula
COS(57)147	Bagdad Pact - Meeting of Council and Military Committee
COS(57)148	Defence Discussions - Rhodesia and Nyasaland
COS(57)149	Oil Facilities in the United Kingdom for Global War
COS(57)150	Strategic Importance of Malta GC
COS(57)151	Training of Russian Linguists
COS(57)152	Internal Security Problem in Cyprus
COS(57)153	Transfer of Christmas Island to Australia
COS(57)154	Reductions of Conventional Armaments
COS(57)155	Disarmament - Brief on MD 119
COS(57)156	Christmas Island: Retention as a Base for A. W. Trials
COS(57)157	Military Policy for Cyprus
COS(57)158	Executive Planning for Emergency Operations
COS(57)159	Further Proposals on the Higher NATO Military Structure

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COS(57)160	Withdrawn
COS(57)161	Reinforcement of Arabian Peninsula or British Somaliland
COS(57)162	British Arms supplied to Middle East Countries
COS(57)163	Evacuation of British and Friendly Nationals from Jordan
COS(57)164	Inter-Service Exercises
COS(57)165	Interim Directive for Global War to Cs-in-C Middle East
COS(57)166	Employment of Commonwealth Forces in Malaya after Independence.
COS(57)167	Disarmament - Reductions in Conventional Weapons
COS(57)168	Disarmament - Reductions in Conventional Weapons
COS(57)169	Disarmament - Reductions in Conventional Weapons
COS(57)170	Cyprus - Military Aspects of Condominium
COS(57)171	Command Structure in the Middle East
COS(57)172	Transfer of Christmas Island (Indian Ocean) to Australia
COS(57)173	External Defence of Cyprus in Circumstances of Condominium
COS(57)174	Period of Warning in Global War
COS(57)175	Defence of Ports and Bases
COS(57)176	The Role of Anti-Aircraft Units in the Air Defence of Malaya
COS(57)177	Deployment of the Strategic Reserve - Aircraft Availability Table 1958
COS(57)178	Services Transmission Security - Third Progress Report (LCSB(57)4 (Final) (January - June 1957))
COS(57)179	Future Constitutional Development in the Colonies
COS(57)180	The Future of Hong Kong
COS(57)181	Antarctica
COS(57)182	Deployment of LST and LTC
COS(57)183	Withdrawn
COS(57)184	Not included
COS(57)185	Reorganisation of HQ British Forces Aden Peninsula
COS(57)186	Not included
COS(57)187	NATO Air Defence Planning
COS(57)188	Rescue and Evacuation of British and Friendly Nationals from Amman
COS(57)189	Reinforcement of West Africa
COS(57)190	Antarctica
COS(57)191	Review of General Personnel Policy at Headquarters Allied Forces Central Europe
COS(57)192	Disarmament - Definition of Armed Forces
COS(57)193	Provision of Service Technicians for Oil Production in Kuwait
COS(57)194	Proposed Engineering Integration of Services Trunk Wireless Network

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COS(57)195	Working Party Report on Action against Ground-to-Ground Missiles (later withdrawn)
COS(57)196	Interim Command Organisation in the Arabian Peninsula
COS(57)197	NATO Annual Review 1957 - UK Submission
COS(57)198	Provision of Saladin Armed Cars for Aden
COS(57)199	The Organisation of Command in Africa
COS(57)200	Communications with Christmas Island
COS(57)201	Directive to the Senior Liaison Officer, Commonwealth Liaison Mission, Korea
COS(57)202	Anzam Defence Committee Minute
COS(57)203	Sir William Dickson's Meeting with the New Zealand Chiefs of Staff
COS(57)204	The Concealment of Visual Aids to Navigation
COS(57)205	Naval War Reserves and Mobilisation Stocks
COS(57)206	Policy for Army War Reserves
COS(57)207	Policy for RAF War Reserves
COS(57)208	Strategic Target Policy for Bomber Command
COS(57)209	Comparative Effectiveness of the Armed Forces of Certain Middle East States
COS(57)210	UK Strategy in the Far East
COS(57)211	Directives to UK Service Liaison Staff in Australia
COS(57)212	Higher NATO Military Structure
COS(57)213	Hostilities Short of Global War Up To 1965
COS(57)214	Strategic Facilities in British Territories Likely to Achieve Independence
COS(57)215	Likely Effect on Western Interests of Recent Middle East Developments
COS(57)216	Action in Support of Iraq
COS(57)217	Directives to Commanders of Overseas Commonwealth Forces in Malaya after Independence
COS(57)218	Inter-Service Exercises
COS(57)219	The Future of Anzam
COS(57)220	General Keightley's Despatch on Operations in the Eastern Mediterranean Nov/Dec 1952 - Pt 2.
COS(57)221	9th Slice NATO Common Infrastructure Programme
COS(57)222	Defence of Middle East Oil
COS(57)223	Proposed Headquarters Organisation for the Arabian Peninsula Command
COS(57)224	Strategic Target Policy for Bomber Command
COS(57)225	Plan HERMES
COS(57)226	Command Organisation in the Far East
COS(57)227	Communications-Electronics Advice for the Chiefs of Staff Committee and the Ministry of Defence

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COS(57)228	Reinforcement of Singapore
COS(57)229	Strategic Facilities in Muscat and Oman
COS(57)230	Reinforcement of Malta, Tripolitania and Cyrenaica
COS(57)231	Withdrawn
COS(57)232	Strategic Mobility in the Far East
COS(57)233	Lessons of Recent Oman Operations
COS(57)234	Air Defence Planning
COS(57)235	East/West Trade: Revised Embargo List
COS(57)236	Reserves of United Kingdom Manpower in Global War
COS(57)237	Report on the Nature, Course and Duration of Global War
COS(57)238	Liaison with Regional Defence Organisations
COS(57)239	Defence Rights in Singapore
COS(57)240	Security of Information for Home Defence against Nuclear Attack
COS(57)241	Reinforcement of Aden, British Somaliland and the Persian Gulf
COS(57)242	The Effect on British Interests in South East Asia of Civil War in Indonesia
COS(57)243	Royal Marine Commandos in the Far East
COS(57)244	NATO Minimum Force Studies
COS(57)245	NATO Minimum Force Studies
COS(57)246	NATO Minimum Force Studies
COS(57)247	NATO Minimum Force Studies
COS(57)248	Security of Kamaran Island
COS(57)249	Strategic Facilities in Muscat and Oman
COS(57)250	Defence of Middle East Oil
COS(57)251	Transatlantic Cables
COS(57)252	Home Defence in Global War - Support to Air Forces Engaged in the Nuclear Air Battle
COS(57)253	Outlook in Indonesia
COS(57)254	Choice of Engines for the RAF Britannia Squadrons
COS(57)255	Balanced Collective Forces
COS(57)256	Strategic Consequences of Withdrawal from Libya
COS(57)257	Future Organisation of Command in the Middle East
COS(57)258	Allied Command Europe Personnel Requirements
COS(57)259	Role of the Colonial Territories in Peace and War
COS(57)260	Oil Planning in South-East Asia
COS(57)261	Control of Nuclear Weapons in the Tactical Land Battle
COS(57)262	Defence Requirements in West Africa
COS(57)263	Role and Composition of the Navy

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COS(57)264	Provision of a Nuclear Capability in the Far East
COS(57)265	Annual Report on Amphibious Warfare
COS(57)266	Transfer of the Royal Malayan Navy
COS(57)267	Threat to Hong Kong from Communist China
COS(57)268	Brief for NATO Military Committee
COS(57)269	Baghdad Pact - Brief on Infrastructure and Training Assistance
COS(57)270	Reinforcement of Potential Centres of Unrest in East Africa
COS(57)271	Defence of Ports and Bases
COS(57)272	Lessons of Recent Oman Operations
COS(57)273	NATO Defence Ministers Meeting, March 1958
COS(57)274	Vacancies at Service Colleges
COS(57)275	Preparatory Planning for Emergency Operations
COS(57)276	US/UK Planning for Defence of Hong Kong
COS(57)277	Deployment of the Strategic Reserve, Aircraft Capability Table 1958
COS(57)278	Likely Form and Duration of a Major War - UK Stockpiling Policy
COS(57)279	Logistic Support in the Far East - Value of Australia
COS(57)280	Minimum Essential Forces Requirements - MC70
COS(57)281	Provision, Manning and Maintenance of LVT
COS(57)282	Command Organisation in the Far East
COS(57)283	Integration of Air Defence for NATO Europe
COS(57)284	Hostilities Short of Global War up to 1965.

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MEMORANDA

APPENDIX B

~~DEFENCE COMMITTEE MEMORANDUM 1957-1958~~

DC/1	1.1.57	Soviet Penetration in the Middle East	Memo. by the Chiefs of Staff
DC/2	2.1.57	Disbandment of Certain Reserve Forces	Note by the Minister of Defence
DC/3	2.1.57	Nuclear Disarmament	Note by the S/S Foreign Affairs
D/1	21.1.57	Terms of Reference and Composition	Note by the Secy of the Cabinet
D/2	18.1.57	Responsibilities of the Minister of Defence	Note by the Secy of the Cabinet
D/3	21.1.57	Defence Facilities in Ceylon	Note by the Minister of Defence
D/4	22.1.57	Military Support for the Baghdad Pact	Memo by the Minister of Defence
D/5	21.1.57	Arms for the Baghdad Pact	Memo by the S/S CRO
D/6	22.1.57	Supply of Hunter Aircraft to Iraq	Memo by the S/S Foreign Affairs
D/7	22.2.57	British Forces in Libya	Memo by the Minister of Defence
D/8	12.3.57	Strengthening the Police Force in Hong Kong	Memo by the S/S Colonies
D/9	5.4.57	Discharge Terms of Redundant Employees in the Ceylon Bases	Memo by the Minister of Defence
D/10	13.6.57	Ditto	Memo by the Minister of Defence
D/11	10.7.57	Hunter Aircraft for India	Minute by the Minister of Supply
D/12	19.7.57	Yemen	Note by the S/S for Air
D/13	26.7.57	Defence Expenditure	Memo by the Minister of Defence
D/14	27.7.57	Fissile Material for Nuclear Weapons	Note by the Secy of the Cabinet
D/15	26.7.57	Strategic Bomber Force	Memo by the Minister of Defence
D/16	26.7.57	Fighter Command	Memo by the Minister of Defence
D/17	26.7.57	Command Structure in the Middle East	Memo by the Minister of Defence
D/18	29.7.57	Admiralty Views on the V-Bomber Force	Note by the Minister of Defence
D/19	29.7.57	Defence Requirements in Hong Kong, the West Indies and South Atlantic	Memo by the Minister of Defence
D/20	29.7.57	The Naval Construction and Aircraft Programme	Note by the Minister of Defence
D/21	22.8.57	Implications for the Commonwealth of Proposed Naval Reductions	Memo by the S/S CRO
D/22	22.10.57	Closure of Hong Kong Naval Dockyards	Memo by the First Lord Admiralty
D/23		Not used	
D/24	12.11.57	Future of ANZAM	Memo by the Minister of Defence
D/25	11.11.57	Command Structure in the Middle East	Memo by the Minister of Defence
D/26	12.11.57	Balanced Collective Forces	Memo by the Minister of Defence
D/27	13.11.57	Atomic Surface - to - Surface Weapons for the Army	Memo by the Minister of Defence
D/28	14.11.57	Role and Composition of the Navy	Memo by the Minister of Defence
D/29	15.11.57	Role of the Navy	Memo by the First Lord Admiralty
D/30	13.11.57	Malta: the Naval Dockyard	Memo by the First Lord Admiralty
D/31	13.11.57	Naval Dockyards	Note by the Secretary
D/32	3.12.57	Muscat and Oman	Memo by S/S Foreign Affairs
D/33		Not used	

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D/34		Not used	
D/35	6.12.57	Effect of Defence Cuts on Employment	Memo by S/S Scotland
D/36	10.12.57	Muscat and Oman	Memo by S/S Foreign Affairs
D/37	10.12.57	Muscat and Oman: Future Policy	Memo by S/S Foreign Affairs
D/38	19.12.57	Role and Composition of the Navy	Note by Minister of Defence
D/39	24.12.57	Admiralty Establishments in Scotland	Memo by First Lord Admiralty
D/1	27.1.58	The Army Garrison at Hong Kong	Memo by the Minister of Defence
D/2	31.1.58	Fleet Air Arm: Economies in the Home Air Command	Note by the First Lord Admiralty
D/3	4.2.58	The Deployment of V-Bombers with Nuclear Capability in the Far East	Memo by the Minister of Defence
D/4	10.2.58	Muscat and Oman	Memo by the S/S Foreign Affairs
D/5	17.2.58	Muscat and Oman	Memo by the Chiefs of Staff
D/6	18.2.58	Muscat and Oman	Note by the S/S Foreign Affairs
D/7	19.2.58	Gwadur	Memo by the S/S CRO
D/8	19.2.58	The Development of V.Bombers with Nuclear Capability in the Far East	Memo by the Chancellor Exchequer
D/9	11.3.58	Operations on the Aden/Yemen Border	Memo by the Minister of Defence
D/10	12.3.58	Facilities in the UK for US Naval Forces	Memo by the Minister of Defence
D/11	17.3.58	European Security	Memo by S/S Foreign Affairs
D/12	17.3.58	Disarmament	Memo by the S/S Foreign Affairs
D/13		Not circulated	
D/14	18.3.58	Disarmament	Memo by the Minister of Defence
D/15	18.3.58	Disarmament	Note by the Minister of Defence
D/16	18.3.58	European Security	Note by the Minister of Defence
D/17		Paper withdrawn	
D/18	24.3.58	Anglo-American Working Group on Hong Kong	Memo by S/S Colonies
D/19	24.3.58	Anglo-US Discussions on Hong Kong	Memo by S/S Colonies
D/20	3.4.58	International Law and Atomic Weapons	Memo by S/S War
D/21	23.4.58	Disengagement	Memo by the Minister of Defence
D/22	31.3.58	Air Staging Post in the Maldive Islands	Memo by S/S CRO
D/23	10.4.58	Aden	Memo by Minister of State Colonies
D/24	19.5.58	Libya Garrison	Memo by Minister of Defence
D/25	7.5.58	Operations in Oman	Memo by Minister of Defence
D/26	2.5.58	Air Staging Post in the Maldives	Memo by S/S CRO
D/27	6.5.58	Ditto	Memo by the Minister of Defence
D/28	7.5.58	The Yemen	Memo by the Minister of Defence
D/29	27.5.59	Facilities in the UK for US Naval Forces	Memo by the Minister of Defence

D/30	16.6.58	Hong Kong Garrison	Note by Chancellor Exchequer
D/31	16.7.58	Attacks from Yemen	Memo by Minister of Defence
D/32	16.7.58	Nuclear Armaments	Memo by the Minister of Defence
D/33	17.7.58	Nuclear Weapons	Memo by the Prime Minister
D/34	15.7.58	Composition and Terms of Reference	Note by Secretary of Cabinet
D/35	2.9.58	Air Defence	Memo by the Prime Minister
D/36	4.9.58	Home Defence Policy	Memo by the Prime Minister
D/37	17.7.58	Record of Meeting on Middle East 15.7.58	Note by Secretary of Cabinet
D/38	21.7.58	Record of Meeting on Middle East 20.6.58	Note by Secretary of Cabinet
D/39	21.7.58	Record of Meeting on Middle East 21.7.58	Note by Secretary of Cabinet
D/40	23.7.58	Record of Meeting on Middle East 22.7.58	Note by Secretary of Cabinet
D/41	24.7.58	Record of Meeting on Middle East 24.7.58	Note by Secretary of Cabinet
D/42	7.8.58	Record of Meeting on Middle East 6.8.58	Note by Secretary of Cabinet
D/43	13.8.58	Record of Meeting on Middle East 12.8.58	Note by Secretary of Cabinet
D/44	5.9.58	Fissile Material and Weapons from the US	Memo by the Minister of Defence
D/45	5.9.58	Air Defence	Memo by the Minister of Defence
D/46	5.9.58	Sea Slug	Memo by the Minister of Defence
D/47	8.9.58	Ballistic Rockets	Memo by the Minister of Defence
D/48	9.9.58	Oman	Memo by the S/S CRO
D/49	30.9.58	Withdrawal of First Guards Brigade from Cyprus	Memo by the Chiefs of Staff
D/50	1.10.58	Muscat and Oman	Memo by the S/S Foreign Affairs
D/51	1.10.58	Muscat and Oman	Memo by the S/S Foreign Affairs
D/52	24.10.58	Nuclear Bomb Storage in Cyprus	Memo by the Minister of Defence
D/53	25.10.58	Icelandic Fishery Limits	Note by Secy of Cabinet
D/54	3.11.58	Germany and Nuclear Weapons	Memo by S/S Foreign Affairs
D/55	3.11.58	The Bomber Force and Guided Bombs	Memo by the Minister of Defence
D/56	3.11.58	Defence of the Deterrent	Memo by the Minister of Defence
D/57	3.11.58	Ballistic Rockets	Memo by the Minister of Defence
D/58	10.11.58	Muscat and Oman	Memo by the S/S Foreign Affairs
D/59	11.11.58	Cyprus: Service Families	Memo by the Minister of Defence
D/60	14.11.58	Level of Defence Expenditure	Memo by the Minister of Defence
D/61	14.11.58	Fighter Defence of the Deterrent	Memo by the Minister of Defence
D/62	14.11.58	Medium Bomber Force	Memo by the Minister of Defence
D/63	17.11.58	Ballistic Rockets	Memo by the Minister of Defence
D/64	14.11.58	National Service	Memo by the Minister of Labour
D/65	14.11.58	Deferment of Science and Mathematics Graduates for Teaching Posts in Secondary Schools	Memo by the Minister of Labour

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D/66	14.11.58	Deferment of Ex-Shipyard Apprentices	Memo by the Minister of Labour
D/67	14.11.58	Anti-Aircraft Missiles	Memo by the Minister of Defence
D/68	17.11.58	Size of the Army	Memo by the Minister of Defence
D/69	17.11.58	Defence Expenditure	Memo by the Chancellor Exchequer
D/70	18.11.58	Integration of NATO Air Defence	Memo by the Minister of Defence
D/71	19.11.58	New Diffusion Plant	Note by the Prime Minister
D/72	21.11.58	Aquisition of Nuclear Submarine Machinery and Information from the US and Subsequent manufacture of Fuel Elements in the UK	Memo by First Lord Admiralty
D/73	28.11.58	A Transatlantic Cable for Military Purposes	Memo by First Lord Admiralty
D/74	1.12.58	Air Stating Post in the Maldives	Memo by S/S CRO
D/75	9.12.58	Report by CIGS on his Visit to Cyprus	Note by Minister of Defence
D/76	5.12.58	Expenditure on Development of Ballistic Rockets and Propelled Bombs	Memo by Minister of Defence
D/77	5.12.58	Integration of NATO Air Defence	Memo by Minister of Defence
D/78	5.12.58	Ditto	Memo by Minister of Defence
D/79	6.12.58	Size of the Armed Forces after 1962-63	Memo by Chancellor of Exchequer
D/80	12.12.58	Size of the Army	Memo by Minister of Defence
D/81	15.12.58	Military Transport Aircraft	Memo by Minister of Defence
D/82	15.12.58	Size of the Armed Forces	Memo by S/S Foreign Affairs
D/83	16.12.58	Cyprus and the Rundown of the Army	Memo by S/S War
D/84	18.12.58	Cyprus: Military Installations	Memo by Minister of Defence
D/85	18.12.58	Cyprus: Report by the Cyprus Requirements Executive	Note by Secy of Cabinet
D/86	20.12.58	Defence Estimates 1959-60	Memo by Minister of Defence
D/87	19.12.58	Blue Streak	Memo by Minister of Defence
D/88	19.12.58	Fighter Command	Memo by Minister of Defence

NORTH ATLANTIC COUNCIL DIRECTIVE TO THE NATO MILITARY
AUTHORITIES, 1956

- 1a. Minute addressed to Chairman COS Committee by the Minister of Defence, 3rd September 1956.
- b. Draft directive by the Minister of Defence, attached to above minute.
- 2a. Minute dated 13th September 1956 addressed by Chairman COS Committee to the Chiefs of Staff, covering Field Marshal Montgomery's draft directive.
- b. Field Marshal Montgomery's draft directive of 10th September 1956.
3. UK revised draft directive as communicated to Washington. (FO Tel No 4556, 2nd October 1956).
4. Anglo-American agreed draft dated 12th October 1956, as communicated to the other NATO powers.
5. North Atlantic Council working group revised draft, as communicated from UK Del Paris to London and Washington. (FO Tel No 205, 21st November 1956).
6. Directive to the NATO Military Authorities from the North Atlantic Council, as finally approved by the Council at its meeting on 13th December 1956. [C-M(56)138(Final)].
Part I, "Analysis of Soviet Intentions". Part II, "The Directive".

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NORTH ATLANTIC COUNCIL DIRECTIVE TO THE NATO MILITARY
AUTHORITIES, 1956

1a. Minute addressed to Chairman COS Committee by the Minister of Defence,
3rd September 1956

"Our talk with General Gruenther on 7th August indicated that the most effective method of making progress with the NATO strategic reappraisal would be for us to prepare a new political directive to the NATO Military Authorities and to discuss it in the first place with the Americans. It could then be settled how best it could be launched in the wider circles of the North Atlantic Council. The discussions with the Americans, which will be at political level in the first place, have been fixed for mid-September.

2. Attached is a draft of such a directive which has been prepared in consultation with the Foreign Office. It takes account of comments from the Embassy in Washington and the UK Delegation to NATO. Before I circulate it to other Ministers for consideration, I wish to have the views of the Chiefs of Staff upon it, and should be glad if you would arrange for these to be obtained.

3. I would in particular draw the attention of the Chiefs of Staff to the following points:-

(i) It has been suggested that before the NATO Military Authorities could effectively apply a directive of this kind to future military planning they would need some guidance on the duration of the initial phase of global war, since this would govern the length of the period in which it would be necessary to hold a front on the Continent. The UK Delegation to NATO had proposed that in order to meet this point the following phrase should be added to paragraph 6(iii) "... and to hold an identified Soviet aggression until the strategic counter-offensive becomes effective". This however would still leave it to the military to decide how long it would be before the counter-offensive did become effective, and I understand that SHAPE are thinking of a period of thirty days. This seems to me much too long in itself; it would also, I would imagine, necessitate the retention of all the forces at present existing on the Continent plus the German forces when they had been raised. If it were agreed that once aggression had been identified as such (ie determined to be no accident but deliberate), no time would be lost in launching the nuclear counter-attack, I should have thought the first phase could not be expected to last for more than a very few days. It would however be difficult to persuade NATO as a whole to accept so specific a statement in the directive, and it may therefore be better to say nothing in the text and to leave it to the UK and US, under whose control the means of launching the nuclear counter-attack will be, to indicate to the NATO Military Authorities that they should plan on the assumption that they would not be required to hold on the Continent for more than a very short period.

(ii) It has been proposed that it would assist in persuading the Germans of the rightness of the new directive if at the end of paragraph 7 the following words were added "... which will be used only against military targets". I am doubtful of the wisdom of adding these words, if only because of the difficulty of defining what is a military target in circumstances of atomic war. Moreover, I am not sure that it would assist materially in persuading the Germans. The real difficulty with them seems to be that they are leaning towards the abolition of nuclear weapons and therefore wish to retain large conventional forces. This is a doctrine which NATO rejected when in 1954 the Council agreed that the Military Authorities should plan on the assumption that nuclear weapons would be used. It remains true that, since the West has no prospect of ever matching the Russians and their allies in conventional forces, the adoption of the German argument would amount to an admission of inevitable defeat. My own view is therefore that it would be better to say nothing in the directive which would limit our freedom of action in the use of nuclear weapons, but I should like to know what the Chiefs of Staff think."

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- 1b **Draft directive by the Minister of Defence, attached to above minute**

**“DRAFT DIRECTIVE BY THE NORTH ATLANTIC COUNCIL
TO THE NATO MILITARY AUTHORITIES**

Planning for the defence of the NATO area and the forces required to give effect to the plan should be based on the following political guidance.

2. It is evident that since the death of Stalin and the detonation of their own thermo-nuclear bomb the Soviet Government have re-examined their tactics and strategy. They now appreciate fully the disastrous consequences to Russia of a thermo-nuclear attack, and they also appreciate that even after they have attained parity with the West in bombs and means of delivery this will not affect our ability to devastate their country. It will therefore be their policy to avoid global war, and as global war will not be initiated by NATO it must be regarded as unlikely.

3. If nevertheless the Soviet Government do commit an identified act of aggression against NATO territory it must always be understood that the West would at once launch a full scale attack on Russia with thermo-nuclear weapons.

4. Soviet long term aims will, however, remain unchanged. In Europe the main Soviet objective will continue to be disruption of the solidarity achieved in NATO and WEU. At the same time Soviet attempts by both economic and political means to undermine the position of the West outside the NATO area, notably in the Middle East, South East Asia and Africa, will be strongly increased.

5. It must be assumed that Soviet efforts in the political and economic fields will be supplemented by indirect military action where this seems to them to be to their advantage. This might take the form of action by the satellite or other hostile Powers, with Soviet moral or covert military support. We must also expect Soviet-inspired subversive movements either with or without covert military support, eg by volunteers. The more subtle and insidious forms which the Soviet threat is now taking thus make it all the more necessary for NATO to maintain its alertness and solidarity.

6. The military forces maintained by NATO, (which must be within the economic capacity of the Alliance to compete with the Soviets in this and other fields) should be the minimum needed to meet the following requirements:-

- (i) to keep confidence in the military effectiveness of the NATO defence organisation; and to prevent external intimidations;
- (ii) to deal with local infiltrations and incursions;
- (iii) to enable Soviet or satellite aggression to be identified as such; and to deal with a satellite attack;
- (iv) to secure the radar facilities required for the full use of the strategic bomber forces.

7. In limited wars under paragraph 6(iii) above, ie those not involving the overt participation of Russia, conventional forces will be armed with an atomic capability.

8. The NATO Military Authorities should reassess the size, composition and disposition of NATO forces in accordance with the above political direction.”

- 2a. Minute dated 13th September 1956 addressed by Chairman COS Committee to the Chiefs of Staff, covering Field Marshal Montgomery's draft directive.

“NEW DIRECTIVE TO NATO

Field Marshal Montgomery saw the Minister and myself on the above subject his morning. He said that he was aware that a new directive was being discussed. He himself had been giving

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consideration to this subject because of the reappraisal which the SHAPE planners were undertaking. To help them in this reappraisal they had had to assume a new directive and had in fact written one. He left copies of this draft directive with the Minister and myself, asking that it should be treated as strictly "for UK eyes only". because although both General Gruenther and General Norstadt had given their general agreement to it, they would not wish it to leave their headquarters at present.

Lord Montgomery said he felt that his directive was greatly preferable to the United Kingdom draft directive which was circulating now. It also had the advantage that it was likely to be acceptable to the Americans and especially to SACEUR and SACLANT. He thought that it would fit well into our programme of economies and was strategically much sounder than what we were contemplating at present. He recognised that the wording was unsuitable for use as a political guidance but this could easily be made appropriate. In any case if we adopted this directive for our discussions with the Americans, paraphrasing of the paper would be essential for the reasons given above.

I have not discussed this with the Minister or with Sir Richard Power, but it is very probable that the Minister would like our immediate views on this alternative. Would you therefore consider it at once and see whether you think there is any merit in this alternative concept. Would it be possible to have your verbal reactions before the end of this working week."

2b. Field Marshal Montgomery's draft directive of 10th September 1956

**"Notes for the Exercise Staff: No 5
Points to be included in a
new Directive which might well be given to NATO Commands
by
The Standing Group**

1. If we take the next ten to fifteen years, which is as far as we can see ahead with any reasonable certainty, it is unlikely that unlimited nuclear war will be launched by the Russians during that time. This situation has been brought about because of the political and military strength which has been built up in NATO. That strength has brought us peace. Therefore we must not run down our overall strength, or lower our guard in any way. Firmness in dealing with aggression is vital. Readiness and preparedness are equally vital.
2. We must remember that while Russia could launch a surprise attack against our air bases and nuclear delivery system at any time, she could not launch an all-out surprise attack on land without some mobilisation procedure. The two attacks, air and land, would obviously need to be synchronised; one without the other would be useless to Russia. It should not be possible for Russia to mobilise her land forces for war without our finding out that she is doing so. For these reasons we must step up our intelligence organisations; we need better intelligence than we have today, far better.
3. Unlimited nuclear war could not be won by either side. As this impossibility of success becomes more apparent, the likelihood of limited war will become greater. Limited war can be defined as armed conflict other than unlimited nuclear war; such wars will generally be outside the NATO area, and the aim will be to endeavour to localize them.
4. In order to be able to collect quickly the national resources necessary for limited war, or for cold war activities, some NATO nations need greater flexibility in the dispositions of their forces than they have at present. The Central Europe sector is probably the least likely area in which Russia would attempt aggression to test our firmness. Forces can be assembled quickly for despatch overseas for limited wars, only if they are stationed in the home country.
5. Consequent on the above, some re-deployment of the NATO military strength is desirable, so long as this can be done without weakening our overall strength. This re-deployment should aim at getting a greater proportion of national forces back into their own countries than is at present the case, thus providing military flexibility. No such re-deployment could take place in the Central

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Europe Command until the German land force contribution of twelve Divisions begins to mature. There must always be in Germany an adequate land force contingent from the UK and the USA.

6. In planning a re-deployment of our forces, regard must be paid to the following four-point strategy:-

- (a) The use of the nuclear deterrent, not only to deter but also its instant use to repel attack.
- (b) If war comes, to attack with the air and missile arm.
- (c) To hold firmly our bases and national territories.
- (d) To retain freedom to operate in the major oceans and seas, and to deny this freedom to the enemy.

Our known ability and preparedness to do these four things constitutes the overall deterrent, and should war come our strategy must be built on the ability to carry them out.

7. Against this background, NATO Supreme Commanders will review the deployment and pattern of their forces. They will also examine our command structure; this must ensure effective command and control in war of all the forces involved."

3. **UK revised draft directive as communicated to Washington.**
(FO Tel No 4556, 2nd October 1956)

"A review of NATO defence planning is required, in order to determine how, within the resources likely to be available, the defence effort of the Alliance, and of each individual member, can best be adjusted to achieve the most effective pattern of forces in the light of current developments, notably:-

- (i) Development of thermo-nuclear weapons;
- (ii) the new Soviet tactics;
- (iii) the mounting costs of new weapons.

2. It is evident that since the death of Stalin and the detonation of their own thermo-nuclear bomb the Soviet Government have re-examined their tactics and strategy. They now appreciate fully the disastrous consequences to Russia of a thermo-nuclear attack, and they also appreciate that even after they have attained parity with the West in bombs and means of delivery this will not affect our ability to devastate their country. It will therefore be their policy to avoid global war, and as global war will not be initiated by NATO it must be regarded as unlikely.

3. If nevertheless the Soviet Government do commit an identified act of aggression against NATO territory it must always be understood that the West would at once launch a full scale attack on Russia with thermo-nuclear weapons.

4. Soviet long term aims will, however, remain unchanged. In Europe the main Soviet objective will continue to be disruption of the solidarity achieved in NATO and WEU. At the same time Soviet attempts by both economic and political means to undermine the position of the West outside the NATO area, notably in the Middle East, South East Asia and Africa, will be strongly increased.

5. It must be assumed that Soviet efforts in the political and economic fields will be supplemented by indirect military action where this seems to them to be to their advantage. This might take the form of action by the satellite or other hostile Powers, with Soviet moral or covert military support. We must also expect Soviet-inspired subversive movements either with or without covert military support, eg by volunteers.

6. In this new phase of competitive co-existence, the members of the Alliance must show flexibility in their thinking and their dispositions so as to put their available resources to most effective use in meeting the Soviet threat in its various and changing forms on a world front. Thus, the NATO defence effort must be so adjusted as to enable member countries to fulfil also their defence

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commitments in other areas; and despite the rising cost of weapons, overall defence expenditure must be kept at a level which will give the members of the Alliance the necessary margin of economic strength to compete with the Soviet threat in all its aspects, without endangering their economic stability which in itself is an essential element of their security.

7. Apart from forces for the strategic air offensive the military forces maintained by NATO should be the minimum needed to meet the following requirements in the NATO area:-

- (i) to keep confidence in the military effectiveness of the NATO defence organisation; and to prevent external intimidation;
- (ii) to deal with local infiltrations and incursions;
- (iii) to enable Soviet or satellite aggressive intentions at sea, on land or in the air to be identified as such; to provide a shield against a satellite attack; and to hold an identified Soviet aggression until the strategic counter-offensive becomes effective;
- (iv) to secure the radar facilities required for the full use of the strategic bomber forces.

8. The atomic capability with which NATO forces will be armed (over and above that provided by the strategic air forces) will be used in the event of aggression whether by Russia or her satellites.

9. The NATO Military Authorities should reassess the size, composition and disposition of NATO forces in accordance with the above political direction."

4. **Anglo-American agreed draft dated 12th October 1956, as communicated to the other NATO powers.**

"A review of NATO defence planning is required, in order to determine how, within the resources likely to be available, the defence effort of the Alliance, and of each individual member, can best be adjusted to achieve the most effective pattern of forces in the light of current developments, notably:-

- (i) development of thermo-nuclear weapons;
- (ii) the new Soviet tactics;
- (iii) the mounting costs of new weapons.

2. It is evident that since the death of Stalin and the detonation of their own thermo-nuclear bomb the Soviet Government have re-examined their tactics and strategy. They now appreciate fully the disastrous consequences to Russia of a thermo-nuclear attack, and they also appreciate that even after they have attained parity with the West in bombs and means of delivery this will not affect our ability to devastate their country. Accordingly, unless there is a sudden and unexpected reversal of Soviet policy or the Soviet Government make a disastrous miscalculation, Russia will avoid global war. Since global war will not be initiated by NATO it must be regarded as unlikely.

3. If nevertheless the Soviet Government do commit an identified act of aggression against NATO territory, it will be met; and NATO planning is at present based on the assumption that the West would at once launch a full-scale attack on Russia with thermo-nuclear weapons.

4. Soviet long term aims will, however, remain unchanged. In Europe the main Soviet objective will continue to be disruption of the solidarity achieved in NATO and WEU. At the same time the Soviet attempts by both economic and political means to suvert the independence of other nations and to undermine the position of the West outside the NATO area, notably in the Middle East, South East Asia and Africa, will be strongly increased.

5. It must be assumed that Soviet efforts in the political and economic fields will be supplemented by indirect military action where this seems to them to be to their advantage. This might take the form of action by the satellite or other hostile Powers, with Soviet moral or covert military support. We must also expect Soviet-inspired subversive movements either with or without covert military support, eg by volunteers.

6. In this new phase of competitive co-existence, the members of the Alliance must show flexibility in their thinking and their dispositions so as to put their available resources to most effective use in meeting the Soviet threat in its various and changing forms on a world front. The defence of the NATO area naturally remains the primary task of NATO forces. Nevertheless the NATO defence effort must be so adjusted as to enable member countries to fulfil also their defence commitments in other areas; and despite the rising cost of weapons, overall defence expenditure must be kept at a level which will give the members of the Alliance the necessary margin of economic strength to compete with the Soviet threat in all its aspects, without endangering their economic stability which in itself is an essential element of their security.
7. Apart from forces for the strategic air offensive the military forces maintained by NATO should be the minimum needed to meet the following requirements in the NATO area:-
 - (i) to keep confidence in the military effectiveness of the NATO defence organisation and thereby to contribute to the deterrent to aggression; and to prevent external intimidation;
 - (ii) to deal with local infiltrations and incursions;
 - (iii) to enable Soviet or satellite aggressive intentions at sea, on land or in the air to be identified as such; to provide a shield against a satellite attack; and to hold an identified Soviet aggression until the strategic counter-offensive becomes effective;
 - (iv) to secure the radar facilities required for the full use of the strategic bomber forces.
8. NATO land, sea and air forces will be provided with an atomic capability (over and above that possessed by the strategic air forces) available for use in the event of aggression whether by Russia or her satellites should the situation so require.
9. The NATO Military Authorities should reassess the size, composition and disposition of NATO forces in accordance with the above political direction."
5. **North Atlantic Council working group revised draft, as communicated from UK Del Paris to London and Washington. (FO Tel No 205, 21st November 1956).**

"In the light of the conclusions contained in part 1 of this paper and of the continuously increasing development of nuclear weapons in the West and also in the East, a review of NATO defence planning is required in order to determine how, within the resources likely to be available, the defence effort of the Alliance, and of each individual member, can best be adjusted to achieve the most effective pattern of forces.

 2. NATO must maintain and protect a fully effective nuclear retaliatory force as the major deterrent to Soviet aggression. NATO must also provide the radar facilities needed for air war.
 3. Apart from forces for the strategic air counter-offensive, the land, sea and air forces maintained by NATO should be designed to meet the following requirements in the NATO area:
 - (a) to keep confidence in the military effectiveness of the NATO defence organisation and thereby to contribution to the deterrent to aggression, and to prevent external intimidation; to this end the continued stationing of British, Canadian and United States forces in Europe is essential;
 - (b) to deal with local infiltrations and incursions;
 - (c) to enable Soviet or satellite aggressive intentions (on land, sea, air) to be identified as such;

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- (d) to deal with limited attacks;
 - (e) to defend NATO territory against a major Soviet aggression in accordance with the concept of "forward strategy", and to sustain operations without any major planned withdrawal until the strategic counter-offensive has achieved its objectives;
 - (f) to protect and maintain sea communications as required in support of the above missions.
4. The ground forces required for an effective shield must of course have the capability to deal with limited armed attacks without recourse to nuclear weapons. Should the situation so require they must also be prepared and capable of responding quickly with nuclear weapons to any type of aggression. In each case the decision would be a matter for governments.
5. In planning for the most efficient organisation and equipment of NATO forces, account must be taken of the possible need for certain NATO countries to use their NATO forces to meet defence commitments elsewhere, a need which may arise because of the various and changing forms of the Soviet threat on a world front.
6. In the light of the considerations discussed in part 1 of this paper it does not seem likely that an attack on NATO will be launched without warning. It would probably be preceded by a period of acute political tension. Nevertheless the consequences of attack without warning are such that those NATO facilities directly relating to nuclear retaliatory action must be kept at constant readiness at all times.
7. In present circumstances, few, if any, NATO countries are prepared to make a substantial increase in the proportion of their resources in men, money and material devoted to defence.
8. In deciding on the allocation of total resources, governments must take account not only of the rising cost of new weapons but also of the need for economic resources to deal with the Soviet threat in all its aspects, without endangering their economic stability, which in itself is an essential element of their security."
6. Directive to the NATO Military Authorities from the North Atlantic Council as finally approved by the Council at its meeting on 13th December 1956.
[C-M(56)138(Final)].

"PART I. ANALYSIS OF SOVIET INTENTIONS

General trends of Soviet policy

The Soviet leaders see international affairs in terms of a struggle for world domination between two rival ideologies. This concept also coincides with many aspects of traditional Russian power policy. They continue their unremitting efforts to weaken and ultimately to destroy the "capitalist world". which they look upon as their opponent in this struggle for power. This assessment has been confirmed by the events which have taken place in Hungary and the Middle East.

2. Whatever repercussions these events may have within the USSR, there is no reason to doubt that the regime will remain sufficiently stable to go on developing its economic and military strength.

In spite of reductions in manpower, the military strength of the USSR will not be diminished. On the contrary, it is steadily increasing in terms of modern weapons for air, land and sea forces. Overall nuclear capability continues steadily to grow, including a capability for the delivery of nuclear weapons both within Europe and directly against North America. In addition to expanding their nuclear capability, the Soviets appear to be keeping forces able to undertake non-nuclear warfare on either a large or a small scale. The effects of the upheaval in the satellites on the military strength of the Soviet Bloc are not wholly clear, but some of the European satellite forces might not be reliable, depending on the circumstances in which aggression occurred.

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Changes in the direction of decentralisation and limited "democratisation" in the Soviet Union have taken place; these changes have not been so extensive or of such a character as to constitute a basic change in the Soviet regime.

These developments have also affected Soviet-satellite relations. The recognition of "different roads to socialism" and the shock of destalinisation have imposed very great strains on the structure of the Bloc, and have confronted the USSR with serious policy dilemmas. It is not clear at present whether the USSR, having apparently miscalculated the scope and strength of nationalism and anti-Communism in Eastern Europe, will continue its earlier policy of modifying Stalinist types of economic, political and military controls in the satellites. It is clear, however, that there are limits beyond which the Soviet Government will not permit the satellites to go and they are prepared to take not only economic and political, but also the most ruthless military measures to retain their control over the Bloc.

3. The rapid growth of the Soviet Union's economic strength gives added hope to the Soviet leaders that their aims can be achieved without resorting to a war in the foreseeable future. To accomplish an expansion of its influence the USSR has attempted to portray itself as a force for peace, has tried to lessen the suspicion of Soviet intentions in non-Communist areas, and has made increasing use of traditional diplomacy, economic ties, and cultural relations. While the Soviets are likely to continue these policies they may now find increasing difficulties in doing so, at any rate in the West.

The USSR's continuing and main objective in the NATO area is to undermine support for Western defence arrangements and thus lead the way to the dissolution of NATO. At the same time, the Soviet Government are actively exploiting new possibilities for trouble-making which have arisen in the Middle East, Asia and Africa. By capitalising on the forces of nationalism and neutralism, the Soviet Government seek to increase their position of power vis-a-vis the West and to undermine and outflank the world-wide positions of the Western Powers. In this process two important weapons are the Soviet Union's growing ability to make attractive economic offers on a highly selective basis and its readiness to supply conventional arms from its large disposable stocks. They will be able to do both with increasing facility as they continue to maintain a rate of industrial growth designed to outstrip the West in economic as well as military power.

Possibilities of Soviet launching of general nuclear war

4. There is no doubt that the Soviet leaders understand and fear the consequences of general nuclear war. It can be assumed therefore that they will not deliberately launch a general war so long as they know that the West is prepared to retaliate with nuclear weapons in sufficient strength to devastate the USSR.

Circumstances may develop, however, in which the Soviet leaders may harden their attitude and be prepared to take greater risks than heretofore. They have indulged in the use of threats, including the threat of war and even of nuclear attack, as blackmail to attain their ends.

There is, furthermore, a danger of general war arising from miscalculation on their part. This danger could arise, for example, through an underestimation of the Western reaction to an aggressive action by the Soviets or through a misconstruction of Western intentions which might lead them to conclude that the Soviet Union was about to be attacked with nuclear weapons.

Possibilities of Soviet action through use of conventional arms, entailing risk of general nuclear war

5. The Soviet leaders are fully aware that any attack they might launch against NATO, even with conventional arms, would entail an immediate military response by the NATO Alliance and thus risk a general war. They would almost certainly regard open attacks with conventional arms across recognised state frontiers outside the NATO area by Soviet, Communist Chinese or satellite forces as involving, under present conditions, a serious risk of general war and therefore as something to be

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avoided. The Soviets are thus not likely to launch such attacks, provided that the West maintains its defence commitments, such as the stationing of overseas troops in Western Europe, its firm purpose to defend itself, appropriate nuclear retaliatory strength and adequate conventional forces to ensure that local armed intervention by Soviet or satellite forces does not offer a prospect of easy success.

6. However, the following possibilities of action by the Soviet leaders through the use of conventional arms, but which would, in varying degree, entail the risk of deteriorating into a major war, must be included among those requiring consideration:

(a) **General attacks against NATO.** The USSR might launch general attacks with conventional weapons against NATO if the Soviet leaders estimated that the Alliance would be deterred from employing nuclear weapons against the USSR except in retaliation to a Soviet nuclear attack. The Soviet leaders might believe that NATO would be thus deterred, for example:

- because of assumed Western reluctance to be the first to use nuclear weapons;
- because of assumed fear on the part of the West that it was more vulnerable than the Soviet Union to nuclear attack;
- because of assumed Western division of demoralisation.

(b) **Local attacks against NATO.** If the Soviets believe that NATO would be deterred from employing nuclear weapons (except in retaliation to a Soviet nuclear attack) and were not able to defend itself against all types of limited aggression, including local attack (eg by a satellite), the Soviets might initiate, instigate, support or condone such aggression.

(c) **Attacks against peripheral non-NATO countries.** If the West is deemed to be deterred from employing nuclear weapons and if for this or other reasons the Soviet leaders thought that a non-NATO country on the periphery of the Soviet bloc would not or could not receive effective support of the Western powers, the Soviets might be tempted to use their preponderance in conventional forces either for armed intervention in the country in question or to exert pressure on it in order to influence it towards alignment with the Soviet camp.

(d) **Insurrection and guerrilla.** Armed insurrection or guerrilla activity under or indirect Communist sponsorship supported by irregulars of "volunteers" from the bloc might occur if the Communists are presented with opportunities (eg serious internal disorders in a non-Communist country, disunity in the free world or collapse of its defence arrangements, etc.)

(e) **Indirect intervention outside of NATO area.** Situations in which the relations between countries outside the Soviet bloc deteriorate will be exploited by the USSR to further her political, economic and military influence. If the deterioration of such relations reaches the point of armed conflict, the USSR may go to the length of sending various forms of military assistance, including "volunteers", from the bloc.

(f) **Soviet intervention in satellites.** Extensive military measures by the USSR to cope with serious deterioration of its control over the satellites can produce an explosive situation.

"PART II - THE DIRECTIVE

The North Atlantic Treaty states that the basic aim of the Alliance is to safeguard the freedom, common heritage, and civilisation of the peoples of the NATO countries. To this end, a collective defence system has been built up for the purpose of averting war. This purpose cannot be fulfilled unless the potential aggressor is confronted by NATO with forces which are so organized, disposed, trained and equipped that he will conclude that the chances of a favourable decision are too small to

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be acceptable and that fatal risks would be involved if he launched or supported an armed attack, even with superior numbers and the advantage of surprise.

2. In the light of the conclusions contained in Part I of this paper, a review of NATO defence planning is required in order to determine how, within the resources likely to be available, the defence effort of the Alliance and of each individual member can best achieve the most effective pattern of forces.

3. For NATO defence and as a major deterrent to Soviet aggression a fully effective nuclear retaliatory force provided with all the necessary facilities must be maintained and protected.

4. Taking into account the role of the nuclear retaliatory force, the land, sea and air forces available to NATO must be designed to enable them to defend NATO territory and in particular to enable them to meet all the following requirements:

- (a) to keep confidence in the military effectiveness of the NATO defence organization, and thereby to contribute to the deterrent to aggression, and to prevent external intimidation;
- (b) to deal with incidents such as infiltrations, incursions or hostile local actions by the Soviets, or by Satellites with or without overt or covert Soviet support;
- (c) to identify Soviet or Satellite aggression (on land, sea or air);
- (d) to deal with armed aggression, other than that referred to in (b) above, in accordance with the concept of "forward strategy", counting on the use of nuclear weapons at the outset, and to sustain operations, without any intention to make a major withdrawal, until the strategic counter-offensive has achieved its objective;
- (e) to protect and maintain sea communications as required in support of the above missions.

For the purposes of this directive it should be assumed that British, Canadian and US forces will continue to be stationed in Allied Command Europe.

5. The shield forces must include the capability to respond quickly, should the situation so require, with nuclear weapons to any type of aggression. They must, of course, also have the capability to deal with the situations envisaged in 4(b) above without necessarily having recourse to nuclear weapons.

6. The responsibility of governments to make decisions for putting NATO military plans into action in the event of hostilities is not affected by this directive.

7. Although NATO defence planning is limited to the defence of the Treaty area, it is necessary to take account of dangers which may arise for NATO because of developments outside that area⁽¹⁾.

In planning for the most efficient organization and equipment of NATO forces, account must be taken of the possible need for certain NATO countries to use some of their NATO forces to meet defence commitments elsewhere, such as may arise because of the various and changing forms of the Soviet inspired Communist threat on a world front. This need, however, should, in conformity with their NATO commitments, be harmonised with the primary importance of protecting the NATO area.

⁽¹⁾ "NATO military authorities have no responsibility or authority except with respect to incidents which are covered by Articles 5 and 6 of the North Atlantic Treaty."

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8. It is possible that an attack on NATO would be preceded by a period of acute political tension and heralded by advance indications involving the application of the "alert" system. In any case the consequences of an attack on NATO without warning are such that those NATO forces and facilities directly relating to early warning and the nuclear retaliatory action must be kept in constant readiness at all times; all other forces must be maintained at the appropriate NATO standard of readiness.

9. In deciding on the allocation of total resources, governments will take account, *inter alia*, of the rising cost of new weapons and of the need for economic resources to deal with the Soviet threat in all its aspects, without endangering their economic stability, which in itself is an essential element of their security. The question of allocation of resources will be kept under constant review, but meanwhile it should be assumed for planning purposes that in present circumstances, few, if any, NATO countries can be expected to make a substantial increase in the proportion of their resources devoted to defence. The continuing need, however, for men, money and materiel for NATO defence remains real.

THE BRISTOL TYPE 192 - AC MEMO(57)20 AND AC CONCLUSIONS OF MEETING 9(57)

Paper No AC(57)20

AIR COUNCIL

ROYAL AIR FORCE REQUIREMENT FOR THE BRISTOL 192 HELICOPTER

Note by DCAS

Introduction

1. As I mentioned to the Council at their meeting 5(57) on the 7th February, Item III, para 14 (vi), I have been considering whether, in view of the financial stringency which now faces us, we must continue with the development of the Bristol 192 helicopter.
2. There are 25 Bristol 192s on order. Production starts in April, 1958 and continues until November 1960. The first 11 helicopters will have the Leonides Major engine, the last 14 the Gazelle. CA release is forecast for April 1959 for the Leonides-engined helicopter, and for June 1959 for the Gazelle-engined helicopter. Our plan was to maintain one 8 UE squadron for search and rescue duties in Coastal Command and one 12 UE squadron for theatre transport duties in the Far East.

Roles of the Bristol 192

3. The Bristol 192 is designed to operate in four particular roles - search and rescue, casualty evacuation, parachute and supply dropping, and general transport. If it were not introduced into service, we should have to make do with other aircraft and I have therefore examined the implications of such.
4. Search and rescue duties are at present carried out by Whirlwind 2s and Sycamores. These are small helicopters and cannot pick up more than a few survivors at one time. However, the numbers carried on board modern aircraft are steadily increasing. It is quite probable therefore that many survivors could be afloat in the same area; and it is important that we should be able to rescue them quickly. With its large carrying capacity, the Bristol 192 would be ideal for this task, and also superior to the Whirlwinds and Sycamores. Nevertheless, the Air Council have accepted the fact that on grounds of general economy, we cannot afford to increase the efficiency of the search and rescue service by introducing the B.192 and we should continue to make do with the types of helicopter already in service. I am in agreement with this and consider that as the normal sea rescue is of a single fighter pilot it is more important to have a large number of small units than a few large ones.
5. For casualty evacuation, similar considerations apply. The value of the Bristol 192 would be its ability to evacuate large numbers of stretcher-cases and walking wounded, swiftly and comfortably from forward areas. To perform the same task with present helicopters would require the operation of a high-intensity shuttle service, possibly to the detriment of other operational tasks. However, I feel that again we might accept this in the interests of the economy to be derived from not carrying on with the Bristol 192. In any case in colonial policing and anti-bandit operation only one or two casualties are normally moved at one time.
6. In certain circumstances, it is essential to drop men and supplies extremely accurately and by surprise; and the Bristol 192 could perform this task well. Yet, now that aircraft like the Twin Pioneer have been successfully developed and are being introduced into service, I think that they could carry out such sorties in a reasonably acceptable manner if we had to give up the Bristol 192.
7. I conclude therefore that in three roles it is not necessary nor even desirable now to use the Bristol 192.
8. For the fourth role, general transport duties, the only possible alternative to the Bristol 192 is the Westland Wessex, the British version of the American S.58; and there is no doubt whatsoever that the Bristol 192 is the better helicopter. As the Appendix shows, the performance of the Gazelle-engined Bristol 192 is far superior to that of the Wessex; it can carry a much heavier maximum load; and it can land twice as many fully equipped troops. A corollary of this however is that the B.192 transport force

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should all be Gazelle-engined which means fitting the Gazelle into the 11 helicopters which are at present being built to take the Leonides Major. At the same time, however, there is one major point against the Bristol 192; it cannot move rapidly between theatres.

9. The Bingley Committee reports that the Army needs the lifting capacity of 12 UE Bristol 192s overseas for cold and limited war purposes. The Bristol 192 cannot move rapidly between the Middle East and the Far East because it has not the range to fly between these theatres, and because it is too large to transport readily in aircraft carriers, since it cannot go down the lifts. If therefore, there is in fact a need for helicopters for transport duties in the Middle East (which I doubt) it will be necessary to establish Bristol 192s in that theatre as well as the Far East. Indeed the Bingley Committee's report says that they, "..... assumed that a means can be found for moving light cargo aircraft between theatres. If this is not so, the figure (of light cargo aircraft required) will be considerably larger".

10. The alternative to a force of Bristol 192s would be to have a Wessex force (or roughly equivalent lifting capacity. On that basis, the number of Wessex helicopters required would be 20 UE). The Wessex is no more able to fly between theatres than the Bristol 192: it is air transportable but not readily so, but it can go down the lifts of aircraft carriers for sea transport. Nevertheless, if 10 UE Wessex helicopters were established in FEAF and another 10 UE in MEAF each theatre would have a more flexible force. With such a force, operations could be more effectively conducted during the period between the start of a campaign and the arrival of re-inforcement.

11. This alternative scheme would have both disadvantages and advantages. The disadvantages are that the forecast CA release date for the Wessex is the first quarter of 1960, about a year later than the Gazelle-engined Bristol 192, and that our order might have to take second place to the order which the Royal Navy had already placed. On the other hand, the advantages of the Wessex are, in the first place, the greater flexibility of a force of 20 UE Wessex helicopters, a point which might well be more acceptable to the Army. Again, the Wessex is not only a good medium-lift helicopter but it is also expected to be simpler to maintain and operate than the Bristol 192. Moreover, the Sikorsky S.58 is already flying regularly in other countries whereas further fundamental research and development is still necessary to complete the Bristol 192. Finally, it will be in use in the Royal Navy as well with advantages in logistics.

Cost

12. When the cost of the two schemes is compared, it appears that from the point of view of Air Votes, going for the Bristol 192 helicopter is cheaper. No extra helicopters have to be bought to maintain the search and rescue force in Coastal Command, so that the comparison is between the Bristol 192s and the Wessex helicopters required to meet the general transport helicopter task.

13. It has been calculated that to maintain a 12 UE Bristol 192 force (plus one for training) to mid-1965 would involve buying 12 helicopters. The capital cost would be £5.1M. Fitting the Gazelle into the first 11 helicopters would cost another £1.25M. On the other hand, to maintain a force of 20 UE Wessex helicopters (plus one for training) over the same period, would involve buying 31 helicopters at a cost of £5.7M. To the cost of the Wessex helicopters would have to be added £2M for the redundancy charges involved in cancelling the Bristol 192, but at the same time, the Ministry of Supply would save £2M. of R & D money. Therefore as far as the capital costs to Air Votes are concerned the Bristol 192 is slightly cheaper. So far as the running costs are concerned, there is very little between the two helicopters - £0.8M being the direct annual running cost of 12 UE B.192s and £0.9M for 20 UE Wessex helicopters.

Conclusions

14. In the circumstances I think that the issue is clear. To cancel the B.192 in favour of the Wessex would mean:-

- a. Operationally we would have a more flexible helicopter force. This would require seeking the agreement of the War Office which I propose to do after the Air Council has taken this paper; I already have the tentative agreement of DCIGS.
- b. From the point of view of Air Votes, there is little to choose between the two types of helicopter either on capital or running costs, although on present calculations the Wessex is slightly more expensive.

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- c. From the point of view of R and D expenditure, to cancel the B.192 would clearly save £2M. The Ministry of Supply view has been sought and they are anxious to preserve this project because of the blow it would deal to British helicopter development and because they have already spent £4M on developing the B.192.

In the present shortage of R and D funds which is daily becoming more serious, projects of importance even for the deterrent, are beginning to suffer financial cuts. This opportunity to save £2M and also to get a force with operational advantages is one which I consider to be so valuable that we should not only grasp it but also be prepared to accept any slight extra cost that Air Votes might have to bear. A further £1.74M is saved by not developing the Gazelle engine beyond the Mark 2.

15. I invite the Council therefore to agree:-

- a. to cancel the 25 B.192s on order for the Royal Air Force and to order 31 Wessex helicopters instead;
- b. that I should approach the War Office to obtain their agreement to this proposal;
- c. that I should inform the Ministry of Supply of the Air Council's decision.

1st April 1957

GWT

COMPARATIVE PERFORMANCE

BRISTOL 192 (SERIES I & II) : WESTLAND WESSEX (S58)

CONDITIONS

	BRISTOL 192		WESTLAND
	Series I 2 x Leonides Major 860 ehp each	Series II 2 x Gazelle II 1650 ehp each	WESSEX (S58) 1 x Gazelle III 1800 ehp
IS Atmosphere. (Sea Level)			
(a) Take-off from obstructed areas, with vertical climb of 180 feet/minute clear of the ground cushion.			
Disposable Load (lb)	4,800	7,750	4,900
Payload/Range (lb/nm) with max internal fuel	760/470 (or 2500/260)	3,400/350 (or 3750/260)	2,900/260
Payload for 100 nm range (lb)	3,750	6,000	4,000
Speed for Max Range (kts)	80	100	100
(b) Take-off from unobstructed areas, with no vertical climb outside the ground cushion			
Max Disposable (lb)	6,350	8,750	4,500
Max Payload/Range (lb/nm)			
(i)	2,300/470	2,450/520	1,000/450
(ii)	3,000/200	5,600/200	3,000/200
<hr/>			
LSA + 17° C @ 5,000 ft (Malayan)			
(a) Take-off from obstructed areas, with vertical climb of 180 feet/minute clear of the ground cushion			
Disposable Load (lb)	1,660	6,830	2,140
Payload/Max Range (lb/nm)	Nil/250	2,500/385	140/315
Payload for 100 nm (lb)	820	5,550	1,420
(b) Take-off from unobstructed areas, with no vertical climb outside the ground cushion.			
Max Disposable Load	2,960	7,750	3,000
Payload/Max Range (lb nm)	Nil/380	1,450/560	Nil/500

NOTE- After engine failure:-

- Series I B.192 can remain airborne or carry (say) 800 lb/50 nm;
- Series II B.192 can carry 3,600 lb/250 nm; or 2,000 lb/200 nm in ISA C + 15°C;
- S58 has to forced land.

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AIR COUNCIL
CONCLUSIONS OF MEETING

9(57)

HELD AT 10 AM

ON THURSDAY, 4TH APRIL 1957

IN THE AIR COUNCIL ROOM

ITEM III ROYAL AIR FORCE REQUIREMENT FOR THE BRISTOL 192 HELICOPTER -AC(57)20 -
Note by DCAS

14. DCAS said that the Bristol 192 helicopter was among the projects to be reviewed by the Defence Research Policy Committee in connection with R & D cuts. This helicopter was originally designed to operate in four roles - search and rescue, casualty evacuation, parachute and supply dropping, and general transport. Paragraphs 4 to 6 of his paper suggested that the first three roles could be performed by other means, eg by making do with smaller types of helicopter at present in service, or by the use of the twin Pioneer. For the fourth role the only alternative to the Bristol 192 was the Westland Wessex, the British version of the American S58. To meet the Bingley Committee requirement in this role it would be necessary to buy 21 Bristol 192s to maintain a force of 12 UE; a Wessex force of equivalent lifting capacity would require 31 helicopters to maintain a force of 20 UE. If the Bristol 192 were retained the Gazelle engine would be necessary in all aircraft. Notwithstanding the undoubted superiority of the Gazelle-engined Bristol 192, on balance, for the reasons developed in paragraphs 10 and 11 of his paper, he was disposed to recommend cancelling the B.192s on order and ordering 31 Wessex helicopters instead.

15. SAAM pointed out that the comparative figures given in the Appendix to the paper related the performance of the Wessex to the Gazelle III engine, but if this engine were dropped from the R & D programme the performance of the Wessex engined with the Gazelle II would be reduced by a twelfth. The Wessex was based on the Sikorsky designed helicopter which might be said to be ahead of other designs in experience from the engineering point of view.

16. CA thought that the statement in paragraph 11 of the paper that the release date for the Wessex would be about a year later than that for the Gazelle engined Bristol 192 was probably optimistic from the point of view of deliveries to the RAF. Unless an order were placed immediately and production stepped up, deliveries to the RAF would more likely be eighteen months behind the Bristol 192; even then they would have to take second place to the order already placed by the Navy. As regards the Bristol 192, 25 aircraft were on order for the RAF of which the first 11 were to have the Leonides Major engine and the last 14 the Gazelle engine. Trouble had been encountered in developing the piston version and he had recommended to the Air Ministry that this version should be abandoned in favour of the gas turbine version. If this advice were followed, it might help to speed up release and deliveries and this streamlining might save nearly £½M. The Bristol 192 was an individual development and to this extent the risk of development troubles was greater, but the firm was nevertheless making good progress and he would not personally attach too much weight to the comparative experience of other firms. He thought the Council would wish to attach weight to the fact that the Bristol 192 had been on order since 1954 and that if the project were cancelled this would involve nugatory expenditure amounting to some £6½M in terms of the value of R & D work already undertaken and redundancy payments. The Ministry of Supply from their point of view were anxious to keep the Bristol team and the industrial capacity in being. So far as could be foreseen, he believed that the Bristol 192 would meet the performance and safety requirements if fitted with the Gazelle engine, and also the requirements for operating in tropical conditions; in this latter respect it would be superior to the S58. Moreover, he was not sure whether 20 UE Wessex helicopters would be a satisfactory substitute in terms of lifting capacity for a force of 12 UE Bristol 192s especially in tropical conditions. Apart from this, it would be necessary to develop a special RAF version of the Wessex since it could not be the same specification as the Naval Wessex intended for anti-submarine work. This would mean that the Ministry of Supply would have to budget for the cost of conversion to meet RAF needs. On a point of detail, that £1.74M mentioned at the end of paragraph 14 of DCAS's note as being saved on Gazelle engine development would be saved whether the Bristol 192 was cancelled or not. This was not, therefore, relevant to the financial calculations.

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17. PUS said that according to the figures given in paragraph 13 of DCAS's paper, the overall difference in capital costs between the alternative projects, allowing for R & D expenditure and redundancy payments, was only marginal, being of the order of £0.4M; and this was dependent on the Wessex UE being restricted to 20. There was no doubt that cancellation of the Bristol 192 would place us in a difficult position in defending an R & D expenditure to the value of about £4M on development work to no purpose and redundancy payments of about £2M from Air Votes.

18. CAS thought we should continue with the Bristol 192. In the first place it was best suited to our needs; secondly, the financial considerations did not appear materially to affect the issue; and, thirdly, cancellation would deal a blow to British helicopter development after much money had been spent on developing the Bristol 192.

19. DCAS agreed that the main argument for cancelling the Bristol 192 was the necessity to save R & D expenditure. Leaving this aspect aside, there was no doubt that the Bristol 192 offered the best way of meeting the transport commitment. If the Council agreed that the first three roles for which this helicopter was originally intended could be met by other means as suggested in his paper, it would, he thought, be necessary to consider whether a force of 12 UE Bristol 192s for the general transport role, particularly if all were Gazelle engined, would still be required, bearing in mind that the stated Bingley Committee requirements might need reconsideration in the light of the reductions to be announced in the Defence White Paper. In this connection, DCIGS had agreed in informal discussion that the size of the task might well need reviewing.

20. The Secretary of State thought the Council could agree that the first three tasks for which helicopters were required could be performed in the manner suggested by DCAS. As regards the general transport role, if it were clear that substitution of the Wessex would yield material savings, there would be a case of substance to consider. But the likely savings appeared to be no more than about £0.4M and there was a prospect that savings of this order might anyway be realised by continuing with the Bristol 192 if production were streamlined, as CA had said, by concentrating on the Gazelle engine. The decision therefore centred on the technical and operational considerations. As to these, the Bristol 192 would have the best performance under tropical conditions and it could be delivered earlier than the Wessex; the Wessex would need modification to meet RAF needs; and there was doubt whether 20 UE Wessex helicopters would be enough. For these reasons the right decision appeared to be to continue with the B.192.

21. The Council:

- a. *agreed*, subject to (iii) below, that the order for the Bristol 192s should stand;
- b. *invited* DCAS to report the Council's views to the Defence Research Policy Committee;
- c. *invited* DCAS in consultation with PUS and the War Office, to review the size of the order in relation to the reduced task for which the Bristol 192 would now be required, and to report back.

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APPENDIX E

The verses below, author unknown, were discovered in CAS Folder ID3/120/9 in the AHB(RAF) archives. The 'Brown' of the first verse was Mr George Brown who was the Labour party spokesman on defence in 1957. The 'Mr Lock' in the seventh verse is a hatter.

NOTES ON THE DEFENCE DEBATE

The Questions all were answered,
the PM sat him down,
And Duncan then with his new FN
Let fly into the Brown.

There's naught to stop the bombers, boys,
The Thing can blow us apart;
So all we can do for a year or two
Is to see that a war don't start.

We'll cut the NATO forces, boys,
While foreigners bite their nails,
But we'll hone the edge of their teeth, we pledge
By lopping off their tails.

The battleships all are done, boys
Tow them away as wrecks,
While the admirals seek for a yard of teak
On the last few quarterdecks.

There's many a limp moustache, boys
In the fighter commands,
And Their Airships pray for a firmer way
Among the shifting Sandys.

The outpost garrisons lower the flag,
And fire their last salutes;
For we've kissed our hand to the NS band
(As long as we get recruits.)

Seven thousand will bite the dust
As the Forces take up slack
But Mr Lock has an endless stock
Of hats that are hard and black,

And now the Minister girds his loins
For the next and final mission.
Fusion it is, for the Services
And the Chiefs are going fishin'!

They pipe their eye in the Service clubs
As they read the horrible story
For it may be wise to atomise,
But where is England's glory?



AIR COUNCIL MEMORANDA, 1957

- 1 The use of the Comet II for aero-medical evacuation - Note by VCAS.
- 2 Royal Air Force Scholarship Scheme - Note by AMP.
- 3 Long term Defence policy - Note by PUS and VCAS.
- 4 Disposal of surplus aircraft: progress report - Note by AMSO and DCAS.
- 5 Future trials of atomic weapons - Operation 'Volcano' September/October 1957 - Note by DCAS.
- 6 RAF Participation in public functions - Note by VCAS.
- 7 The replacement of the Provost/Vampire pilot training sequence - Note by DCAS.
- 8 Provisional Plan 'L' - Note by VCAS and AMSO.
- 9 Aircraft accidents involving both Service and Civil Aviation interests: the case for and against 'Joint Inquiries' - Note by PUS.
- 10 St Clement Danes - Note by AMP.
- 11 Pilot and Navigator recruitment - Note by AMP.
- 12 Hollinghurst Committee - Recommendation (p) - Disposal of stores - Note by PUS.
- 13 The Policy Review - Economy measures - Note by AMSO.
- 14 Helicopters for the Queen's Flight - Note by PUS.
- 15 Helicopters for the Queen's Flight - Note by DCAS.
- 16 Inquiries into aircraft accidents involving both Service and Civil Aviation interests - Note by PUS.
- 17 Effect of Defence Review on careers in the Royal Air Force - Note by AMP.
- 18 Launching sites for Blue Streak - Note by DCAS.
- 19 Provisional Plan 'L' miscellaneous, training and communications aircraft patterns - Note by VCAS and AMSO.
- 20 Royal Air Force requirement for the Bristol 192 Helicopter - Note by DCAS.
- 21 Vulnerability of Type 80 radar stations - Note by DCAS.
- 22 Position of candidates already accepted for National Service aircrew training - Note by AMP.
- 23 Long-range Transport Force - Note by DCAS.
- 24 Development of Operational fighter airfields - Note by AMSO.
- 25 Manpower economy - Note by PUS.
- 26 Conditions of entry of pilots and navigators - Note by AMP.
- 27 Wearing of Aiguillettes by the aide-de-camp to the Air Officer Commanding, No 90 Group - Note by AMP.
- 28 Flying experience for General List Technical Officers - Note by AMP and AMSO.
- 29 Removal of families from Class I airfields in war - Note by AMSO.
- 30 Class E Reserve policy - Note by AMP.
- 31 Red Shoes - Service Trials - Note by DCAS.

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- 32 Helicopters for the Queen's Flight - Note by DCAS.
- 33 Production of the dual P23 trainer - Note by AMSO and DCAS.
- 34 Policy Review - Note by VCAS and PUS.
- 35 Not generally distributed.
- 36 Report of the Future Service Manpower Requirement Committee - Note by PUS.
- 37 Progress report on new weapons - quarter ended, 31st March, 1957 - Note by DCAS.
- 38 The First Reinforcement Scheme - Progress report - Note by AMP and DCAS.
- 39 Progress of the 1958 plan for the re-organisation of the Control and Reporting system - Note by VCAS.
- 40 Orders for Javelins - Note by DCAS.
- 41 Hunter operational restrictions - Nose down pitch - Note by DCAS.
- 42 Premature retirement of redundant officers and airmen - Note by AMP.
- 43 Memorial to Lord Trenchard - Note by AMP.
- 44 Fighter Command organisation for the 1958 Control and Reporting Plan - Note by DCAS.
- 45 Economy in the Aircraft Ferry organisation - Note by AMSO and VCAS.
- 46 Paper withdrawn.
- 47 Rank of Senior Air Staff Officer - Air Headquarters, Malta - Note by VCAS and AMSO.
- 48 Dental cadetships leading to permanent commissions in the Dental Branch - Note by AMP.
- 49 Measures to improve the efficiency of the Control and Reporting system - Note by DCAS.
- 50 The carriage of Service families in the Comet II - Note by VCAS.
- 51 Report of the Committee on the servicing of RAF equipment - Note by AMSO.
- 52 The future of the RAF Regiment - Note by VCAS.
- 53 Higher formations and Air Rank posts - Note by AMSO.
- 54 Battle of Britain Parade, 1957 - Note by AMP.
- 55 The entry and subsequent training of future permanent officers in the Royal Air Force - The equipment and secretariat cadet entry - Note by AMP and AMSO.
- 56 The size of the intakes of General Duties cadets to Cranwell - Note by AMP.
- 57 Progress report on new weapons - Quarter ended 30th June, 1957 - Note by DCAS.
- 58 The Marine Craft Branch - Note by DCAS.
- 59 Aircraft servicing - Diagnosis of faults and inspection of rectification work - Note by AMSO.
- 60 Tactical strike/reconnaissance aircraft - Note by DCAS.
- 61 The Policy Review - Economy measures - HMAFV's Bridport and Bridlington - Note by AMSO.
- 62 WRAF - Creation of an 'immobile' section - Note by AMP.
- 63 Special Air Council occasions in 1958 to which Her Majesty would be invited - Note by PUS.

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- 64 Royal visits to the Royal Air Force in 1958 - Note by US of S.
- 65 Static display on the Horse Guards Parade in Battle of Britain week - Note by PUS.
- 66 Royal Air Force non-public funds - NAAFI extra rebate for the year ended 29th October, 1955 - Disposal of RAF share - Note by AMP.
- 67 Stocktaking and store accounting in the RAF - Note by AMSO and PUS.
- 68 Storage and display of aircraft and other items of historic value - Note by PUS.
- 69 Air Council lunch to which the Queen will be invited following the St Clement Danes rededication service in October, 1958 - Note by A/AMP.
- 70 Royal Air Force 40th Anniversary Dinner - Note by A/AMP.
- 71 Javelin Mark 7 - Note by DCAS.
- 72 Requirement for the 2" Rocket battery - Note by DCAS.
- 73 Placing of Technical cadets (U) at Universities - Note by AMP and AMSO.
- 74 Review of RAF relations with the Universities - University Air Squadrons - Note by AMP.
- 75 Intakes of pilots and navigators - Note by AMP.
- 76 Premature retirement of redundant officers - Note by AMP.
- 77 RAF Hendon - Note by AMSO, PUS and DCAS.
- 78 The development of Tengah - Note by VCAS.
- 79 Inquiries into aircraft accidents involving both Service and Civil Aviation interests - Note by PUS.
- 80 Communication and continuation flying - Note by DCAS.
- 81 Progress report on new weapons - Quarter ended 30th September, 1957 - Note by DCAS.
- 82 Recruitment for the RAF in Malta - Note by AMP.
- 83 The amalgamation of the Bomber Command Development Unit, the Central Fighter Establishment and the Electronic Counter Measures Element of the Central Signals Establishment - Note by DCAS.
- 84 Royal Air Force Central Fund - Report and Accounts for 1956 - Note by AMP.
- 85 Development of El Adem - Note by AMSO and VCAS.
- 86 Review of DGW organisation - Report of the Warter Committee - Note by AMSO and PUS.
- 87 Flight Safety progress report - Note by DCAS
- 88 Sketch Estimates 1958/59 - Note by PUS.
- 89 Premature discharge of redundant airmen - Note by AMP.
- 90 Measures for strengthening the Air Training Corps - Note by US of S.
- 91 Air Defence requirements in the Mediterranean - Note by VCAS.
- 92 Deployment of Valiants in 1961 and the provision of flight refuelling capability after 1961 - Note by VCAS.
- 93 Helicopter pilot training - Note by DCAS.

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- 94 Javelin all-weather fighter operational conversion unit requirement - Note by DCAS.
- 95 Report of the Committee on the servicing of RAF equipment - Note by AMSO.
- 96 Not allocated.
- 97 Ground defence requirements in Malaya and Singapore - Note by VCAS.
- 98 Royal Air Force 40th Anniversary Dinner - Note by AMP.

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APPENDIX H

RAF COLLEGE CRANWELL: NO 69 ENTRY

No 69 Entry graduated from the College in April 1957; "all that they had looked forward to as pilots of the RAF is now to be swept away" - said the News Chronicle (see Chapter 4, p145). The subsequent careers of the 22 GD cadets destined for the RAF are summarised below:

Still serving in 1979

- 1 Air Commodore
- 1 Group Captain
- 4 Wing Commanders
- 3 Squadron Leaders
- 1 Flight Lieutenant

Retired

- 8 Squadron Leaders
- 2 Flight Lieutenants

Failed to complete GD training

- 1 Pilot Officer

Died

- 1 Flight Lieutenant

The cadet who received the Sword of Honour retired as a squadron leader after 17 years service. The RM Groves Memorial Prize was won by the cadet who was still serving in 1979 as an Air Commodore. The wing commander in the appointment of Air Attache Madrid in 1979 won the Ecole de l'Air Trophy for French studies as a cadet - a case of "coming events". None of the cadets retired with less than ten years service; most served for between fifteen and twenty years. Of the seven cadets in No 69 Entry who entered ground branches, two had retired by 1972; the others were still serving in 1979, three being wing commanders and two squadron leaders.

THE REFORM OF NATO STRATEGY

Memorandum for the Minister's consideration

1. There are two things to be reformed in NATO strategy. The first is the plans for action short of all-out war. The second is the provision for all-out war itself.

Action Short of All-Out War

2. At present NATO strategy visualises that if SACEUR were authorised to use nuclear weapons he would be given a free hand. This means that the situation would almost certainly build up rapidly into all-out war.

3. Some people argue that there is no need to change this, because its very insecurity is the best guarantee against war. Democracies, they would say, will never be the first to fire nuclear weapons and will always prefer Munichs; and the only safe course, and the one which is in fact preserving peace to-day, is to have an automatic mechanism that ensures that if fighting starts in Europe a train is set alight that eventually blows up the world. The weakness of this argument is that the mechanism is not in fact fully automatic. It only functions if NATO takes off the safety catch by authorising the use of nuclear weapons. The Russians will come to realise that this will only be done in desperation, and that they could go a long way without serious risk. Moreover, what really actuates the mechanism? If the Russians block the road to Berlin and NATO forces the block are the Russians actuating it or is NATO?

4. Other people suggest that NATO should provide itself with large enough conventional forces to meet attack from Russia. This policy would also be unsound. To match the Russians with conventional forces, while perhaps theoretically possible, is not practical politics. There is no justification for the suggestion that something short of parity in conventional forces, but more than NATO has at present, would be adequate, on the grounds that "only a third is needed by the side that is on the defensive" or that all that is needed is the ability to "impose a pause". If the Russians are stronger in conventional forces they will win a struggle between conventional forces.

5. The only tolerable course is to introduce a system of what may be called discriminate nuclear reaction, that is, using nuclear weapons to prevent the East getting an advantage from a resort to force, but in such a way as to minimise the risk of all-out war. The essence of this system would be that if an attack from the East were too strong for NATO conventional forces to deal with, nuclear weapons would be used but primarily as political rather than military instruments. The object would be to demonstrate that it could not pay the Russians to allow the fighting to continue; that the West was serious in its determination to resist; and that to press on must at the best mean heavy loss of life and material ~~obstruction~~ ^{DESTRUCTION} to no sufficient advantage and might well bring about all-out war. It would be necessary to have political control of the timing, location and size of any explosion by NATO forces of an offensive nuclear weapon. The present system provides for only two positions of the lever controlling the use of nuclear weapons, "Stop" and "Fire at will". The new system must provide for intermediate positions. There would still, of course, be a risk of "escalation" into all-out war. But the Russians would be as keen as the West to prevent it. There is no reason why it should be inevitable, provided - and this is the crux - that neither side can believe that decisive advantage can be gained by being the first to go one higher. A careful study is now needed of the way in which this approach could be translated into practical terms.

6. This proposal is not the same as the idea, which has been written about under the name of "Graduated Deterrence", that the West should announce in peacetime the way in which they would use first conventional and then nuclear weapons in response to particular action on the part of the East. By promising the East that the West would not react too sharply to carefully limited aggression, it would invite a series of aggressions carefully planned to keep within safe limits.

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Preparations for all-out war

7. NATO strategy, which reflects US strategy, maintains, correctly, that the most important objective is to prevent war, and that the way to do this is to demonstrate that:

- a. all-out warfare would mean such appalling disaster for Russia that no Russian Government would want even to risk it;
- b. any attempt to gain an advantage by the use of force will bring about this risk, because the shield forces can prevent advantages being gained from minor acts of aggression.

8. However, it also provides for a second objective, namely to win an all-out war if efforts to prevent it fail. It provides for the integrity of the NATO area to be maintained as far as possible, and sea communications are to be kept open, while the nuclear counter-offensive is taking place; and after the will and ability of the enemy to pursue general war have been destroyed NATO must be able to re-organise and clean up.

9. This second objective is seen as necessary to the first. It is argued that the Russians might think all-out war was worth risking if they believed that after the nuclear exchange their surviving forces would dominate the world; and that if the West was manifestly making no preparations for fighting after all-out nuclear exchange the Russians might infer that there was no risk of the West's initiating such an exchange.

10. For several years past United Kingdom policy has been unfavourable to this second objective. The effects of an all-out nuclear exchange would be so gigantic that the outcome of battles in Europe or the Atlantic would be insignificant by comparison; the time is coming when an all-out exchange would be likely to mean the end of life forms as they exist to-day. In consequence it is folly to spend on preparations for "winning" an all-out war resources that could be spent on preventing it. Preparations of this kind do not make the deterrent more credible. The comfort that could be devised by being rather better prepared for fighting all-out war is so small that no Government could be seriously influenced by it in deciding whether to precipitate the all-out exchange.

11. HM Government should now repeat the attempt that was made in 1956 to get this second objective abandoned by NATO.

The Effect on force plans of the reforms proposed

12. To consider what changes are called for in NATO force plans, it is necessary to take the effects of these two reforms together.

13. As to nuclear weapons, it is very difficult to say how many weapons and of what kind would be needed if the objective were that described in para 5 and if ability to fight an all-out war is no longer an objective. An entirely fresh study is needed. But it looks as if NATO ought to think in terms of holding not more than a few hundred offensive nuclear weapons of all kinds,* including those launched from aircraft, over the whole front from the Baltic to the Caucasus, so as to be able to put down a very small number with great precision at any desired points at short notice; and in terms of warheads of below, not above, Hiroshima size. There are almost certainly already in SACEUR's forces far more weapons than this policy would need. MRBM's would not be needed. SACEUR himself seems to accept that they could only be used with or after an all-out megaton exchange.

14. This is not to say that NATO should throw away a large proportion of the existing aircraft and missiles that are designed primarily or wholly to carry nuclear weapons, such as the US Sixth Fleet, the element of Bomber Command allotted to SACEUR, and the Thor, Jupiter, Matador and Mace missiles. The money has already been spent. Moreover the aircraft at any rate could be used with conventional bombs, and all of them have some value as a show of strength. It is the new money that needs to be saved,

* A secondary point requiring study is whether NATO would also need defensive and sub-Kiloton nuclear weapons which would be used at the discretion of the military commands once the use of nuclear weapons had been authorised, on the grounds that in themselves they would not cause much risk of escalation to all-out nuclear war.

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(including if possible, some of the massive expenditure contemplated by the Continent on the F104 fighter-bomber). They ought not to be appreciably thinner on the ground than they are already, if they are to be able to prevent infiltration. Perhaps a suitable yardstick would be that they should be capable of throwing back any attack that might be mounted by a Russian satellite, assuming that satellite to be armed at the time, like North Korea, with up-to-date weapons.

15. In shape, as distinct from size, major changes would be called for. It is wasteful to plan for prolonged conventional operations that NATO is bound to lose in the end. Reserves of ammunition should be more than enough for a few days' intensive fighting. Base workshops, etc would be related only to peace-time needs. On the other hand improvements in standards of readiness would be called for.

16. There would be no need for preparations for keeping open communications across the Atlantic. This is not, of course, to say that no tasks would be left for NATO navies.

What should we say to our Allies?

17. The first of the two reforms - the doctrine of discriminate nuclear reaction - would by itself involve much less heart burning than the other. Admittedly it would bring to the fore the intractable problem, which it has been HM Government's desire to keep shelved, of who are the political authorities that should control the use of nuclear weapons; but the French Government are unlikely to allow this question to rest in any case. There is a temptation, therefore, to be content for the time being with advocating this first reform. The other reform has already been unsuccessfully advocated by HM Government in 1956. It was not well received, and for political reasons it was not pressed.

18. Unless, however, both reforms are advocated, HM Government will be obliged, in 1961 as in 1957, to subscribe to statements of NATO doctrine that call for forces, including MRBM's and other nuclear weapons in increasing numbers, for fighting all-out war. The longer the change is delayed, the more bitter will become the ultimate controversy, and the more money will have been spent in the wrong directions. The argument used in 1956/7, that to stop preparing to fight all-out war would make the Continent lose interest in NATO, is no longer sound, if it ever was: on the contrary, to advocate these reforms would be to substitute a real and valid role for what is increasingly felt to be a fantasy. Above all, it would be intolerable for HM Government to have to continue paying lip service to a policy it does not believe in. Doing this for the last four years has destroyed confidence at home in the Government's wisdom and abroad in its sincerity.

19. If reforms are to be advocated, there must be no question of trying to devise careful formulae to soften their impact on sensitive points; to suggest, for example, that there are logical military reasons for regarding the MRBM scheme as unnecessary while still believing in preparations for the "broken-backed war". This is not an occasion where blurring the issues will pay.

Tactics and Training

20. It is the Americans that HM Government must try to convince first. Since the vested military interests are so strong, the main approach must be made through political channels, which means, of course, waiting till next year. Meanwhile the Ministry of Defence should follow up the informal discussions that have already taken place through scientific channels, and if possible broaden them beyond the issue of the control of the use of nuclear weapons: and an examination should be started of the number and types of nuclear weapons that the new strategy would require.

21. Although it would cause deep offence to the Americans to go direct to the North Atlantic [Alliance] with proposals for major changes, there is much to be said for flying a kite publicly in this country before the American election.

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Conclusions

22. (1) NATO strategy should be reformed to provide for meeting determined aggression by a discriminate use of nuclear weapons designed to demonstrate that advantages cannot be gained by continued fighting. A study is required of the way to do this.
- (2) It should also be reformed so as no longer to aim at winning all-out war if efforts to prevent such a war fail. Winning an all-out war is of no importance compared with preventing it. The equipment, its disposition, command, etc of assigned NATO forces should be directed to dealing with situations short of all-out war and not all-out war itself.
- (3) Both these reforms should be advocated by HM Government.
- (4) They should be proposed initially to the US Government through political channels, and not in the North Atlantic Council. There might be some advantage in letting it be known publicly beforehand that HM Government's thinking was running on these lines.

MINISTRY OF DEFENCE, SW1
31st AUGUST 1960

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APPENDIX J

SERVICE ESTIMATES (NETT) 1958/59-1962/63

	£M	1958/59	1959/60	1960/61	1961/62	1962/63
NAVY	Original	339	371	397	413	422
	Supplementary	42	-	-	-	16
		381	371	397	413	438
ARMY	Original	402	431	470	501	519
	Supplementary	30	4	5	5	8
		432	435	475	506	527
AIR	Original	467	490	527	526	552
	Supplementary	4	-	6	22	20
		471	490	533	548	572

NOTES:

- (i) The separate estimates for MOD averaged about £17M annually during this period. These were mainly for funding infrastructure projects in NATO and the pay and allowances of British staffs in NATO and other international organisations.
- (ii) There were no significant differences between the nett estimates of any of the Services and actual expenditure in each financial year.

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APPENDIX K

Security Category
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E.R.

BRIEF for SECRETARY OF STATE FOR AIR AND CHIEF OF THE AIR STAFF

Committee: DEFENCE COMMITTEE

No & Date of Meeting: D(59)13TH MEETING 31ST DECEMBER, 1959

Material for Brief provided by: A.C.A.S.(I); A.U.S.(A)

ITEM No 6

Subject and Paper No: AIR DEFENCE
D(59) 41 and 50
**NOTES BY THE MINISTER OF DEFENCE AND
THE SECRETARY OF STATE FOR AIR**

The Minister's Arguments

The Minister of Defence in para 6 of his paper rests his case on two arguments:

- a. Existing policy costs more than we can afford but still does not give complete protection from nuclear or conventional attack.
- b. Since there is at present no defence against the ballistic missile, the air defence plan becomes less and less credible as we move into the middle 60s.

He therefore proposes changes in our plans, but states that these "do not terminate the policy of defending the deterrent".

2. The Prime Minister has called for a separate study, which will be circulated, of the savings that could be realised if the Minister's proposals were adopted. In general, these are small and would result in wholly disproportionate damage to the effectiveness of our air defences. For reasons made plain in your own paper, for example, effective interception of the supersonic high altitude threat would be impossible without the Lightning Mark 3 with RED TOP or BLOODHOUND Marks 2 and 3. It would make no sense to dismantle our air defences, but it would make even less sense to preserve them while emasculating their effectiveness, whether for their home or overseas roles, in order to realise relatively marginal savings.

3. It is beside the point to argue that for the money we are spending in order to defend the deterrent we cannot give it complete protection from attack. Since we are not providing air defences in order to go to war, complete protection is not required. Our object, as your paper says, is to stop a nuclear attack on this country by demonstrating to the Russians that they could not destroy our retaliatory forces by the unopposed use of manned aircraft.

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4. The Minister's argument that our present air defence plans become less credible in the middle 60s in the face of the missile threat, is only valid to the extent that the Russians use missiles exclusively in practice in preference to manned aircraft. There is no certainty about their intentions. If we were to provide no defences against manned Russian bombers there are strong reasons (eg. in the potentialities of a feint attack by manned bombers) why the Russians should continue to use them.

5. Finally, there must be continuity between our planned defences against manned aircraft and whatever defence system which may be devised against missiles. The fighter force, as explained in your paper, is required to prevent jamming of the ballistic missile early warning system. Command Guidance nuclear-headed BLOODHOUND is certainly required, because Command Guidance and nuclear-headed techniques are the only foreseeable lead-in to an active ballistic missile defence.

The Threat

6. The nature of the threat is common ground between the Minister of Defence, yourself and the Chiefs of Staff.

7. Mention may be made (eg, by the CDS) of doubts cast by Sir Kenneth Strong on the likelihood of a threat consisting primarily of manned aircraft as late as 1965. The JIC * some time ago estimated that a new supersonic bomber could come into service within the period 1960-63, to be followed later by an improved version. During the same period transonic tactical bombers may supersede the current subsonic IR 28s, which might be involved in any attack on the United Kingdom, though the JIC noted that there was as yet no evidence of production of a new type of light bomber.

8. The JIC have also examined Sir Kenneth Strong's views and accept that a supersonic replacement for the Badger could possibly appear as early as 1961, for example in the form of a Bounder or Backfin development. The performance requirements for RED TOP (paras 6 and 7 of your own paper) and BLOODHOUND Marks 2 and 3 (Annex 'A' to your own paper) are related to the performance of a Russian aircraft in the Bounder category. The appearance of Bounder confirmed earlier estimates by Air Intelligence that the Russians would introduce a supersonic aircraft of this nature.

9. In dealing with the threat your own paper argues that the V-bombers must be actively defended because of their vulnerability to a feint attack by the Russian bomber force. The reality of such a feint may be questioned. You are advised to emphasise that you do not believe a feint will take place, provided that the V-bombers are guarded by adequate active air defences. In the absence of such defences, however, the Russians, when considering the possibility of successful aggression or a pre-emptive attack on the West, could choose between:

- a. A feint, with a chance of destroying the V-force on the ground when it returned to its bases to refuel after the feint was exposed.
- b. No feint, thereby guaranteeing immunity for the V-force and the destruction of up to one-third of the major cities of Russia.

For the Russians (a) would be the obvious tactical choice.

10. In a previous paper to the Chiefs of Staff, CAS dealt in detail with various subsidiary arguments about the practicability of a feint attack. If such arguments are raised again it is recommended that you should say that they have been dealt with in detail already by the Chiefs of Staff, who concluded that up to (say) 1965 the defences should be capable of preventing or neutralising the effect of feint attacks (COS(59)72nd Meeting).

RED TOP

11. RED TOP may be subject to three criticisms:-

- a. it is unnecessary;

*JIC(59)34 (Final)

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- b. it cannot be used overseas because the radar there will be inadequate;
 - c. it cannot be successfully developed.
12. The necessity for RED TOP is explained in paras 6 and 7 of your own paper.
13. Regarding the radar environment available overseas, Sir Frederick Brundrett last year reported on behalf of the DRPC to the Chiefs of Staff Committee and the Defence Board that:-
- "the threat against overseas bases will be similar in kind to that against the United Kingdom, except that it is much more likely to consist solely of the manned bomber The big difference in the scale of defence stems from the fact that the radar deployment likely to be available will have less range and capacity than that deployed in the defence of the deterrent which is backed up by continental radar. The limited period of warning makes it essential to provide collision course armament for the fighter component. Since we cannot rely on being able to use GENIE for this purpose in all parts of the world, either because of its nuclear head or because of limitations imposed by the Americans, development of an HE-headed collision course weapon in the United Kingdom becomes a necessity."
14. The suggestion that it may not be possible on technical grounds to develop RED TOP successfully emanated from Sir Frederick Brundrett, only recently, after he had argued that it could not be used in the radar environment available overseas but was reminded of his own report to the contrary a year ago. Technical reappraisal of the weapon may in consequence be inevitable, but should be urgently completed.

GENIE

15. You have now received a report from DCAS on the US offer to provide us with GENIE. It is confirmed that the offer is for defence in the United Kingdom. Briefly, the United States have offered to maintain free an adequate stock of GENIE rockets for the Lightning so long as the aircraft is operational; to provide generous assistance in the development of the Lightning to carry GENIE; and to make arrangements which are acceptable for the control of this weapon by themselves. The estimated cost of the project is still within the £7.9M, first reported to the Chancellor of the Exchequer in May. A rough estimate by the United States Air Force of the cost of this offer to the United States is one hundred million dollars.

VTOL Fighter

16. The Minister's tentative support for such an aircraft in para 9 of his paper is welcome so far as it goes, but it should not be imagined that any such aircraft is remotely in prospect, still less that we could do without the Lightning Mark 3 with RED TOP on the strength of it. The only development of this nature in prospect is the Hawker P1127 which is primarily a strike aircraft and has nothing like the performance required for the Lightning.

SAGW

17. The position is fully discussed in your own paper and its Annex. If, however, notwithstanding, the arguments in your paper, the Defence Committee concludes that only one type of SAGW can be afforded, you would be well advised to press most strongly for a committee of experts with the necessary operational and technical knowledge to be set up to consider which that weapon should be. There are so many complex political and military issues involved that it would scarcely be possible for the Defence Committee in the course of a single meeting, without proper technical advice, to be sure of reaching a sound conclusion. Meanwhile, however, it is essential that further financial cover should be given at once for the continued development of BLOODHOUND Mark 3, since the existing cover expires at the end of this year.

18. Annex 'A' sets out in detail the make up of the present planned SAGW deployment. The target rate of build up over the next 5 years is in Annex 'A' to the Minister of Defence's paper.

Conclusions

19. You will no doubt speak to the conclusions in your own paper, for which this brief is intended to provide additional supporting arguments.

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Existing Planned SAGW Deployment

(COS(59)27)

	Stations	Fire Units	Missiles
Bloodhound Mark 2	8½*	31	496
Bloodhound Mark 3	13½*	27	216
	22	58	712

*The trials station, North Coates, is to have a mixture of Bloodhound Marks 2 and 3.

COASTAL COMMAND: THE 1958/59 CONTROVERSY

A report by Sir Richard Powell on Government and Service Organisation for Anti-Submarine Warfare and Training was submitted to the Defence Board in July 1959. Comments by the Vice-Chief of the Air Staff, Air Marshal Sir Edmund Hudleston, were considered at the same time. The first part of the Powell Report was a relatively uncontroversial description of existing arrangements for organising, controlling and operating the shore-based long-range maritime aircraft of Coastal Command. Extracts from the later part of the report, which dealt with the effectiveness of the existing system and argued the case for change are set out below, followed by the relevant comments of VCAS.

Extracts from Powell Report**"EFFECTIVENESS OF THE PRESENT SYSTEM****Introductory**

17. The system described briefly above was established over 12 years ago. Since then there have been revolutionary changes affecting both strategy and tactics. First, there has been the development of the Soviet submarine fleet, which is by the far the largest and most formidable force of its kind that there has ever been. Secondly, there has been the introduction of nuclear propulsion, which has made it possible for submarines to stay indefinitely submerged and has immensely increased the problems of detection. Thirdly, the development of missiles, both cruise type and ballistic, capable of being carried in submarines has vastly enhanced their offensive power. Fourthly, the Russians have begun to supply submarines to other countries, such as China and the United Arab Republic. If this practice grows, as it seems likely to do, submarines may well come to play an important part in limited war. The problems of anti-submarine warfare have thus become both far more complex and more widespread and it is against this background that the present system must be judged.

18. It should be said that, within the limits of the resources allocated to them, the Admiralty and the Air Ministry have made the forces which they provide for anti-submarine operations highly efficient, and there can be no criticism of the present system on this score. The admitted deficiencies in our anti-submarine defences are primarily due to our inability to devise effective technical countermeasures to the modern submarine rather than to any defects of organisation. Moreover, the fact that two Services have to play a part in anti-submarine operations and in preparing and training for them has led to a spirit of healthy rivalry between them and in particular has put the Royal Air Force, as junior partner, very much on its mettle. This becomes more evident the farther away one is from Whitehall, and the co-operation between the two Services at the Anti-Submarine School at Londonderry could not be closer.

19. Nor does the fact that two Services divide the responsibility lead to unnecessary duplication in the control of operations, except at the top levels in the Eastern Atlantic Command or in the two Sub-Areas. I found no reason to think that if one Service had exclusive responsibility the staffs of the operational headquarters could be significantly reduced.

20. I am nevertheless satisfied that the present system has substantial defects, most serious at the highest levels in the command structure and in Whitehall.

Difference of outlook between the two Services

21. Anti-submarine warfare, which has always been one of the principal concerns of the Admiralty and of the Royal Navy, has in recent years assumed even greater predominance. To quote the Defence White Paper of 1958, "the Government consider it desirable to concentrate the efforts of the Royal Navy to an increasing extent on the anti-submarine role". On the other hand, Coastal Command has become steadily more specialised and separate from the main stream of Air Ministry and RAF activity which has, quite rightly, been increasingly concentrated on the nuclear deterrent forces and their defence and on the requirements of limited war. The needs of Coastal Command, whose primary task has been regarded as related to global war, have, in accordance with Government policy, laid down by the Ministry of Defence, been given the lowest priority.

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22. It should perhaps be mentioned here that the argument of the unity of air power which led Sir Thomas Inskip to conclude in 1937 that shore-based maritime aircraft should remain part of the Royal Air Force no longer seems to apply with the same force. Since 1937, aircraft have become more highly specialised to particular roles and the extent of flexibility and interchange of personnel between the various main elements of the Royal Air Force has thus grown progressively less, many of the personnel spending the greater part of their time in the RAF in one Command. In the conditions of 1959 a V-bomber would be of little or no use for anti-submarine patrolling and hunting (though excellent for maritime reconnaissance), nor could the piston-engined aircraft of Coastal Command, admirably suited though they are to their main function, be effectively used as long-range bombers. Even their use as troop transports, though justifiable in an emergency, is not an economic employment of resources.

Division of responsibility

23. Any division of responsibility contains within itself the seeds of compromise and the risk of failure to press to a decision issues which in the interests of efficiency ought not to be left unresolved. It would be disputed by neither the Admiralty nor the Air Ministry that the Joint Sea/Air Warfare Committee, which was established in 1946 to formulate a joint policy on all matters connected with the control of sea communications in which both Services are concerned, has entirely failed. After a few years in which it met about twice a year, it fell into virtual disuse, and it appears to have been the practice of both departments to avoid raising controversial issues at all. It is true that there has been a great deal of day-to-day contact between the Naval and Air Staffs, but this has not been at a level where important issues of policy could be discussed and settled. The two Services have gone very much their own separate ways, with the one exception of the Anti-Submarine School, where they have lived, worked and trained together in the closest co-operation.

24. Furthermore, though it cannot be said that there have been any glaring failures in operational control through the duplication of the Command structure, a system which depends entirely for its effectiveness upon the two partners always seeing eye to eye or having sufficient time to argue out their differences or to refer them to higher authority does not accord well with the correct principles of command in war, which call for a clear and undivided chain of responsibility. Despite the very close contact between the Naval and Air Commands at all levels, there is here a potential source of weakness under the strain of operations in war which should be accepted only if there are the strongest possible reasons for doing so.

25. It is also reasonable to assume that if one authority were fully responsible for all four elements of the anti-submarine forces, it would be easier than it is under the present system to ensure that a proper balance is maintained between the elements so that, for example the number of long-range aircraft available for the transit offensive was in balance with the numbers of ships and submarines which would also be taking part in these operations. At present, the Ministry of Defence, as the allocator of resources, has to do its best to ensure that a proper balance is held, but if one expert authority had to do this there seems little doubt that it would be better done.

26. It should perhaps also be mentioned that the present NATO Supreme Commander Atlantic has the strongest objections to the present duality of command in his Eastern Atlantic Sub-Command and has said that he would see difficulty in supplying British forces with US atomic depth charges unless it is altered.

Duplication of overheads

27. Though time has not permitted a fully detailed study, there are, in my view, good reasons for thinking that the present arrangement results in unnecessarily heavy overheads. Coastal Command is now a small force of only 48 front-line aircraft, and there can be no significant increase in its size in the event of war, since the aircraft will not be available. It seems doubtful whether so small a force justifies the existence of a command structure of the present size. At the same time, the shore organisation of the Fleet Air Arm is, no doubt unavoidably, large and expensive. If Coastal Command and the Fleet Air Arm were combined into one organisation, some reductions should eventually be possible in overheads. Flag Officer Air (Home) could readily undertake for shore-based maritime aircraft the same functions as he now performs for the Fleet Air Arm, and operational command of the aircraft could be exercised by the Naval commanders-in-

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chief of the areas in which the aircraft are stationed. Though the Royal Navy have hitherto not had experience of operating and maintaining large four-engined aircraft, there is no reason to suppose that the task is any more difficult and complex than those which it has to tackle in operating and maintaining the modern fighter and strike aircraft with which the Fleet Air Arm is now being equipped. It also seems probable that there would be a reduction in total manpower and in the total number of airfields required if the two organisations were combined. The whole of the command structure of Coastal Command and its groups could be liquidated. All these matters would of course require detailed study.

CHANGES TO BE CONSIDERED

28. I believe that if we were now creating for the first time a force of shore-based anti-submarine aircraft, the responsibility for it would be given to the Admiralty, on the ground that its functions were more closely connected with those of the anti-submarine forces of the Royal Navy than with those of the Royal Air Force. I also believe that, if the issue were to be settled purely on grounds of merit, it would be desirable to transfer responsibility for shore-based anti-submarine aircraft now to the Royal Navy.

29. If such a transfer were to be made, it would have to be on two conditions:

(1) The Royal Navy would have to continue to depend upon the Royal Air Force for all training and administrative and logistic support that Coastal Command does not at present provide for itself or which the Fleet Air Arm could not take on without any increase in the number of its establishments or the size of their staffs. In practice, this would mean that aircrew training would be carried out by the Royal Air Force up to the stage of the specialised training in maritime operations now given at Kinloss, and that Maintenance Command of the RAF would continue to provide the services which it at present provides for Coastal Command. (Arrangements for fourth-line repair work could no doubt be made direct by the Royal Navy with contractors.)

(2) The period of transition would have to be long enough to avoid immediate and wholesale replacement of RAF by RN personnel. Otherwise the Navy would be faced with a serious recruiting problem and with large and wholly uneconomic expenditure on training. The object would be to allow Royal Air Force personnel to continue serving with shore-based maritime aircraft for as long as they would have done had responsibility remained with the Royal Air Force and for the Royal Navy to replace them gradually as the normal time came for their transfer to other RAF duties. It would also be necessary to arrange for the permanent transfer to the Royal Navy of as large a number of RAF personnel as were willing to accept this.

30. Provided that these two conditions were met, there should be no loss of efficiency, and some eventual economy, which might well prove to be substantial.

31. In reaching these conclusions, I have had in mind the undesirability on general grounds of having two separate shore-based air forces. It is however a fact that the Royal Navy already has a substantial air organisation on shore; and the need for the closest possible link between the sea-borne and shore-based anti-submarine forces in my view justifies the further small breach of a generally sound principle that I am now suggesting. It is the intimacy of this link and not simply the fact that the aircraft of Coastal Command operate over the sea that is the decisive consideration; and it would be wrong to accept the extreme argument that all aircraft which may carry out operations over the sea should

Extracts from VCAS's Comments (Note: VCAS's comments went into considerable detail and he provided the Defence Board with a digest. It is from this digest that the extracts below are taken. The full comments would be necessary reading for those who wished to understand the full extent of the controversy).

"2. Sir Richard Powell in the first 19 paragraphs of his report concludes that:

- a. The machinery for partnership between the Royal Navy and the maritime forces of the Royal Air Force for the conduct of anti-submarine operations is well established and well understood.
- b. Within the limits of the resources allocated to them the Admiralty and the Air Ministry have provided highly efficient forces for anti-submarine operations, subject to the technical limitations inherent in the problem of under water detection.

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for this reason be operated by the Navy. But if it were decided to introduce new types of aircraft for anti-submarine work closer inshore, it would, for the same reasons as apply to Coastal Command, be right for them to be operated by the Royal Navy.

MORALE

32. It is difficult to assess the effect on the morale of the Royal Air Force of a transfer of shore-based anti-submarine aircraft to the Royal Navy. A great deal would no doubt depend upon the attitude of the Air Council and senior officers of the Royal Air Force at the time. A decision to transfer could obviously be taken as yet one more sign that the flying days of the Royal Air Force were coming to an end. On the other hand, it could in my view reasonably be presented as a sensible measure of rationalisation designed to strengthen our ability to deal effectively with the war at sea against the submarine and to remove from the Royal Air Force a task which had become increasingly divorced from the main activities of a modern air force. I would hope that given good will and skilful presentation, it would be possible to convey this latter impression and to do no lasting harm to morale.

CONCLUSION

33. My conclusion would therefore be that there is a case on merits for transferring responsibility for shore-based maritime aircraft to the Royal Navy, and that it could be done without any increase of total expenditure and with reason to expect some reduction which might be substantial. The handling of a transfer, both at political and Service level, would be most important for the morale of the Royal Air Force."

c. There has been a positive gain in efficiency as the result of the spirit of healthy competition between the two Services.

d. There is no evidence of unnecessary duplication in the control of operations, and no reason to suppose that the transfer of shore-based maritime aircraft to the Navy would produce any significant economies in staffs.

3. These are powerful arguments against making any change, and as an assessor I endorse them. Indeed it would seem purposeless to take the examination further. However, since this has been done I must state categorically that the remainder of the report (in which reasons for making a change are suggested), is inaccurate and incomplete, both in its presentation and its interpretation of the available evidence.

4. Chapter and verse are annexed. In brief, the case for change is argued in paras 29-33 of the report on the basis of:

a. **Alleged differences of outlook between the Royal Navy and the Royal Air Force and alleged specialisation by Royal Air Force personnel (paras 21-22)**

The suggestions in these paragraphs disregard:

- (1) the continued close association of Coastal Command with other Home and Overseas Commands of the Royal Air Force in its maritime, its transport and its Colonial policing roles;
- (2) the history of the Air Council's efforts to provide the largest possible maritime force, subject to the priority and resources allocated to it by the Ministry of Defence;
- (3) the growing importance of the maritime role of Coastal Command in limited war (which the report acknowledges to be a primary interest of the RAF);
- (4) the absence of any genuine change of circumstances since Sir Thomas Inskip recommended that shore-based maritime aircraft should remain with the Royal Air Force in the interests of the unity of air power. To this unity current operations and exercises of the Shackleton force in its primary and in its secondary roles admirably testify;
- (5) the free interchange of personnel between Coastal Command and other Commands of the Royal Air Force. (This results in a happy blend of new blood and experience and provides the valuable incentive that Coastal Command personnel are not limited in their careers or outlook, but compete on level terms for the full range of Royal Air Force senior posts).

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- b. **Alleged risk of failures in operational control and allocation of priorities as a result of divided responsibility (paras 23-26)**

These paragraphs display a failure to grasp the true nature of the close co-operation between the Naval and Air Staffs and between the Royal Navy and Royal Air Force at Command and Group level, and to appreciate the practical success of the existing organisation under the stress of six years of intensive anti-submarine warfare. As para 7 of the report acknowledges, the Navy is already the authority for deciding the allocation of operational tasks. This is true not only at Command and Group HQ but at all levels. The allocation of resources to anti-submarine warfare is properly the responsibility of the Ministry of Defence. (I deal fully in the annex with the entirely irrelevant and improper intervention attributed to SACLANC).

- c. **Alleged duplication of overheads (Para 27)**

The report acknowledges that this is a matter which would require detailed study. The evidence already available indicates that there would be an increase rather than a decrease in overhead costs if Coastal Command were transferred to the Navy.

5. The report acknowledges (paras 28-31) that Coastal Command should only be transferred to the Navy subject to certain conditions. All the evidence is against the supposition that the first condition - continued dependence of the Royal Navy on the Royal Air Force for training, administrative and logistic support - would be fulfilled in practice. The second condition - that the transition should be progressive and gradual - would inevitably give rise to lasting friction between the Services, inefficiency and low morale.
6. I believe that it is vain to imagine that the transfer of Coastal Command to the Navy could reasonably be presented as a sensible measure of rationalisation, or as an isolated measure. The RAF in the United Kingdom and overseas has four major operational roles - Bomber, Fighter, Maritime and Transport. Our ability to attract recruits of the right quality depends largely upon the appeal of the first three, since these are the combat roles of the Service. In the maritime role in particular the Service is proud today of its operations record and of its partnership with the Navy. Within the Service the transfer of Coastal Command to the Navy would inevitably be regarded as a successful outcome of the many efforts that have been made over the past few years to dismember the Royal Air Force. It would create a complete lack of confidence in the Air Council and of those responsible for the wellbeing of the Service.
7. I believe that the evidence, correctly presented, leads to the following conclusions:
- a. That the existing organisation for anti-submarine warfare and training is efficient.
 - b. That it has stood the test of war and is well adapted to meeting future requirements.
 - c. That existing machinery is satisfactory for ensuring that anti-submarine warfare is accorded due consideration in United Kingdom strategy.
 - d. That any transfer of Coastal Command to the Navy would certainly be detrimental to efficiency and to the morale and recruiting prospects of the whole Royal Air Force.
 - e. That transfer would be likely to increase overhead costs.
8. Finally, I conclude that a transfer of control of Coastal Command, far from achieving any positive increase in efficiency or economy, would lend inevitably to a major and permanent loss of effectiveness."

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APPENDIX M
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CHIEFS OF STAFF VIEW OF MILITARY STRATEGY

Memorandum for Minister of Defence

This document has been removed because it carries a caveat marking. Copies will be made available in AHB(RAF) by prior appointment for users who wish to see it and who have the necessary qualifications and authority.

1. INTRODUCTION

2. OBJECTIVE

The purpose of this study is to investigate the effects of various factors on the performance of the system. The factors considered are the input data, the processing time, and the output results. The study is conducted in a laboratory setting using a computer system. The results are presented in a table and discussed in detail.

The first part of the study is a literature review. This part discusses the previous work done in this field and identifies the gaps in the current knowledge. The second part is the methodology. This part describes the experimental design, the data collection, and the analysis methods. The third part is the results. This part presents the data collected and the conclusions drawn from the analysis.

The results of the study show that the performance of the system is significantly affected by the input data. The processing time is also a major factor. The output results are consistent with the previous findings. The study concludes that the system is capable of handling the input data and producing the required output results.

The study is limited by the scope of the investigation. Further research is needed to explore the effects of other factors on the system performance. The study is a preliminary investigation and the results are subject to change.

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APPENDIX

TABLE

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APPENDIX N

THE CASE AGAINST BLUE STREAK

Extract from Report by the British Nuclear Deterrent Study Group, December 1959
(BND(SG)(59)19(Final).

"...25. The ballistic missile currently under development is BLUE STREAK. This is a liquid fuel IRBM with a maximum range of at least 2500n.m. and is being designed for firing from underground. This range is much greater than is needed for the target capability of attacking 40 cities in the Western area of the Soviet Union. The warhead yield will be 1 MT. and the accuracy 0.5 n.m. at 1000 n.m. (1.3 n.m. at maximum range). With this accuracy and yield, 44 deliveries are required to achieve the target level of damage. Allowing for an estimated reliability of 75 per cent, about 58 missiles would need to be launched. As present Air Ministry plans envisage the deployment of 60 sites, we have used this figure for our further calculations. On the present programme six sites would be operational by the end of 1965 and the rest by the end of 1967.

26. Work on the research and development of BLUE STREAK has been in progress for several years. By the end of 1959-60 over £50 millions will have been spent in respect of capital facilities and contractors' work in the United Kingdom; in addition, the Australian Government have spent considerable sums, partly at our expense, on the extension and equipment of Woomera range for this project. It is estimated that to carry out a firing programme of 36 missiles and to complete development work will cost between £170 and £200 millions. In addition, there is likely to be further expenditure attributable to the project of about £60 millions in respect of costs in Australia and in United Kingdom establishments and for housing and transport. It is impossible to predict precisely what part of this sum will fall to be paid from United Kingdom funds; nor would all of it be saved if the project were cancelled.

27. The capital cost of constructing, in the United Kingdom, 60 underground sites each capable of firing one missile, together with the necessary ancillary equipment, and of providing the required number of BLUE STREAK missiles (excluding the costs of the nuclear warheads) would be about £200 millions. The cost of the warheads would not be more than £5 millions, because they would be fabricated from others already in service.

28. The total cost of completing the development and the planned deployment of BLUE STREAK may therefore be about £465 millions. The annual maintenance cost after deployment would be about £10 millions.

29. Once launched the BLUE STREAK missiles would be completely invulnerable so long as the Soviet Union has no effective defence against ballistic missiles. But, in view of the accuracy and yield of the ballistic missiles which the Soviet Union could have for use against this country by the mid-1960's, we have attempted to assess the vulnerability to pre-emptive attack of an underground deployment of BLUE STREAKS.

30. Before deciding to mount a pre-emptive attack, the Soviet Government would need to be confident that they could neutralise the bulk of the 60 BLUE STREAK sites with one swift blow, in order to prevent any substantial weight of counter-attack. If we assume that the Soviet attack would be made with ballistic missiles of an accuracy equal to that which we expect to achieve ourselves (0.55 n.m.) and that a warhead of at least 3 MT. would be available, 95 per cent of the underground BLUE STREAK sites could be destroyed by between 300-400 Soviet missiles. Even allowing for the requirements of air defence weapons for the defence of the Soviet homeland, and for the need simultaneously to pose a serious threat to the United States, we have no doubt that the Soviet stockpile by 1967 would be sufficient to provide these warheads for attack on the United Kingdom.

31. There would be a saving of about £33 millions if surface sites instead of underground sites were provided (£9 millions in development and £24 millions in site construction). But to neutralise 60 surface

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sites, the Soviet weight of attack would need to be only half that required to neutralise the same number of underground sites. Moreover, the Soviet missiles would not need to be so accurate.

32. Before finally assessing the implications for BLUE STREAK as an effective deterrent system of the Soviet ability to deliver this attack, it is necessary to consider whether the attack could be evaded by firing the missiles before the sites were knocked out.

33. We do not think that a pre-emptive attack would be attempted unless the total deliveries required could be completed within the time required to fire BLUE STREAK successfully from the state of readiness at which the missiles could be held. We have assumed that the Soviet attack would be delivered as near simultaneously as possible, though there would inevitably be some spread in the deliveries. The Soviet Union should have this capability from 1965 onwards.

34. We have previously assumed that there would be a period of strategic warning (at least 24 hours) before any Soviet attack, during which our deterrent forces could be brought to maximum readiness. BLUE STREAK can be kept indefinitely at 4½ minutes' readiness. When required it can be fuelled and brought to 30 seconds readiness, where it can be held for 10 hours. If not fired by the end of this period, the missiles would be out of action for about three hours. In such a situation a number of missiles would no doubt be stood down before the end of the 10-hour period, but this would reduce the retaliatory capability subsequently available.

35. About 2½ minutes must be allowed for the identification of the first radar response as a missile attack aimed at this country, for the communication of the warning to the firing sites, and for the BLUE STREAKS to reach a sufficient height to be invulnerable to a 3 MT. ground burst near their sites. With BLUE STREAKS at 4½ minutes readiness, a total of about 7 minutes would therefore be needed from the time of the first radar response to enable the missiles to be launched successfully. This total time would be reduced to about 3 minutes if the BLUE STREAKS were at 30 seconds' readiness. Both these timings assume that all the operating procedures work perfectly.

36. Even with Soviet missiles fired on normal trajectories, it would not be technically feasible to launch all BLUE STREAKS successfully in order to evade a Soviet attack with 650 n.m. missiles unless the BLUE STREAKS were at 30 seconds' readiness. It would however, be possible to evade a Soviet attack with 1000 n.m. missiles, if all the procedures worked perfectly. If Soviet missiles of 1000 n.m. range were fired on low trajectories in order to reduce the amount of radar warning available - and this would seem a sensible tactic for the Soviet forces to adopt - very few BLUE STREAKS could be successfully launched, even though they were at 30 seconds' readiness.

37. In the previous paragraphs, we have considered only the technical feasibility of launching BLUE STREAKS within the time given by radar warning. As ballistic missiles cannot be recalled once they have been fired, the political decision to retaliate must also have been taken before this means of evading a pre-emptive attack can be adopted. For this evasive tactic to succeed authority would need to be delegated to order nuclear retaliation on radar warning alone. We do not believe that any democratic Government would be prepared to delegate authority in an issue of such appalling magnitude.

38. This analysis shows that unless the political decision were delegated, the Soviet Union could carry out a successful pre-emptive attack on the BLUE STREAK sites, whether these were underground or on the surface; and that even if the political decision were delegated, the Soviet Union could probably still make a successful pre-emptive attack on the United Kingdom alone. But, as stated previously, once launched the BLUE STREAK missiles would be completely invulnerable so long as the Soviet Union had no effective defence against ballistic missiles. Because BLUE STREAK missiles could only be successfully fired before a Soviet nuclear attack on this country, an underground deployment is not strictly necessary. Such a deployment would, however, considerably complicate the task of the Soviet forces."

AppN-2
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AIR COUNCIL MEMORANDA - 1962

- AC(62) 1 Battle of Britain Week 1962
- 2 Radar Requirements for Cyprus
- 3 Future Manpower Planning
- 4 Manpower
- 5 Modernisation of the Shackleton Force
- 6 Future Use of Transport Command Comet 2s
- 7 Supplementary List
- 8 Commutation of Retired Pay and Pensions
- 9 Tanker Force Requirements
- 10 Integration of Government Long Distance Communications
- 11 Re-organisation of PMUB Chaplaincy Administration
- 12 Progress Report to 28 February 1962 on Weapons Systems not yet fully released
- 13 Replacement of Valetta C2s, Hastings C45 and Ansons and Hercules of the Queen's Flight
- 14 NATO Shield Forces
- 15 Defence Review Costing 1962
- 16 Normal and Local Service WRAF - Future Policy
- 17 RAF Non-Public Funds
- 18 The Introduction of the Chinook in place of the Wessex
- 19 OR.351
- 20 Aircrew Recruiting Study Conference
- 21 Recruitment of General Service Airmen in Malta
- 22 Progress Report to the end of June 1962 on Weapons Systems and Aircraft not yet fully released
- 23 Revision of 1951 Ground Trade Structure
- 24 SBAC Show - 1962
- 25 The Hong Kong Auxiliary Air Force
- 26 Training, Communication and Miscellaneous Aircraft Patterns
- 27 Size of the Air Ministry
- 28 ECM for the Mk. 2 'V' Bombers
- 29 Introduction of Napalm for use by Ground Attack Aircraft
- 30 Security Measures at RAF stations in the UK
- 31 The Cranwell Syllabus
- 32 University Cadetships in the General Duties and Technical Branches
- 33 Modernisation and Reconditioning of the Shackleton force
- 34 Outturn of Air Estimates 1962/63
- 35 Orders for the VC.10
- 36 Future of the Deterrent Force
- 37 Royal Visits to the Royal Air Force in 1963
- 38 Officer Structure - Multiple Annotation

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- ~~AC(62)~~ 39 Sketch Estimates 1963/64
- 40 Progress Report to Mid-November 1962 on Weapons Systems and Aircraft not yet fully released
- 41 Civilian Manpower Costs: Votes 3 and 4
- 42 The Re-equipment of the Tanker Force with Victor Mk.1/1A Aircraft
- 43 Research and Development for the Royal Air Force
- 44 The Air Training Corps and the Air Sections of the Combined Cadet Force
- 45 RAF Non-Public Funds
- 46 Joint Services Headmasters' Conference
- 47 Anti-Nuclear Demonstrations at RAF Stations
- 48 Anti-Nuclear Demonstrations at RAF Stations in a period of Tension

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APPENDIX P

Annex 'C' to A.C.(62)15

DEFENCE REVIEW 1962

ASSUMPTIONS

The Bomber Force

1. The long-term deployment and organisation will be as in A.C.(61)5.
2. Aircrew/aircraft ratios for the Vulcan force will be:-

Until March 1965	1.375 : 1
April 1965 - March 1966	1.75 : 1
From April 1966 onwards	2 : 1

The utilisation rates will be as in S.D.98 until 1.4.66, thereafter rising to 40 hours.

3. The 1.375:1 ratio will apply to the rest of the Medium Bomber Force (apart from PR and tankers) but will not be subject to an increase as in paragraph 2 above.
4. A total of 73 Blue Steel Mark I (including 16 training rounds) and 170 Skybolts will be acquired.
5. The Thor rundown will begin in October, 1964 and will be achieved by eliminating one station per quarter; completion will be by October 1965.
6. A total of 138 TSR.2s will be acquired, including a number of tandem dual version for the OCU.
7. The aircrew/aircraft ratio for the TSR.2 will be 1.375:1 in all theatres.
8. All TSR 2 aircraft will be fitted to carry AS 30 but operational stocks will be held only by the NEAF and FEAF squadrons. Training rounds at the rate of one per pilot per annum will be provided for strike squadrons. All TSR 2 squadrons will be armed with a replacement unguided rocket.
9. The first Victor tanker squadron will be formed by 1.4.65. The present two Valiant tanker squadrons will be converted to Victors during the following year. All three squadrons will have tri-point refuelling equipment.

The Fighter Force

10. There will be a total requirement for 2,500 Firestreak and 2,000 Red Top. (This requirement is unchanged under the various Fighter squadron alternatives).
11. 'Q' band radar will be acquired for the Lightning.
12. Two additional Hunter trainer aircraft will be retained in each front-line Lightning squadron until 1.4.66.
13. As from 1965, aircrew/aircraft ratios for Lightning squadrons will be as follows:-
 - (a) The main costing of 11 squadrons.

8 in UK	-	1.25 : 1
2 in FEAF.	-	1.5 : 1
1 in NEAF.	-	1.25 : 1
 - (b) The supplementary costing of 10 squadrons:-

8 in UK	-	1.25 : 1
2 in FEAF.	-	1.5 : 1

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(c) The supplementary costing of 9 squadrons:-

8 in UK.

1 in FEAF.

1.25 : 1

1.5 : 1

14. The aircrew/aircraft ratio for the Hunter GA9 squadrons in the UK and in NEAF will be 1.35 : 1. in AFME and FEAF it will be 1.5 : 1.

15. The 8 Lightning squadrons in the U.K. will be deployed at six airfields. Other existing airfields will be needed for the Hunter OCU and for the 2 Hunter squadrons allotted to No. 38 Group.

16. As one of the main assumptions is that the Fighter squadrons in Germany will be withdrawn by the end of 1962 there will be no need to reform the Javelin OCU. The aircraft of the AW Fighter Combat School will be retained at Middleton St. George until the end of 1963 to train replacement pilots for the Javelins.

17. The armament needed for the OR.356 close support aircraft (which is assumed to be the Hawker P.1154) will consist of an improved air to ground rocket, an air to air missile (eg Red Top), an air to surface missile (eg AS.30), and conventional cannon. All OR.356 aircraft in the Offensive Support and Ground Attack roles will be fitted for operation with AS.30. Operational stocks of AS.30 will be provided for Transport Command (Offensive Support Squadron), AFME and FEAF: limited provision will be made for training firings. For the supplementary pattern it is assumed that the P.1127's will have only air to ground rockets and conventional cannon.

18. A tripartite evaluation of the P.1127B will be carried out in 1964. It is assumed that the venue will be an RAF station in East Anglia, such as Horsham St Faith.

19. LINESMAN will proceed on the basis of Plan I as recommended recently by the Steering Committee (ie the basic LINESMAN concept, but with capacity reduced from 750 to 550 tracks and with autonomy at radar stations).

20. There will be a MIDAS station operational at Kirkbride by 1.10.65. Manning will be an Air Ministry responsibility and domestic and running costs will fall on Air Votes.

21. Apart from BMEWS and MIDAS, there will be no provision in the costing for anti-ballistic missile defence.

Maritime Aircraft

22. The Shackleton force will be modernised and provided with a nuclear weapon delivery capability in accordance with the programme submitted to the DRPC.

23. The Mk. 44 Torpedo will be introduced in 1962. A total of 591 will be acquired initially and 27 per year thereafter to replace training and other wastage.

24. An Explosive Echo Ranging System with its associated sonobuoys (OR.3613) will be introduced in 1966.

25. A long range active/passive sonobuoy system (OR.3548) will be available in the late 1960s.

26. A new conventional torpedo (OR.1186) will be available in 1970.

27. It is probable that a non-acoustic system for detecting submarines will have been developed for the Shackleton replacement.

28. A replacement aircraft for the Shackleton (OR.350) will begin to enter Squadron service in 1971.

The Transport Force

29. The aircrew/aircraft ratios for all strategic transports (Comets, VC.10s, Belfasts and Britannias) and for the OR.351 will be 2.4:1. For the Argosy and for SRT fixed wing aircraft (including the AVRO 748) it will be 1.5:1. For the Belvedere it will be 1.5:1 and for the Wessex and Whirlwind 1.25:1.

30. Up to 1965, only one UK airfield will be needed for the strategic transport force. After 1965 Gaydon will be added. It is assumed that Gaydon will be sufficient to cope even if the VC.10 force increases to 14.

31. The normal monthly utilisation rate of the Britannia force will be 2,000 hours throughout, with provision for an emergency effort of 4,000 hours per month in any two months of each year.

32. There will be a considerable development of island staging posts/forward operating bases on the reinforcement route during the period of the costing. Ascension will be developed as a staging post as soon as possible. Aldabra will be developed as a staging post/forward operating base by the end of 1966. St Helena as a staging post/tanker operating base by the end of 1966. Masirah as a forward operating base by the end of 1970, and Cocos as a staging post by the end of 1973. The staging posts will be similar to Gan as currently developed; forward operating bases will include technical and operating facilities similar to Akrotiri as planned, but with domestic accommodation only for the peace-time staging role on an unaccompanied basis.

33. The UK/Germany SRT force will be deployed partly at Odiham, partly in Germany.

34. The helicopter force will be armed in accordance with proposals in AC(61)50.

35. The Brigadoon Commitment is too small and short term to need to be covered in this costing.

Training

36. All flying training, including OCU training, will be carried out in the UK with the exception that TSR2 OCU training will be carried out in Canada from 1968 onwards.

37. There will be four basic flying training schools, two advanced schools, two navigators' schools, and one signallers' school.

38. Naval advanced flying training will go to Brawdy at the beginning of 1964. Basic training will remain at Linton.

39. Formal ground training for the Skybolt force will be undertaken at Newton.

40. Melksham and Yatesbury will be closed by 1.4.65 and the adult training schools of Technical Training Command will be redeployed to stations in permanent construction.

RAF Germany

41. In the case of the supplementary pattern showing the purchase of 30 P.1127s, the OR 356 requirement in Germany will be met by these aircraft.

NEAF

42. Nicosia will be run down to the C. and M/ATC basis by the end of 1964.

43. The improved RAF radar system will operate from Cape Gata and Mount Olympus and the NATO station at Cape Greco will not be built.

Malta

44. Takali will go on to a C and M basis from 1.4.63.

AFME

45. The redeployment from Kenya to the Arabian Peninsula will take place as in COS(62)89.

46. From the end of 1963, there will be no RAF manpower in Kenya apart from the Communications Centre which will close by 1.4.67: the minimum personnel additions will be made to the Aden Comm Centre in compensation from 1.4.67.

47. Bahrain will be a families' station, except that air and ground crews of the Hunter and Beverley squadrons will be on one year unaccompanied tours until 1.4.66.

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FEAF

48. It is assumed that there will be no major RAF development in Australia or Labuan in the period of the costing.

49. No new static radars will be required in the period to replace those recently approved for Singapore and Butterworth.

RAF Regiment

50. Mauler will be acquired in April 1967 on a scale sufficient to equip 3 squadrons.

51. It is assumed that the squadron to be withdrawn from Cyprus will disband.

Signals

52. The expansion and modernisation of the Commonwealth Air Forces Telecommunications network will continue, including the provision of more efficient equipment, and the introduction of automatic devices for traffic handling.

53. On line crypto equipment will be progressively introduced over the whole RAF point to point communications system.

54. A new range of air transportable signals equipment will be introduced for tactical and joint task force operations, to provide control and reporting, navigational aid, and communication facilities.

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Ministry of Defence

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