SECRET

PART 5

82-39

Confidential Filip

The Defence Budget

Defence Expenditure 1980-81: Contracts Moratorium

The Arming of Service Women

UK Military Training Assistance Scheme (UKMTAS) (Table of UK Arms Sales)

DEFENCE

Part 1: May 1979

Part 5: March 1981

Referred to	Date	Referred to	Date	Referred to	Date	Referred to	Date
~~13.3.81~~							
~~18.3.81~~							
~~19.3.81~~							
~~20.3.81~~							
~~29.4.81~~							
11-5-81							
18.5.81							

PREM 19/415

PART 5 ends:-

Meeting Record PM with S/S MOD.
17.5.81

PART 6 begins:-

Early Day Motion 18/5/81

TO BE RETAINED AS TOP ENCLOSURE

Cabinet / Cabinet Committee Documents

Reference	Date
C(81) 11	16/03/81
CC(81) 12th Meeting, Item 5	19/03/81

The documents listed above, which were enclosed on this file, have been removed and destroyed. Such documents are the responsibility of the Cabinet Office. When released they are available in the appropriate **CAB** (CABINET OFFICE) CLASSES

Signed C Wayland Date 19 April 2011

PREM Records Team

Published Papers

The following published paper(s) enclosed on this file have been removed and destroyed. Copies may be found elsewhere in The National Archives.

1. Cmnd. 8212-I and 8212-II: Statement on the Defence Estimates 1981 Presented to Parliament by Sec. State for Defence, April 1981 [HMSO]

2. House of Commons, Second Report from the Defence Committee, Session 1980-81: Statement on Defence Estimates 1981 Published by HMSO, 12 May 1981

Signed A Wayland Date 19 April 2011

PREM Records Team

Real[1] Defence[2] Expenditure 1950-83

£m

(1970=100)

1950	1893	1959	2355	1968	2733	1977	2739
1951	2415	1960	2348	1969	2468	1978	2711
1952	2949	1961	2404	1970	2460	1979	2894
1953	3005	1962	2483	1971	2488	1980	3053[3]
1954	2903	1963	2493	1972	2506	1981	3085[4]
1955	2740	1964	2544	1973	2628	1982	3178[4]
1956	2644	1965	2587	1974	2645	1983	3274[4]
1957	2539	1966	2610	1975	2635		
1958	2392	1967	2778	1976	2789		

1. The deflator used is the implied index of total home costs.
   Source: Economic Trends, Annual Supplement, 1981.
2. Defence is defined as total military defence.
   Source: Table 9.4 of the National Income and Expenditure blue book, 1980, and various other issues.
3. Based on Cmnd 8175 out-turn figure, ie Provisional.
4. Based on Cmnd 8175 figures, assuming a 1% RPE.

Annex F

Public Expenditure Trends

The table below illustrates the Cmnd 8175 expenditure figures for defence and some other major programmes and the percentage changes indicated over a four year period.

£m at 1980 Survey Prices

	1979-80	1983-84	% change 1983-84 on 1979-80
Defence	9294	10350	+ 11.4
Industry, energy, trade and employment	2929	2460	- 16
Roads and transport	2967	2670	- 10
Housing	4928	2230	- 55
Education etc	9236	8190	- 11.3

Annex E

Public Expenditure in 1982-83 - Illustrative Cuts

The Public Expenditure White Paper (Cmnd 8175) stated that public expenditure was higher than the Government would wish, and that this required the most serious attention during the forthcoming Survey. Treasury Ministers have yet to put proposals to their colleagues but the figures below illustrate the effect of 2½%, 5% and 7½% reductions in total spending if not only defence, but three other main programmes to which the Government has a comparable degree of commitment, were to be maintained at the Cmnd 8175 levels which for defence implied 3% growth on the 1981-82 figure. These other commitments are to maintain the real value of pensions; to give priority to expenditure on maintenance of law and order; and to maintain expenditure on health services. The table shows that the percentage cuts on all other programmes would need to be some 4½%, 8½% and 13% to achieve the overall cuts mentioned above.

£m 1980 Survey Prices

	Provision for 1982-83	overall cut	2½%	5%	7½%
		necessary cut in non-exempted programmes	4.32%	8.64%	12.96%
Defence	10,050				
Law and order	2,440				
Health	8,110				
Retirement pensions	9,600				
Health and law and order in Scotland, Wales and NI	2,000				
Industry, energy and trade	1,690		- 73	- 146	- 219
Roads and transport	2,670		- 115	- 230	- 346
Housing	2,720		- 117	- 235	- 353
Education etc	8,360		- 361	- 722	-1083
other social security	12,000		- 518	-1037	-1555
Other	16,875		- 729	-1458	-2187
Total	76,525		-1913	-3828	-5743

REAL DEFENCE[1] EXPENDITURE[2] 1950-83

£M

(1970=100)

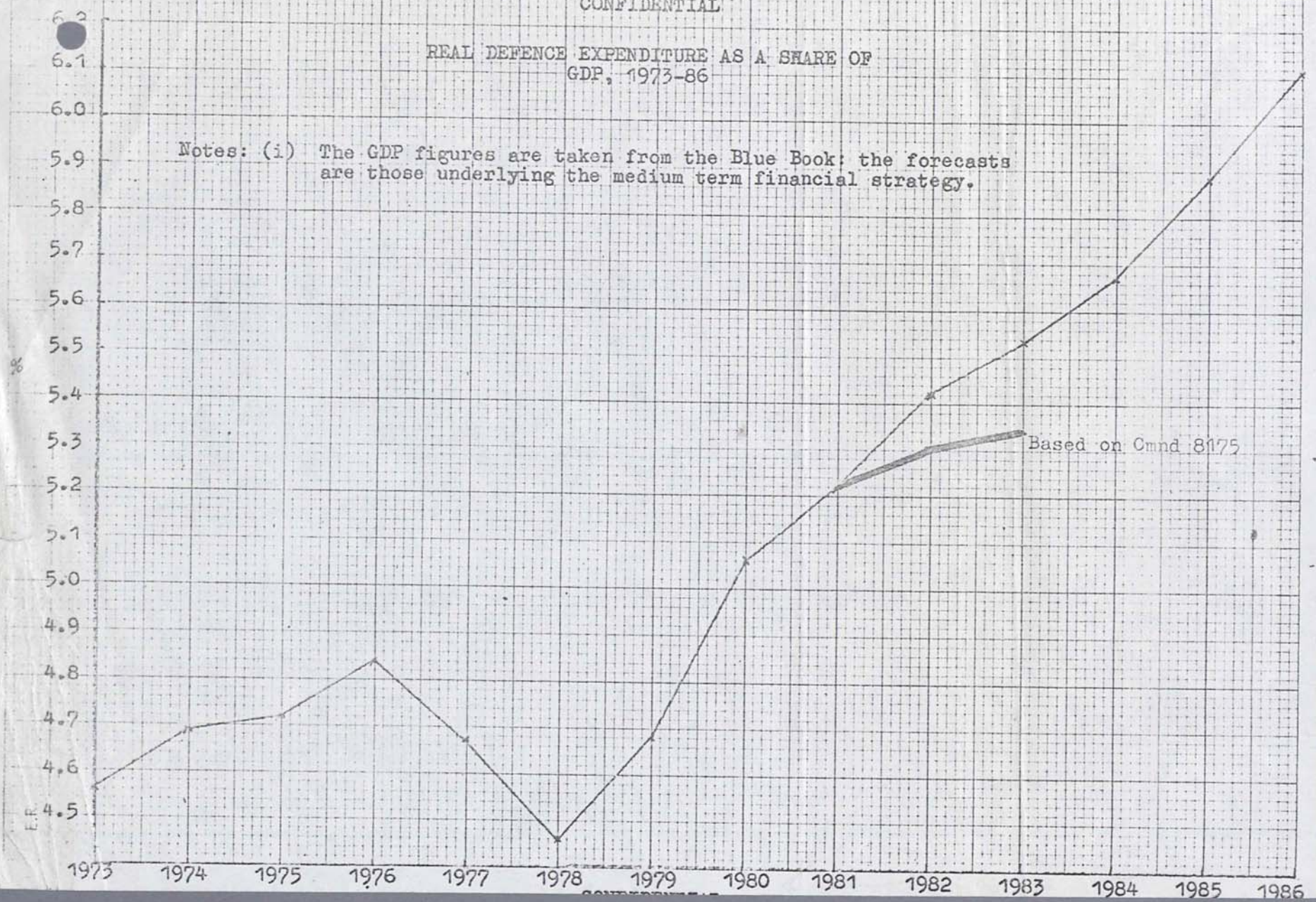
1950	1893	1959	2355	1968	2733	1977	2739
1951	2415	1960	2348	1969	2468	1978	2711
1952	2949	1961	2404	1970	2460	1979	2894
1953	3005	1962	2483	1971	2488	1980	3053[3]
1954	2903	1963	2493	1972	2506	1981	3085[4]
1955	2740	1964	2544	1973	2628	1982	3246[5]
1956	2644	1965	2587	1974	2645	1983	3387[5]
1957	2539	1966	2610	1975	2635	1984	3550[5]
1958	2392	1967	2778	1976	2789	1985	3733[5]
						1986	3943[5]

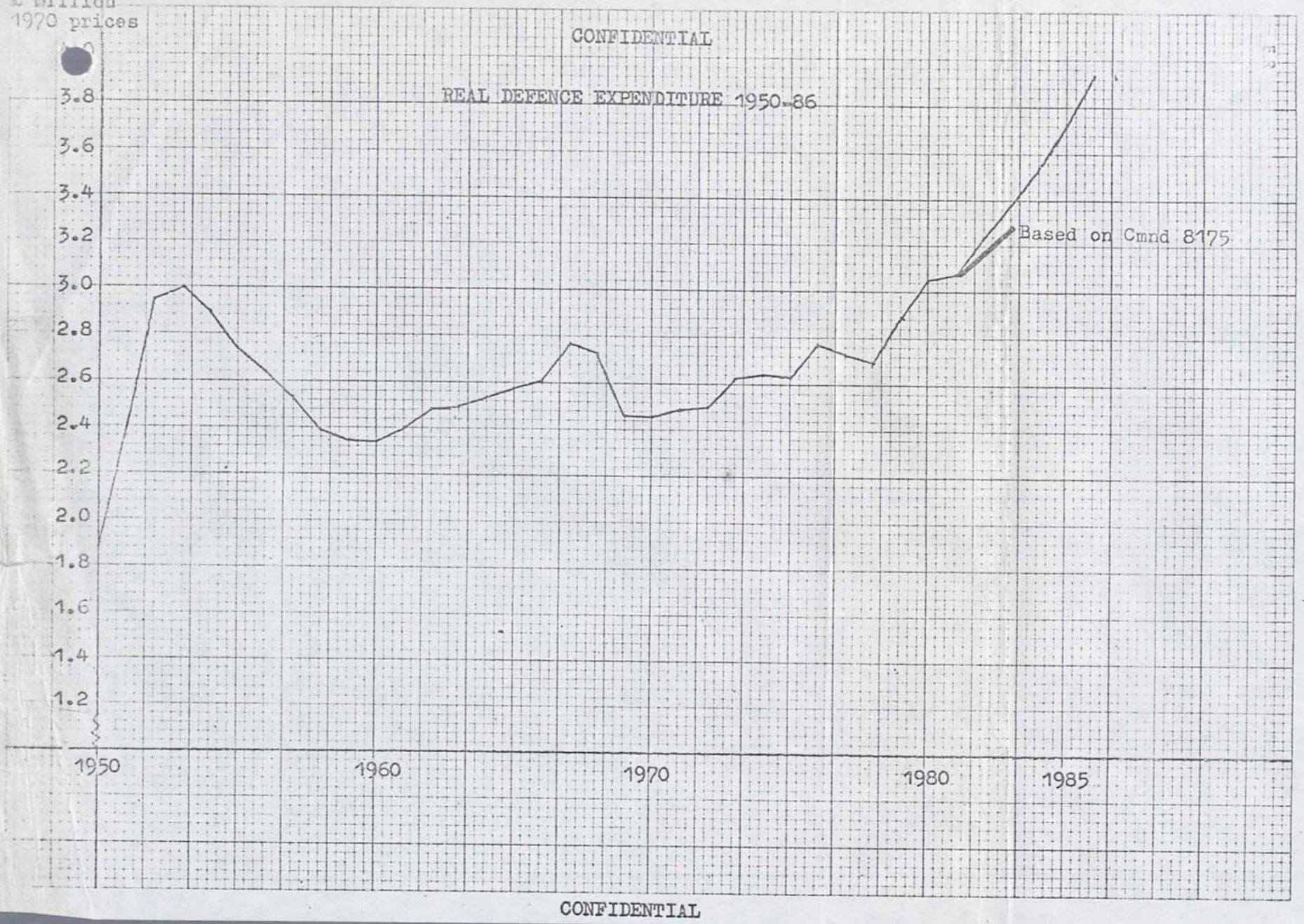
1. The deflator used is the implied index of total home costs.
   Source: Economic Trends, Annual Supplement, 1981.
2. Defence is defined as total military defence.
   Source: Table 9.4 of the National Income and Expenditure blue book, 1980, and various other issues.
3. Based on Cmnd 8175 out-turn figure, ie Provisional.
4. Based on Cmnd 8175 figures, assuming a 1% RPE.
5. Based on Cmnd 8175 figures, with 3% NATO growth extrapolated and assuming a 1% RPE plus Trident I costs.

CONFIDENTIAL

REAL DEFENCE EXPENDITURE AS A SHARE OF GDP, 1973-86

Notes: (i) The GDP figures are taken from the Blue Book: the forecasts are those underlying the medium term financial strategy.




£ billion
1970 prices
REAL DEFENCE EXPENDITURE 1950-86
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
Based on Cmnd 8175
1950
1960
1970
1980
1985

CC: Mr. Pattison

MR. WHITMORE

KEITH SPEED

Since I will be late again tomorrow morning, because of my appointment with the physiotherapist, I thought I should let you know before you see the Prime Minister the contents of a telephone call this evening (Sunday) between herself and John Nott.

Mr. Nott said that Keith Speed's remarks over the weekend were going to cause some problems for him in MOD. He had clearly broken ranks while the Navy Chiefs, while no doubt feeling the same way as he did, had remained loyal. He did not have anything against Speed personally, but ideally it would be better if he could be moved to another Department in the light of what had happened. If that was not possible, he believed Speed should stay on as Navy Minister, but that he should be given some kind of rebuke. Firstly, he proposed to see Speed and make it quite clear that he either had to shut up or resign; and unless he was prepared to give his word that he would say no more in public, he should be asked to resign likewise. He would also like to be able to tell him that he (Nott) had spoken to the Prime Minister. Secondly, Speed was at present scheduled to speak in the Defence Debate on Tuesday or Wednesday. He now proposed that he himself should open and wind up and that Goodhart and Pattie should speak. It would be obvious that Speed had been dropped from the Debate, and this would be seen as a clear rebuke within MOD and perhaps more widely.

The Prime Minister said she was appalled at Speed's open disloyalty. She was surprised that John Nott did not want him to resign right away. There was no question of moving him to another Department: if he was going to be disloyal to the Governmen in one Department, he would be in another. If Nott felt that he should be given another chance, then she was prepared to go along with his proposals. (Earlier in the conversation she had suggested that she herself should speak to Speed; Nott replied that it was sufficient for him to do so). As regards the Debate, the Prime Minister wondered whether it was possible for Mr. Nott to both open and wind up; Nott said that he was pretty sure it was possible; the Prime Minister suggested that he should check with the Chief Whip.

17 May 1981 T.P.L.

COMMITTEE OFFICE
HOUSE OF COMMONS
LONDON SW1A 0AA
01-219 3280/81 (Direct Line)
01-219 3000 (Switchboard)

DEFENCE COMMITTEE

Enclosed is a copy of the Report by the Defence Committee on the "Statement on the Defence Estimates 1981".

This Report, which is being published today at 2.30 p.m., gives a brief assessment of aspects of the Government's Defence White Paper.

Douglas Millar
Clerk to the Committee

15th May, 1981

RELEASE TIME FRIDAY
13th MAY 82.

HOUSE OF COMMONS
LONDON SW1A 0AA

Extract from a Speech given by Keith Speed M.P.(Ashford Kent) Navy Minister, to Tenterden Conservative Association on Friday 16th May, 1981 at 8 p.m.

" With defence expenditure topping £12,000million this year we are, quite properly, having a long hard look at tasks, priorities and recources.

The Secretary of State has already told Parliament he is not in the business to make " apocalyptic decisions" and that surely is right. While we must certainly seek the very best value for money the world is a desperately dangerous place and the threat posed both by the Soviet bloc and by terrorism remains as great as ever.

Some academics have suggested that now is the time to downgrade the Royal Navy and plough the savings made into other arms of defence. I believe such suggestions would do immense damage to a unique contribution this country makes in a European context and ignores all the lessons of history.

The Royal Navy's prime role, after provision of the submarine based strategic deterrent force, is anti-submarine warfare in the Eastern Atlantic and the English Channel. This A.S.W. is done at a cost of some 2% of the defence budget to provide no less than 70% of NATO's forces in the area. (By contrast, and I say it not critically, but as a statement of fact, British Services in Germany on the Central Front of Europe cost over 40% of our defence budget and provide 10% of NATO's forces in the area).

In any future European War the supply and reinforcement of men, materials and fuel from North America to Europe is essential for the NATO battle plans. Most of that has to go by sea because, apart from vulnerability of the European Airfields, there is just not the airlift capacity to do it by air. The Soviets can put into the Atlantic some 200 submarines which could sever Europe's jugular vein. Compare this with the last war situation when Germany had less than a quarter of that number of submarines and yet was able to make an almost successful challenge to our control of vital sea lanes.

To tackle this Soviet submarine threat needs a combination of submarines, maritime patrol aircraft, surface ships and anti submarine helicopters. The threat could build up in a pre-war tension period long before the first shot was fired. The determination and capability of NATO to reinforce Europe is a key part of its credibility in deterring continental war.

From: KEITH SPEED, R.D., M.P.

HOUSE OF COMMONS
LONDON SW1A 0AA

Without the Royal Navy's 70% contribution that capability and credibility will be lost. There is no other NATO Country now or in the forseable future that can provide it without making massive and probably unacceptable changes in its own defence dispositions.

Those who argue that the U.S. Navy could fill the gap have ignored the U.S. Chief of Naval Operations stark message. "We have a 3 Ocean commitment with a 1½ Ocean Navy". Nor would the new defence orientated administration in the U.S. look favourably at the one European ally that has been a robust member of NATO these past two years, degrading so seriously its most significant contribution to the alliance. Not least when in the Trident acquisition negotiations the U.S. were given assurances our conventional forces would not be sacrificed to pay for the programme.

To those who argue that maritime patrol aircraft and submarines only can effectively do the A.S.W. task, the answer alas, is not so. The Russians are learning that noisy submarines can be easily detected by passive listening equipment which can be carried in Sonobuoys dropped by M.P.A.'s, other submarines, surface ships and helicopters. So they are making their submarines quieter and faster, and stronger and deeper diving. This means that active sonar (the pinging type) of great power will be vital in the next few years. For technical reasons this cannot be effectively used in sono-buoys, and we come back to helicopters, surface ships both in their own right and as helicopter platforms and submarines. We shall never have enough A/S-submarines which although very effective are also very expensive.

If we are serious about A/S warfare therefore we need the right mix of passive and active sonars together with the right mix of M.P.A.s, anti- submarine helicopters, surface ships and submarines. Incidentally thank heavens co-operation between the RAF Nimrod Squadrons and the Royal Navy is so good as I have seen for myself. Many other Navies including the United States, the Soviet Union, the German, the Dutch and the French have their own very substantial Fleet Air Arm, with maritime patrol aircraft and in the Soviet case a large number of "Backfire Bombers" a thought to be borne in mind when we look at Soviet air expenditure !

From: KEITH SPEED, R.D., M.P.

HOUSE OF COMMONS
LONDON SW1A 0AA

Apart from the anti-submarine warfare Europe and the U.K. could be thwarted by a determined mining campaign. The Warsaw Pact has over half million mines which can be laid by ships, submarines or aircraft, to say nothing of merchant ships with virtually free access to our ports. As Vietnam showed the laying vessel can be an unsophisticated fishing boat if needbe. It is often forgotten more ships were sunk by mines in World War 11 than any other weapon. In the late 1950s the Royal Navy had more minesweepers than NATO altogether now has operational. Yet the danger has increased rather than diminished. While even the threat of mining in areas like the Gulf of Oman or the Straits of Gibraltar could cause major disruption to merchant shipping.

If World War 111 however is to last only a few days and all this supply and reinforcement is a waste of time, as some suggest, the corollory of that line of thought, is that the nuclear threshold in Europe is virtually non-existent because within hours one side or the other would engage in a rapidly escalating nuclear exchange. This argument may be used by the C.N.D., I do not believe it myself, nor do the NATO planners. In addition whatever happens in the land battle it is unlikely that the fleets of Soviet submarines armed with strategic and cruise missiles would meekly surface in due course, missiles unfired !

There is, however, a danger in that concentrating on one very unlikely scenario for a World War 111 that won't happen we shall lose the ' no peace no war ' situation which has been with us, and has largely been contained for the past 30 years. I do not believe the Kremlin wants a nuclear holocaust, any more than Whitehall or the Pentagon. And while there is a rough parity and NATO keeps its political nerve on deterrence for both strategic and theatre nuclear weapons then the overwhelming odds are against such a catastophe.

The same is not true however about Soviet idealogical ambitions on a World wide basis backed up by military power falling short of all out war. Over the past 25 years Admiral Gorshkhov has turned the Soviet Navy from being very much concerned with home defence into a wide ranging blue water fleet. Their current strength are, 2 Aircraft Carriers, 2 Helicopter Carriers, 1 Nuclear Battle Cruiser, 380 submarines, 38 Cruisers, 87 Destroyers, 185 frigates, over 370 Minesweepers plus many hundreds more supporting vessels

From: KEITH SPEED, R.D., M.P.

HOUSE OF COMMONS
LONDON SW1A 0AA

of all types and a massive building programme currently taking place of submarines and surface ships, with for example, 1 new nuclear submarine entering service every 5½ weeks.

The Soviets with their satellite and sympathetic partners have established a world wide chain of access ports and naval bases east and west of Suez. As Gorshkov has said " The Soviet Fleet is a powerful factor in creating favourable conditions for the building of Socialism and Communism". He is certainly practising what he preaches. Every Ocean of the world is part of their operating temitory above and below the waves. While their intelligence gathering ships the ubiquitous A.G.I.s are stationed worldwide to listen, watch and report on both naval and merchant shipping activity of the Western Allies.

We do well to remember that every day some 120 ocean going ships arrive in the ports of North West Europe. Every day there are 200 tankers between the middle east and western Europe carrying supplies of oil to NATO Countries. Overall we still have some 12,000 ships of over 1000 tons at sea bringing in nd only this vital oil (increasingly coming closer to home) but also essentials such as copper, tin, chrome, potash, manganese and baMxite to name but a few.

Some 96% of our exports and imports go by sea and as an Island Nation we are particularly vulnerable to disruption or severing of the sealines of communication.

It is on the sea that the Soviets can mount their severest challenge with the least risk if we were foblish enough to let them . It is by maritime power that political and military ends can be projected together as we have not failed curselves to do on occasions. Again Admiral Gorshkhov has got it right when he said " In many cases a show of Naval strength without taking armed action may achieve political ends merely by exerting pressures through its latent power or by threatening to take military action".

As I speak R.N. Ships, with our friends, are patrolling the Gulf of

From: KEITH SPEED, R.D., M.P.

HOUSE OF COMMONS
LONDON SW1A 0AA

Oman, other R.N. Ships are on regular patrol in the Caribbean ready to render assistance if required to Belize or other friendly countries threatened by disruption whether man-made or brought about by nature. In Hong Kong more R.N. Ships curb the would-be flood of illegal immigrants, piracy and smuggling in the South China seas. In the Antarctic another R.N. Ship and the Royal Marines shows a welcome presence to the Falkland Islanders. Around our coasts both in the fishery protection role and in safeguarding our off-shore energy supplies the Royal Navy has a crucially important task for British economy. Soon to become more important with the patrolling and security of 200 mile Exclusive Economic Zones and the exciting developments in the exploration of the seabed. Working alongside all this are the 13 RN Hydrographic Survey Ships who provide an internationally recognised service that is unequalled anywhere else in the world.

As I reminded parliament last June all defence equipment gets more and more expensive. Increase in costs are often way above the average level of inflation. We need men and women of the highest quality in our services and their back-up support. We cannot compromise on quality here. However in equipment we have to be careful of " The best being the enemy of the good" We canot afford to continue indefinitely with large and expensive frigates, now costing £130million each. Nor with very good, very sophisticated Mine Counter Measures vessels at £30million a time. That is why as a matter of urgency we are developing the Type 23 Frigate which will have a good anti-submarine capability but will be simpler, smaller and half the cost of a current frigate. The same goes for the Single Role Mine Hunter and the Minesweeper (Fleet) both of which are very very much cheaper than the more expensive vessel. We are now designing ships easier to clean, easier to maintain, requiring smaller crews.

This must be the way forward so that we can match resources to the tasks and priorities we face. To irreversably run down the Royal Navy would be to ignore this Country's history, its geography, its economic trading base and the security facts of life as Members of the North Atlantic Treaty Organisation.

From: KEITH SPEED, R.D., M.P.

HOUSE OF COMMONS
LONDON SW1A 0AA

I have no doubt that the Government and the Conservative Party would reject such a defeatist and dangerous course which could threaten the security of every man woman and child living in Britain.

Let me leave the last word with another famous Russian. It was Solzhenytzen who said " The threat lies not so much in the capabilities of its enemies as in the indifference of the West". If that has bean true in parts of Europe we must not allow it to become true here."

SECRET

12

Ref. A04917

PRIME MINISTER

Timetable -

The Defence Programme

The Secretary of State for Defence has sent you three minutes, all dated 14th May, as a basis for the discussion which you will be having on the evening of Monday, 18th May with himself, the Home Secretary, the Foreign and Commonwealth Secretary, the Chancellor of the Exchequer and the Secretary of State for Industry. The Secretary of State for Defence's aim is to obtain your endorsement in general terms of the way in which he is tackling the problem of bringing the defence programme into line with the resources which are likely to be available.

2. The Secretary of State for Defence intends to prepare a paper for the consideration of OD based on the conclusions reached at your meeting on 18th May. We could take this in OD at one of the meetings already provisionally arranged, on Monday, 1st June or Monday, 8th June. The Secretary of State for Defence's timetable envisages that NATO allies will be consulted in early June and a public announcement and publication of a White Paper will follow in early July.

3. His three minutes consist of a detailed report on the progress of the examination so far, a minute on the particular problem of HMS Ark Royal, and a personal minute explaining the underlying reasons for the proposals he is putting forward. You may like to use this latter document as the main basis for discussion on Monday, and suggest that attention on this occasion should concentrate on the following three basic questions:-

(a) Are the resource assumptions set out in paragraph 5 of the main report generally agreed?

(b) If they are, are the Secretary of State for Defence's plans for bringing the programme into line with them the right ones in terms of the national interest?

(c) Can these plans be successfully presented to the Government's supporters, the general public and NATO allies, particularly the United States?

SECRET

4. Clearly the discussion must both begin and end with question (a). On this, there are no firm figures for the cost of the Secretary of State for Defence's proposals, but the thrust is clear: in the long run they would significantly reduce the rate of growth of the defence programme and therefore of the share of GDP consumed by it; but in the short run - the next three years - not only would there be no further savings on defence, but the Secretary of State would require a commitment to the existing figures in real terms plus additional provision of the order of £200 million a year for Trident. Can the Chancellor - or indeed the Government - live with that?

5. In relation to question (b), in broad terms it is the Secretary of State for Defence's intention to impose marginal reductions on the Army and RAF programmes but to cut the surface fleet very severely. In effect the surface fleet is being cut in order to pay for Trident. This may be the best way of presenting it. Although Trident is not an instrument of sea power, the weapon platform is a submarine and therefore the addition of this potent weapon to the Royal Navy may be seen by many as an adequate compensation for the proposed reduction in surface ships. Even so the proposed reduction in naval manpower of nearly one-third by 1991 and the proposed closures of Gibraltar and Chatham dockyards and the sharp reduction in the size of Portsmouth dockyard will all be very bitter pills to swallow, particularly for the sitting Conservative Members for Portsmouth and Chatham. What is more, the frigates and destroyers of the surface fleet have probably been of greater operational value to us in the last ten years than the submarine fleet: if you were sending ships to the Gulf, for instance, frigates might be more to the point than submarines.

6. The other main point which arises under question (c) is the likely attitude of our allies, particularly the United States. In the original Trident agreement President Carter laid great stress on the importance of the United Kingdom continuing to improve its conventional forces. It is going to be very difficult to persuade the United States that the United Kingdom is actually doing this in the light of their proposals, and at the same time move from the proposed procurement of the Trident I system at £5 billion to the Trident II system at £6 billion (at this stage Trident II is simply a working assumption. The Secretary of State for Defence will be reporting on this issue within the next two months).

HANDLING

7. You will wish to ask the Secretary of State for Defence to introduce his three papers. You may then like to suggest that subsequent discussion should concentrate on the three questions set out at (a), (b) and (c) above. Subsequent discussion should cover the following points:-

(i) How does the Secretary of State for Industry assess the overall industrial effects particularly on British Shipbuilders and British Aerospace of the proposals put forward by the Secretary of State for Defence?

(ii) Do the Ministers present agree with the general thrust of the Secretary of State for Defence's argument that it is the surface fleet which must bear the main brunt of the reduction? This may be difficult. When OD discussed the defence programme on 8th July 1980 there was a strong disposition to argue that in the long term it was in Britain's national interest to concentrate on her maritime defence effort. The Lord Chancellor held this view particularly strongly and the Foreign and Commonwealth Secretary has been heard to express similar views.

(iii) Does the Foreign and Commonwealth Secretary believe that these proposals can be presented successfully to NATO allies, particularly the United States?

(iv) To the extent that either the Chancellor of the Exchequer argues that the demands of the defence programme are still too high, or Ministers believe that some of the proposed reductions go too far, are there any alternative reductions which the Secretary of State for Defence should be asked to consider?

(v) In regard to the Secretary of State for Defence's separate minute to you of 14th May about HMS Ark Royal, you may like to invite the meeting to endorse the line which he proposes he should take i. e. to investigate the possibility of the Australians buying or leasing either Invincible or Illustrious. You may equally wish to endorse the Secretary of State's proposed rejection of HMS Britannia as a possible saving.

8. Subject to points made in discussion, you may like to conclude the meeting by inviting the Secretary of State for Defence to prepare a paper for circulationg to OD reflecting his proposals.

9. The Chiefs of Staff present a problem. You may like to deal with it by proposing that after Monday's meeting but before the OD discussion the Chief of the Defence Staff and all three Chiefs of Staff should come and see you with the Secretary of State for Defence to discuss the proposals. As the CGS and CAS will broadly agree with what is proposed and the CDS will probably sit on the fence, the CNS will be left in a minority of one, and my present impression (it can be no more) is that he will not press his unhappiness to the point of resignation. In subsequently presenting the proposals in public you should be able truthfully to say that you have taken due note of the views of your professional military advisers in arriving at these conclusions. This course of action might also greatly ease the Secretary of State for Defence's position within his own Department. But I gather that Mr. Keith Speed - the Parliamentary Under Secretary of State for Defence for the Royal Navy - might feel the need to resign.

RCA

ROBERT ARMSTRONG

15th May, 1981

Ref. A04921

PRIME MINISTER

The Defence Programme

There is one additional point concerning the Secretary of State for Defence's proposed timetable which you may wish to consider at your meeting on Monday evening. At the moment he envisages putting proposals to our NATO allies in early June and making an announcement accompanied by a White Paper in early July. That would have the advantage of maintaining the forward momentum of the Review, and of minimising the period during which political and pressure group lobbies can manoeuvre to frustrate the objectives. But I fear that this timetable may be unrealistically fast for three reasons:

(i) The decisions involved are momentous not only in defence but also in domestic and foreign political terms. The Secretary of State for Defence must take his colleagues with him. This may need more than one meeting of the small group before the paper goes to OD; and you may think that decisions of this magnitude ought to be cleared through the full Cabinet.

(ii) Once the Government has made up its mind, the proposals will require very careful presentation to our Allies, particularly to the Americans. Indeed the decisions may need to be adjusted to take account of the American reaction.

(iii) An announcement in early July is likely to create great problems for the Chancellor of the Exchequer in relation to the PESC timetable. Proposals along the lines suggested by the Secretary of State for Defence would lead to a large area of public expenditure being not merely exempted from further cuts but actually in receipt of additional resources, at a time when other spending programmes would be subject to critical review and possible reduction. Will other colleagues be readier to accept reductions in their programmes if they see the Secretary of State for Defence getting away without any? From this

point of view it might be easier for the Chancellor of the Exchequer if proposals on the lines put forward by the Secretary of State for Defence came forward at a later stage in the annual PESC cycle, e.g. in the autumn?

2. It will be important to agree on this timing point at your meeting on 18th May. Otherwise the Secretary of State for Defence may implicitly commit himself, during the defence debate on 19th-20th May, to making a major policy statement as early as July.

Christopher Clarke

approved by ROBERT ARMSTRONG
* signed on his behalf.

15th May, 1981

Ze A4

10

10 DOWNING STREET

From the Principal Private Secretary

15 May 1981

SECRET AND PERSONAL

Dear Brian,

The Prime Minister was not able to deal with the Defence Secretary's minute of 13 May 1981 submitting the First Sea Lord's minute of the same date about the defence programme until this morning.

I am afraid that, with a visit to Scotland today and a speaking engagement in Brighton on Monday, the Prime Minister's diary is already so crowded that it is quite impossible for her to fit in a meeting with the First Sea Lord before she sees her Ministerial colleagues on Monday evening about the future shape of the defence progamme. In any case, she has already agreed to see the Chiefs of Staff collectively, if they so wish, following the Ministerial meeting on Monday. She thinks it better to let the meeting with the Chiefs of Staff take place first and then have the First Sea Lord come and see her separately, if that, in the light of the outcome of her meetings with Ministerial colleagues and the Chiefs of Staff, is still his wish.

Yours ever,

Clive Whitmore.

Brian Norbury Esq.,
Ministry of Defence.

Gc.

SECRET AND PERSONAL

9

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~XXXXXX~~ 218 2111/3

MO 9

15th May 1981

CAW Team
PA

Dear John.

THE DEFENCE PROGRAMME: HMS ARK ROYAL

My Secretary of State has decided that it would be sensible to extend to the other Ministers who will be attending next Monday's meeting the circulation of his minute to the Prime Minister of last night about HMS ARK ROYAL.

I accordingly enclose a copy and am sending copies of it, with copies of this letter, to John Halliday (Home Office) and Ian Ellison (Department of Industry). Copies of my letter, for their information, go to Clive Whitmore (No 10), George Walden (FCO) and David Wright (Cabinet Office).

The same caveats apply to the minute as apply to my Secretary of State's personal minute to the Prime Minister about the defence programme.

Yours ever
Brian Norbury

(B M NORBURY)

A J Wiggins Esq

SECRET AND PERSONAL

SECRET AND PERSONAL

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PRIME MINISTER

THE DEFENCE PROGRAMME

I enclose a note reporting on my examination of the defence programme. This could form the basis of discussion on Monday evening.

2. You will wish to know how the Chiefs of Staff see matters. Briefly, they are at one in strongly deploring any reductions in our contribution and funding, at a time when Soviet military effort continues to grow unchecked. If changes on the scale I postulate nevertheless are to be made, the Chief of the General Staff and the Chief of the Air Staff endorse the broad balance of the proposals; the Chief of the Naval Staff does not. The Chief of the Defence Staff would endorse it if our Brussels Treaty commitment to Europe is judged crucial to Alliance cohesion, but he is uneasy about such a judgement at a time of growing Soviet adventurism worldwide; he would prefer to reach conclusions only after thorough dialogue with our Allies.

3. I am copying this minute and enclosures to the Home Secretary, the Foreign and Commonwealth Secretary, the Chancellor of the Exchequer and the Secretary of State for Industry; and to Sir Robert Armstrong.

FN.

Ministry of Defence
14th May 1981

SECRET AND PERSONAL

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THE DEFENCE PROGRAMME

1. The defence programme needs to be revised, for two reasons. Firstly, the rapid advance of military technology, exploited by massive Soviet spending, calls for change in our own investment and operational priorities. Secondly, the latest Long-Term Costing (LTC 81) has confirmed that even if the current defence programme were ideal in relation to the growing threat, it is overfull by any reasonable standard of what Britain can afford and sustain. The force structure is too large to equip and support well enough within the means likely to be available.

2. Even if the problem were solely economic, general dilution of quality or general cutback on numbers would not be a tolerable way out. Nor can it be solved simply by cutting out "waste"; in an annual budget of twelve billions there is always scope for better value for money, but it is not possible to squeeze out anywhere near enough by this route alone.

3. These two sets of reasons compel a radical look at our programme and priorities.

Basic Approach

4. Work was commissioned on the basis, for study, of a deliberately severe reduction in resource assumptions. Shaping a long-term defence programme raises an acute problem of uncertainty, since very large elements have to be committed ten years or more in advance - much further ahead than the precise defence budget can be forecast. But it makes no sense to pitch our planned force structure at the limits of what could be supported on the most

optimistic projection. A basic structure needs to be set at a level which could - indeed must - be sustained through the inevitable shifts as budget allocations move from projection to specific decision in cash terms. The basic structure must of course be accompanied by proper provision for logistic support, training, mobility and the like, since without these the forces will not have the readiness, the staying power and the standards of operational performance needed. These cannot safely be neglected, as the measures which had to be taken last year as a result of cash problems readily demonstrate - ships kept in harbour, aircraft grounded and so on.

5. The resource assumption set for study was a projection based on holding the share of GDP spent on defence through the 1980s at the present level (about 5.25%), on cautious projections of GDP growth and of defence inflation relative to general inflation (the "relative price effect"). The run of figures this produces is set out in Column 1 of the table below, alongside the run (Column 2) which results from the March PEWP figures projected at NATO's 3% until 1985/86* and 1% thereafter. For completeness, Column 3 shows what the current programme, unchanged, is estimated to cost; and Column 4 shows the incidence of Trident costs as estimated in LTC 81 (we already know that these are out of date in detail, but cannot yet give firmer figures.)

	1 Constant GDP Share	2 Cmnd 8175 + NATO 3% until 1985/86 then 1%*	3 "Unchanged" defence programme (with Trident I not II)	4 Trident I
		(£M at September 1980 prices)		
1982/83	11495	11889	12235	138
1983/84	11605	12247	12604	179
1984/85	11725	12615	13122	286
1985/86	11845	12993	13457	447
1986/87	11965	13123	13758	685
1987/88	12085	13254	13785	729
1988/89	12205	13387	13823	655
1989/90	12325	13521	13757	546
1990/91	12450	13656	13741	449
Nine-year total	107,700	116,685	120,282	4,114

* This takes no account of the newly agreed NATO "roll forward" of the 3% aim to 1987/88

6. The nuclear role is cardinal; Trident must go on. It looks probable that there will have to be a switch to the Trident II system (which would incidentally be likely to slow down expenditure in the next few years although involving greater expenditure of roughly £1 billion overall). This is being explored non-committally with the Pentagon, and there will be a further report in the next two months.

7. The aim must be to avoid cutting direct defence of the UK base, if anything more ought to be done. It seems, however, that the defensive mining capability will have to be abandoned. Some more Hawk trainers should be armed as supplementary fighters. There would be attractions in bringing Phantom interceptors home from Germany, but this is not straightforward. The size and role of the reserve forces, especially the Territorial Army should be expanded.

8. It would make a lot of sense in purely UK military terms to have a slimmer BAOR of perhaps 45,000, structured around two strong armoured divisions as a manoeuvre reserve for the Northern sector of the Central Region, with someone else taking over the forward frontage for which the United Kingdom is responsible; but the military and political difficulties in the Alliance would be formidable. If these difficulties mean sticking to the current role and the Treaty figure, it would be necessary to keep very tightly to an establishment of 55,000, and also for draw on BAOR more readily than hitherto (Northern Ireland aside) for contingencies elsewhere.

9. On either option, if the Army is to be reasonably equipped its total manpower must be cut and from five to ten major units disbanded. (An enlarged TA would make this slightly easier.)

10. Even then there would still be a great deal of money needing to be saved elsewhere; and the prime remaining candidate would inescapably be the general maritime effort. Indeed the proposals in column 1 of this paper involve a reduction of up to 25% in the funding for the "conventional" Navy by comparison with current plans, and a reduction in naval manpower of some 17,000 by 1986.

Amelioration of cuts in this planned structure could only be avoided by making compensating reductions in the UK's European effort in addition to those already proposed. This would involve disbanding more major units leaving a smaller Army for all the varied calls made on it at home and abroad and taking some squadrons out of the RAF's front line.

11. Wherever the precise dividing line is drawn (between financial allocations to single-Services) there would seem to be no escape from substantial change in the structure of the maritime contribution, although there will be military and political difficulties in the Alliance. The top-quality maritime effort (after the strategic deterrent and its protection) would be concentrated upon submarines and maritime air. There would be a smaller surface fleet (with fewer high cost new ships) which would be necessary for peacetime and for periods of tension and deterrent operations. On this basis, the UK would envisage engaging in high-intensity operations against Soviet opposition only in circumstances where the US could provide the most sophisticated elements, for example in maritime air defence. It would be important, however, to exploit vigorously the flexibility of the surface fleet, including the new carriers, for deployment outside the NATO area.

12. Within a modified programme it will be all the more important to shed the Belize stationing task. In Gibraltar the dockyard would close and the airfield be transferred to civil running; further savings might be considered if Spain joins NATO. There should be a hard look at Cyprus, though the political difficulties prevent assuming large savings at present. Modest measures, as already identified, to improve the general out-of-area flexibility of UK ground forces should proceed.

13. Annexes A-C set out the main features of the altered Service programmes, with alternatives for BAOR as indicated in paragraph 9 above. Annexes D-F compare "before" and "after" front lines; Annex G lists the main specific decisions which would need to be faced this year; and Annex H notes some of the locations in the UK where effects would be particularly felt. All these Annexes are at present broad indications; elements will need to be adjusted as work continues over the next month.

Industry and Employment

14. The UK would still be spending, in total, an increasing real amount on equipment. Some particular expectations would however be disappointed, and partly through a shift away from certain labour-intensive areas (most notably ship-building) and partly because of overseas purchases the number of jobs directly sustained in British industry would fall, from about 225,000 at present to an estimated 200,000. (The drop could be less if defence sales increased.)

15. Specific features would include these:

a. The vast majority of major future equipment projects would remain, as Annex I shows.

b. In particular, the UK would proceed with AV8B (the UK/US improved-Harrier purchase) and Sea Eagle (British Aerospace's air-launched anti-ship missile).

c. Warship building would be hard hit, and some yards would have to close.

d. British Aerospace and Marconi would lose prospective work in maritime guided weapons and electronics.

e. The long-term viability of Short's would be in question.

f. There seems no way of affording the Marconi heavyweight torpedo if the cost advantage of the US alternative proves anything like the £400M now suggested; but a UK/US bargain involving the Stingray lightweight torpedo would be sought.

g. The maritime helicopter to replace Sea King is a problem. The concept's place in the new programme is not firmly established and the cost is high. Given its importance to Westlands and the civil commercial prospects claimed for it may be best to sustain work into 1982 pending final decisions; but its long-term future must be a matter mainly for the Department of Industry and the market.

16. Defence employment would be hit in other areas also. Re-shaping the whole support base would be a complex affair and it is impossible to identify all the details now; but likely changes would include these:

a. As Annex I illustrates, Gibraltar, Chatham, and most of Portsmouth, dockyards would close as well as various other depots and installations.

b. The in-house R&D base would be cut, reducing the number of Establishments.

c. Training courses and other support would be pruned rigorously.

d. Including transfers from the public to the private sector (where, for example, as much as possible would be done in relation to the Royal Ordnance Factories) the number of MOD-employed UK-based civilians - already cut from 248,000 in 1979 to 231,000 now, and due to be 200,000 in 1984 - might come down eventually by about a further 20,000.

e. Service recruitment, particularly for the Royal Navy and the Army, would in most categories have to be sharply restrained.

f. It would be impossible to avoid redundancies, both in the Services (where officer numbers, especially in staff and support posts, would reduce substantially) and among civilian employees; the total redundancy in the Royal Navy would probably run to at least several thousands, and these would affect near-term costs.

Resources

17. There remains the key issue of resources. As explained the structure outlined in paragraphs 6-11 above and Annexes A-C was evolved broadly from the severe study assumption of Column 1 of the table on page 3 above. But even if the painful consequences of moving to such a structure was accepted a shift from current planned allocation to Column 1 throughout will not finance it properly, for two reasons. Firstly, Column 1 would at best barely sustain the structure even when it settles down. Support and stocks (which ought to be enhanced) are very tight; some war stocks are now down to 4/5 days at intensive combat levels whereas

intelligence sources indicate that the Warsaw Pact has 60 days of war combat stocks; some extremely bold assumptions about the magnitude and (still more) the timing of overhead reductions have yet to be validated and may prove over-optimistic; and to set long-term planning allocations at Column 1 would almost certainly recreate in a year or two hence, and at a lower level of defence, today's problem of a structure set at or over the extreme edge of what funding will just support. Secondly, Column 1 could not finance the new posture at all in the difficult early years where existing commitments give little room for manoeuvre, and where the complex shift to the new posture will itself impose some transitional costs in redundancies and the like. Column 1 could be approached next year, for example, only by arbitrary cuts in operational activity and training on a sweeping and indefensible scale, in effect bringing the Services almost to a halt.

18. At the other end of the spectrum if changes of the kind and scale - extensive and undoubtedly painful - which the new structure envisages were regarded as politically intolerable, the likelihood is broadly that to sustain the present programme would mean restoring allocations above the pre-November 1980 level and carrying them forward on the "NATO" basis producing a line of figures something like Column 3 of the table, but with the 3% carried forward by an extra 2 years, as agreed last week in NATO.

19. There is another course which would sustain both the United Kingdom's major commitment to a good defence effort and a move towards what the economy can afford by planning the forward defence programme on an intermediate basis, but with a long-term thrust coming progressively closer to Column 1. For the years 1982/83 and

and 1983/84 this would involve confirming the allocation published in March, plus the costs of Trident in those years and a similar approach in 1984/85. Thereafter, the basic assumption for planning would be to move to a level producing, in the second five years, figures somewhat closer to Column 1, and absorbing Trident within them.

20. This would give continuing if modest real growth over the period taken as a whole. A programme to match it will require early and painful choices, which will individually attract heated criticism from one interest or another, and will add to the near-term unemployment problem. Nevertheless, the United Kingdom effort would remain in the round a creditable one by any standard of international comparison, and capable of effective and positive presentation, especially if the change was presented by comparison with today's situation and not with aspired-to plans.

21. Under any hypothesis it would be highly important, for the management of the transition to the new structure, to have some inter-year flexibility on the lines being discussed with the Treasury.

Ministry of Defence

14th May 1981

ANNEX A

ROYAL NAVY

Aside from the strategic nuclear deterrent force, nuclear-powered hunter-killer submarines (SSNs) would go up from 12 now to 17 in 1991. Work would proceed with building new diesel-powered boats, but the number of diesel boats in service would fall from 16 now to 8 in 1991. The improved Mark 48 heavyweight torpedo would be bought from the US, if possible in some deal involving Stingray, which would continue.

2. The second new CVS (anti-submarine carrier) would be brought into service but not the third - ARK ROYAL, to be launched in June - unless one or other of the ships could be disposed of abroad. No more Sea Harriers would be bought.

3. The fleet of destroyers/frigates would be reduced from 59 now to 38 in 1986 and 36 in 1991 and reduce further thereafter. This would come about

a. by undertaking no more expensive mid-life modernisations; and

b. by disposing early of a considerable number of the Royal Navy's present surface ships. These would include the ASW carrier Hermes, the destroyer Bristol, and the amphibious assault ships Fearless and Intrepid. (This would bring forward to 1984 the date at which the Royal Marines are to lose their specialist amphibious landing capability.) Six older destroyers and sixteen older frigates would be sold or scrapped.

4. No more Type 42 (air-defence-optimised) ships would be ordered; planned improvements to their capability would be cut sharply; there would be no move to a new type in this role. Only at most two more of the complex Type 22 (anti-submarine-optimised) ships would be ordered and there would be a move to a smaller and simpler new ASW frigate, the Type 23.

5. The existing defensive mining capability would be abandoned as well as plans to update it to improve protection of our home waters. The number of mine-counter-measure ships would rise slightly; that of fleet auxiliaries would be halved by 1991. The size of the hydrographic fleet would be halved and the ice-patrol ship Endurance phased out in 1982.

6. Gibraltar dockyard would close by the end of 1982 and Chatham in 1984, and the scope of work at Portsmouth would be sharply reduced by 1984. Up to fourteen stores or other depots elsewhere in the UK would be closed.

7. The Royal Navy's manpower establishment would reduce from 68,000 now to 50,000 by 1986 and to 47,000 by 1991. Civilian manpower would reduce from 68,800 now to 48,500 by 1986.

ANNEX B

ARMY

Costings of two options for BAOR have been carried out:

Option A. Keep current task and 65 km forward-defence frontage. Establishment to be held tightly to the Brussels Treaty 55,000 (as compared with 58,400 now). Organisation to be three regular divisions (of which one brigade would be held in UK) plus a UK-based Territorial Army division, instead of the current four in-station armoured divisions.

Option B. Surrender forward-defence task, save for a "token" brigade, and provide a strong armoured forces as Northern Army Group reserve with 45,000 stationed troops in two regular divisions, plus a UK-based TA division.

2. The total Regular Army trained establishment, now some 142,300 would by 1988 be about 133,000 with Option A and 129,000 with Option B. Five major units would be disbanded in Option A. and ten in Option B. Option B would be rather more expensive than Option A over the next ten years because of the costs of change, but by then would be up to £100M a year cheaper.

3. The Territorial Army establishment would be increased from the present 73,000 to about 86,000.

4. Only one major Army equipment project (the Wavell data-handling system to help operational headquarters in 1 British Corps deal with intelligence and other information rapidly) would be cancelled,

but many planned buys would be cut or slowed down and various improvement programmes would be reduced. The buy of the new Challenger tank would be held at a bare one-division's worth. There would be a substantial reduction in the buy of the new mechanised combat vehicle and many of the present FV432 vehicles would be run on to the end of the century. Extra Milan infantry anti-tank guided missiles would be bought (including more for the TA), and war stocks of most levels of ammunition would be increased.

ANNEX C

ROYAL AIR FORCE

Overall, the RAF front line would decline from 649 aircraft to under 600 in 1983/84, and rise thereafter to 631 in 1986 and 662 by 1991.

2. The Tornado programme (now deeply committed, and made very inflexible by the complex collaborative arrangements) would be kept, but the option would be held open of taking the last 20 aircraft in the interception rather than the strike version for use in UK air defence.

3. An extra 36 Hawk trainers would be armed as supplementary fighters for UK defence, but any replacement of the Bloodhound SAM system would be postponed well in the 1990s. An examination would be carried out of bringing back the two Phantom squadrons from Germany for UK defence, putting Wildenrath airfield on care and maintenance but preserving the option of forward detachment.

4. The last three Nimrods (currently stored) would be brought into service in the maritime patrol role, and there would also be consideration of converting to this role the three Nimrods currently used on special duties (to which spare VC10s might be adapted). The Sea Eagle anti-ship missile programme would remain. Buccaneers would be run on in the maritime role, so relieving the (more expensive) Tornado front-line.

5. The remaining Vulcans would be disbanded early, before Tornado replaces them, and the start of the Jaguar run-down brought forward. The direct Jaguar replacement (AST 403 - the Trilateral Combat Aircraft) would be abandoned, accepting a lack of air combat capability.

60 Harrier AV8Bs would be produced in collaboration with the US. The JP233 anti-airfield weapon project would continue and new weapons for suppressing enemy air defences and for attack on armour would be bought.

6. To save money, over the next three years flying hours in most roles would be brought down close to the SHAPE minimum rate.

7. VC10s would replace Victor tankers used in combined tanker/transport roles. Replacement (eg by Jetstream) of present communications aircraft would be postponed until the later 1980s.

8. The RAF would cease to operate Gibraltar airfield.

SECRET

ROYAL NAVY

	1 April 1981		1 April 1986		1 April 1991	
	OPERATIONAL	TOTAL	OPERATIONAL	TOTAL	OPERATIONAL	TOTAL
SHIPS						
Nuclear Powered Strategic Ballistic Submarines (SSBNs)	2	4	3	4	2	4
Nuclear Powered Attack Submarines (SSNs)	8	12	13	16	13	17
Conventional Powered Attack Submarines (SSKs)	12	16	12	15	6	8
ASW Carriers (CVS)	1	2	1	2	2	2
Assault Ships (LPD)	1	2	0	0	0	0
Destroyers (DD)	10	13	10	14	11	14
Frigates (FF)	33	46	18	24	16	22
Mine Counter Measures Vessels (MCMV)	26	33	30	38	30	36
Hydrographic Survey Vessels	6	11	4	5	3	5
Royal Fleet Auxiliary (RFAs)	13	15	9	10	6	7

AIRCRAFT			
Sea Harrier	10	10	10
Sea King helicopter	32	32	32
Lynx helicopter	21	33	30
Wasp helicopter	23	2	2
WEAPONS STOCKS			
TORPEDOES	3036	2315	3130
SEADART (Area air defence missile)	570	920	1295
EXOCET (Ship to ship missile)	111	222	200
SUB-HARPOON (Submarine launched anti-ship missile)	0	265	369
MANPOWER			
RN(+ WRNS)	67976	50606	47444
ROYAL MARINES	7927	7883	7856
CIVILIAN	68654	48500	44200

ANNEX E

ARMY

This table shows 3 Regular Divisions permanently based in BAOR with 1 predominantly TA Division moving from the UK as a reinforcement for 1st British Corps. The first figure in each column shows the number of units (or of equipments) in place; the second figure shows numbers of reinforcing units from the UK; the figures in brackets show TA units. The table excludes battalions in Berlin (3), Hong Kong (5), Cyprus (1) and Gibraltar (1).

	1 April 1981		1 April 1986		1 April 1991	
	UK BASE	1(BR)Corps	UK BASE	1(BR)Corps	UK BASE	1(BR)Corps
Armoured Regiments	1	9	1	11	1	11
Armoured Reconnaissance Regiments	2	4+1 (2)	2	2+1 (2)	2	2 (3)
Artillery Regiments	2	13+1 (2)	2	12+1 (3)	2	12+1 (3)
Air Defence Regiments	2 Bty	2+1 (3)	2 Bty	2+1 (3)	2 Bty	2+1 (3)
Engineer Regiments	3 (1)	6+1 (5)	3 (1)	6+1 (5)	3 (1)	6+1 (5)
Infantry Battalions	27 (17)	14+4 (21)	26 (15)	13+6 (23)	24 (17)	13+6 (23)
SAS	1	- (2)	1	- (2)	1	- (2)
Army Air Corps Squadrons	2	10+2	2	9+2 (1)	2	9+2 (1)

PRINCIPAL EQUIPMENTS - (for 1(BR)Corps)

Tanks	719	764	764
Field Artillery	261+82	261+82	275+82
Air Defence Weapons	178+203	191+203	191+203
Armoured Personnel Carriers	1106	1106	1074
Medium Range Anti-Tank Guided Weapons	386+351	564+357	564+357
Helicopters	135+24	120+42	120+42

MANPOWER

Regular Army	142300	136800	133000
TA	73660	83660	88660
Civilian	53075	50600	50600
BAOR Locally Engaged Civilians	23000	22000	22000

RAF

AIRCRAFT	1 April 1981		1 April 1986		1 April 1991	
	UK	RAFG	UK	RAFG	UK	RAFG
Strike/Attack						
Vulcan	53	-	-	-	-	-
Tornado GR1	-	-	44	72	28	84
Buccaneer	25	15	29	-	29	-
Jaguar	-	48	-	-	-	-
Offensive Support						
Harrier	28	36	24	36	36	36
Jaguar	33	-	30	-	12	-
Air Defence						
Phantom	80	20	80	-	34	-
Lightning	34	-	34	-	-	-
Tornado F2	-	-	15	-	130	-
Bloodhound SAM - (Launchers/Missiles)	48/85	48/96	108/216	-	108/216	-
Rapier Short range A/D (Launchers/Missiles)	16/480	32/960	16/480	32/960	16/560	32/960
Maritime Patrol						
Nimrod	32	-	34	-	34	-
Vulcan (Reconnaissance)	8	-	-	-	-	-
Airborne Early Warning	11 Shackletons to be replaced by 11 Nimrods by 1 April 1986					
Air Transport	No change (11 VC10s; 50 Hercules, all based in the UK)					
Support Helicopters	57	13	58	23	54	23
Air-to-Air Refuelling						
Victor	19	-	19	-	19	-
VC10	-	-	8		8	-
Reconnaissance						
Canberra	22	-	-	-	-	-
Jaguar	12	12	12	12	12	-
Tornado	-	-	-	-	12	12
Nimrod R	3	-	3	-	3	-
Search and Rescue Helicopters	27	-	24	-	24	-

WEAPONS			
Air-to-Air Missiles	4686	5800	6800
Air-to-Surface Missiles	296	446	446
Conventional Bombs	12100	12100	12100
Airfield Attack Weapons	-	1500	1500
Defence Supression	-	200	750
Anti-Armour	27800	21600	22100
Torpedoes	447	477 ?	447
MANPOWER			
Service	93500	91000	91000
Civilian	28659	26400	26400

NOTE: The figures include in UK totals the following current overseas deployments Harrier: 4 in Belize, Support Helicopters 14 in Cyprus/Hong Kong. There are in addition 6 Regular RAF Regt Field Sqns throughout the period: Auxiliary Sqns will rise from 3 to 9.

ANNEX G

LIST OF THE MAJOR MEASURES WHICH HAVE BEEN IDENTIFIED FOR INCLUSION IN THE MAJOR STATEMENT IN JULY

Navy

1. Cancel ARK ROYAL third and last of class of new ASW carriers - to be launched by The Queen Mother on 2nd June, or announce the intention to sell one of the other two new ASW Carriers.

2. Dispose of HERMES carrier which entered service in early 1960s, three/four years earlier than planned.

3. Dispose this year (several years earlier than planned) of three County Class guided missile destroyers two of which only entered service in 1970.

4. Dispose of the Amphibious Assault Ships INTREPID (early in 1982) and FEARLESS (in 1984). They entered service in mid-1960s and had been planned to serve throughout the 1980s.

5. Dispose between 1981 and 1985 of 13 Leander class frigates which entered service in late 1960s (8 of which were modernised in the 1970s) and which it had been intended to retain until 1990s.

6. Dispose this year of eight Rothesay Class frigates which entered service in early 1960s and which it had been intended to transfer to reserve with subsequent disposal in mid/late 1980s.

7. Dispose of the Ice Patrol Ship ENDURANCE in 1982. Implications for UK support of Falkland Islands.

8. Halve hydrographic fleet with loss of capability of defence and civil surveys.

9. No modernisation of the latest class of Air Defence Destroyers (Type 42). These have been in service since late 1970s and seven are still under construction. They will now be disposed of from the early 1990s, much earlier than planned and there will be no Successor class of ship.

10. Sharp drop in other planned future shipbuilding orders - frigates, submarines and support ships.

11. Close Chatham dockyard by 1984 and Gibraltar dockyard by 1982 and considerably reduce Portsmouth dockyard by 1984.

12. Close about 14 naval oil fuel depots and stores and armament depots in the UK over the next few years.

13. Go for the US heavyweight torpedo instead of the Marconi option.

14. Make 1,500 naval officers and 5,000 ratings redundant by 1984/85; reduce total size of Navy by 17,000 by 1986.

15. Abandonment of the existing defensive mining capability and all plans to update it.

16. Cancellation of ship-borne air defence modernisation plans and contracts with British Aerospace, Marconi, Ferranti and Sperry.

Army

1. Reduction in size of Regular Army by over 9,000 by 1991.

2. Change in structure and level of stationed forces in BAOR.

3.* Increase in size (up by 13,000 by 1991) and rôle of TA.

4. Scaled down programme for new Armoured Personnel Carrier (MCV 80) - announced last year - affecting GKN and Rolls Royce Motors.

5. Cuts in Blowpipe improvements programme affecting Shorts (Belfast).

6. Defer by one year programme for new collaborative rocket launcher (MLRS).

7. Cancel Wavell Battlefield Communications System affecting Plesseys.

8. Cancel Boxer - a new Crisis Management Communications System, affecting GEC.

9.* Announcement of plan to buy self-propelled Rapier affecting BAe Dynamics.

Royal Air Force

1.* Reduce number of Tornado Strike version by 20 and increase number of air defence version correspondingly.

2.* Buy 60 AV8B improved Harrier in collaborative programme with US. Work for British Aerospace.

3.* Plan to acquire better weapons for Tornado and other aircraft.

4.* Convert VC10s for dual-purpose tanker/transport role, thus improving UK air defence.

5.* Convert three remaining Nimrods to Mk II standard improving this element of anti-submarine capability.

6.* Arm more Hawks for air defence of UK.

7. No provision for Jaguar replacement (AST 403).

8.* More use of RAF reserves for airfield defence.

9. Transfer Gibraltar airfield to civil operation.

10. Disband remaining Vulcan squadrons on 1st April 1982.

11. Defer for four years plans to acquire replacement communications aircraft.

12.* Continue Sea Eagle.

Other

1.* Firm plans for providing out-of-area capability.

2. Privatisation/Re-structuring of ROFs.

3. Re-organisation of R&D Establishments including privatisation and closure.

* These items are 'good news' domestically, although some (like withdrawal of Germany Phantoms) may not be welcome to NATO.

ANNEX H

DEFENCE EQUIPMENT

A. Major equipment programmes which will continue largely as planned.

Programme	£M September 1980 prices Costs
Tornado GR 1 aircraft for strike, interdiction, counter-air and reconnaissance operations.	3200
Tornado F2 air defence aircraft.	2300
Rapier ground to air low level air defence missile (towed and self-propelled versions).*	1240
Sting Ray lightweight torpedo (launched from ships and aircraft).	800
Sea Wolf shipborne close-range air defence missile system.	700
Improved Harrier Short Take Off/ Vertical Landing offensive support aircraft.	650
Nimrod MR2 long range maritime patrol aircraft for anti-submarine operations.	580
Ptarmigan tactical trunk communications system for BAOR.	550
SP 70 self-propelled artillery howitzer (including ammunition).	500
Ninrod Airborne Early Warning aircraft.	450
Lynx helicopter for anti-submarine and battlefield operations.	400
JP 233 air launched airfield attack weapon.	380

* some future elements of this programme are still in early definition stage.

B. Programmes which will continue but with reductions in expenditure during the period.

	Earlier planned costs	Revised programme costs	£M September 1980 prices
Armoured personnel carrier for infantry (Mechanised Combat Vehicle 80)	850	400	
Sea Dart shipborne surface to air medium range air defence missile and associated radars	900	470	
Challenger Main Battle Tank and tank improvement programme	800	650	
Nuclear powered fleet submarines	770	650	
Type 22 anti-submarine frigates	700	260	
Future heavyweight torpedo (revised programme assumes US alternative)	400	280	
Future Support Ships for the Fleet *	400	350	
New class of diesel-powered patrol submarines	350	250	
Proposed future class of Frigates (Type 23)*	300	200	

* programmes still at an early stage in planning

C. Programme subject to further consideration

Replacement for the Sea King anti-submarine helicopter	650	500	

D. Programme to be discontinued	Cost
AST 403 (replacement aircraft for Jaguar offensive support aircraft)	350

Notes

1. Criterion for major programmes is a planned spend of £300M or more over 1982/83 - 1990/91. The costs relate to these years.

2. Warship costs exclude the weapon systems fitted in the ships. (These systems appear separately in the table, where applicable).

ANNEX I

DEFENCE PROGRAMME

MAJOR LOCATIONS AFFECTED BY PROPOSED CHANGES

A. SERVICE/CIVILIAN UNITS ETC

		Civilian Staff (Figs approx) Likely redundancies
1. Royal Navy		
a. Dockyards and RN Support Establishments		
(i)	Chatham area	4600
(ii)	Portsmouth area	4200
(iii)	South Wales	1050
(iv)	Gilbraltar	1100

b. RN Training Establishments and Barracks

Based on the assumption of a substantial move towards ship-based training preliminary indications of job losses are:

		Service	Civilian
(i)	London and Home Counties		
	(a) within 12 months	90	20
	(b) later	360	275
(ii)	Portsmouth area		
	(a) within 12 months	10	10
	(b) later	1530	1050
(iii)	W. Country		
	(a) within 12 months	340	100
	(b) later	300	310
(iv)	Gibraltar	90	70

2. Army

A number of major establishments will close in due course, as the UK training organisation, the Army's infrastructure run down.

For example, there are question marks over the Junior Leaders regiment at Dover and the Junior Soldiers unit at Taunton. Details of employment changes will depend on relocation of units from BAOR, expansion of the TA, the scope for using other surplus defence accommodation and on putting units in the best place for their role (e.g. training, reinforcement).

3. RAF

Major changes:

		Job losses	
a.	As soon as possible:	Service	Civilian
(i)	Close Maintenance Unit, Kemble, Gloucestershire;		500
(ii)	Close one RAF Hospital (unspecified);	125 officers	
(iii)	Cease to operate Gibraltar airfield.	750 airmen	
b.	Withdraw Phantoms from RAF Wildenrath (to be put on care and maintenance) to Leuchars, 1984/5.		

4. Other Units

Closure of the National Defence College at Latimer-within the year - will result in the loss of 80 civilian jobs. Further reductions - unquantifiable at present - are envisaged in Service medical facilities.

5. Service Redundancies

The Navy foresee redundancies of about 1500 officers and 5000 ratings between early 1982 and 1984/85. The Army would also need a redundancy scheme the size of which is not yet known. The RAF could manage without.

B. R & D ESTABLISHMENTS - PROPOSED CLOSURES

It has been assumed that the following Establishments would close and the sites be disposed of or transferred to industry:-

Establishment	Location
National Gas Turbine Establishment	Pyestock
Propellants, Explosives and Rocket Motor Establishment	Westcott, Aylesbury and Waltham Abbey
Military Vehicles and Engineering Establishment	Chobham, Surrey and Christchurch, Dorset
Royal Aircraft Establishment, Tunnel Site	Bedford
Admiralty Surface Weapons Establishment	Portsdown

Overall reductions in Civil Service manpower at R & D Establishments total about 5,000. The prospects of industry's providing alternative employment cannot be assessed at this stage. Closures are assumed to take place in 1983/84 except at Portsdown, which is assumed to close in 1986/87. Action on disposal or transfer would start well in advance at all Establishments.

C. EMPLOYMENT IMPLICATIONS FOR INDUSTRY OF MEASURES LISTED IN ANNEX G

MEASURE	FIRM/LOCATION	CHANGE IN EMPLOYMENT See Note (1)	TIMING
Cancel Sea Dart system improvements	BAe Dynamics Hatfield & Bristol	- 150	from 1981/2
	Marconi Radar Leicester	-1200	
	Ferranti Edinburgh	- 150	
Reduction in shipbuilding orders	Vickers Barrow	Up to -20000 in total	from 1981/2
	Yarrow Clyde		
	Vosper Southampton		
	Swan-Hunter Newcastle		
	Cammell-Laird Birkenhead		
	Scott-Lithgow Clyde		
Buy US Heavy-weight Torpedo	Marconi Space and Defence Systems, Neston & Portsmouth	- 400	in 1981/2
		-3000	in 1986/7
	Marconi Avionics Basildon		
Reduce orders of infantry combat vehicle (MCV 80)	GKN Wolverhampton/Telford	Not yet identifiable.	
	Rolls Royce Shrewsbury		
	Vickers Newcastle		
Cancel Blowpipe Quadruple Towed Launcher	Shorts Belfast	-120	1981-84
Cancel WAVELL (Army Automatic Data Processing system)	Plessey Liverpool	- 40	Immediately - more in later years
	Plessey Weybridge	- 160	
Cancel special tank ammunition (Depleted Uranium)	BNFL Preston	-30-50	Immediately

MEASURE	FIRM/LOCATION	CHANGE IN EMPLOYMENT	TIMING
Cancel BOXER (military communication system)	GEC Telecoms Coventry	Not yet known	from 1983/4
Reduce buy of CLANSMAN (Army tactical radio)	MSDS Hillend MEL Crawley Plessey Telford Racal Wembley & Nottingham	Not yet known	from 1983/4
Defer SP70 self propelled gun by 1 year	ROF Nottingham	- 100	in 1984
Buy 60 Harrier AV8B	BAe Kingston Rolls Royce Bristol (and other Equipment suppliers)	+ 2-3000 at peak	in 1987
Convert Nimrods to Mk II	BAe Woodford	+ 200 at peak	in 1983/4
Delete provision for AST 403	BAe Warton Rolls Royce Bristol (and other Avionics Companies)	-3000 at peak -1000 in early -1900 1990s	Losses start in mid-80s
Restructure ROFs	ROF Birtley Bishopton Blackburn Bridgewater Chorley Enfield Glascoed Leeds Nottingham Patricroft Radway Green Featherstone (agency factories) Powfoot (agency factories) London (HQ)	See note 2.	

(1) Loss (= -) or gain/maintenance (= +) of jobs or job opportunities. Includes actual redundancies, and new job opportunities that will be foregone.

(2) Depends on terms of restructuring/privatisation. Total workforce is 21,000. Likely timing is between 1981 and 1983.

1

Copy No ONE of 7 copies

MO 9

PERSONAL

PRIME MINISTER

THE DEFENCE PROGRAMME

I need your guidance urgently on the next stage of my radical look at the defence programme. The forward momentum of the Review must be maintained, otherwise the initiative for reaching necessary decisions will be wrested from me by those who counsel delay, excessive consultation with the Allies, new option exercises etc etc - and all the other Whitehall devices for avoiding harsh and unpleasant changes.

2. I enclose my formal Minute to you, setting out the options. It has only been seen by a small circle, including the Chiefs of Staff. I cannot, however, give you the necessary guidance unless I also include this personal minute, which goes only to the colleagues who will attend your meeting next week.

The "Threat" - Even worse than feared. Also political uncertainty.

3. Unless colleagues are in receipt of a constant flow of military intelligence - and are working in Defence - it is difficult to grasp the full meaning of the "threat". May I just say, as an extreme sceptic of everything I am told, that I am appalled by the accelerating growth of Soviet military strength. I fear that the military/scientific establishment is gaining control of the Kremlin. So great are the vested interests of this huge Defence elite, that I do not see how the Kremlin can change course towards a de-escalation of the arms race.

4. Inevitably, as the gap widens even further between the Defence capabilities of the Warsaw Pact and NATO, we will enter an

exceptionally dangerous period. It will be enhanced by growing political instability within and around the Soviet Empire, changes in the Soviet leadership, and the weakening of the European nuclear shield as a result of (necessary?) arms control negotiations on LRTNF weapons.

5. I fear that our European (and Canadian) allies will be increasingly unreliable and feeble although NATO will somehow "hang together". We must not exclude the ultimate and remote contingency - not for the first time this century - that the survival of freedom will depend on the United States and ourselves. And whilst we must deter - and therefore be prepared to fight a war on the Central Front and in the Atlantic we must not commit again the cardinal error of neglecting the UK base - not least because it is the ultimate re-inforcement base for NATO.

The Need for Change

6. The long term plans to which the Services are currently working envisage some strengthening, albeit marginal, of the UK base; provide for a small out-of-area capability; and maintain and in some cases enhance our front-line force declarations to NATO. The cost of this conventional programme is very great. To it must now be added the cost of Trident II, if it is confirmed that we do have to go for it (up to £1 billion more than Trident I). The cost of sustaining the whole of this programme would, I estimate, require at least an additional £300M a year above the current provision. Even then I cannot guarantee that rising equipment costs will not cause continuing and increasing difficulty. All the evidence is that this is what would happen. It is also clear to me that this would

simply postpone the day when we had to tackle the deep-seated imbalances in our conventional programme.

7. I am therefore recommending a radical change in the direction of the 10 year defence programme, involving extremely difficult political decisions, as I shall explain. If we decide to act boldly now then by the mid-80s we should be able to sustain a balanced and effective defence NATO contribution in line with our likely economic circumstances, including the costs of Trident II.

8. The problem lies in the next four or five years. I need first as assurance that the published PESC allocations will not be reduced and will be carried forward at 3% to 1984/85, and then I will be able to turn round the conventional programme on to its new, lower, path. We have almost no room for manoeuvre over these critical years, and I need additional funds to cope with Trident up to 1984/85 (a rough forecast is £140M in 1982/83; £180M in 1983/84; £290M in 1984/85). I cannot bring about the necessary change and manage Trident, within my current PESC allocation - let alone produce actual short-term savings. For that reason I cannot produce any sensible answer to the 3%/5%/7½% PESC exercise which has just been commissioned. I am operating in a much deeper way, constructing a new long-term defence programme; this is not compatible with short-run cuts which could only involve the virtual cessation of current activity for the Forces themselves.

Our operational Capability

9. I have looked at the operational tasks and effectiveness of each of our Services. We are, of course, part of the collective defence

of NATO, but, for the reasons given above, it would be too great a risk to cut out totally a major capability of our Services. It would also be politically impossible to go for too great a degree of specialisation and therefore dependence on others.

10. With this in mind I have examined in depth a number of options for the size of the Army. We have costed:

Army options

a. a reduction in our contribution on the central front from 4 divisions to 3 divisions in BAOR with a reduction in the regular Army of approximately 5,000 men and also;

b. a larger reduction from 4 to 2 divisions in BAOR involving an even greater reduction in the size of our regular Army and our withdrawal from the central front into a reserve role.

11. This latter alternative is in fact initially more expensive than the first. In any event, with Northern Ireland civil contingencies etc I personally doubt whether we can risk a much smaller regular Army than say 130,000 regulars (against over 140,000 now) nor risk the damage this would do to the cohesion of the Alliance and our problems in the Community.

RAF - same

12. There is little scope for a change in the size, role and cost of the RAF and indeed I can see no way of doing as much as we should - not least because of Tornado - towards the air defence of the United Kingdom.

13. I have been forced to look critically at the role of the Royal Navy. I am being accused by the Admirals of having pre-judged the exercise in favour of a continental strategy. I have been pressed by them to examine the financial consequences of our pulling out of BAOR

altogether and concentrating our resources on our traditional maritime role on the assumption that our Allies would take over our responsibilities on the 65 kilometers of the central front. It would of course be possible to try and cost in detail this exercise but for the reasons given above I simply do not believe that it is a coherent or viable option and I have therefore been driven back to looking at the role of the surface fleet.

Navy

14. I have become increasingly sceptical (as has much scientific and other strategic opinion inside and outside Government, despite the outrage to Naval tradition) of the viability of the surface fleet in the Atlantic, in face of the increasingly long-range submarine and air launched missile forces of the Russians, for the fleet's prime role, that of Anti Submarine Warfare (ASW). I believe this is the prime area where we should look for adjustment. We ought increasingly to concentrate our effort in Atlantic on nuclear submarines and Nimrod maritime patrol aircraft - and switch from expensive frigates to cheaper ships with towed array (listening devices for ASW). I need more time to take final decisions on an ASW helicopter. The sharpest changes will be in cutting back on shipbuilding, (although orders for ships will continue) shortening the life of many of our older ships, and closing two dockyards and many naval shore establishments (with more training at sea).

15. I accept however that the surface fleet, in its reduced form and with much cheaper new vessels, will still have a major "deterrence by presence" role both in the NATO area and out of it. The new carriers might be declared to SACLANT but we would use them for "out of area" tasks and avoid the huge expense of seeking to protect them against sophisticated Soviet forces like the Backfire aircraft and cruise missile firing submarines.

Conclusions

16. The changes which I recommend to restore a balance in our forward programme for our Forces are large indeed. There is ample room for disagreement, of course, about my personal recommendations. But there is no easier or cheaper way of achieving this objective. Indeed, if we resile from action now, we face a degraded capability and rising costs.

17. We can run down our civilian support staff - if my proposals are accepted, this will mean a reduction of 50,000 anyhow - but most of them are performing essential service tasks. Indeed they are effectively in uniform already.

18. We can withdraw from forward defence on the Central Front (as the Admirals recommend) but only, in my view, at added cost - and at the risk of seriously damaging NATO.

19. The proposals are highly controversial - the Naval lobby is very strong and many marginal seats are involved in dockyard and other closures - but I think we can win the argument and show these changes are to the nation's advantage - but only on two conditions.

20. First we must show that (1) we are not reducing Defence spending but are re-organising our defences within the 3% guidelines and (2) that in the changes proposed, Trident is not the cause of all our difficulties. The Chiefs of Staff say correctly that we are cutting substantially from planned and essential improvements. But as Annexes D - F of the main paper show quite clearly (except in the case of the numbers of frigates) we are modernising our existing capital stock, although to a much lesser degree than we had hoped, and we are generally enhancing our war stocks.

21. My judgement is, therefore, that given the current PESC provision plus around £600M for Trident over the next three years we can pull it off. With anything less than this - we are both in deep political

trouble, and in ever rising costs. I seek the guidance of colleagues on how I prepare for OD, prior to making proposals to our NATO allies in early June.

22. Copies of this minute only go to the Home Secretary, the Foreign and Commonwealth Secretary, the Chancellor of the Exchequer and the Secretary of State for Industry; and to Sir Robert Armstrong.

JW

Ministry of Defence
14th May 1981

6

MO 9

PRIME MINISTER

THE DEFENCE PROGRAMME: HMS ARK ROYAL

There is one particularly awkward and pressing question arising on the Royal Naval programme - my minute to you of today refers - which I must draw to your particular attention but in which I hope that we do not need to get too bogged down on Monday.

2. This relates to HMS ARK ROYAL. You will see from Annex A to my main paper that the Naval Staff are proposing the cancellation of HMS ARK ROYAL after her launching. ARK ROYAL is the third of the class of anti-submarine carriers, one of which INVINCIBLE is already in service and the other of which ILLUSTRIOUS will enter service next year, and be fully operational in March 1983. I am clear that for the reasons explained in my paper, one of these must be got out of the programme; but I am equally clear that this cannot be ARK ROYAL. Queen Elizabeth The Queen Mother is due to launch her - with the maximum publicity, and on plans laid long ago - on 2nd June and I am to make a speech immediately after the launching. The high profile of the launch, and the very particular associations the name has, both for the Royal Navy and the general public, make it in my view politically unthinkable that we should move to putting her in mothballs in June or July. But what I think that we might do is explore further the idea, on which I have already taken some very gentle soundings, that we might sell or lease either INVINCIBLE or ILLUSTRIOUS to the Australians, who are in the market for this

kind of ship although at present, because of the importance they attach to commonality with the United States, they are looking to the US Iwo Jima class. If you agree I suggest that you might send Malcolm Fraser a message soon to get the ball rolling and we could follow this up when his Defence Minister Denis Killen is in England towards the end of this month. I could also explore with Caspar Weinberger at the same time whether the Americans would also be interested in one of the two carriers.

3. If you are content for me to pursue this, perhaps you might like to guide discussion at Monday's meeting accordingly; I would then put a plan to you?

4. You should know that, in addition to this proposal in respect of HMS ARK ROYAL, the Naval Staff are proposing that HMY BRITANNIA should be retired in 1983 when she would next be due for a four-month refit! I am equally convinced that this is not on although we could review the position before the following refit in 1987. In any case the resultant savings would be small - £4.8 millions over the next nine years. I would propose to tell the Naval Staff to forget it.

5. Because the above raises foreign policy implications I am sending a copy of this minute to Peter Carrington, but not to our other colleagues who will be at the Monday meeting. A copy also goes to Sir Robert Armstrong. Copied also to Chancellor of Exchequer, Home Secretary and S/S Industry.

To keep Ark Royal will cost us an additional £200 million - less any proceeds we received from selling another carrier. You can see the problems! JN.

Ministry of Defence

14th May 1981

SECRET

5

PRIME MINISTER

DEFENCE PROGRAMME

These are the papers for your meeting with colleagues on Monday evening on the future of the defence programme. You will want to study them in detail over the weekend (by when we should also have a Cabinet Office brief). But if you have time this evening, you might like to take a first look at them, and in particular at John Nott's personal minute immediately below (which the Chiefs of Staff have not seen). His proposals are broadly those he sketched out when he saw you some days ago.

There is also in the box but separate from the bundle of papers below, a minute from Mr Nott about the particular problem of HMS Ark Royal.

C. A. WHITMORE

14 May, 1981

SECRET

4

Prime Minister.

Even if you were ready to see Admiral Lewin in principle before Monday morning's meeting of Ministers, your diary for Friday and Monday is such that we could not fit him in. I have explained this to Mr Nott's office, who tell me that Mr Nott is not urging you to see Admiral Lewin before Monday.

MO 9

PRIME MINISTER

I have undertaken to the Chief of the Naval Staff to submit to you the request in his minute to me, attached, that you should see him before you discuss with me and colleagues directly concerned my proposals on the future shape of the defence programme.

You have in any case agreed to see the Chiefs of Staff collectively following Monday's meeting. If, after that, Admiral Lewin still wants to see you privately (presumably to offer his resignation) I think you will have to grant him an interview.

May we proceed in this way?

14.V.

2. I hope to put to you tomorrow evening the paper of which CNS has seen a draft.

JN.

Ministry of Defence

13th May 1981

Yes

MT

SECRET PERSONAL

No. 1500/40

Secretary of State

THE DEFENCE PROGRAMME

Reference:

A. Draft paper to Ministers

1. Although you are already aware of my views I feel I must put on record my disagreement with your proposals.

2. Such a step change in our conventional naval capability will cause disproportionate damage both to our National and to our Alliance interests: the former because we are an island dependent on seaborne trade and because much of our political influence in Europe and world-wide depends upon naval power and presence - a principle from which the Soviets and the French continue to derive great benefit: the latter because of its impact on NATO's ready forces to deter and confront the expanding Soviet Navy and because it impacts upon the crucial linkage of the US to Europe. At a time when the capability to deter Soviet aggression outside Europe is becoming increasingly important it makes no sense to slash the only part of our defence capability which can contribute to this deterrence on a continuing day to day basis.

3. I consider your proposals for the Navy of the future to be irresponsible and damaging to the short and long term interests of our country. My advice has been disregarded. I must ask for the opportunity of expressing my views personally to the Prime Minister before Ministers meet with her to discuss your proposals.

First Sea Lord

13 May 1981

SECRET PERSONAL

c.c. Master set.
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[initials] PRESS OFF

SUBJECT.

PRIME MINISTER'S TELEPHONE CONVERSATION WITH SECRETARY OF STATE FOR DEFENCE: MONDAY 11 MAY 1981

Secretary o f State for Defence: I am just going to NATO for 3 days and I just had a awful thought and that is you are seeing your German colleague today and tomorrow, it is just that if my subject comes up at all - which I doubt if it will - but if it were to you will be given this coming weekend a first full report from me on the state of my review and there are people around me and no doubt elsewhere who are urging that we must go into a long period of consultation on all this and I think it will be quite impossible, assuming we can all agree what to do, if we go into long periods of consultation with everybody and I think what we ought to do is make a number of propositions to our Allies and then we can consult them on the basis of certain propositions which I think we will have to make acceptable to them. But I hope you can ensure that none of my options are processed in the next two days.

Prime Minister: I don't think they will be because I think there is another new uncertainty since yesterday.

S/S: Absolutely. I think in fact that the direction in which I will be recommending with options to you I think becomes all the more apposite in view of the result. But the only point that I am really trying to make is that of course the Foreign Office want to consult everybody in sight on everything and unless we can keep all our options open, at least until we have discussed it, I think we will be in a very difficult position.

PM: All right. John what was the origin of - there was a recent article or review by someone saying that all the Russian stuff is rotten anyway.

S/S: The origin of that is the Marxists and Trots in World in Action and it would be a typical Socialist plot if they put a television programme on saying that the Soviets are incapable of doing anything. I think it all fits in.

PM: Was it shown in the States?

S/S: I think it was a World in Action programme which said that they were all very inefficient. I wouldn't believe a word of that.

PM: No, no. It is obviously a subversive thing but I was horrified that - I had forgotten it was World in Action. I telephonedPeter yesterday because, you know, they had a meeting. I understand that our friends are in just as much difficulty as we are. But we are not going to close any options.

S/S: Just one thing that is worth contemplating but I think that probably it won't come up at all at your meeting today and tomorrow. There was, if you will allow me to say so, quite a good article in The Economist this week about the number 3 article and indeed that article is correct, that the whole thing needs rethinking but until we have had a look at our position, I think it is difficult for us to make a lead in that area.

PM: Well we tried last time we had this and got nowhere.

S/S: I am sorry to disturb your breakfast.

PM. All right. Bye John.

2.

Mrs Stephens

Prime Minister.

1. MR. WHITMORE
2. PRIME MINISTER

This meeting will be immediately after you return from Brighton.

12/

MG

Defence Programme Meeting

The Foreign Secretary has cancelled a dinner in Brussels on Monday 18 May to enable this meeting to take place. I have told the others required, namely Home Secretary, Chancellor, Secretary of State for Defence and Secretary of State for Industry, that they have to cancel whatever engagements they have got and that the meeting will take place at 1830 hours at No. 10 that evening. We have had to postpone the meeting with the 1922 Executive to enable this meeting to proceed. Ian has rearranged.

There was absolutely no other time at all between now and the May recess when I could get the above together because either the Foreign Secretary was abroad or the Chancellor.

CJ.

11 May 1981

CONFIDENTIAL

British Embassy
Jedda

11 May 1981

Michael Alexander Esq
No 10 Downing Street

Dear Michael.

DEFENCE SALES: TRAINING COURSES

1. During the Prime Minister's visit to Riyadh she expressed a keen interest in the difficulties that have regularly arisen over the years about the prices we charge for training and the disadvantage at which those prices put our sales effort. You were not in the room at the time and she asked me for a note on the subject. I told her that there was already a note among her briefs and I gave my copy of that particular brief to your Private Office with suitable underlinings. I also referred to that brief in my despatch on the visit.

2. One of the dumbfounding things which the brief said was, as I recall, that there was no evidence that our competitors offered any better rates over training costs. I now enclose a piece of evidence in the form of a telegram sent by my Defence Section to the Ministry of Defence.

Yours ever

James

James Craig

CONFIDENTIAL

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TO MODUK
TELNO Z8G/365 OF 7 MAY

FROM ADA1 FOR CARTER MDS 2 AND D SALES 1. IMS ARTY PACKAGE. REF D/MD/HDS/77/5/14 OF 23 MAR 81 GIVING ARTY COURSES DETAILS (NOT TO SALES 1).

1. COMD SAUDI ARTY SCH HAS TOLD IMS:
A. TOP STUDENT ON IMS GSR COURSE NOW NOMINATED FOR LONG GUNNERY COURSE IN USA.

B. THOUGH UK COURSES PREFERRED HE CONSIDERS PRICES QUOTE EXORBITANT UNQUOTE. US/FRENCH PRICES QUOTE VERY VERY MUCH CHEAPER UNQUOTE AND WILL ORIENTATE STUDENTS TO THOSE NATIONS EQPTS.

2. BEARING IN MIND OUR HOPES FOR FURTHER ARTY SALES NOT LEAST FH7Ø, IS THERE ANYTHING THAT CAN BE DONE TO AVOID POTENTIAL DISASTER BY:
A. GETTING COURSE COSTS LOWERED CONSIDERABLY
OR
B. OBTAINING D SALES/IMS SUBSIDY TO SAME END.

CRAIG
BT

NNNN

CONFIDENTIAL

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~XXXXXXX~~ 218 2111/3

MO 9

7th May 1981

Mrs Stephens,

Can you now go forward on X/ please.
I see no need to do anything about Y/ until the 19 May meeting has taken place.

Dear Clive,

THE DEFENCE PROGRAMME

As you know, my Secretary of State proposes to bring to OD within the next few weeks his proposals on the future shape of the Defence Programme. I understand that he has explained to the Prime Minister that he would hope, before that, to have the opportunity to have a discussion with the Prime Minister, and with the other colleagues most directly concerned. He plans to minute the Prime Minister towards the end of next week.

X I understand from David Wright in the Cabinet Office that it might be possible for a meeting to be arranged for the afternoon of Tuesday 19th May, and I hope that that may be confirmed; my Secretary of State hopes that up to two hours could be set aside for a discussion.

Y I understand that my Secretary of State also explained to the Prime Minister that he would be grateful if, subsequent to that meeting, she would agree to receive the Chiefs of Staff with him so that the Chiefs of Staff could let her have their views.

I am sending copies of this letter to John Halliday (Home Office), John Wiggins (HM Treasury), George Walden (FCO), Ian Ellison (Department of Industry) and David Wright (Cabinet Office).

Yours ever,
Brian

(B M NORBURY)

C A Whitmore Esq

CONFIDENTIAL

PMG NOTE 11/81

THE DEFENCE ESTIMATES 1981 : MINISTERIAL BRIEFING NOTE

1. This year's Defence White Paper follows, and develops further, the improved format and presentation introduced last year. It is in two volumes, the second containing a comprehensive collection of defence statistics. The first volume discusses clearly and frankly the issues of the past twelve months and gives new information on all areas of defence activity. It includes a number of new-style, self-contained passages (printed on blue) which provide deeper background or a more free-ranging analysis of policy issues. The chapters have been grouped into four sections to impose some form on the large number of topics discussed and to make the Statement more accessible to the general reader.

Introduction

2. The Secretary of State sets out frankly the conflicting pressures on the defence programme: the growing threat; economic constraints; escalating costs of equipment; and equipment stock unbalanced from the effects of previous cutbacks, and over-severe limitations on activity. The way ahead lies in looking realistically at the way we fulfil our basic roles, and in measures to allow us to meet them more effectively without a massive real increase in expenditure. The Secretary of State will be examining this in consultation with the Chiefs of Staff and with our allies in the coming months.

Part One - Policy

3. In the past year public interest in defence has been heightened both by outside events and by Government decisions. The Soviet Union is developing formidable military forces and has demonstrated, in Afghanistan, its readiness to use them. But challenges to Western interests are not solely Soviet-inspired (eg the Iraq/Iran conflict) and do not always take overt military form. The Western response must make use of defence assistance to local states, and periodic force deployments, as well as maintaining the capacity to intervene directly when necessary. NATO provides a forum for discussing these matters and working towards common approaches. The Alliance's main and paramount

responsibility remains, however, to meet the growing threat in its own area and the need for fresh efforts has been underlined by recent Soviet actions. These trends have also revived questions about the balance of effort within NATO, which will need more work in the coming year.

4. Arms Control. The Government is committed to seeking worthwhile arms control agreements, based on a clear assessment of the realities of international security. Progress has been affected by events in Afghanistan and elsewhere.

Part Two - Roles

5. Our defence policy is moulded by many factors: resources, finance, and the complex pattern of political interests within the Alliance. A passage on "Britain within NATO" examines the background to any reassessment of how our basic roles are performed.

6. Nuclear Issues. 1980 saw two important decisions in nuclear policy: the planned purchase of Trident and the choice of sites for US cruise missiles in the United Kingdom. A major statement of Government thinking on nuclear weapons and deterrence forms part of Chapter 2. Our possession of nuclear weapons is an integral part of NATO's deterrent and defensive strategy, the purpose of which is to prevent war by keeping it clear in a potential agressor's mind that he could not make any move against NATO without the risk of responses bringing unacceptable damage to himself. Possession of nuclear weapons makes war less, not more, likely.

7. Conventional Defence. The Warsaw Pact has made major qualitative strides in its conventional forces, on top of its clear numerical superiority. Offensive and worldwide capabilities have been enhanced. NATO cannot rely on nuclear strength alone to counter these forces, but must maintain and improve its own conventional capabilities, to which the United Kingdom contributes significantly on the Central Front, in the Eastern Atlantic, in defence of the UK base, and in specialist reinforcement. The roles and operating concepts of our forces are described and illustrated more fully in past White Papers, but it is made clear

that this picture - in face of a changing environment - cannot be regarded as a static one.

8. Outside the NATO Area. Britain has a continuing interest in, and important contribution to make to, worldwide defence through military assistance, deployments and the maintenance of intervention capability. This capability is being modestly enhanced, though there is no question of our creating a new earmarked "intervention force" or restoring our old presence "East of Suez". In times of threat to Western interests outside NATO we would expect to co-operate with regional states concerned and with the US and/or other allies.

Part Three - Resources

9. This section deals first with the Services as a "resource" of the community in their demanding and often dangerous work in Northern Ireland, search and rescue, bomb disposal and so forth. It then looks at the resources on which defence itself draws, starting with the complex problems of managing a defence equipment programme where the increasing threat and the price of equipment pull towards greater sophistication and expense, and financial and other resource constraints pull the other way. Procurement policy and the benefits of buying British are thoroughly examined in a separate passage. Chapter 7 looks at human resources - both Service and civilian personnel - and discusses the policy tasks and practical problems involved in their effective management.

Part Four - Money

10. Defence expenditure for the past year rose by about 5% in real terms. Defence estimates for 1981/82 total £12,275 million. 1980/81 was a difficult year for budgetary management. Despite increases in the cash limit, strict measures were necessary to control expenditure as industry short of civil orders concentrated on defence work.

11. All activity in defence is conducted against a background of strict "value for money" scrutiny. There are constant efforts to eliminate waste. The Statement summarises the findings of the past year's studies in this field.

Chancellor of the Duchy of Lancaster and
Paymaster General
Privy Council Office
68 Whitehall
LONDON SW1

April 1981

cc PS
PS/LPS
PS/Mr Ilard
PS/PUS
Chief Clerk
Sir A Acland
Mr P Mobsley 16/4.

FCS/81/46

SECRETARY OF STATE FOR DEFENCE

Training Charges

1. The letter of 6 April from Number 10 to your Private Secretary refers to the damage to British interests in Saudi Arabia as a result of the over-zealous recovery of charges for SAS training. This, I think, highlights a wider problem over the impact of MOD training charges on our interests abroad which has concerned me for some time.

2. When colleagues considered the MISC 42 reports, it was accepted that full costs (as defined by the Treasury) or as near full costs as the market would bear, should continue to be the basis of charging policy. I understand that, in endorsing subsequently the scale of charges to be made for training in the UK, you directed that there should be some flexibility; especially where there is a direct defence policy interest (including defences sales). This is a welcome move. No doubt your officials will now be considering how to implement your directions. You may therefore like to have a note of how we here see the problem.

3. Clearly problems exist. My attention has been drawn to a number of instances where our charging arrangements may be having an adverse effect on our national interests. One in particular, on which our officials have been in touch, is the charge we make for Canadian work-up training and the possible reciprocal (and costly) effect on what the Canadians may charge us for our use of

/their

their facilities. We have also had recent indications from the Ambassador in Oslo that the Norwegians may be turning elsewhere, perhaps to the Dutch, for training because our costs are too high. The latest indications we have of dissatisfaction with the level of our charges come from a report by the leader of the Red Arrows team to the Middle East. You may have seen his signal of 24 March, reporting on representations made to him on the high cost of British training. These and other examples, coming as they do on top of the evidence last year that third world countries like Ghana, Kenya and Malaysia had to reduce the amount of training they could buy from us, are worrying. Not only does this prompt such countries to look to us to provide an increasing level of subsidised help under the UKMTAS (the level of which is not increasing in real terms), but there is surely a risk of pricing ourselves out of the market. Worse, are we in some instances, eg that of Canada, in danger of cutting off our nose to spite our face?

4. The examples, to which I have referred, relate only to past experience. I understand however that a further very substantial rise in charges is envisaged for 1981/82. This increase will make our problems worse.

5. I entirely understand the difficulties which you face with the Defence Budget. Clearly any revenue you can generate is helpful. But in the longer term we may be in danger of reducing revenue in real terms, since demand cannot be infinitely elastic. I am sure that your initiative in relation to charges will be implemented in a way which meets our general need to maintain, by training and sales, good defence relations with friendly

/foreign

friendly foreign states as well as satisfying your particular need to recoup as large a proportion as possible of your costs. My officials would be glad to give whatever help they can to yours in working out details of a more flexible approach.

6. The letter from Number 10 to which I referred also touched on the related question of the allocation of training places. I agree that this can sometimes present difficulties, particularly with Staff Colleges where competition is fierce. One factor is the demand; another is the ability of friendly countries to provide suitable candidates. Clearly we do need to give careful thought about which countries should be offered slots and in what numbers. Our officials are in touch on this. I believe that it is in our interests to do all we can to identify and meet the effective demand.

7. I am copying this minute to the Prime Minister, the Chancellor of the Exchequer and to Sir Robert Armstrong.

(CARRINGTON)

Foreign and Commonwealth Office
15 April 1981

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Defence

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~930 7612~~ 218 2111/3

Mo 21/2/26

20th March 1981

Dear John,

STATEMENT ON THE DEFENCE ESTIMATES 1981

Cabinet yesterday approved the text of my Secretary of State's Statement on Defence Estimates (his memorandum C(81)11) subject to minor drafting amendments.

We now need amendments, if any, very quickly indeed, and I shall be working on the basis that unless we are advised to the contrary by 5.00pm on Monday 23rd March (calls going, please, in my absence to David Omand) there are none that it is desired should be made.

I am sending copies of this letter to the Private Secretaries to the other members of the Cabinet and the Chief Whip; and to David Wright (Cabinet Office).

Yours ever
Brian Norbury

(B M NORBURY)

J F Halliday Esq

CONFIDENTIAL

CABINET OFFICE

70 Whitehall, London SW1A 2AS Telephone 01-233 8319

From the Secretary of the Cabinet: Sir Robert Armstrong KCB, CVO

Ref. A04504

19th March, 1981

Statement on the Defence Estimates

When the Cabinet discussed the statement this morning, the Prime Minister said that she had two points which she wanted to make to the Secretary of State for Defence. They were as follows:

(i) The Prime Minister thinks that, in view of the worries which the Americans have expressed, the last sentence of paragraph 218 should be omitted completely. If the question is raised subsequently in the House of Commons, the Secretary of State could refer back to previous answers; or we could then discuss with the Americans a new answer exactly following previous precedents. The Americans would clearly be happier with that than with a reference in the White Paper.

(ii) In paragraph 219, there is perhaps a danger that "test firings of Tomahawk in various modes" may reinforce some critics of Trident in their view that sea-launched cruise missiles would offer a cheaper alternative to Trident. This danger could be avoided if the paragraph was reworded to refer only to ground-launched test firings.

B.M. Norbury, Esq.

CONFIDENTIAL

SUBJECT cc. Mrs Lr SECRET File KB

10 DOWNING STREET

From the Principal Private Secretary

18 March, 1981

Dear Brian,

DEFENCE EXPENDITURE, 1981/82

The Prime Minister held a meeting this morning with the Home Secretary, the Foreign and Commonwealth Secretary, the Chancellor of the Exchequer, the Secretary of State for Industry and your Secretary of State to discuss defence expenditure in 1981/82. Sir Robert Armstrong was also present. The meeting had before it your Secretary of State's minute of 11 March and the Chancellor of the Exchequer's minute of 16 March.

Mr Nott said that the main problem he was facing concerned the long term defence programme and not defence expenditure in the year ahead. The long term costing of the defence programme had just been completed and this showed that the cost of the programme was greatly in excess of the resources likely to be available. He had, therefore, just commissioned an alternative costing. This was a fundamental exercise and was likely to lead to a substantial re-shaping of his programme. He wanted to emphasise that no decisions had yet been taken and he was only at the stage of asking for options to be considered. When the new costing had been completed and he had been able to consider it, he would of course consult his colleagues before any firm decisions about major programme changes were taken. He was very conscious of the political and industrial dimensions of some of the options under consideration.

The problem of defence expenditure in 1981/82 was small by comparison but it was of course more immediate. He would like to go ahead with the £105 million of cuts listed in the annex to his minute, and he recognised that the gap of £36 million would have to be closed in some way. But he did not want to make specific programme cuts now to deal with this gap, for this would compel him to consult NATO again only a few weeks after the last approach to them and this might prejudice the outcome of the much more important longer term exercise. He thought that it should be possible to deal with the £36 million when his department and the Treasury came to

/agree

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agree on the adjustment to the cash limit for the Relative Price Effect. It would, however, be essential that the assessment of the RPE was a realistic one: the cost of all defence programmes - British, American, German - was at the moment running ahead of inflation.

The Chancellor of the Exchequer said that he agreed that the Defence Secretary should not find the remaining saving of £36 million in 1981/82 by making programme cuts which would require a further announcement and he accepted that there would have to be an assessment of the RPE later in the year. But a way would have to be found of keeping defence expenditure within the discipline of cash limits. The same was true of the expected overspend of £300 million in 1980/81. He recognised that it would be impossible to claw-back the whole of this amount in 1981/82, but nonetheless the discipline of cash limits was working well for other programmes and must be applied to the defence programme as well, if it was not to be undermined generally. One solution might be to spread the claw-back over more than one year. The matter should be looked at again when the cash limit for 1981/82 was reviewed.

The Foreign and Commonwealth Secretary said that many of the options the Defence Secretary was considering had political implications, and he hoped that his officials could be associated with the studies at the earliest practicable moment. He welcomed the Defence Secretary's assurance that no decisions would be taken until Ministers collectively had been consulted. He hoped that the new costing would not reduce still further our ability to operate outside the NATO area.

The Defence Secretary said that there were no additional resources available for a capability for use outside the NATO area. It would not, for example, be possible to deploy more ships beyond NATO waters, though it should still be possible to send a naval task force to places like the Gulf. There were many competing demands for the limited resources available: he was, for example, very anxious to increase the ammunition stocks in BAOR which at present was capable of fighting a conventional war for no more than four days. As regards the conduct of the new costing of the defence programme, he would see that officials from other departments were brought in by the Ministry of Defence as soon as the costed options were available.

The Prime Minister, summing up the discussion, said that they were agreed that Mr Nott should make the £105 million worth of savings set out in the annex to his minute. They also accepted that he should not make programme cuts at this stage to find the remaining £36 million but that his department and the Treasury should seek to agree on how this gap was to be closed when the cash limit for 1981/82 was reviewed later in the year. They should also use the occasion of the review to attempt to reach agreement on how to accommodate the expected overspend in 1980/81. The Defence Secretary should bring the results of his re-examination of the long term defence programme to his colleagues at the earliest opportunity.

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I am sending copies of this letter to John Halliday (Home Office), George Walden (Foreign and Commonwealth Office), John Wiggins (HM Treasury), Ian Ellison (Department of Industry) and David Wright (Cabinet Office).

Yours ever,

Clive Whitmore

B Norbury, Esq
Ministry of Defence

Defence

Ref. A04489

PRIME MINISTER

Statement on the Defence Estimates 1981

(C(81) 11)

BACKGROUND

Following OD's discussion and broad approval of the draft Statement on the Defence Estimates 1981 on 5 March the Secretary of State for Defence has made a number of relatively minor amendments and has inserted, as agreed, a short introduction referring in guarded terms to the need to look realistically at the programme in order to match it to the available resources.

2. The final paragraph of the free standing essay on "Britain within NATO", which follows chapter 1, has been amended to leave out the earlier reference to "a new review effort" which OD thought unsuitable, given the lack of enthusiasm for such a review among our NATO allies.

3. The Secretary of State for Industry has been in touch with the Secretary of State for Defence about the changes in tone which he would like to see made in those parts of the Statement dealing with the British defence industry. (Sir Keith Joseph's letter to Mr Nott of 13 March 1981). The Statement has been amended to some extent to meet his points.

4. With the agreement of the Ministry of Defence and Foreign and Commonwealth Office we have consulted the Americans on the direct Cabinet Office/White House link, about the reference in chapter 2 (end of paragraph 218 on page 2-11) to the control arrangements for the basing of United States GLCMs in Britain. This involves an oblique reference to the "specific understanding" on defence nuclear matters which you renewed in writing with President Reagan during your Washington visit. The Americans are not happy with the present wording, and we will be pursuing the matter with them, in consultation with the Ministry of Defence and Foreign and Commonwealth Office. Some amendment will probably be needed. But the point need not come up at Cabinet.

5. One aim of the discussion at Cabinet is to ensure that everyone directly concerned is content with the amendments. Another is to allow non-members of OD some insight into what is going on in the defence field: this is almost the only occasion in the year at which that is possible. But it would not be a suitable occasion for opening up the general question of the size of the defence budget in 1981/82 which was discussed by the Secretary of State for Defence and Chancellor of the Exchequer in their minutes to you of 11 and 16 March.

HANDLING

6. You will wish to invite the Secretary of State for Defence to introduce the Statement. The ensuing discussion should cover the following points:-

(a) Are the Foreign and Commonwealth Secretary and Chancellor of the Exchequer, from their different points of view, content with the new Introduction which refers to the likelihood of some changes being made to the Defence Programme in the coming months?

(b) Is the Secretary of State for Industry satisfied with the amendments made to the section on "Defence Procurement strategy" just before chapter 6 (pages 6.1-6.4)? The beginning of paragraph 5 on page 6.2 in particular has not been fully amended as he would have wished.

(c) Is the Secretary of State for Northern Ireland generally content with the references to the activities of the services in Northern Ireland in chapter 5 (pages 5.1-5.3)? (He was not present at the OD meeting).

(d) If the Foreign and Commonwealth Secretary does not do so, you may yourself care to refer to the section on "Nuclear Weapons and Preventing War" just before chapter 2. OD regards this with warm approval as a very clear statement of the Government's policy on nuclear weapons. You could encourage members of the Cabinet to draw on it for future speeches intended to counter the spread of nuclear pacifism.

(e) In chapter 2 itself, in paragraph 219 on page 2-11, there is a reference to cruise missiles. The essential point is that United States development of ground-launched missiles is proceeding satisfactorily. But the way that "test firings of Tomahawk in various modes" is phrased may reinforce some critics of Trident in their view that sea-launched cruise missiles would offer a cheaper alternative. Does the Secretary of State for Defence see that as a danger? If so, could not the paragraph be reworded to refer only to ground-launched test firings?

CONCLUSION

7. The Cabinet will need to agree that the Statement be published about 13-15 April (the exact day has not yet been settled) subject to final editing which should take account of points made in discussion.

RA

ROBERT ARMSTRONG

18 March 1981

SECRET

3

Treasury Chambers, Parliament Street, SW1P 3AG
01-233 3000

18th March 1981

B M Norbury Esq.
Private Secretary
Ministry of Defence

Dear Brian,

C(81)11: STATEMENT ON THE DEFENCE ESTIMATES

The Chancellor of the Exchequer has asked me to let you know that, while still supporting your Secretary of State's proposal, discussed in OD, to preface the Defence White Paper with a personal Introduction, he has some doubts about the draft as now circulated to Cabinet. His recollection is that OD envisaged that it would concentrate on the need to match the defence programme to available resources: the current draft refers to past, but not future, resource constraints, and lays more stress on the undoubted need to respond to technological change and changes in the Soviet threat.

The Chancellor recognises that the cautionary note on resources, which OD agreed should be struck, must not be over-done. His concerns could in fact be met by fairly minor drafting changes, and he suggests that:-

(a) The third sentence in the last paragraph on page 1 should be expanded to end:-

"... on numbers procured: our future plans must take better account of likely resource constraints."

(b) The last four sentences of the first paragraph on page 2 should be deleted. The first three of them are covered in the following paragraph, and the fourth, in its current truncated form, might convey the misleading impression that MOD procurement, as distinct from MOD support for UK industry, will be concentrated on new technology areas: this could imply abandoning the economies involved in using existing technology whenever possible.

/(c) The

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(c) The penultimate sentence in the second paragraph on page 2 should be expanded to begin:-

"Because the equipment programme is so diverse and so heavily loaded, it has been necessary ..."

I hope that these changes will cause your Secretary of State no difficulty.

I assume that the second word in the last line of the draft Introduction should be "informed".

yours ever

John Wiggins

A J WIGGINS
Private Secretary

PS. I am copying this letter to Clive Whitmore at No.10, the Private Secretaries to other Cabinet Ministers, and David Wright in the Cabinet Office.

Copy to Sir Robert Armstrong. SECRET

2A

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~930 7022~~ 218 2111/3

MO 9

17th March 1981

PERSONAL

Dear Clive,

DEFENCE POLICY AND PROGRAMME

In his minute to the Prime Minister of 11th March about defence expenditure 1981/82, which is to be discussed at the Prime Minister's meeting at ~~8.30~~ 8.00 am tomorrow, Wednesday 18th March, my Secretary of State said - his seventh paragraph - that he had work in hand in order to frame later recommendations to OD for future defence policy. In this connection he would like the Prime Minister to see the enclosed copy of an internal minute he is circulating within the Department setting out his guidance for the work to be done.

My Secretary of State is also showing his minute, on a strictly personal basis, to Mr Whitelaw, Lord Carrington, Sir Geoffrey Howe and Sir Keith Joseph but not to anyone else outside the Ministry of Defence; he is giving it a very tight circulation within the Department.

Yours ever,

Brian

(B M NORBURY)

~~G A Whitmore Esq~~

Prime Minister.

This is really background for tomorrow's meeting (which is about the immediate problem of defence expenditure in 1981/82) and there should be no need to discuss it then.

Mr Nott's minute will be highly controversial in defence circles, both within and without the MOD. His alternative programme (which is long overdue) will hit the Navy particularly hard. He expects the First Sea Lord to resign: he hopes he can hold the CDS but is not sure he will succeed. Even if there are no resignations, the exercise is bound to leak quickly, I am afraid. It will be characterised as a full-scale defence review (which it is) and will be bound to stir up the Conservative Defence Committee. But all that is unavoidable if a realistic defence programme is going to be put together.

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Page 1 of 10 pages

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DEFENCE POLICY AND PROGRAMME

I am most grateful for the several briefings which I have received in the past few weeks, for your patience in answering my many individual enquiries and for the realism and forward thinking contained in the many internal papers which I have been given to read. We have now reached the stage where we must move forward to decisions and translate a wide range of ideas into a costed programme.

2. Quite rightly I have been asked both directly and indirectly on several occasions to give clear political direction so that there is a frame within which military judgement and costing and operational expertize can best be deployed. In the days following my trip to Washington last week I have been able to give further thought to this overriding problem. The purpose of this minute is to give guidance and also to outline the proposals which I would like costed.

3. Our national economic dilemma means that many of these ideas may seem radical but taken as a whole they are designed to be a

source of future strength to defence. We are all agreed that we cannot go on as we are. Our Armed Forces do a truly remarkable job: nothing that follows qualifies in any way my very real admiration for what I have seen on my visits to units of all three Services. Indeed the morale, bearing and readiness of our forces has exceeded my highest expectations. It is no reflection on them, or on the leadership they have received that the defence programme is currently in a mess. In my view this situation results from the creeping impact of successive cuts. Under such conditions of financial seige when funds for new investment have been so tight and when lead times have been so long, it is understandable that our capital stock should have got out of step with the changing nature of the threat (Soviet doctrine, tactics, technology and equipment); with changes in our own thinking; and with the changes that have arisen in the relative costs of different parts of the defence programme.

4. Our capital stock is unbalanced, with too many resources tied up for tasks which no longer have a matching priority (and related inconsistencies in assumptions about warning time and duration of hostilities between different theatres of operations); too many resources are locked into expensive capital units and not enough in individual weapons which they may carry or fire; too little is invested in stocks of war material necessary for staying power; and, in relative terms, inexpensive second and third line reserves of manpower and equipment have been given too low a priority in our forward planning.

5. The programme that was costed in LTC 81, even at a "baseline level" is for all these reasons untenable. It must be reshaped, and I should now like the Service Departments and the Procurement Executive to undertake an immediate re-costing of the main lines of an alternative basic programme. The total costs of this programme must of course be contained within wholly realistic assumptions about resource availability, which will also allow for sufficient elbow room to cope with the unforeseen.

6. With these factors in mind I should like the following guidelines to be used for costings purposes.

The Strategic Nuclear Force

7. The Trident force has overriding priority. Every effort must be made to contain it within the figure of about £5 billion over the next 15 years and the size and structure of the force must be constrained by the financial rewards and penalties of each option.

Our Effort on Mainland Europe

8. We must continue to meet our obligations under the Brussels Treaty but with quiet diplomacy at the military level, there is some room for manoeuvre. The Army must reduce in size to a complement which will just permit the Brussels Treaty strengths to be fulfilled.

9. Current strengths on the Continent will have to be reduced where necessary, and planning should be on the basis of three Divisions in peacetime in BAOR, with a fourth Division composed predominately of TA units based in this country, to be moved to BAOR upon reinforcement. The withdrawal of formations and units from BAOR to the UK in peacetime is not ruled out; neither is the disbandment of individual units (with their possible replacement by reservists). A reduction in the scale of purchase of MCV 80 should be studied. I am not persuaded that the planned balance of anti-armour weapons is the right one: I would like to see studied options for a reduction in the size of the future tank force with more anti-tank guided weapons combined with anti-tank helicopters.

10. For the RAF the costing should assume we have no Tornadoes permanently based in Germany; and that our effort there is concentrated on short range close support. The cost of 60 AV8(B)

aircraft should be included, to meet ASR 409 (the timescales and savings involved in an alternative assumption of the purchase of 60 Harrier GR 3 should be costed). No provision is to be made for aircraft to be acquired to meet AST 403. High priority is to be given to acquiring better air delivered anti-armour weapons. Plans should be assumed for acquiring, by an off-the-shelf purchase, conventional cruise missiles (either air or ground delivered) for the long range strike role, possibly based in the UK.

Maritime Forces

11. Our maritime effort in the Eastern Atlantic and Channel areas should concentrate on the deployment and protection of ballistic missile submarines with free access to their bases, the security of our continental reinforcement ports, and, in conjunction with United States Navy, the disruption of Soviet maritime activity with the aim of containing it north of the Greenland-Iceland-UK gap. This will have to be at the expense of UK effort in the direct protection of reinforcement shipping on the assumption that United States reinforcement will mainly flow out of the Gulf of Mexico and move across the south Atlantic along the line of the Azores and on to Europe.

12. The costings should be based on an imaginative and positive look at our naval role outside the Eastern Atlantic and Channel in peacetime including, for example, limited deployment of the new Invincible class ships, in a wider role alongside the United States Navy.

13. In terms of naval equipment, the SSN building programme should proceed at no faster pace than is necessary to maintain ship building capacity for Trident (I would be content to see variations in the long term force level studied). The new class

of patrol submarines should go ahead as planned. Sting Ray should go ahead and we must cost the UK/US options for a new heavy weight torpedo.

14. There should be a sharp change of direction in our surface ship plans reflecting the switch away from direct defence and the protected convoy. No more Type 42s should be built and the Type 44 programme abandoned. Funds should not be included for the Sea Dart improvement programme, or only at the very minimum level which enables us to get some value from our existing investment in Type 42s. The Type 22 programme should be terminated as soon as possible and replaced by the very much smaller Type 23 frigate. We should investigate using corvette type vessels as towed array ships. I should like shortlifing for the destroyer/frigate force examined, and do not rule out a reduction in the long term force level.

15. No advanced Sea King Replacement is to be acquired and there is to be no additional Sea Harrier buy.

16. In the briefing CDS and I had last week at Norfolk, Virginia I was impressed by the contribution of Nimrod/Orion aircraft in the anti-submarine role. The existing Nimrod force is to be maintained and if possible strengthened by bringing airframes out of reserve and their transfer from other roles. In the maritime strike role, it seems probable that Sea Eagle should be procured for use from Tornado GR1.

Defence of the UK Base

17. The air defence of the UK needs strengthening and we should negotiate the purchase of more Tornado F2 at the expense of reducing numbers of GR1 aircraft. I am convinced that we can change production schedules by negotiation. The two Phantom air defence squadrons in Germany should be regarded as forming part

of the defence of the UK base; we should also investigate the possibility of buying some additional second-hand Phantoms. Missile defence should be provided by Rapier and existing Bloodhound with planning for an area SAM abandoned.

18. Plans should proceed for cheaper MCMVs, and an enhanced minesweeping capability.

Specialist Reinforcement Forces and Out of Area Effort

19. Three RM Commandoes are to be retained. No provision is to be made for specialist amphibious shipping. The additional measures to support out of area activity agreed by OD last year are to be included in forward planning: no other additional provision is to be made.

Reserves

20. I would like all three Services to give greater priority in their costing to Reserve forces. Numbers should increase. Money should be included for increases in all essential war stocks. Plans should include the most imaginative use possible of civil assets including taking up vessels from trade, civil aircraft, and civilian-owned vehicles and making arrangements to fit weapons to them. Financial provision should be considered for the purchase of surplus civil aircraft at very low cost (as with the VC10s) for adaption for air flight refuelling etc, and for modifications to new British civil aircraft orders enabling their subsequent conversion for military tasks.

Overheads

21. The changes in emphasis in the front line programme should produce consequential changes in all forms of administrative and logistic support. These savings should be identified as far as possible and costed. In addition plans should be based on phased reductions of officer numbers by 10% for each of the

Services over the next three years. The reductions are to fall on staff jobs and headquarters numbers in particular. The administration of the Army must be smaller and more streamlined (most of the peacetime functions of HQ BAOR should in future be performed by HQ 1st British Corps). The Papers before the Defence Council this afternoon confirm that we must turn every effort to reducing civilian numbers to 200,000 by 1st April 1984; this reduction should itself produce major economies in administration as well as in our manpower bill.

22. Provision for training and medical organisations is to be pruned. Staff/student ratios are to be sharply increased within the next two years. One tier of officer training (Staff College/ National Defence College/RCDS) should be closed. Service hospitals are to be re-organised to eliminate most if not all of the surplus capacity: if necessary the medical services are to be merged. A real streamlining of all non-combatant arms is needed.

23. Major cut-backs must be achieved in Research and Development carried out in-house, going well beyond those in the report produced by Lord Strathcona. Several establishments and facilities must be identified for closure or sale.

Resources

24. You will also wish me to lay down guidelines for resources. The Government is committed to the 3% NATO guideline until 1985/86, and I shall staunchly uphold this central NATO benchmark. Our present financial mess shows, however, what happens if we commit ourselves a long way ahead to a programme right up against the most optimistic assumptions about resources, and which leaves little or no room for cost growth or for short term changes to adjust to the unforeseen. Before my departure to Washington I asked for some figuring to be worked out, and this is shown at Annex.

25. I have also set out at Annex the approximate division of this core budget into the management areas of the Department. This reflects the guidance set out earlier: it assumes that Trident provision will be accommodated within the Navy and PE shares reflecting the importance of treating the programme as part of the cost of our contribution rather than something special or additional to "Service" programmes. PUS should turn this division into year by year target figures.

26. It is essential that new programmes are constructed to fit within these ceilings. It can be done. When we have the results we can all sit down together and go through it with open minds.

The Next Steps

27. This minute should be sufficient guidance for you to re-shape your individual programmes, and for your staffs to cost them. PUS should arrange, in consultation with the Chiefs of Staff, for the re-costing to be carried out, and for any detailed instructions to be issued if these are needed to ensure consistency. The results should be submitted by PUS to me by 24th April, so that I can study them before I return to the office. I will consider them with a very small group on which I should be grateful if CDS should represent the Service view. But I shall be happy to receive any views the Ministers, Chiefs of Staff or others wish to put forward.

28. PUS should also co-ordinate an action plan setting out the major individual decisions required in order to implement the re-shaped programmes, with timescales for their implementation.

29. The Minister of State and the three Service Ministers should jointly scrutinize the manpower and overhead reductions. The costings will necessarily have to include some broad brush assumptions but I should like the details to be filled out in time for announcement by mid June, otherwise we are going to be in conflict with the debates on the White Paper, which I shall try to defer.

30. CDP should look with CSA at the implications for R&D of these changes in direction on the assumption that there is to be a further sizeable cut in our in-house effort.

31. I will be talking to you all over the next few weeks on my return from the Gulf about how the work is progressing, and I hope to be able to meet many of the staffs who will be working on this exercise. Many people will have to be consulted in the Department about individual items to be costed but I want the exercise itself and knowledge of it to be confined to as few people as possible on your staffs. All those involved must be on their guard against the dangers of generating unnecessary rumour, and of leaks. Any such slanted presentation of the costing exercise will cause quite unnecessary damage to the morale of the Services which should otherwise be sustained by the Governments implementation of the Recommendations of the Pay Review Body.

32. Finally I emphasize that this note is intended to give political guidance not least because it has been consistently sought. From hereon it is necessary to move forward speedily to conclusions but it is my intention to encourage, and not stifle, frank and candid internal discussion over the next two months about the difficult choices which face us. Having said

this I am confident that if everyone pulls together we can enhance our front-line capability in future years by a greater concentration of our limited resources on key areas of our collective defence.

16th March 1981

ANNEX RESOURCE ASSUMPTIONS

A. DEFENCE BUDGET

£M AT 1981 SURVEY PRICES

1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
11,889	12,247	12,615	12,993	13,123	13,254	13,387	13,521	13,656

B. ALLOCATION BY TARGET HEADING

	1971/72-1975/76	1976/77-1980/81	1985/86	1990/91	(Post Trident)
Navy *	26%	27%	28%	27%	26%
Army	33%	34%	33%	33%	33%
Air Force	30%	29%	30%	31%	33%
PE *	8%	7%	7%	7%	6%
Misc	3%	3%	2%	2%	2%

* including Trident

Ref. A04487

PRIME MINISTER

Defence Expenditure 1981/82

MW 9.00

You are meeting the Chancellor of the Exchequer and the Secretary of State for Defence at 8.30 tomorrow morning to discuss their minutes to you of (respectively) 16th and 11th March. The Home Secretary, Foreign and Commonwealth Secretary and Secretary of State for Industry will also be present.

2. To meet his agreed expenditure reduction target for 1981/82, Mr. Nott now believes that he would need to cut his programme by:

(a) £141 million, being the final slice of his £200 million cut agreed last November plus an allowance for further deterioration in his costings prospects since that date.

(b) About £300 million, being the likely extent of his 1980/81 overspend.

He proposes a painful but tolerable way of finding £105 million towards (a). But the steps needed to save the remaining £36 million under (a) would in his view be "politically daft". He therefore wishes to defer consideration of this until June/July, when his major review of defence policy options will be complete and when the 1981/82 cash limit is in any case due to be reviewed. He also wishes to be excused the £300 million under (b) altogether.

3. Sir Geoffrey Howe is unable to accept either of these two wishes. His reaction is very understandable. Although it is given comparatively little space in either of their minutes, the missing £300 million under (b) is what really matters. Letting Mr. Nott off this would not only make a large dent in his public expenditure policy but would also incite other hard-pressed colleagues to seek similar derogations. The missing £36 million under (a) is small beer by comparison. But there is clearly no basis for the belief that finding it will somehow be easier in June/July. On the contrary, over 90 per cent of the defence budget is already committed and the further the year progresses the smaller is the scope for making any savings at all.

4. You will therefore need to support the Chancellor on the issues of principle involved. But in practical terms your meeting cannot simply order Mr. Nott to meet his cutting obligations in full regardless of the consequences. In his view even cutting £36 million more than he proposed will be politically disastrous in terms of the Government's relations with its own supporters at home and with its American and other allies abroad. The items identified on his list below the thick line are all highly "visible" in military, industrial and political terms. Cutting these plus £300 million would obviously be ten times worse. If existing defence expenditure commitments are allowed to stand, the sort of measure which would be needed might be a total ban on recruitment to the Services for the whole financial year - which would be impossible for the Government to defend in the light of their declared defence policy.

5. The problem has to be viewed in the light of the main elements into which the defence budget for 1981/82 (or any other year) breaks down. In round figures, the total is £12 billion: £2 billion of that goes on works and non-warlike stores; £5 billion on personnel; and £5 billion on military equipment. Over half the personnel bill is Armed Forces pay; the balance is pensions and civilians' pay. About half the equipment bill is for new items; the other half is e.g. ammunition, fuel and spares for existing items.

6. Against this background you may wish at tomorrow's meeting, after probing to see if there is any give in either the Chancellor's or the Secretary of State for Defence's position, to explore what seem to be the only two ways out of the impasse, both of which would involve controlled breach of commitments.

(a) New equipment (about £2½ billion). Most major contracts are already let and cannot be cancelled without heavy penalties. But if the main industrial suppliers concerned were confronted starkly enough with the alternatives, they might be willing to accept, however reluctantly, some small deferment of Ministry of Defence payments into 1982/83. Deferment of 10 per cent would go a long way towards closing Mr. Nott's gap. Bankruptcies should be avoidable, given that companies would have a "bankable" Government promise that the missing payments would be

available as early in 1982/83 as was wanted. Industrialists who refused to co-operate would have to recognise that the dislocation which this might cause to the whole procurement programme, over more than one year, could well be much more costly to them in the end.

(b) Armed Forces pay (about £2½ billion). The Chancellor is in principle committed to giving the Ministry of Defence extra money to cover the extent to which Armed Forces pay rises by more than 6 per cent. The Government is formally committed to implementing whatever the AFPRB recommends; we do not know what that will be, but it could well be considerably over 6 per cent. Each 1 per cent over 6 per cent will cost the Chancellor about £25 million. If the Secretary of State for Defence could be persuaded to absorb any excess pay costs over 6 per cent in return for being let off the £300 million, the Chancellor would be better placed to be more understanding about the £300 million excess. This would be likely to represent a good bargain for the Secretary of State for Defence (though the precise value is not yet quantifiable), but would avoid reneging on the promise to the Armed Forces and would partly preserve the equipment programme.

7. Given the less mathematical approach of the new United States Government, you will not want to spend too much time on the question of what is likely to happen to our 3 per cent defence expenditure increase target in 1981/82. In constant price terms, the overspend in 1980/81 is likely to mean that we shall do a bit better than 3 per cent in 1980/81 and (if the overspend is repaid as Sir Geoffrey Howe wishes) a bit worse than 3 per cent in 1981/82; i.e. over the two years taken together the average annual increase will not be far off 3 per cent. But in volume terms, because defence costs are rising faster than the inflation rate, we shall show little or no increase; and it is this which will worry the Americans, and the Government's supporters.

RCA

ROBERT ARMSTRONG

17th March, 1981

SECRET

1A

Treasury Chambers, Parliament Street, SW1P 3AG
01-233 3000

PRIME MINISTER

DEFENCE EXPENDITURE 1981-82

The Defence Secretary suggested that you might wish to call a restricted meeting to discuss the issues raised in his minute of 11 March. I would value such a discussion.

1 PM

2. I welcome John Nott's recognition that significant changes are required to bring the defence equipment programme back to a coherent and sustainable level. It is absurd that the MOD internal costings procedures should over the past year have produced expenditure plans for 1981-82 amounting to £850 million in excess of available resources. Like John Biffen, I am sure that for the medium and long term it is necessary to devise a more realistic programme.

3. I well understand how limited is the room for manoeuvre in the short term but the Defence Secretary's proposals for 1981-82 raise two difficult propositions.

4. The first is that he should not be obliged to abide by the Defence programme agreed by Cabinet last November, and published in the recent White Paper. I recognise that he is not arguing that he cannot deliver cuts amounting to the £200 million agreed by Cabinet. But maintains that the momentum of the equipment programme is now such that cuts greater than earlier foreseen (£141 million on top of the £160 million already approved), and greater than he could recommend, would be required to hold the programme to the agreed level.

/Though we

SECRET

5. Though we agreed that the cash limit should be subject to a mid-year review, it would be quite out with the scope of such a review to consider so increasing it as to accommodate a larger programme. Colleagues, and the country, would rightly see this as reopening last November's decisions. We have just stated publicly that the present public expenditure totals are higher than we wish and that this requires the most serious attention in reviewing future flows. How can we start by failing now even to hold to the totals we agreed?

6. I am in no position to assess the risk, to which John Nott refers, that continuing acceleration of Defence work in industry, may defeat the efforts which the Ministry are now making, on his instructions, to introduce more effective control of cash flow. I cannot therefore judge whether individual measures listed "below the line" in the Annex to his minute will be required. Certainly I have no doubt - because we have discussed the problems together - that John faces real difficulties. But then so do I!

7. In these circumstances, I am quite sure that the programme must be brought into line with the cash limit. If in John's judgement that will require him to take all or any of these measures, I have to say that I believe he must do so.

8. No less serious is the suggestion (paragraph 10 of his minute) that it will not be possible for him to accommodate a deduction in 1981-82 to compensate for the expected overspend in 1980-81. The principle that overspends are compensated by commensurate deductions in the following year is a central feature of the cash limits discipline, accepted by Francis Pym last autumn, and many times stated publicly.

9. I am told that the measures which the Ministery have taken to reduce cash flow in the closing months of this year

/are having

are having considerable effect, and that the overspend may in the end be a little below £300 million. How the deduction is to be made will be for decision at the time of the cash limit review. But despite all the difficulties, it is my view that Defence officials should devise appropriate contingency plans well in advance.

10. We need to keep the problem in perspective. The sums under discussion are marginal in relation to a Defence Budget of £12.3 billion. The cash limits, the total on which our discussion should focus, is £11.5 billion, half for procurement. It might assist us to have a functional breakdown of how the bulk of the Defence money is to be spent in 1981-82, to complement the note which John Nott has circumated on particular measures which might be taken to create the necessary savings at the margin.

11. I am sending copies of this minute to John Nott and to the Home Secretary, the Foreign Secretary, the Secretary of State for Industry and Sir Robert Armstrong.

(G.H.)
16 March 1981

Department of Industry
Ashdown House
123 Victoria Street
London SW1E 6RB

Telephone: Direct Line 01-212 0440
Switchboard 01-212 7676

David Young
Special Adviser

16th March, 1981

T. P. Lankester, Esq.,
Private Secretary,
10 Downing Street,
London, S.W.1.

Dear Mr Lankester

DEFENCE PROPERTY DISPOSALS

I wrote to you on 3rd March enclosing a letter from Mr. Jaffray of the MoD setting out the current state of play. I now enclose a copy of a further letter we have received from MoD in response to Mr. Young's request that, if possible, more than £15 million should be raised.

Yours sincerely

Miss G. M. A. Lambert

Our ref:
DUS(PL) 97/81
1/51/25/2

MINISTRY OF DEFENCE

Main Building, Whitehall, London SW1A 2HB

Telephone (Direct Dialling) 01-218 7152

(Switchboard) 01-218 9000

From: A R M Jaffray, CB, Deputy Under Secretary of State (Personnel and Logistics)

11 March 1981

David Young, Esq.,
Department of Industry.

Dear Mr Young,

DEFENCE PROPERTY DISPOSALS

Following our telephone conversation yesterday, I have confirmed that, looking ahead as far as we can, we cannot at present identify more than £10 - 15m. of properties which will be definitely surplus to military requirements at some future date. Other possibilities exist, but at present they are subject to studies whose outcome will be governed by higher policy decisions (eg. affecting unit deployments) which have still to be taken. Ministers here will shortly be taking stock of the decisions needed and the probable time-table for them; I hope then to be in a better position to indicate when the Department is likely to be able to put together a further worthwhile sales package. My feeling at present is that this will not be before the late summer or early autumn.

Yours sincerely

Alistair Jaffray

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000
DIRECT DIALLING 01-218 2111/3

MO 10

16th March 1981

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10/3

Dear Michael

DEFENCE PROPERTY DISPOSALS

Many thanks for your letter of 26th February about the sale and lease-back of surplus defence property.

A provisional list of possible sales was sent to your officials on 20th February and I hope it will be possible to let you know definitely about these by the end of March. By then if the Treasury have any views on these ideas, I hope they will let us have them. Given the time you say will be needed for pre-sale documentation, however, it looks as if the end of April will be the earliest date for issuing offers, assuming that in the light of all the information then available we decide to go ahead.

I am glad you agree that we must handle any schemes which come forward without diverting effort away from normal disposals: the objective is to free up more resources for defence.

I am copying this letter to the recipients of yours.

Yours ever

John

John Nott

The Rt Hon Michael Heseltine MP

INTRODUCTION TO STATEMENT ON THE DEFENCE ESTIMATES

The first obligation of any Government is the defence of the realm. Foreign, economic and social policies all play their part - but defence is fundamental.

The United Kingdom makes an outstanding contribution to the Western alliance - for without collective security through NATO there could be no effective defence of our own country. Last year our defence expenditure rose by around 5% in real terms, at a time when our Gross Domestic Product (GDP) actually fell; and our contribution to NATO expressed as a proportion of GDP is significantly higher than that of our principal European allies.

But, together with our Allies, we face growing problems in meeting the threat posed by the military forces of the Warsaw Pact. If we are to keep the peace - if we are to deter any potential aggressor - NATO must show that it is capable of resisting attack at any level and in any form.

Our part in meeting the collective needs of NATO for a balanced response to the threat is unique. Alone among our European allies we contribute to the Strategic Nuclear Forces of NATO, to the land and air forces in the central region, to the Naval and Maritime Air Forces in the Channel and Eastern Atlantic and to the defence of our own home base.

To carry out our contribution in each of these areas requires a mix of forces - ships, aircraft, armoured vehicles, weapons, electronic sensors and a whole range of supporting equipment best suited to the tactical circumstances of each theatre of operations. The mix of forces cannot be static - the military doctrine, organisation, tactics and equipment of the Warsaw Pact forces are changing continuously; new equipment becomes available for our own and Allied Armed Forces; and the relative costs of different equipments change with economic circumstances.

The relentless application of technology to military use by the Soviet Union over the last ten years has greatly increased the problems facing our own equipment designers. The sophistication and, therefore, the cost, of equipment has risen, and continues to rise, alarmingly. On the one hand this has made unit costs for all types of weapons much higher and, with necessarily limited means, has forced us in the past to cut down on numbers procured. Changing technology has created new challenges for our armed forces and is profoundly affecting the tactics which they adopt. New ways must be found of holding down unit costs and we must re-shape our forces to meet the changing threat.

By itself, defence technology does not have an inbuilt bias towards either the defender or the attacker. The greatest strength of the Western tradition lies in its diversity, in its enterprise and free spirit. The Western Alliance has great strength in the innovative powers of its industrial base. The Government intends to support fully its advanced industries, but intends to concentrate effort upon the areas where the greatest return can be produced. Changes cannot happen over night. The value of the total inventory of ships, aircraft, vehicles and weapons available to our armed forces is enormous. That stock embodies past decisions and past technology. As far as possible the Government will favour new programmes embodying new technology and new tactical concepts.

Technology changes quickly, but it takes time for it to reach our Forces through new equipment. The same is true of changes driven by shifts in the threat, in the mix of our forces and in tactical thinking. Change is overdue. But the last five years have not been propitious for change. Successive budgetary pressures have meant cut backs on procurement and given the inevitable contractual complications of a large investment programme these cuts have fallen unduly on newer, smaller programmes. One consequence is that the capital stock is unbalanced with too many resources tied up in weapons platforms, whether at sea, on land, or in the air, and not enough in the weapons and sensors they carry. The economic pressures generated by the current recession and the faster industrial deliveries of major existing equipments has also cut deeply into procurement of some ammunition, fuel and oil, and essential spares. It has been necessary to cut back on activity to an unreasonable extent. Again, the re-establishment of a proper balance in the programme is essential.

So the time has come to look realistically and with an open mind at the way in which our forces fulfil their various roles. I shall be considering in the coming months, with the Chiefs of Staff, and consulting our Allies in NATO, how technological and other changes can help us fulfil those same roles more effectively in the future without the massive increase in real defence expenditure which the escalation of equipment costs would seem to imply. This Statement describes very fully the background to our consideration. I hope it will contribute to a wider understanding of our defence policy and the capabilities of our forces, and to an informal public debate about the new direction we should take.

DRAFT

STATEMENT

ON THE

DEFENCE ESTIMATES

1981

VOLUME 1

CONTENTS

PART ONE

POLICY

"Our defence policy is a response to, and must be shaped by, the potential threats to the security of the United Kingdom". Those words from the Statement on the Defence Estimates 1980 hold equally true today. The threat, our starting-point, is ever present: heightened in some areas, unabated in others. The most effective and economical way for Britain to meet it is still through collective deterrence achieving collective security. We need not, therefore, rehearse here the basic principles of defence policy spelt out in last year's Statement. We shall focus instead on the changing global conditions in which those principles have to be developed and applied.

1. DEFENCE POLICY IN A CHANGING WORLD

101. The past year has seen, in Britain and the West generally, a fresh upsurge of interest and concern over defence. A series of international crises in which Western interests - and sometimes Western citizens - were closely involved has created a new sense of risk. The decisions which the Government has taken on British defence have attracted lively attention and debate. Some have argued that we are doing too much: aggravating the dangers rather than helping to avert them. Others, with an eye to threats both inside and outside the NATO area, have argued that we are doing too little. The argument in each case turns on two factors: the degree of challenge with which the outside world faces us, and the part that it is proper for Britain to play in meeting that challenge. This chapter explains the Government's general view on both points.

102. The Government deplores the idea of an arms race, and in particular a nuclear arms race. We and our allies seek to provide security at the lowest and least costly level of forces we can. In all our countries there are other social expenditure programmes which have legitimate and pressing claims on our limited resources and on which we should like to spend more. We do not wish to aggravate an international climate of suspicion and mistrust. It is our aim therefore to negotiate arms control agreements wherever possible (see paragraphs 119-125), while at the same time maintaining forces sufficient in size and quality to deter any level of aggression. In determining this sufficiency we cannot ignore the build-up of Soviet forces and the proven

willingness of Soviet leaders to use them in an expansionist way and regardless of international opinion.

Developments in the Threat

103. The scale of the Soviet military build-up and its potency is illustrated by some sample production figures for 1980. The equipment turned out by Soviet industry in that year included:

- some 250 intercontinental ballistic missiles (ICBMs)
- over 1300 combat aircraft
- over 400 military helicopters
- over 3000 tanks
- 5 major surface ships
- at least 9 nuclear-powered submarines
- 4 conventional submarines.

There is also a huge and growing space programme mainly for military purposes. The Soviet Union launches some 100 satellites each year, roughly three times as many as the rest of the world.

104. Despite growing economic problems the Soviet Union continues to devote enormous effort to strengthening its armed forces. The Soviet government publishes no credible figures for defence spending, but Western estimates indicate that it rose in real terms by some 4 per cent per year throughout the 1970s and now absorbs around 12-14 per cent of

Gross National Product (GNP). We estimate that actual Soviet defence expenditure in recent years contrasts with published figures as follows:

	1978	1979	1980
Soviet published figures	17.23	17.23	17.12
Estimated actual expenditure	73-78	76-81	81-86

in billions of current roubles

Maintenance and personnel costs are relatively low in the Soviet armed forces and the budget is dominated by equipment procurement. About 40% of defence expenditure goes to procure new weapons systems and about a further 20% on R & D - the latter being double the corresponding percentage in the United States and half as much again as in the United Kingdom. Even if we assume a Soviet propensity to over-insure, this effort still goes much beyond what could objectively be seen as necessary for defence.

105. It is the association of immense military power with a hostile and expansionist ideology which makes the Soviet Union a potential threat to the West. Marxist-Leninist ideology still determines Soviet official attitudes. The Soviet leadership continually reaffirms its adherence to the teachings of Lenin, whose recurring theme is the inevitable triumph of communism over capitalism. The West need have nothing to fear from peaceful competition with the Soviet Union. We can be confident of the international appeal both of our political and ethical traditions, and of our economic and technological achievements. Experience suggests, however, that we cannot be confident the Soviet Union will be content with peaceful competition.

106. We still have no reason to believe that Soviet leaders are specifically planning to attack NATO. Nevertheless they have a large and growing military and naval capacity for offensive use; they are plainly ready to apply force in support of political aims, either directly or indirectly; and they aim to be confident of successfully

surviving - with their Party, State and military structure still functioning - from any possible war between East and West. The potential threat to NATO's own territory that this combination of capability and attitudes implies remains the main challenge with which the defence policies of the Alliance and its members must contend.

107. It is difficult to judge how, in the decade ahead, Soviet ambitions - and willingness to pursue them by force - will be translated into action. The Soviet leadership will have problems of its own to face: internal economic difficulties, problems in Eastern Europe, and the imminent need for changes in the leadership itself. These factors could make for greater caution in external policy. Alternatively - and depending not least on the stand the West itself takes - they could make adventurism outside Europe look increasingly tempting. But some features of Soviet worldwide policy remain constant. Its aim is to exploit unrest in the world to Soviet advantage, and formidable military power lies at its disposal to support that aim. The elements in Soviet defence capability which lend it a worldwide dimension are discussed in paragraphs 303-5 and illustrated in Figure 1.

108. Military capability can also be a weapon of political influence, intimidation and blackmail, whether outside or inside Europe (as recent Soviet activity on the borders of Poland has shown). Our objective in the European theatre is thus to deter not only the direct use of force but also other uses of Soviet military power which could bring unacceptable pressures to bear on the political and economic life of free Western states. The same analysis holds good for other regions. The Soviet Union has already shown that it possesses massive military force, and is prepared to use it for national advantage. The invasion of Afghanistan has been prolonged, in the face of repeated worldwide protest, into a callous occupation;

the Soviet Union has still made no serious move to withdraw its troops and let the Afghan people decide their own destiny. But this is only one of a number of options open to the Soviet leadership for the application of military power. Their alternative - and generally preferred - techniques include the use of allies and surrogates, like the Cubans in Africa and the Caribbean; active encouragement of disruptive elements in pro-Western or non-aligned states; and the various methods of covert subversion. The West cannot ignore these activities, since they directly threaten international stability and secure lines of communication, upon which we depend in a way the Soviet Union does not, not only for supply of raw materials but also to market our products.

The Worldwide Dimension in Western Strategy

109. The global challenge to Western interests has loomed large in discussions on security during the past year. It would be wrong to let it either overshadow the threat in NATO's own area, or project an over-simplified pattern of East-West antagonism on the wider world. Disturbance anywhere, of any origin, offers the Soviet Union fresh opportunities to exploit. But the causes of instability in different states and regions are complex, often owing more to long-standing local rivalries and racial, religious and political tensions than to any outside stimulus. The hostilities between Iraq and Iran (see paragraph 413) have shown what problems can be posed for the West by a conflict in no way provoked by the Soviet Union.

110. A Western counter-strategy must take full account of these complexities. Defence measures alone are not enough. They must be integrated with other Western actions, political and economic, designed to remove sources of conflict and strengthen the

foundations of our cooperation with the developing world. They must recognise the rights and views of our local partners, who will wish to take prime responsibility for their own defence. At the same time the West must find a way to deter the potentially damaging uses of Soviet and Soviet-backed military power and to demonstrate its resolve to defend essential interests. The Government sees the best way of reconciling these requirements in a three-fold application of Western defence resources. The first element consists of defence aid to independent states, in the form of equipment sales, loan personnel, training, and advice, to help them bear the burden of their own and their regions' security. The second is periodic deployment of the West's own forces to strategically important areas, for exercises, visits and training. The third is the ability to deploy those forces for deterrent or defensive action where circumstances make this necessary in the last resort.

111. The overall threat concerns all Western nations in varying degrees. The United States has declared its resolve, which the Government warmly welcomes, to bring its resources to bear wherever necessary. The United Kingdom will do what it can to support these efforts in accordance with the principles set out above. (See Chapter 4.) Other NATO nations, and friendly powers such as Australia and New Zealand, also have historical links and military and economic resources which can usefully be brought to bear. The response can often be made more effective and cost-effective by cooperation among the Western countries involved and with the local states whom they seek to help.

Challenge for NATO

112. While recognising the global implications of a growing Soviet military capability, we do not forget what is still its main, and for us most crucial, focus - the drive for dominance in and around Europe. In 1977 NATO Heads of State and Government recognised that urgent remedial measures were needed to check growing imbalances between the forces of the Warsaw Pact and those of NATO. They agreed then to aim at real increases in defence expenditure in the region of 3% per year, and the Long Term Defence Programme (LTDP) was put in hand. (See Chapter 3.)

113. NATO remains the essential framework of Western defence and the key to the United Kingdom's own national security. It would be a grave mistake for NATO to ignore collective security in its own Treaty area while its members work for the security of regions further afield. The area set out in the North Atlantic Treaty, within which NATO's fundamental commitments apply, will not be extended. But NATO can help to meet its members' concern about their wider strategic interests. It offers a forum in which they can discuss such concerns and develop common approaches to them. Moreover, it must cope with any implications for its own area of responsibility, not just from the wider threat but also from the effort its members are making outside NATO's area.

114. NATO has been active in these respects throughout the past year. Allied Ministers discussed "out-of-area" issues at their meetings during 1980. They concluded that it was right for countries which had the ability to do so to work for stability outside the NATO area and that such efforts should where possible be coordinated.

115. Afghanistan threw into sharper relief the need for a concerted allied effort within the NATO area. The plans for a Rapid-Deployment Joint Task Force (RDJTF) developed by the United States in response to the out-of-area threat do not involve the withdrawal of any American ground or air forces permanently stationed in Europe. But they do affect the potential availability of reinforcements and maritime forces; and Ministers recognised at the NATO Defence Planning Committee (DPC) meeting in December 1980 that "making good such deficiencies was a legitimate responsibility of the European allies". Work has already been set in hand on the associated tasks, including a two-phased programme of short and medium-term measures to improve Alliance defences. NATO has thus taken its share in shaping a Western response to the extended threat. Despite inherent differences in national starting-points we have made, and will continue to make, progress in the Alliance towards a common conception both of the threat outside Europe and of the role that individual allies should play in responding to it.

116. The other main theme of discussion in NATO over the last year has been the broad pattern of collective defence. The need for the United States and some other allies to shoulder responsibilities outside Europe has revived long-standing questions about the balance of effort within NATO between the United States and the rest, and among the various European allies. It has also focussed attention on host nation support within European countries for the growing number of rapid-reinforcement forces earmarked for the European theatre by the US. In tackling these issues in the coming year it is right to recall that of the ready forces currently available in Europe (including the French), some 90% of the ground forces and 75% of the air forces already come from the European countries, as do 75% of the tanks and more than 90% of the armoured divisions.

European countries provide a similarly high proportion of the ready naval forces in the Eastern Atlantic and Channel.

117. The division of effort among the European allies is a matter of particular importance for British defence policy. We make a national contribution in four separate roles, and in present economic circumstances we need to concentrate our expenditure within each role where it will be most cost-effective both for us and for NATO as a whole. Judgements about this should as far as possible be made in the context of Alliance patterns of joint effort.

118. NATO's success in sustaining an adequate and up-to-date defence programme depends on its resilience and flexibility as a structure as well as on the attitudes of its individual members. In 1980 one very welcome event on both counts was the return of Greece to the integrated military structure. Besides strengthening the key Southern Flank this was a tribute both to the determination of Greece and Turkey to strengthen Alliance cohesion and to their statesmanlike attitude to their national differences.

Arms Control

119. The international confidence essential for progress in arms control has been damaged by the events of the past eighteen months and in particular by the Soviet invasion of Afghanistan. Nevertheless the Government still regards the pursuit of arms control and disarmament agreements as an important element of its security policy. We will continue to work to achieve such agreements wherever there are prospects for reducing the risks of conflict and allowing our defence to be guaranteed at a lower level of effort and cost. The United Kingdom has

participated actively over the last year in the negotiations on Mutual and Balanced Force Reductions in Central Europe (MBFR), on a Comprehensive Nuclear Test Ban Treaty, and in the Review Conferences of the nuclear Non-proliferation Treaty and the Biological Weapons Convention, for both of which we are joint depositories. We have consistently supported efforts for strategic arms limitations between the United States and the Soviet Union. We have played a full part in the 40-nation Committee on Disarmament, including the discussions it has sponsored on chemical weapons arms control. We will continue to do so during 1981 and in the preparations for the second United Nations Special Session on Disarmament planned for 1982.

120. The Government's guiding principle in all these negotiations is realism. The uncertainty today in East-West relations is not a reason to relax our efforts for worthwhile arms control agreements; but it does highlight the constraints on what arms control alone can achieve. Progress in arms control negotiations may help to improve the East-West climate, but it cannot transform the basic political attitudes which lie at the roots of tension.

121. This reasoning is fundamental, among other things, to the Government's position on unilateral nuclear disarmament. (See page [ ] on Nuclear Weapons and Preventin War.) There is no reason at all to think that British renunciation of nuclear arms would significantly alter the views either of those states which maintain or of those which might consider acquiring, their own nuclear weapons. It would achieve nothing except to weaken our ability to deter aggression in the face of the continuing nuclear and conventional threat.

122. More generally the Government sees little merit in sweeping declarations on arms control that gloss over realities such as the wide differences between problems in Europe and those elsewhere. Only painstaking negotiation on specific problems can achieve balanced and verifiable arms control agreements which can enhance our security. Verification is always a difficulty, given the closed nature of the societies in the Warsaw Pact. Yet it is indispensable if we are not to gamble with our security; compliance with the negotiated terms cannot simply be taken on trust. These lessons have been clearly illustrated in our recent experience of specific negotiations.

123. In the talks on Mutual and Balanced Force Reductions (MBFR) the major impediment to progress continues to be the wide discrepancy between Eastern statements and Western estimates of the size of Eastern forces in Central Europe and the failure of the East to co-operate in resolving this problem over the facts. Another example of the Alliance's approach to arms control concerns long-range theatre nuclear forces (LRTNF). As explained in Chapter Two, the Soviet Union began by rejecting the United States' offer of negotiations but then modified its position and agreed to talk. The Alliance's refusal to be deflected from its own LRTNF modernisation while the Soviet build-up continued was crucial in bringing about the change in Soviet attitudes which enabled US/Soviet talks to begin in October 1980.

124. The United Kingdom made a major contribution at the UN Conference on Inhumane Weapons in 1980 by tabling, with the Netherlands, the draft on which the Convention eventually adopted was based. We also helped to secure protocols containing new restrictions on the use of certain weapons, such as mines and incendiaries, against civilian targets. This agreement represents a worthwhile advance in humanitarian law.

125. The second Review Meeting of the Conference on Security and Cooperation in Europe (CSCE) began in Madrid on 11 November 1980. The first phase of the meeting concentrated on a review of the implementation by all CSCE signatories of the provisions of the Helsinki Final Act signed in 1975. At the end of the first phase France tabled an important proposal concerning security in Europe. This provides for the negotiation of militarily significant, binding, verifiable Confidence-Building Measures (CBMs) applicable to the whole of Europe. These CBMs would go considerably beyond the five, largely voluntary CBMs embodied in the Helsinki Final Act. Such new CBMs represent a different concept of arms control from that adopted in most other negotiations: they focus principally on making more open the activities of military forces, and on thereby making it more difficult to use these forces for aggressive purposes, rather than on limiting armaments or the forces themselves. The French proposal enjoys broad support from the Alliance, including the United Kingdom.

126. The Government's responses to the new challenges on the international scene as they affect both defence and arms control form a coherent whole. The key point is that the Western Alliance should maintain its solidarity, its strength and its self-confidence; which in turn requires a continuing frank and thorough exchange of ideas among Allies, and an efficient and fair pooling of responsibilities. A constant effort is needed to assess and adjust to new circumstances as they arise. In all this the Government is determined that Britain should play an active, imaginative and constructive part.

PART TWO

ROLES

Chapters 2 to 4 of this Statement describe the roles performed today by British nuclear and conventional forces in NATO and more widely. The picture that emerges is not static. Threats change with time, as do the factors which influence our choice of the most rational and cost-effective response.

The General Context: Britain within NATO

1. As a sovereign nation we must in the end decide for ourselves what tasks our armed forces should be ready to perform, and how they should be designed to meet them. But we cannot decide in a vacuum; many hard realities bear upon our choices. We have to consider what adversary we may face, and what his capability is and may become. We have to consider what level of resources to set for defence (and also - the other side of the coin - what security risks any such setting implies). And, in an Alliance, we have to consider how our contributions interact with those of our partners.

2. NATO is not a supra-national authority assigning tasks to individual members as though to subordinates. Its international commanders and staffs seek to influence national choices in the common interest; but the pattern of roles has for the most part evolved gradually among the member nations themselves, by accommodation and adjustment which usually owes more to the interplay of historical, geographical, economic and political factors than to specific negotiations or bargains. The result (of which paragraph 309 gives some features) is the defence posture of the Alliance. It is rarely what pure strategic theory might suggest; but it reflects a complex

structure of interdependence and confidence which needs subtle understanding.

3. Britain's own present pattern of force commitment to the Alliance illustrates this. Of our four principal roles the nuclear contribution (the least costly) derives from special factors which make us in practice the only possible European provider. Direct defence of the United Kingdom is a role where we must clearly shoulder the main burden ourselves, though others may help. We make the main European contribution to Alliance maritime effort and are well fitted to do so. In purely historical terms our stationing of major land and air forces on the Continent is the least obviously natural of our roles; yet this very fact gives it special significance. Beyond its direct military importance in protecting a key sector of front covering the Alliance's heartland, it expresses and guarantees the full commitment of our national effort (including our nuclear capability) to the collective security of our key European allies as inseparable from our own.

4. It is unreal to suppose that the United Kingdom could safely or sensibly abandon any of these roles. Talk of choosing in some simple or exclusive way between, say, a "maritime" and a "Continental" effort is misconceived. We must, however, shape our future contribution to the four roles in a world of shifting military, political, economic and technological pressures.

5. The pace of technological advance, with the rising cost of exploiting it, puts inescapable financial pressure on our defence budget. It does not follow that we must be forced out of major areas of our defence effort, especially as the scale of that effort is ultimately a matter of free political choice, not of economic determinism. But we must take especial care, within each of our main roles, to concentrate our expenditure where it will be most

truly effective for the Alliance, and this may sometimes mean hard decisions about the content of our programme.

6. The resource pressures we face are common to all members of the Alliance. This, and the fact of interdependence, suggests that programme choices should so far as possible be made consciously within an Alliance framework. NATO's Long Term Defence Programme launched in 1978 was an important step in this direction. But as both the external threat from new challenges and the economic pressures sharpen, there is a case for a further and perhaps more radical look at Alliance wide cost-effectiveness. Even now, the Alliance appears to spend in total more than the Warsaw Pact on defence; and while much of the Pact's cost-effectiveness springs from features such as massive conscription and enforced uniformity which we should not wish to emulate, we cannot be complacent about the results. A willingness to look at new patterns of joint effort - more far-reaching interdependence, for example, or greater use of the Alliance's highly developed civilian resources for logistic support in emergency - may be worthwhile. The Government would welcome, and will seek to encourage, renewed effort by the Alliance in this general direction.

NUCLEAR WEAPONS AND PREVENTING WAR

1. Nuclear weapons have transformed our view of war. Though they have been used only twice, half a lifetime ago, the terrible experience of Hiroshima and Nagasaki must be always in our minds. But the scale of that horror makes it all the more necessary that revulsion be partnered by clear thinking. If it is not, we may find ourselves having to learn again, in the appalling school of practical experience, that abhorrence of war is no substitute for realistic plans to prevent it.

2. There can be opposing views about whether the world would be safer and more peaceful if nuclear weapons had never been invented. But that is academic; they cannot be disinvented. Our task now is to devise a system for living in peace and freedom while ensuring that nuclear weapons are never used, either to destroy or to blackmail.

3. Nuclear weapons are the dominant aspect of modern war potential. But they are not the only aspect we should fear. Save at the very end, World War II was fought entirely with what are comfortably called "conventional" weapons, yet during its six years something like fifty million people were killed. Since 1945 "conventional" war has killed up to ten million more. The "conventional" weapons with which any East/West war would be fought today are much more powerful than those of 1939-1945; and chemical weapons are far more lethal than when they were last used widely, over sixty years ago. Action about nuclear weapons which left, or seemed to leave, the field free for non-nuclear war could be calamitous.

4. Moreover, whatever promises might have been given in peace, no alliance possessing nuclear weapons could be counted on to accept major non-nuclear defeat and conquest without using its nuclear power. Non-nuclear war between East and West is by far the likeliest road to nuclear war.

5. We must therefore seek to prevent any war, not just nuclear war, between East and West. And the part nuclear weapons have to play in this is made all the greater by the facts of military power. The combination of geography and totalitarian direction of resources gives the Soviet Union a massive preponderance in Europe. The Western democracies have enough economic strength to match the East, if their peoples so chose. But the cost to social and other aims would be huge, and the resulting forces would still not make our nuclear weapons unnecessary. No Western non-nuclear effort could keep us safe against one-sided Eastern nuclear power.

6. An enormous literature has sprung up around the concepts of deterrence in the nuclear age. Much of it seems remote and abstruse, and its apparent detachment often sounds repugnant. But though the idea of deterrence is old and looks simple, making it work effectively in today's world needs clear thought on complex issues. The central aim is to influence the calculations of anyone who might consider aggression; to influence them decisively; and, crucially, to influence them before aggression is ever launched. It is not certain that any East/West conflict would rise to all-out nuclear war: escalation is a matter of human decision,

not an inexorable scientific process. It is perfectly sensible - indeed essential - to make plans which could increase and exploit whatever chance there might be of ending war short of global catastrophe. But that chance will always be precarious, whether at the conventional or the nuclear level; amid the confusion, passions and irrationalities of war, escalation must always be a grave danger. The only safe course is outright prevention.

7. Planning deterrence means thinking through the possible reasoning of an adversary and the way in which alternative courses of action might appear to him in advance. It also means doing this in his terms, not in ours; and allowing for how he might think in future circumstances, not just in today's. In essence we seek to ensure that, whatever military aggression or political bullying a future Soviet leader might contemplate, he could not foresee any likely situation in which the West would be left with no realistic alternative to surrender.

8. Failure to recognise this complicated but crucial fact about deterrence - that it rests, like a chess master's strategy, on blocking off in advance a variety of possible moves in an opponent's mind - underlies many of the criticisms made of Western security policy. To make provision for having practical courses of action available in nuclear war (or for reducing its devastation in some degree by modest civil defence precautions) is not in the least to have a "war-fighting strategy", or to plan for nuclear war as something expected or probable. It is, on the contrary, a necessary path to deterrence, to rendering nuclear war as improbable as

we humanly can. The further evolution last year of United States nuclear planning illustrates the point. The reason for having available a wider range of "non-city" target options was not in order to fight a limited nuclear war - the United States repeatedly stressed that it did not believe in any such notion - but to help ensure that even if an adversary believed in limited nuclear war (as Soviet writings sometimes suggest), he could not expect actually to win one.

9. The United Kingdom helped to develop NATO's deterrent strategy, and we are involved in its nuclear aspects at three main levels. First, we endorse it fully as helping to guarantee our security, and we share in the protection it gives all Alliance members. Second, we co operate directly, like several other members, in the United States power which is the main component of the nuclear armoury, by making bases available and providing certain delivery systems to carry United States warheads. Third, we commit to the Alliance nuclear forces of various kinds - strategic and theatre - under our independent control. The details of all this are matters of debate, which the Government welcomes. But the debate should recognise that positions which seek to wash British hands of nuclear affairs, while continuing (as NATO membership implies) to welcome United States nuclear protection through the Alliance, offer neither moral merit nor greater safety. Whether we like the fact or not, and whether nuclear weapons are based here or not, our country's size and location make it militarily crucial to NATO and so an inevitable target in war. A "nuclear-free" Britain would

mean a weaker NATO, weaker deterrence, and more risk of war; and if war started we would if anything be more likely, not less, to come under nuclear attack.

10. The East-West peace has held so far for thirty-five years. This is a striking achievement, with political systems so sharply opposed and points of friction potentially so many. No-one can ever prove that deterrence centred on nuclear weapons has played a key part; but common sense suggests that it must have done. Deterrence can continue to hold, with growing stability as the two sides deepen their understanding of how the system must work and how dangers must be avoided. Not since the Soviet gamble over Cuba in 1962 have we come anywhere near the brink. It is entirely possible, if we plan wisely, to go on enjoying both peace and freedom - that is, to avoid the bogus choice of "Red or dead".

11. To recognise the success of deterrence is not to accept it as the last word in ensuring freedom from war. Any readiness by one nation to use nuclear weapons against another, even in self-defence, is terrible. No-one - especially from within the ethical traditions of the free world, with their special respect for individual life - can acquiesce comfortably in it as the basis of international peace for the rest of time. We have to seek unremittingly, through arms control and otherwise, for better ways of ordering the world. But the search may be a very long one. No safer system than deterrence is yet in view, and impatience would be a catastrophic guide in the search. To tear down the present structure, imperfect but effective,

before a better one is firmly within our grasp would be an immensely dangerous and irresponsible act.

2. NUCLEAR FORCES

201. The Statement on the Defence Estimates 1980 explained the role of nuclear weapons in NATO's deterrent strategy, and the reasons why we continue to contribute independent British nuclear forces within the framework of the strategy. In the first major Parliamentary debate on nuclear policy for fifteen years these issues were discussed in the House of Commons on 24 January 1980, when the Government's view was supported by a majority of six to one. Later in 1980 two important decisions were taken: the agreement between the Prime Minister and the President of the United States for the United Kingdom to buy the Trident missile system to succeed Polaris in the 1990s; and the choice of the two locations for the United Kingdom-based element of the United States ground-launched cruise missile force to be introduced from the end of 1983 as part of the programme to modernise NATO's long-range theatre nuclear forces.

The Nuclear Balance

202. The Alliance has never sought, at either the conventional or the nuclear level, to match the Soviet Union and its allies weapon for weapon. The aim has been simply to deter aggression, by having enough forces to respond effectively to an attack at any level and, if necessary, to raise the level of the conflict to make clear NATO's ability and determination to go on resisting. But the growing disparity in certain areas between NATO and Soviet nuclear strength,

and the increasing vulnerability of some of NATO's older systems to the modern Soviet weapons now being massively deployed, must cause concern.

203. The United States and the Soviet Union have continued to observe the provisions of SALT I and the unratified SALT II agreement. The new United States Administration has indicated that it wishes to see the SALT process continue and is at present reviewing its policy in this area. The British Government strongly supports the continuation of talks. There has been some adjustment of forces within the SALT II limits: for example, by replacing SS9 and some SS11 with SS17, 18 and 19 missiles the Soviet Union has now almost reached the permitted ceiling of 820 MIRVed ICBMs (inter-continental ballistic missiles with multiple independently targetable re-entry vehicles). Nevertheless the situation at this level remains one of broad parity, with the advantage of the United States in terms of numbers of warheads offset by that of the Soviet Union in missile throw-weight.

204. Among systems of types not yet covered by SALT, the marked disparity noted in last year's Statement has widened with the continuing deployment of new Soviet weapons. The imbalance is particularly marked in land-based long-range weapons; additional SS20 missiles continue to be deployed at a rate of more than one a week, and Backfire bombers at thirty a year. Comparison of shorter-range weapons is difficult because most delivery systems on both sides are dual-capable - they can carry either conventional or nuclear warheads. We do not know precisely how many nuclear warheads the Soviet Union has available

for use by its theatre systems; but the Soviet Union produces and refurbish well over a thousand warheads each year for its combined strategic and theatre weapon stockpiles. The numbers of nuclear delivery systems currently deployed by the Soviet Union and NATO (including France) at the strategic level and within the European theatre are shown in Figure 2.

205. Simple numerical presentation cannot provide a complete picture. It cannot reflect such factors as system performance and age, nor the accuracy, number, or yields of warheads. Some systems, such as aircraft, can carry different numbers of warheads in different roles, and many, including some missile launchers, can be re-used. But however the figures are presented, it is clear that while there is broad parity between West and East in inter-continental systems there is a wide and growing disparity in the European theatre.

Trident

206. When the Government's decision to buy Trident from the United States was announced on 15 July the Ministry of Defence published a Memorandum on the Future United Kingdom Strategic Nuclear Deterrent Force. This explained not only the strategic background and the main considerations affecting the choice of system, but also which options had been examined and why Trident was clearly the right choice among them.

207. The crucial role which our nuclear forces play in enhancing Alliance security lies in providing a nuclear deterrent capability committed to the Alliance yet fully under the control of a European member. Even if in some future situation Soviet leaders imagined that the United States might not be prepared to use nuclear weapons, having to take account of enormous destructive power in European hands would compel them to regard the risks of aggression in Europe as still very grave. This additional element of insurance - the "second centre of decision" - has been a feature of Alliance deterrence for over twenty five years.

In practice no other member is in a position to provide this, and its importance has been repeatedly recognised by our Allies- most recently, and very clearly, in the November 1980 communique of NATO's Nuclear Planning Group. To give up our distinctive capability now or to let its effectiveness fade away, whether as a deliberate act of unilateral disarmament or simply to save money, would be to abandon not a marginal capability but a central and unique component of our contribution to the Alliance. This would be a particularly strange act at a time when Soviet power relative to the West's is greater than ever before, and still growing.

208. To be a credible deterrent our strategic nuclear forces must meet certain standards. They must clearly be under ultimate United Kingdom control. They must be capable of posing a convincing threat - of inflicting, on key aspects of Soviet state power, damage which any Soviet leadership would regard as out of all proportion to any likely gains from aggression against us. It must be maintained at a high state of readiness, invulnerable to surprise attack. The examination of options for replacing Polaris also had to take account of timescale (it would become increasingly difficult, expensive and operationally uncertain to maintain the Polaris force beyond the early 1990s) and of cost.

209. The studies which led up to the Government's decision considered various possible launch platforms: sea-based (surface ships or submarines), airborne and land-based. The factors were reviewed at length in the Ministry of Defence Memorandum. Briefly, the choice to continue with nuclear-propelled, ocean-going submarines was dictated essentially by

the need for invulnerability; other platforms would need to be deployed in large numbers and difficult operational patterns to give high assurance of surviving sudden attack. The choice of delivery vehicle lay between cruise and ballistic missiles. The former at present cost less each, but much larger numbers are needed for a given level of deterrent threat; and the long-term development of Soviet defences against them is very hard to predict. In addition, cruise missiles would need more submarines (the most expensive single component of the force). In short, a cruise missile force would be less certain and more costly than a ballistic missile force.

210. Of the ballistic missiles considered, Trident had clear advantages on both operational and cost grounds. Trident is a formidable and proven system now in service with the United States Navy. Other possibilities, such as further modernising Polaris, would entail costly and uncertain development programmes and result in systems unique to the United Kingdom. The agreement of the United States Government to provide the Trident system maintains the highly successful cooperation we have had on Polaris. Trident will be bought on broadly the same mutually advantageous terms, and complete with its MIRV capability. We will therefore still have the benefit of commonality with a tried and tested high-technology system. As with Polaris, the United Kingdom will provide its own warheads. The exchange of letters between the Prime Minister and President Carter in July 1980 (Cmnd 7979) established the basic undertaking for the sale of the missiles. A further exchange of letters between the two Governments on

30 September 1980 extended the provisions of the 1963 Polaris Sales Agreement to cover the supply of Trident. Although, as with Polaris, we shall rely on the United States for such items as spares, technical information, training assistance and range facilities, the force will be entirely under the control of the United Kingdom Government. Like Polaris it will be committed to NATO save in a situation where our supreme national interests are at stake.

211. Various studies are already in hand: on the design of the submarines, the precise number of missiles required (including allowance for spares, trials and test firings) and maintenance and support facilities. No decision is needed yet on the option of building a fifth boat.

The total capital cost of a four-boat force is broadly estimated at £5000 million (at mid-1980 prices). When the studies are complete, however, a more precise estimate will be possible of the cost and how it will be spread. At present we expect the expenditure to extend over fifteen years, reaching a peak in the late 1980s. Between 1980 and 1995 it is not likely to absorb more than about 3% of the defence budget on average, and about 5% in the peak years (including about 8% of the equipment part of the defence budget). About 70% of the cost will be spent in the United Kingdom.

212. The cost of Trident will clearly be a major item in the defence programme, particularly towards the end of the 1980s. The strategic nuclear force is however an integral part of our security effort in support of the Alliance. A judgement has to be made about the resources to be devoted to each aspect of this effort. The proportion of our budget allocated to

the strategic nuclear force has varied over the past twenty-five years between about 2% and about 10%. Even alongside the continuing running costs of Polaris (about 1½% of the budget) the Trident programme thus involves no dramatic change in the allocation of our defence resources. Once the system is in service it will, like the Polaris force, be very economical both in running costs and in its demands on skilled Service manpower.

213. The Government has made it clear that the provision of the Trident force will not prevent continued improvement in other areas of the United Kingdom's contribution to NATO. Money spent on Trident is money not spent elsewhere, but no alternative use of resources would provide a comparable strengthening of the collective security of the Alliance. As long as the Warsaw Pact continues to deploy both massive conventional forces and large numbers of strategic and theatre nuclear weapons, NATO deterrence needs adequate defence capabilities at every level. The United Kingdom nuclear contribution plays a distinctive role in this; the decision to procure Trident will enable it to continue to do so well into the next century.

CHEVALINE

214. Trident will not enter service until the early 1990s. Meanwhile we must keep the Polaris force effective in the strategic environment of the 1980s. The 1980 Statement on the Defence Estimates described the Chevaline programme to improve the front end of the Polaris missile in response to Soviet anti-ballistic missile capabilities, which we know are being improved. Chevaline is a highly complex development costing some £1 billion, and includes advanced penetration aids and a manoeuvrable payload. It is a United Kingdom programme

and most of the work has been done in Britain, although some United States contractors have been used and the United States Government has given full cooperation. Development work is near to completion and Chevaline will enter service shortly thereafter.

Theatre Nuclear Force Modernisation

215. NATO has for many years had land-based theatre nuclear forces, capable of long-range strike yet separate from the main intercontinental armouries. Technical and strategic arguments for having a capability of this kind as part of NATO's deterrent power have grown in importance as Soviet strength - especially at this level - has mounted. For the past decade NATO's capability has been provided by United States F.111s and Royal Air Force Vulcans, all based in England. These aircraft are ageing; the rundown of Vulcan, indeed, has already begun, and its replacement, the Tornado, is of shorter range. The current aircraft would have increasing difficulty in penetrating Soviet anti-aircraft defences, which are massive in scale and constantly improving. And they depend upon fixed airfields, which accurate enemy systems can strike. This last point gives heightened significance to the long-planned, continuing and widespread deployment of powerful modern Soviet systems like the SS20 and Backfire.

216. For the Alliance to have done nothing - simply to have acquiesced in the progressive erosion of a long-standing and important element of its strength - would have been seriously damaging to the Alliance's ability to deter the Soviet Union from thinking that it could fight and win a nuclear war confined to Europe. The member countries discussed the problem

extensively and reached a broadly-based collective view. On 12 December 1979 NATO Ministers decided that two parallel and complementary approaches were needed. One approach involved a programme to modernise the Alliance's forces by introducing 464 ground-launched Tomahawk cruise missiles (GLCMs) and 108 Pershing II ballistic missiles (replacing 108 Pershing Is) in a number of European countries. The second approach involved an offer by the United States, with the full support of the Alliance, to begin negotiations with the Soviet Union as soon as possible about limiting land-based long-range theatre nuclear forces. At the same time the United States announced its intention to withdraw unilaterally 1000 warheads from its nuclear stockpile in Europe, and to withdraw further warheads on a one-for-one basis as the new missiles are deployed. Action has gone forward in all these areas during the past year.

217. On 17 June 1980 the Government announced that the 160 cruise missiles to be based in the United Kingdom would be located at the RAF bases at Greenham Common in Berkshire (6 flights totalling 96 missiles) and Molesworth in Cambridgeshire (4 flights, 64 missiles). Greenham Common will be the first site to become operational; the first missiles should be deployed there by the end of 1983. To ensure that the base is ready in time preliminary work has now begun there, and the main construction work should start later this year.

Molesworth is scheduled to come later in the NATO programme; missiles will not be deployed there before about 1988 and construction work will not start for some years.

218. The cost of GLCM and Pershing II development and production totalling £5,000M, is being met entirely by the

United States, who will also deploy and operate the systems. Much of the cost of constructing the bases will, however, be met from the NATO infrastructure budget, to which all the nations within NATO's integrated military structure contribute. The United Kingdom's share of the total European programme, including the sites in England, will be about £16 million; in addition we shall provide some 220 personnel as a contribution to the security forces at the United Kingdom bases. As with other United States nuclear weapons which have been based in the United Kingdom (and indeed elsewhere in Europe) for many years, authorisation for the release of the missiles must be given by the President of the United States; but, under very long-standing arrangements, the use of the United Kingdom bases in an emergency would be a matter for joint decision by Her Majesty's Government and the Government of the United States in the light of the circumstances prevailing at the time.

219. GLCM development is proceeding satisfactorily. So far there have been over 50 test firings of Tomahawk in various modes, and over 80% have been successful, a high figure for an advanced weapon system at this stage of development. As usual with a programme of this complexity, some problems have been encountered, but these are not expected to delay the planned date for the initial deployment.

220. The GLCMs and Pershing IIs will be mobile, and in time of tension they would be quickly and widely dispersed and concealed away from their normal bases. This will be practised in peacetime, but without live warheads or fuelled missiles. Once dispersed they will be virtually impossible for an enemy to locate and attack, and there will be no point in striking the

places they have left. Far from attracting a pre-emptive strike, therefore, they will help deter any such strike on other more vulnerable forces and facilities. At the same time they will not themselves pose any threat of pre-emptive strike against Soviet capability; they will be both too few and too slow in flight for that, and Soviet systems such as the SS20 are themselves mobile.

LRTNF ARMS CONTROL

221. In response to the United States offer to negotiate about limitations on long range theatre nuclear weapons the Soviet leaders initially refused to talk unless the Alliance first abandoned its modernisation programme (though they made no suggestion of abandoning their own much larger and further advanced programme). They maintained this line for several months, until it became clear to them that the Alliance was not prepared to make such a one-sided concession. Following Chancellor Schmidt's visit to Moscow in June 1980 the Soviet Union agreed to begin talks, and useful first exchanges took place in Geneva in October 1980. Given the already substantial preponderance of Soviet long-range theatre nuclear forces, however, it is clear that we cannot achieve a reasonable agreement by giving the Soviet leaders what they want in advance. If we are to induce them to negotiate seriously NATO must continue with its plans to implement the modernisation programme.

222. The withdrawal of the 1,000 warheads from the United States stockpile in Europe begun in the spring of 1980 has now been completed.

Shorter-Range Systems

223. In addition to the Polaris and Vulcan forces the United Kingdom contributes a number of other nuclear capable systems to NATO's deterrent forces. These comprise four squadrons of Jaguars and five squadrons of Buccaneers based in the United Kingdom and Germany. All these can deliver either conventional weapons or British free-fall nuclear bombs. Over the next few years the Tornado will replace the Vulcans and three of the Buccaneer squadrons. We also operate, afloat and ashore, various maritime helicopters capable of delivering British nuclear depth-bombs. The first two embarked Sea Harrier squadrons, soon to be operating from the anti-submarine carriers, will also be capable of delivering free-fall nuclear bombs. All these weapons are assigned to NATO, although final authority for their release remains with the United Kingdom Government. In addition we operate four squadrons of Nimrod maritime patrol aircraft based in the United Kingdom and equipped with United States nuclear depth-bombs; and one regiment of Lance missiles and three regiments of dual capable artillery all based in the Federal Republic of Germany and equipped with United States warheads. The United States nuclear warheads for these weapons are provided under "dual-key" arrangements - that is, arrangements on the established NATO pattern whereby the cooperation of both those providing the warhead and those providing the delivery system is needed if the forces are to be used.

224. The value of Britain's nuclear forces lies less in their relative numerical size - they represent only a small fraction of the arsenal of the super-powers - than in their deterrent effect as a major complicating factor for Soviet calculations. We maintain a range of modern nuclear forces, geared to NATO's strategy of flexible response and capable of inflicting such damage on the Soviet Union that Soviet leaders must take them into account. The Government is convinced that its decisions to acquire the Trident system and to cooperate fully in the modernisation programme for the Alliance's theatre nuclear forces, while maintaining the other components of our nuclear forces - all at the cost of only a small proportion of the defence budget - will sustain this highly effective part of our contribution to Alliance deterrence.

3. CONVENTIONAL FORCES

301. The growth of Soviet nuclear capabilities is matched by a similarly large and comprehensive build-up in their conventional forces. To the numerical superiority they already possess the Warsaw Pact forces in Europe are now adding a formidable range and quality of equipment; and given the progress they have already made and the size of the R & D investment they are continuing to make, there are very few areas in which NATO can be confident of maintaining a qualitative edge.

302. The customary presentation of the numerical balance of in-place forces in Central Europe (see Figure 3) shows the continuing quantitative advantage held by the Warsaw Pact. This presentation cannot reflect the quality or effectiveness of the forces listed, but it would not be realistic to suppose that the addition of these factors could fully offset the current imbalance. (The particular difficulties of drawing up a maritime balance are discussed on page [ ] together with a new presentation of the balance itself.)

303. Key elements of recent Warsaw Pact improvements are:

- modern tactical aircraft with sophisticated avionics and improved weapons, including air-to-surface missiles and electronic counter-measures;
- fast and manoeuvrable tanks (T-64 and T-72) with advanced armour and high-velocity 125 mm smooth-bore guns;
- the Typhoon ballistic missile submarines (SSBNs), which will carry 20 new solid-propellant strategic nuclear missiles;
- the Oscar submarines, which have at least 20 new anti-ship cruise missiles with increased range;

(both these types of submarine were launched in 1980 and

are bigger than any types in the West)

- the Kirov - a 25,000 ton nuclear-powered cruiser- and two further first-of-class surface warships. The first of another new class of cruiser is expected in 1981.

304. Such a list is daunting; but perhaps more worrying for the West is the accelerating rate at which these improvements are taking place and the extent to which they reflect an emphasis on the development of offensive and worldwide capabilities. For example, in the Soviet Army new air assault units specially organised for parachute drops or helicopter landings have appeared in the forward area. The Warsaw Pact also maintains the effectiveness of its capability for offensive chemical warfare.

305. By massive investment in naval shipbuilding and repair facilities the Soviet Union has in ten years transformed its defensive coastal force to a deep water navy. It has new classes of surface ships (as mentioned above) which are largely offensive in concept and are capable of worldwide operations. In the air the character of forces has also changed dramatically. Ten years ago the Soviet Tactical Air Force provided air defence and close support for ground force operations. Today, though its defensive capability has been retained and enhanced, there have also been wholesale improvements in its potential for offensive operations. It now has longer-range ground-attack fighter-bombers carrying heavier payloads; moreover its growing inventory of heavily armed attack and assault helicopters and integral air defences for ground forces releases high-performance aircraft for longer-range tasks.

Allied Defence

306. NATO's nuclear strength helps to counter the challenge posed by these conventional forces, but it cannot do so alone. If we are to deter a

potential adversary from initiating either nuclear or conventional war, the defensive threat we pose needs not only striking power but also a credible likelihood of use if needed.

307. The Alliance therefore aims to possess a range of defensive responses essentially as wide as the range of offensive options open to our potential adversaries. This does not mean that NATO must match the Warsaw Pact weapon for weapon, either in types or in numbers. The NATO armoury is designed to supply the means of checking the threat, not the means of emulating it. It must reflect our forces' own, defensive, role, not mirror that of an aggressor. "Flexible response", which in 1967 replaced the earlier "trip-wire" strategy of massive nuclear retaliation, has, however, inevitably thrown more emphasis on the maintenance of effective conventional forces.

308. The concept of flexible response is complemented by that of forward defence. The stationing of forces well forward in Europe gives the clearest evidence, both to the Warsaw Pact and to NATO's own European members, of the Alliance's determination and commitment to defend the whole of NATO territory. Since several nations contribute to these forward forces they also demonstrate clearly the collective nature of the allied defence effort (see Figure 5) and the fundamental NATO principle that each member enjoys the protection of the combined armed strength of all the members.

309. The current pattern of allied force deployment in all major theatres reflects this collective responsibility. Thus in Federal Germany the United Kingdom provides some 55,000 men in four armoured divisions and one artillery division, as part of the Central Region forces which also include some 155,000 regulars and 180,000 conscripts from the Federal German Army, about 200,000 US Army personnel and

about 80,000 from the armies of Belgium, Canada and the Netherlands. As part of NATO's Second Allied Tactical Air Force the Royal Air Force has 11 fast-jet squadrons and a helicopter squadron based in Germany; the Federal German Air Force contributes 23 combat squadrons to the Second and the Fourth Allied Tactical Air Force, as well as four squadrons in the Baltic Approaches; and the US 17th Air Force is divided between Germany and the Netherlands. Belgium, Canada and the Netherlands also provide air force contributions. In the EASTLANT area of naval operations the United Kingdom provides some 70% of the ready forces and operates alongside forces from Denmark, the Netherlands, Norway and Portugal. The United Kingdom, Belgium and Netherlands also assign ships to the Allied Commander-in-Chief Channel (CINCHAN) and the United Kingdom and Netherlands assign Marine units to the United Kingdom/Netherlands Amphibious Force under SACLANT.

310. Certain of these forces are under NATO command all the time, notably air defence fighter aircraft, missiles and radars, and the Standing Naval Force Atlantic, to which nine countries contribute ships. In peacetime most NATO forces remain under national command, only in time of tension or war coming under the direct command of a major NATO commander (Supreme Allied Commander Europe (SACEUR), Supreme Allied Commander Atlantic (SACLANT) or CINCHAN).

FORCE PLANNING

311. To give maximum value to the Alliance, national maritime, ground and air contributions need to be shaped through a central coordinating process. NATO's force planning procedure is designed to meet this need. It takes account of the Alliance's overall military requirements, of advances in science and technology and of available resources. It considers the spread of military effort among NATO members in the light of financial and political factors and makes

recommendations on force structures and military objectives for a five-year period ("Force Goals"), which should guide Alliance members in forming their national plans. The nations then reach their own decisions on the size and scope of their contributions. They report annually their performance against the targets set by NATO, and their reports are considered by NATO Ministers. The review process is shown at Figure 6.

312. NATO keeps its planning procedures flexible enough to allow for new initiatives and special improvements in capabilities. The Long Term Defence Programme (LTDP) agreed in 1978 and described in last year's Statement was just such an initiative. Many LTDP measures have now been translated into Force Goals. We have incorporated in our national plans the great majority of the measures which the LTDP addressed to us. NATO's planning has also been adapted recently to incorporate the Phase I and Phase II measures agreed following the Soviet invasion of Afghanistan.

313. Given the multinational nature of the forces available to NATO, it makes good economic sense for support facilities to be constructed and used on an international basis. The Infrastructure Fund, to which all nations (including France for certain categories of work) contribute, has financed common-user projects. Major elements of the Infrastructure Programme include:

- improvement and hardening of airfields;
- establishment of a NATO Pipeline System some 6,000 kilometres long;
- development of an integrated communications system;
- the coordinated early warning system known as the NATO Air Defence Ground Environment;
- automation of the joint maritime headquarters at Northwood.

314. There are of course many other ways in which the Alliance nations co-ordinate their defence efforts. Alliance forces must also practise operating together. NATO gives a high priority to international exercises such as the SPEARPOINT element of the CRUSADER 80 exercise, described in paragraph 323, and the concurrent major maritime exercise TEAMWORK. Other examples of NATO exercises are at Annex A.

UNITED KINGDOM ROLES

315. The remainder of this Chapter looks at Britain's role in three geographical sectors and in specialist reinforcement. There is not space to give a full analysis of NATO strength and weakness in each area or to reflect the whole gamut of possible attack and response. We attempt, however, to identify the main abiding features of the threat and of the range of responses of which British forces are capable.

The Central Region of Europe

WARSAW PACT FORCES

316. The immediate threat to NATO's forces in the Central Region is posed by the Warsaw Pact forces in Czechoslovakia, East Germany and Poland. These comprise 26 Soviet and 31 other Warsaw Pact divisions. During a period of tension these could be reinforced from the 30 further divisions in the Soviet Western Military Districts. All the Soviet divisions stationed in other Warsaw Pact countries, and certain other Warsaw Pact divisions, are almost fully manned in peacetime, but most of those in the Western military districts would need the addition of reservists to make them combat-ready. (Figure 3 includes on the Warsaw Pact side only forces stationed in Czechoslovakia, East Germany and Poland.)

317. Soviet military doctrine stresses offensive action as the key to success. In a war with NATO the Warsaw Pact would plan to launch a rapid offensive under cover of surprise and deception, backed by massive fire-power. The tank armies would play a key role, using their mobility and fire-power to exploit weaknesses exposed by the initial attack. They would try to break quickly through NATO's lines, by-passing defences and helping to destroy centres of political and economic power in the rear areas. Attacks would then be developed from the side and rear.

318. Warsaw Pact ground forces can fight in any type of nuclear or non-nuclear battle and are steadily improving their ability to operate in bad weather and at night. Their structure, training and organisation are increasingly geared to the demands of an extended conventional battle without detriment to their nuclear offensive capability. The importance Warsaw Pact members attach to the Central Region is also reflected in the distribution of their air forces and the numerical superiority they have established there.

THE BRITISH ARMY OF THE RHINE (BAOR)

319. 1st British Corps, the combat element of BAOR, forms part of NATO's Northern Army Group and is responsible for the defence of a 65-kilometre sector of the Inner German Border. The Corps is supported by a range of logistic units. It is neither practicable nor cost-effective to maintain in peacetime in BAOR all the forces needed to counter a fully prepared Warsaw Pact attack; the Corps would have to be reinforced in time of tension by regular and reserve units and individual reservists from the United Kingdom.

320. The 1(BR) Corps sector is only part of the Central Region front, but its terrain and direct routes to the Ruhr make it one of the most likely areas into which the Warsaw Pact

would advance in the event of a major attack. Such an attack would be led by a large concentration of tanks supported by mechanised infantry, artillery, assault helicopters, helicopter gunships and close support aircraft, all concentrated on a narrow front. It would be the task of 1(BR) Corps to break up the momentum of such an advance and then to defeat it. To do this, reconnaissance forces would have to identify quickly the direction of the main threat. These reconnaissance forces would initially be deployed close to the Inner German Border together with what are called aggressive delay forces to disrupt and slow down the enemy's advance and to determine the direction and scale of his attack. The aggressive delay forces would be withdrawn through the main defensive position after they had disrupted the enemy's advance. The forces in the main defensive position would then absorb any attack and create time and opportunities for other formations to counter-attack in order to regain lost ground.

321. 1(BR) Corps is composed of four armoured divisions and one artillery division. Each armoured division is made up of a number of brigades; but on the battlefield the basic unit is the battle group. Based upon either an armoured regiment or a mechanised infantry battalion, and commanded by a Lieutenant-Colonel, a battle group contains a mix of armoured squadrons and mechanised companies, but is also supported by artillery and engineers and has its own anti-tank guided weapons troop, a close reconnaissance troop and an air defence section. This organisation is flexible and can be altered to meet whatever tasks it may be called upon to perform on the battlefield. A typical battle group fighting a defensive battle and based upon an organisation of one armoured squadron and two mechanised companies could contain about 600 men, 15 tanks and 80 armoured personnel carriers.

322. To perform its role 1(BR) Corps must have enough men, soundly deployed and equipped. BAOR's peacetime establishment of some 55,000 would in war be more than doubled. Regular and Territorial Army (TA) units would be sent from the United Kingdom and other units would return as necessary from further afield. Individual reservists would increase units to their wartime strength and replace battle casualties. All these reinforcements must reach the battle rapidly, and detailed plans for this are kept under constant review. The new Individual Reinforcement Plan becomes fully operational during 1981 and will halve the time needed to mobilise the reservists.

CRUSADER 80

323. Exercise CRUSADER 80, held in September 1980, demonstrated the speed and efficiency with which TA units can be deployed from the United Kingdom to their battle positions. The Army's ability to reinforce was tested on the largest scale attempted since the last war, in three separate but inter-related exercises. SQUARE LEG tested selected plans and procedures for the call-out of the TA and for defence of the United Kingdom. JOG TROT practised the establishment of lines of communication through Belgium, the Netherlands and the Federal Republic of Germany and their use in the movement of 30,000 men, with equipment, from the United Kingdom. SPEARPOINT, the culmination of CRUSADER 80, was a field training exercise designed to test operational techniques with American and Federal German troops on a bigger scale than ever before.

EQUIPMENT

324. The Corps has a wide range of equipment, with the main emphasis on anti-armour and air defence weapons.

Chieftain tanks (of which the Corps has about 600), Milan and Swingfire anti-tank guided weapons, anti-tank helicopters and mines would all contribute to defeating enemy armour. Integral air defence is provided by the Rapier and Blowpipe missile systems. A large proportion of the in-place Corps infantry is mechanised, moving on the battlefield by armoured personnel carrier. Artillery support is provided by a range of self-propelled and towed guns, and the engineers who support the battle groups are equipped to construct or remove obstacles and to bridge major rivers. The Corps is planned to be strengthened in the mid-1980s with Challenger tanks and more self-propelled guns. (Chapter 6 gives more details of the equipment programme.)

RAF GERMANY

325. Air power has always played a very important part in NATO strategy. In the early stages of an attack, particularly if it were mounted with little warning, allied air forces would have a key role in disrupting Warsaw Pact tactics and deployments and imposing maximum delay and casualties, thereby winning time for NATO units to be reinforced and take up their battle positions. The 12 aircraft squadrons of Royal Air Force Germany (RAF(G)) must therefore be kept at a high state of readiness. There are also four Rapier short-range air defence missile squadrons, a Bloodhound missile squadron for area air defence and a field squadron of the RAF Regiment for airfield security. All these forces form part of NATO's Second Allied Tactical Air Force.

326. To carry out their role the RAF(G) squadrons would undertake the following interrelated tasks:

- Strike

  Selective air attack with nuclear weapons against specific targets might be necessary to demonstrate political will and to induce an opponent to stop aggression. Buccaneers and Jaguars would be tasked in this role.

- Interdiction

  This would fall to the Buccaneers and Jaguars and would involve attacks against units behind the line of battle, and the disruption of second-echelon formations, road and rail communications and the movement of enemy reserve forces.

- Counter air operations

  Operations against such targets as airfields and command centres are particularly effective in limiting an enemy's freedom of action and flexibility. Buccaneers and Jaguars would be used in this role.

- Air defence of both the 1(BR) Corps area and RAF base areas

  This is provided by two squadrons of Phantoms and - at shorter range - by the Bloodhound and Rapier squadrons.

- Close air support in direct support of land forces

  The bulk of this task is assigned to the Harriers, which can operate flexibly and securely from dispersed sites. They would attack tanks and armoured vehicles on the battlefield and could be assisted by Jaguars and Buccaneers if necessary.

- Tactical reconnaissance

  Ground and air force commanders will need prompt and accurate information on enemy dispositions and reinforcements; a squadron of Jaguars would help in collecting this.

- Helicopter support for 1(BR) Corps

  A squadron of Puma helicopters would help move men, stores and ammunition. This squadron is being supplemented by a squadron of Chinook helicopters, due to enter service in 1982.

327. The effectiveness of modern air defence radars and weapons means that all our combat aircraft, if they are to survive, must be able to fly at very low level by day or night in all weathers,

and possibly in the face of heavy electronic jamming. Peacetime training must therefore ensure great proficiency in these techniques. (See page [ ] on control of low-flying disturbance.) The standards achieved by the RAF are already high, as is shown by the consistently good results achieved in NATO operational evaluation exercises.

328. Over the next few years the Tornado GR1 will replace the Jaguars and Buccaneers for interdiction, counter-air and reconnaissance operations. With its advanced navigation and attack systems, wide range of weapons and advanced counter-measures to help combat the increasingly sophisticated Warsaw Pact ground and fighter defences, the Tornado is particularly well suited for these roles.

The Eastern Atlantic and Channel

329. The conventional defence of Central Europe depends crucially on transatlantic reinforcement and resupply. Despite the major improvements now planned in airlift and pre-stocking, the bulk of equipment and resupply would have to come by sea. In addition, the economic survival of the European members of NATO, and the United Kingdom in particular, depends on trade and raw materials from overseas; 96% of the United Kingdom's external trade moves by sea. The Warsaw Pact is not dependent on the sea in either of these ways, and it is impossible to interpret the massive improvement of the Soviet Navy as other than offensive in strategic concept.

330. NATO must therefore have strong maritime forces, and the United Kingdom makes a major contribution to these. We are situated at the focus of the busiest sea-lanes in the world and also close to the main route for Soviet warships deploying to the Atlantic. We are thus geographically well placed to play a major part in NATO maritime strategy.

331. Action at sea in support of the defence of Europe could take many possible forms, in various places. Our maritime tasks would include:

- Independent Strategic Nuclear Deterrent

  This has been discussed in Chapter 2.

- Containment of Soviet Naval Forces

  NATO European Forces, largely made up of Royal Navy and Royal Air Force elements, would seek to contain Soviet forces and hinder their deployment through such "choke points" as the Greenland-Iceland-UK Gap. They would also have to bear the brunt of any Soviet aggression in the Eastern Atlantic and Channel until the arrival of United States forces. Submarines would provide the best forward defence, as they could operate effectively in hostile waters. RN Task Groups and shore-based maritime aircraft provide a wide range of defensive and offensive capabilities, as depicted in Figure 8.

- Defence of Reinforcement and Resupply Shipping

  Reinforcement should begin during a period of tension, but might be opposed at any time. Resupply to sustain a conventional defence of Europe would be a massive task and last throughout any period of fighting. Direct defence of reinforcement and resupply shipping, made easier by the containment mentioned above, would be essential to counter any opposing forces that were in position before hostilities began or had penetrated NATO's forward defences.

- Provision of Anti-Submarine Support for the NATO Strike Fleet

  The United Kingdom makes a major contribution to the anti-submarine defence of the NATO Strike Fleet Atlantic, allowing the United States strike carriers to concentrate on their air defence and strike/attack roles, which are of

key importance on NATO's Northern flank. British forces would make up Anti-Submarine Group 2 comprising one or two anti-submarine carriers with Sea Harriers and anti-submarine warfare (ASW) helicopters, several air defence destroyers and anti-submarine frigates, Nimrod long-range maritime patrol aircraft and perhaps also nuclear-powered attack submarines.

- Deployment of UK/Netherlands Amphibious Force (See paragraph 349) We provide Royal Marines Commando forces to reinforce the Northern flank of NATO in Norway and Denmark, and also the Atlantic islands. The combined UK/Netherlands Amphibious Force could arrive well before United States and Canadian reinforcements. In tension and in the early stages of conflict its movement would need protection from Soviet air, surface and submarine attack.
- Protection of UK and NATO Merchant Shipping NATO recognises the need for protection of shipping in peace and war both within and outside the NATO area. Our naval and air forces are capable of deployment and support world wide, as discussed in Chapter 4.

In tension or in war most of our surface vessels and all our submarines and maritime aircraft would be committed to the Alliance.

332. Our maritime forces are primarily designed for anti-submarine warfare, as the most dangerous threat is from Soviet submarines. However, at sea as on land, Soviet doctrine is one of massive co-ordinated attack. Their submarines, armed with long-range anti-ship missiles as well as torpedoes, combine with surface and naval air forces to pose a wide-ranging and varied threat.

333. Shore-based air support is vital to the success of many maritime operations. The Royal Air Force's four squadrons of

Nimrod long-range maritime patrol aircraft contribute mainly to the ASW battle but can also undertake surveillance of surface ships. The Nimrods are currently undergoing an extensive avionic modernisation.

The first of the modernised aircraft - designated Nimrod MR2 - have already entered service. Shore-based air defence cover for the Royal Navy is provided by two squadrons of RAF Phantom aircraft. These could be joined by more UK-based aircraft if priorities so dictated. There are two squadrons of Buccaneers armed with Martel missiles and laser-guided bombs for attacking enemy surface ships.

Defence of the United Kingdom Base

334. The direct defence of the United Kingdom has three aspects: air defence; maritime defence; and Army tasks. We explained in last year's Statement (paragraph 335) the importance of the United Kingdom base to the defence of NATO.

AIR DEFENCE

335. The Soviet Union has available for attack on Western Europe some 500-600 heavy and medium bombers. These could carry free-fall bombs or stand-off weapons armed with either conventional or nuclear warheads. The first task of our air defences is to detect the approach of enemy aircraft. Shackleton airborne early warning (AEW) aircraft and a chain of ground radar installations, together with NATO's continental radar network, are the 'eyes' of our air defence system. They gather information on the presence and position of hostile aircraft and transmit it to the operations centres which control the air defence effort. In the next few years these detection facilities will be considerably improved and extended. The AEW version of the Nimrod will replace and considerably improve upon the Shackleton, and the

United Kingdom Air Defence Ground Environment (UKADGE) will include new, mobile, three-dimensional radars and an automated command and control system.

336. Our first line of air defence would be our fighter screen: five squadrons of Phantoms and two Squadrons of Lightnings are kept at a high state of readiness to intercept attacking aircraft. Two squadrons of Victor K2 tankers provide air-to-air refuelling to keep our fighters airborne longer. The fighters also have a peacetime role, being ready at short notice to intercept Soviet military aircraft on intelligence-gathering or other missions. On average during 1980 five such aircraft a week were intercepted and identified in the airspace around Britain. Behind the fighter screen, Bloodhound and Rapier surface-to-air missile systems provide a further line of defence. Rapier gives cover at short range against low-level air attack while Bloodhound gives medium-range protection. (See also Figure 9.) We need a new medium-range missile for the future and hope to build one in collaboration with our European allies.

337. Several improvements to these defences are already in hand, notably in air-to-air missiles and in the modification of Hawk trainer aircraft to carry missiles. In the early 1980s we plan to introduce a squadron of VC10 aircraft now being converted for air-to-air refuelling, and in the mid-1980s the air defence version of the Tornado - the F2 - will enter service.

RAPIER FOR THE UNITED STATES AIR FORCE (USAF)

338. In February this year the British and United States' Governments signed a Memorandum of Understanding covering the USAF's purchase of 32 Rapier fire units to defend their bases in this country. Formal contracts for these will be let shortly but work has already begun.

Under the agreed arrangements the United Kingdom will provide and train RAF officers and men for a wing headquarters and three Rapier squadrons. The cost of the RAF manpower will be recovered in accordance with the published exchange of letters dated 14 and 15 July 1980 between the US Secretary for Defense and the United Kingdom Secretary of State for Defence. This is an outstanding example of defence cooperation between our two countries.

MARITIME DEFENCE

339. The main threat to shipping in British waters would be submarines armed with torpedoes, missiles and mines; and in inshore waters, the mine alone. This threat, if not countered, could affect the deployment of ballistic missile submarines (SSBNs), essential shipping routes, reception ports and naval bases. The Soviet Union possesses a vast stock of advanced modern sea mines, which could be laid by aircraft and surface ships, as well as submarines, over the entire Continental Shelf at a rate of hundreds of mines per day.

340. The submarine threat in United Kingdom waters is an extension of that in EASTLANT. Our ASW effort in the predominantly shallow waters around the British Isles is designed to prevent submarine mining and submarine torpedo and missile attacks on our military and commercial shipping. For this task we have surface ships, helicopters and maritime patrol aircraft. We are also modernising our own mines and plan to develop new types for defensive and protective mining. Surface warships with an air defence capability will also be integrated into the United Kingdom air defence network while carrying out other duties such as ASW.

341. To meet the mining threat we are introducing the new Hunt Class vessels capable of both minehunting and minesweeping. Their

glass-reinforced plastic construction gives them a high degree of protection against mines. They use minehunting sonar to locate mines and then use a wire-guided vehicle aimed by television to deal with them. Future offshore patrol vessels could be equipped in wartime for both minelaying and minesweeping. The protection of our offshore resources (oil, gas and fish) is discussed in Chapter 5.

UNITED KINGDOM LAND FORCES (UKLF)

342. The role played by UKLF in reinforcing continental Europe has already been mentioned. It involves training reinforcement units in peace, and in tension or war it would mean mobilising Regular and Territorial Army (TA) units, together with individual reservists, stores and equipment, to reinforce BAOR and meet our other NATO commitments.

343. A similarly vital role is played by UKLF in the defence of the United Kingdom base. Some 30% of the Army's mobilized strength would be available for home defence. This includes Regular and TA units and units formed on mobilization from the training and base organizations, or recalled reservists. These forces would guard vital military and civilian installations against disruption or sabotage; would seek to destroy any force landed by an enemy; and would assist the civil police as required. In some cases the static nature of guard duties does not require the full range of military training or experience: we are therefore considering whether these forces should be supplemented by additional reservists, possibly operating on a local basis, so that fully trained personnel could be released for more demanding tasks.

344. One of the keys to successful use and defence of the United Kingdom base would be an efficient and reliable military communications system: a new VHF radio system, which would be used for the command of home defence forces in war, is to be introduced this year.

Specialist Reinforcement Forces

345. From the northern to the southern flank of NATO territory is a distance of over two thousand miles, much of it in shared frontiers with Warsaw Pact countries. NATO cannot hope to have in-place forces along this entire perimeter. But in spite of their relative remoteness and difficult terrain, the northern and southern flanks are vulnerable to challenges which NATO must be able to counter.

346. The need for specialist reinforcement forces goes further than this. Their flexibility and ability to respond to crises in various parts of Alliance territory makes it harder for a potential aggressor to assess what forces he may face in a given area. Their high state of readiness and ability to deploy rapidly to an area of heightened tension lends itself also to another type of deterrent use, as a prompt signal of collective Alliance resolve in the face of threatened aggression (see page 7). In political terms, meanwhile, these forces provide an important practical demonstration of the readiness of other NATO nations to come to the aid of an individual member.

347. The diverse and highly flexible forces which make up our contribution were described in last year's Statement (paragraphs 352-4). Since then, in order to save overheads, a decision has been taken to merge 41 Commando Royal Marines with the three remaining Commandos.

348. Forces for SACEUR

a. Allied Command Europe Mobile Force (AMF). The AMF is a multi-national force of balanced land and air elements. It

has several deployment options ranging from Norway and Denmark to Italy, Greece and Turkey. It would usually deploy by air and be resupplied by air and sea. Given its modest size, deployment would be primarily designed to demonstrate NATO's solidarity and determination. The force would normally be used for deterrent patrolling as far forward as possible; if aggression came the AMF would remain available to the local NATO commander to fight alongside other NATO forces. The British Army contributes some 1800 men, consisting of an infantry battalion group, a logistic support battalion and other combat and support troops. A major part of the combat element is trained and equipped for Arctic warfare. The Royal Air Force contributes a squadron of Harriers and Puma helicopters to support the land forces. The force is currently commanded by a British Major-General.

b. The United Kingdom Mobile Force (UKMF). The UKMF is a self-supporting land and air force equipped to counter armour and mechanised infantry. It can also defend itself against hostile aircraft and is equipped and trained for operations in each area of Allied Command Europe (ACE). The land element is the 6th Field Force and its logistic support group. The air element is a squadron of Jaguars and an enlarged squadron of Puma helicopters. Next year some Pumas will be replaced by Chinooks, which will greatly improve the lift capability of the force. The addition of an armoured regiment and a medium artillery regiment within the next two to three years is being considered.

c. SACEUR's Strategic Reserve (Air)(SSR(A)). The SSR(A) is a force of British and United States squadrons based in the

United Kingdom. At present we contribute three Jaguar squadrons and one Harrier squadron. One of the Jaguar squadrons and the Harrier squadron also have alternative deployment options with the UKMF and AMF respectively. This reserve of aircraft is available for SACEUR to redeploy at short notice to airfields forward in Europe to strengthen defence and to use, for example, against concentrations of armour and airfields. The Harrier provides additional flexibility with its ability to operate from landing sites remote from conventional airfields.

349. Forces for SACLANT

The United Kingdom/Netherlands (UK/NL) Amphibious Force. An amphibious force is highly flexible and can be largely self-supporting. It can be sailed towards - and held near - an area of likely operations without anticipating a political decision to intervene, or formal NATO alert measures. The UK/NL Landing Force can be put ashore without relying on reception ports and airfields. It disembarks rapidly using amphibious craft and helicopters, and is instantly ready for operations. The force would be equally effective if deployed for operations in North Norway, in the Baltic Approaches or on certain Atlantic islands in the NATO area. To halt any Soviet attack or outflanking attempt as early as possible it can use landing craft, helicopters and oversnow vehicles to redeploy troops and artillery within its area of operations, and subsequently resupply and support them.

WARNING TIME AND POLITICAL DECISION MAKING

1. We have no reason to believe that the present Soviet leaders are deliberately planning to attack NATO. However, should they or their successors wish to do so they have developed and continue to improve the military means to prepare rapidly for war and to launch an attack at a time and place of their own choosing. Surprise is a great advantage in war, but we believe nevertheless that Soviet leaders would not feel that they could be sure of winning without having made some preparations for sustaining an attack and for any resulting nuclear exchange. To do this effectively across the length and breadth of the USSR and other Warsaw Pact countries would be an enormous undertaking. NATO would therefore expect to receive some warning of Soviet preparations for war, though the amount of warning time would vary depending on the balance the Soviet leaders chose between surprise and preparedness.

2. The NATO concept of forward defence requires the stationing of forces well forward in Europe to demonstrate NATO's determination to defend every part of its territory. It is neither politically nor economically practicable to increase these forces in peacetime to a level where they could counter a full-scale conventional attack without substantial reinforcement, especially on the flanks. NATO therefore continues to look for ways of improving its reinforcement planning - for example in the Long Term Defence Programme. Although we can quickly reinforce British Forces Germany fom the United

Kingdom, as Exercise CRUSADER demonstrated last year, early political decisions would be needed to call out the Territorial Army and the reserves of all Services and to make ships and aircraft available. Furthermore, the vast majority of the reinforcements for Europe have to cross the Atlantic from North America. NATO strategy needs this movement to begin early in a period of tension. The decision to reinforce would depend not just on any notional warning time but on the judgement, political will and resolution of the Alliance.

3. It is important to recognise that prompt NATO decisions - should they ever become necessary - to reinforce Central Europe and the flanks, to deploy specialist reinforcement forces and to increase all-round military preparedness might well avert war; they need in no way be an irreversible step towards it. The determination and readiness of the Alliance to plan and, if necessary, implement the planning, have in themselves a powerful deterrent effect. If the decision were ever made to reinforce NATO Europe in a period of tension there would simultaneously be intense political activity to contain the crisis. The political and military policies of the Alliance at such a time would be carefully integrated, with the central aim of preventing a conflict from breaking out.

CONTROL OF DISTURBANCE IN THE UK LOW-FLYING SYSTEM

1. A great deal of low flying is necessary over the United Kingdom if aircrew are to maintain the essential standards of proficiency and readiness. This inevitably affects many people, but extensive measures are taken to limit the nuisance to the public.

2. The training is dispersed as widely and evenly as possible throughout the country. Permission to use the military low-flying system is normally granted only to aircrew based in the United Kingdom or RAF Germany and to visiting units from NATO members who give us training facilities in their countries. Minimum heights and speeds are prescribed for each low-level sortie to ensure that the aircraft fly no lower or faster than absolutely necessary. Most of the training is carried out between 250 feet and 500 feet above the ground, and the usual cruising speed is 450 knots. The use of re-heat to boost engine thrust beyond the normal maximum is severely restricted.

3. Although it is not practicable for pilots to steer clear of every village, their orders require them to avoid flying directly over the conurbations, the larger towns and many smaller places. Routine low level training is not normally carried out between 11pm and 7am, and exceptions must be specially authorised.

4. When a special exercise is likely to involve any unusual low-flying activity the Ministry of Defence informs Members of Parliament, the Press and organisations such as the National Farmers' Union.

4. WIDER DEFENCE INTERESTS

401. In Chapter 1 we demonstrated the need for the West to be aware of threats to its own and its friends' security in the world beyond NATO. Such awareness comes naturally to the United Kingdom. Our political and economic interests have traditionally stretched world-wide, and been supported by several kinds of defence activity. Last year's Statement on the Defence Estimates drew attention to the elements of this activity which continue. Their significance - particularly in those areas where the growing Soviet threat is felt most keenly - has been sharply highlighted by the events of the last eighteen months, and there has been much discussion in this country and in NATO of whether we could and should do more. That question must be considered, like the issues of out-of-area defence as a whole, with due respect for realities. Reinstatement of the former British presence "East of Suez", whatever the arguments for and against, is no longer either a political or an economic possibility. What we can do is review each aspect of our worldwide defence activity to ensure that our available resources are being used as effectively as possible, both in the national interest and as part of a coherent overall response by the West.

402. Chapter 1 defined the three levels at which defence resources can be brought to bear in this task: assistance, deployments, and intervention. The United Kingdom has a role - possibly more varied and extensive than that of any European ally - to play at all three levels.

Defence Assistance

403. This assistance may take the form of training, both in Britain, and abroad (through the provision of loan service personnel); of advisory visits; and of sales or other technical aid.

Assistance is generally tendered to individual countries on terms agreed between the two Governments, but we can also help in the development of multilateral security cooperation between local states.

404. The professionalism and technical skills of our armed forces are widely respected. Where possible, the Government makes training places available for foreign military personnel in MOD establishments: during 1979/80 some 4,000 students from non-NATO countries trained in the United Kingdom, in addition to some 1,500 students from NATO countries. Such training is valuable in itself, but also helps to maintain links between the United Kingdom and the countries involved. There are British military training teams in several countries. The number of Service personnel on loan to foreign governments this year totals almost 600 deployed in 24 countries, and some 150 Army, Royal Marine and RAF personnel are currently serving in the British Military Advisory and Training Team in Zimbabwe. This team was established at the time of independence, at the Zimbabwe Government's request. It is commanded by a Major-General and is making a key contribution to the task of amalgamating and training the local armed forces. The work of the team in Zimbabwe has been supplemented by the provision of training courses and attachments to the armed forces in the United Kingdom.

405. The British armed forces have a history of close contact with the forces of a number of countries, both within and outside the Commonwealth, which leaves us well placed to help in their training and development. MOD's training establishments

cannot accommodate all requests for places; but the Government believes we should continue to give as much military assistance of this sort as resources allow. Decisions on the allocation of training places and the deployment of loan service personnel (LSP) must take account of several considerations, including the United Kingdom's strategic interests, the nature of our defence relationship with the country concerned, and whether their armed forces operate similarly to our own, and use British equipment. British advice on training, logistics, defence organisation and equipment requirements is often sought, and the Services make and receive many visits at all levels. Provision of British defence equipment can, as shown in Chapter 6, help to build up the self-defence capability of states which may have little or no manufacturing capacity of their own. The friendly contacts thus established form an important element in our relations with many countries outside NATO.

Deployments

406. The map at Fig 11 shows the worldwide deployment of the Armed Forces in early 1981. Full details of our standing deployments were given in paragraphs 412-422 of the 1980 Statement. Paragraphs 407-10 below mention only the more significant developments or changes during the past year.

CYPRUS

407. A review of the United Nations Force in Cyprus (UNFICYP) was carried out by the United Nations (UN) authorities in 1980. Its findings included proposals on the various force elements contributed by the United Kingdom. As a result, a modest reduction of manpower has taken place in the British contingent and a more economical use of helicopters is planned. These changes do not affect UNFICYP's effectiveness in its essential peacekeeping role. The arrangements

whereby Britain contributes to logistic support for UNFICYP and the United Nations Interim Force in Lebanon (UNIFIL) still stand. Britain will continue, subject to other commitments, to support current and future UN peacekeeping operations.

HONG KONG

408. The British forces in Hong Kong demonstrate our commitment to the integrity and security of the territory. The main elements of the garrison are currently four infantry battalions (three of which are Gurkha), Gurkha engineers, five RN patrol craft, a squadron of RAF Wessex helicopters and a squadron of Army Scout helicopters. The Hong Kong Government meets 75% of the costs of the garrison under the Defence Costs Agreement, which was re-negotiated in October 1980. The new Agreement will run from April this year, will provide for an additional infantry battalion and support elements, and will ensure that the cost-sharing between the two Governments realistically reflects the actual costs of the enlarged garrison. Build-up of the garrison is now proceeding. The additional infantry battalion will initially be a Gurkha battalion, which will entail an increase in the size of the Brigade of Gurkhas.

409. Temporary reinforcements have been provided during the past year to help check the inflow of illegal immigrants from China. The main elements have been the fast patrol boat HMS Scimitar, two hovercraft, a Royal Marines Raiding Squadron equipped with small boats, the 1st Battalion of the Royal Regiment of Wales, the 1st Battalion The Parachute Regiment, elements of the Gurkha battalion from Brunei and three Army Air Corps Scout helicopters with their crews from the United Kingdom. The two hovercraft, the Raiding Squadron and the Scout helicopters are staying in Hong Kong to help the local forces.

BELIZE

410. British forces continue to be stationed in Belize. The Government is working towards the achievement of a secure and peaceful independence for Belize, in accordance with the Resolution overwhelmingly adopted last November by the UN General Assembly. The United Kingdom will be prepared to help Belize in meeting her security requirements after independence and we are considering the form that such assistance might take.

Exercises and Training

411. Exercises, training and manoeuvres account for the bulk of our temporary deployments in peacetime. In addition to their training value, they demonstrate Britain's continued interest, support and capability in the regions concerned. They offer valuable opportunities for cooperation with host nations and other friendly powers. Joint exercises and training activities take place not only with our NATO allies but also with Commonwealth partners and third world countries. Exercises can bring benefit to the host country in other ways: for instance, many Royal Engineers training projects carry out valuable construction work and contribute to local development programmes. There has been renewed interest over the last year in holding joint exercises under the Five Power Defence Arrangements (providing for consultation on defence matters) to which the United Kingdom is party with Australia, New Zealand, Malaysia and Singapore. We shall be participating in these exercises as resources allow. Annex D to this Statement shows the most significant exercises held outside the NATO area last year.

Royal Navy Task Group Deployment

412. This year's major Royal Navy task group (TG 318.0), comprising two destroyers, three frigates and three Royal Fleet Auxiliaries, set sail in May 1980 for a seven-month deployment to the Far East.

A nuclear submarine joined them in the Mediterranean phase. Following an invitation from the People's Republic of China, three ships - Antrim, Coventry and Alacrity - paid a four-day visit to Shanghai in September 1980, the first ever RN visit to the People's Republic. Some three months in all were spent in the Far East. Figure 10 traces the passage of this deployment, showing the ports visited and the main exercises undertaken.

413. Because of this group deployment the United Kingdom was able to respond promptly to the need for a naval presence in the Gulf of Oman when the outbreak of fighting between Iraq and Iran raised the possibility of a threat to the free passage of merchant shipping in the area. Ships were initially detached from TG 318.0 to provide a patrol of two ships in the Arabian Sea. These were in turn relieved by ships deployed from the United Kingdom. The Government expects to maintain a naval presence of this kind in the area at least so long as the potential requirement for protection of merchant shipping persists.

Intervention Capability

414. The Gulf of Oman patrol is one example of the advantages Britain derives from the ability of HM Forces to operate flexibly outside as well as inside the NATO area. Contingencies where we might want to take advantage of this include the reinforcement of dependent territories, as in the case of the New Hebrides mentioned below; protection of British citizens, for instance through Service aid in evacuation from danger areas; protection of shipping; and various forms of support to independent Governments. Our capability also enables us to carry out tasks of peacekeeping and disaster relief like those mentioned elsewhere in this Chapter.

415. The military power which Britain alone could bring to bear in any of these contingencies is limited. Resource constraints

and our primary commitment to NATO rule out any idea of creating a substantial standing "intervention force". In any serious overseas emergency we would in any case expect to concert our actions with other Allies. The value of such cooperation among Western powers has been increasingly recognised in NATO this year; as we noted in Chapter 1, the impressive effort by the United States to enhance its own long-range capability will open up a number of new possibilities.

416. Options for enhancing British capabilities at modest cost, mentioned in paragraph 409 of last year's Statement, are being examined against this background. Our programme to "stretch" 30 of the RAF's existing Hercules aircraft will be completed over the next few years and will increase capacity over short ranges by the equivalent of about eight new aircraft. We are considering establishing a special equipment stockpile for limited operations overseas, and restoring a limited parachute assault capability by providing RAF aircrews with station-keeping equipment and training to drop an entire battalion group if necessary within 15 minutes. Improvements are being made in command and control arrangements for overseas operations; an existing two-star headquarters will be nominated and staff earmarked to take command of any contingency intervention. This headquarters will be in close contact with all formations that might be called on for such operations.

Operations in 1980/81

417. In 1980 HM Forces carried out an important overseas operational deployment in Vanuatu, previously the New Hebrides. They have also undertaken major disaster relief tasks over the last year.

NEW HEBRIDES/VANUATU

418. A tactical commando headquarters and one rifle company of 42 Commando Royal Marines, with Army and RAF support elements,

deployed by RAF VC10 and Hercules aircraft to the New Hebrides (now Vanuatu) in June 1980 to honour our joint obligation with France to maintain the stability and integrity of the territory. British and French troops, acting together, carried out a successful air-landed operation on the island of Espiritu Santo. At the request of the government of Vanuatu, British and French troops stayed in the territory for a short period after the achievement of independence on 30 July.

RELIEF OPERATIONS

419. The Services have helped in various relief activities over the past year, including assistance after floods in Belize; building projects in the Falkland Islands; training Gambia Police Pioneers in construction skills; repairing a jetty in South Georgia in the Antarctic; and other tasks in Kenya, Tuvalu and St Vincent.

Nepal

420. After a severe winter drought in 1979/80 the mountainous western areas of Nepal ran seriously short of grain. Relief work was hampered by communications problems. In response to a call for assistance from the Nepalese Government, the Overseas Development Administration provided £175,000 to finance an airdrop of foodstuffs to the worst-hit areas. An RAF Hercules aircraft with two aircrews, an Army Air Despatch Team, a command party, support personnel and equipment deployed to Nepal. During May-June 1980 this team carried out 77 missions and dropped 1005 tons of essential food supplies.

Hurricane Allen

421. In August 1980 HMS Glasgow was diverted to the Caribbean island of St Lucia, which had been extensively damaged by Hurricane Allen. The ship arrived as the hurricane passed and for four days the crew cleared roads, repaired buildings and helped restore water, power supplies and communications. The ship's helicopter flew

medical teams and stores to outlying areas and provided aerial reconnaissance. Meanwhile, HMS Scylla arrived at the Cayman Islands, which had also suffered hurricane damage, and her crew provided valuable help on Cayman Brac, the worst-hit of the islands.

422. A Royal Engineer troop also visited St Lucia between October and December 1980 to repair schools, community centres and parts of the electrical transmission system. Until June 1980 the Royal Engineers were still providing similar help on the nearby island of Dominica in repairing damage caused by Hurricane David in 1979.

PART THREE

RESOURCES

Britain's Armed Forces are a unique national resource, which daily provides protection and assistance in the most critical areas of the community's safety. The community in turn provides not only the money, but also the resources of men, women and industrial capacity from which our forces are constructed. The linkage between the community and defence can hardly be overemphasised: the success of each depends fundamentally on the whole-hearted efforts and understanding of the other.

5. ASSISTANCE TO THE COMMUNITY

501. The preceding chapters have been concerned with the deterrent and defensive roles of our forces. Every day of the year, however, the Services are actively engaged within the United Kingdom across a broad range of operational activities which call for the special expertise that only they can provide, and which can very often make the difference literally between life and death. The most substantial and, regrettably, most continuous of these is the support which the Armed Forces give to the Royal Ulster Constabulary (RUC) in Northern Ireland. We deal with this first and then go on to discuss the other ways in which Service skills and training assist the civil community. Figures over a span of years on most of the topics covered in this chapter are given in the tables of Volume II Section 7.

502. This chapter describes the tangible and practical aspects of Service assistance to the community. In our pursuit of realism and economy, however, we must not forget that the British also look to the Armed Forces to reinforce that intangible sense of national pride and self-confidence that is nourished not least by atmosphere and sentiment. The Guards; the state processions; Trooping the Colour; the Royal Marines bands; the Red Arrows are all invaluable parts of our national life, without which no account of Service assistance could be complete. Their contribution to Service and national morale is considerable.

NORTHERN IRELAND

503. In some parts of Northern Ireland the Royal Ulster Constabulary (RUC) still needs help from the Armed Forces in the enforcement of law and order. The restoration of a normal life to Northern Ireland has always been the Government's aim; and we look forward to

a time when soldiers in the Province can return to their normal duties. The RUC already operates effectively without Regular Army help in most areas of the Province, any necessary local assistance being provided by the Ulster Defence Regiment (UDR). Despite the efforts of the men of violence, encouraging progress continues to be made. The lessening of the overall level of violence during 1980 and the RUC's growing ability to prevent terrorism and arrest those responsible have steadily reduced the need for Army support. During 1980 we have been able to withdraw three of the military units deployed to the Province on four-and-a-half-month emergency tours and reduce further the number of troops on supporting tasks. As a result, the resident garrison of six major units now outnumbers those on emergency tours for the first time since 1971, and the total force of ten major units in the infantry role is the lowest Army force level since then.

504. Nevertheless, the Government will continue to keep sufficient troops in the Province to provide whatever support is still needed by the RUC. The terrorists' campaign of propaganda and violence continues and still casts a shadow over some areas. Their main weapons - the gun and the bomb - still threaten death and destruction, though this approach has now been abandoned by all but the most extreme and politically bankrupt elements. The statistics for 1980 in table 7.1 of Volume II of this Statement show a continuing improvement over previous years. But statistics can never adequately portray the many tragedies and the personal suffering caused by the brutality of mindless violence. The examples which follow are just a few of many cases involving crimes against members of the Regular Army and the UDR, who risk their lives every day because of their commitment to protect the people of Northern Ireland.

505. Among the most despicable of such crimes was the murder of a soldier who had returned to Londonderry from Germany to visit his wife in a local hospital after she had lost their baby. Later in the year another soldier was shot dead outside the same hospital while waiting to pick up a friend who was visiting his wife and new-born child. In a third incident a 59-year-old member of the UDR, due to retire next year, was murdered in his home town while collecting for charity. Like other UDR soldiers, who have been killed while on postal rounds or farming their land, he was off duty at the time.

506. The callousness of the terrorist contrasts sharply with the courage and persistence which members of the security forces show every day in bringing the men of violence to justice. Figures for arrests are shown in Table 7.1 of Volume II, but they too cannot illustrate fully the sheer dedication and tenacity which the forces of law and order display in their daily work in the Province. One example was on 2 May last year, when four men were arrested in possession of an M60 machine gun and other weapons. An Army Officer, killed in the course of the incident, has posthumously been awarded a Military Cross (MC) for his bravery. Altogether, about 100 awards were made for service in Northern Ireland, including a Distinguished Service Order, another MC, two Air Force Crosses, one George Medal, one Military Medal and 15 Queen's Gallantry Medals.

OTHER ACTIVITIES

507. The Services are seen most typically as a resource of the community in their invaluable work in search and rescue, bomb disposal, protection of offshore installations and fishing grounds

and in emergency assistance after natural disasters. These tasks are often dangerous and always performed in difficult conditions. The high standards of skill and courage with which they are carried out rightly attract much public attention. This year we also give new details of the lesser known and less dramatic defence responsibilities in hydrography and meteorology.

THE PRINCES GATE SIEGE

508. One event from the past year particularly caught the public imagination and demonstrated vividly, on live television, the skill, professionalism and courage of the servicemen who took part. This was the ending of the siege which began on 30 April last year at the Iranian Embassy in Princes Gate, West London. A group of six terrorists had occupied the embassy and demanded the release of prisoners being held in Iran. After cordoning off the area the police began negotiations with the aim of bringing the incident to a peaceful conclusion. Five hostages were released as a result, but the situation changed dramatically on the afternoon of 5 May, when shots were heard from inside the Embassy, and shortly afterwards the body of one of the hostages was thrown into the street. The terrorists threatened to murder more hostages if their demands were not met, and the Home Secretary authorised an assault on the embassy by the Special Air Services Regiment to prevent more innocent lives being lost. The assault was successful, and all except one of the hostages were rescued alive. Five of the terrorists were killed and the sixth arrested.

MILITARY AID TO THE CIVIL COMMUNITY

509. During the year the three Services have again aided the community in a wide range of projects. Last October troops from the King's Own Royal Border Regiment and 75 Engineer Regiment

provided, together with others, water-borne rescue teams when the valleys of the Ribble and the Wyre were severely flooded. During July a troop from 22 Engineer Regiment built a girder bridge across the River Soudley in Gloucestershire for the local village hall committee. Throughout the year Service divers have helped the police in emergency underwater search operations.

MILITARY AID TO CIVIL MINISTRIES

510. Servicemen made a major contribution to running emergency temporary prisons during the winter when, at the Home Secretary's request, Service police and supporting units assisted the prison authorities and civil police in dealing with the effects of industrial action by the Prison Officers' Association. The Services were used only in the last resort as a safeguard to the community and demonstrated once again their flexibility in an unfamiliar and difficult role.

BOMB DISPOSAL

511. The Services' bomb disposal teams continue to respond to calls for assistance throughout the United Kingdom. Their work in Northern Ireland in dealing with terrorist devices is well known, but on the mainland too they do essential and hazardous work. In the past year in Britain alone some 5,987 calls were received and 10,693 explosive items were safely disposed of in the course of clearance operations.

512. The primary role of the Services' bomb disposal experts is the safe detonation of unexploded ordnance, but they are also trained to deal with a wide range of terrorist devices. They normally work in small teams, located throughout the country; at the request of the Home Office they have recently agreed to take over from the Metropolitan Police responsibility for providing support for Home

Counties Forces. Improved arrangements have also been made to involve Royal Navy and RAF as well as Army teams in helping the police.

513. The high success rate of Service teams in safely disposing of explosives is a tribute to their skill, dedication and standard of training. Among the many notable examples from Northern Ireland in the past year was the request in September for bomb disposal teams to help recover the body of Mr Wallace Allen, a reserve RUC constable who had been ambushed and shot dead by the Provisional IRA while driving a milk lorry. His body was removed by the terrorists and the lorry was booby-trapped. As well as clearing the lorry, the bomb disposal experts had to deal over the next 12 days with a number of explosive devices placed in areas where the Security Forces were told Mr Allen's body could be found. In one case a dummy body was used to lure soldiers into an area where a remotely controlled explosive device had been laid. When the body was finally dumped by the Provisional IRA the same thorough precautions had to be taken by the bomb disposal teams before it could be removed and returned to his family.

PROTECTION OF OFFSHORE RESOURCES

514. The Royal Navy and the Royal Air Force work together in protecting our offshore interests. The major elements of their forces are: five Island class offshore patrol vessels (with two more from other duties as necessary), nine Ton class mine counter-measures vessels, various RN aircraft, a company of Royal Marines and RAF Nimrods from Kinloss and St Mawgan. HMS Speedy, the Royal Navy's first jetfoil, is currently being evaluated in the offshore protection role. These forces also keep in close touch with the fishery protection vessels of the Department of Agriculture and Fisheries for Scotland, which patrol some of the fishing grounds

and in emergency assistance after natural disasters. These tasks are often dangerous and always performed in difficult conditions. The high standards of skill and courage with which they are carried out rightly attract much public attention. This year we also give new details of the lesser known and less dramatic defence responsibilities in hydrography and meteorology.

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off the Scottish coasts. The Nimrods and the Island class ships combine fishery protection duties with patrols of offshore oil and gas installations.

515. As well as surveillance and deterrence some policing is involved. In 1980 the Royal Navy boarded 1,508 British and foreign fishing vessels and, following prosecutions initiated by the fisheries departments, 16 of these were convicted of contravening fishing regulations. Such prosecutions can cover a wide variety of offences, including fishing in prohibited areas, using nets of an illegal mesh size, or exceeding catch quotas.

516. Deterrence of terrorist activity is particularly important in the case of oil or gas installations. The ability to react quickly is crucial and has been recognised in the formation of a new Royal Marines Company (Comacchio Company) at Arbroath in May last year. Throughout the year this company maintains Royal Marines at very short notice to respond to an offshore incident.

517. Since it was formed the company has been involved in three exercises on offshore platforms. In July a major exercise was held in the Ninian field; it also involved Royal Navy ships and helicopters and RAF Nimrods and photo-reconnaissance aircraft. Six further exercises are planned for this year.

518. Some of the improvements to the naval and air forces engaged in offshore protection are described in Chapter 6.

SEARCH AND RESCUE

519. Helicopters of the Royal Navy and Royal Air Force as well as RAF Nimrod maritime patrol aircraft are in constant readiness to undertake search and rescue missions. Although the primary purpose of the teams is military, in peacetime the overwhelming majority of missions flown are to rescue civilians. Helicopter squadrons of the two Services flew 1,173 missions and rescued 834 people during 1980.

520. The seas around Great Britain have always been among the busiest in the world. The traditional categories of seafaring Briton - fisherman, merchant sailor and yachtsman - have now been joined by another: the oil rig worker, who may also from time to time stand urgently in need of the rescue services. A tragic reminder of the risks run by those who work in the North Sea was the disaster which overtook the oil rig support platform Alexander Keilland, which capsized on 27 March 1980 with 212 people on board. Despite appalling weather conditions, Royal Navy units joined in the rescue work, while RAF Nimrods provided a communication centre over the disaster area for the British and Norwegian rescue teams. Service helicopters flew a total 122 hours, rescued ten people and located a further 26, who were later rescued by a recovery vessel.

HYDROGRAPHY

521. The Royal Navy's survey flotilla is largely occupied with carrying out surveys to meet defence requirements. The growing capabilities of Soviet and other Warsaw Pact naval forces in, for example, submarine and anti-submarine warfare, together with developments in our own systems, permit no relaxation in defence-oriented survey work. The operational effectiveness of our own submarines, including the future Trident submarines, depends on their having detailed and accurate knowledge of the environment in which they operate.

522. The Royal Navy's survey flotilla consists, at 31 March 1981, of four ocean survey ships, four coastal survey vessels and four inshore survey craft, one of which, the civilian-manned Waterwitch, is due to be paid off in April. In addition a hydrographic survey team is embarked in the ice patrol ship HMS Endurance.

523. All ships are fitted with a wide range of precision navigation equipment and survey sensors, such as surveying echo sounders for water depth measurement on the Continental Shelf and towed side-scan sonars to locate wrecks and other underwater dangers.

524. The three remaining inshore survey craft, all now over 20 years old, are to be replaced over the next few years by three new and more suitable vessels. These are a 15-metre launch for surveying approaches to naval ports, an improved coastal survey vessel for use in exposed coastal waters, and a surface effect craft (a type of hovercraft) for use in the shallow waters of the southern North Sea and the outer approaches of the Thames Estuary.

525. The Hydrographic Department at Taunton uses the data provided by the Survey Flotilla and data from other sources to produce and maintain a world series of charts and publications which are the mainstay of the international merchant marine. Nearly 1,000 staff are employed in the process from initial compilation to fair drawing, printing and distribution worldwide. Eighty per cent of the total output of charts and nautical publications is sold, amounting in the calendar year 1980 to 2,772,000 charts and 575,000 books.

METEOROLOGY

526. The Meteorological Office is a part of the Ministry of Defence, but serves all sections of the community. It also takes a leading part in international cooperation through the World Meteorological Organisation and acts in concert with the other Western European services. It collects, distributes and publishes meteorological observations; provides forecasts, services and advice; and undertakes research. Specialised support is provided for the Services; civil aviation; shipping; agriculture; the energy, water, construction and other public and private industries;

and local authorities. The general public are served through the news media, Weather Centres in major cities, and the automatic telephone weather service. About one third of the cost of the Office is recovered to the defence budget from non-defence users. Table 7.9 of Volume II shows the apportionment of expenditure between civil and defence activities.

527. An important recent development has been the provision of weather information through the Prestel service of the Post Office. This gives users access to a wide range of up-to-date observations and forecasts, and makes possible the efficient collection of a reasonable fee from each user. The expansion of this service should provide substantial benefits to the users and to the Meteorological Office. Steady progress is being made in methods of making and transmitting observations: automatic weather stations, radars and satellites play an increasingly important role, and communications facilities are continually being improved. Improvements are also being made in the computer methods used to forecast the weather. Particular attention is given to forecasting for a few hours ahead in support of the Royal Air Force, and to the study of possible long-term changes in climate. Specialised weather forecasts also play an important part in offshore oil production. 'Weather window' prediction is a vital element in planning tows of oil rigs and equipment and supply barges. All these tasks require great computing power, and preparations are well advanced for the installation during 1981 of a new, very fast Cyber 205 computer which will make possible more realistic simulations of climate and more detailed short-range forecasts.

DEFENCE PROCUREMENT STRATEGY

1. The procurement budget is provided by Parliament for the research, development and production of equipment for the Armed Forces. It cannot be used specifically to support industry in its civil markets. The defence industrial base was created to satisfy the equipment needs of the Services and not vice versa. But there are many strands of interdependence between the Forces, the defence industries and the economy as a whole; and it is an important aim of defence procurement policy to foster these links and exploit the full scope they offer for mutual benefit.

2. The scale of the interaction between defence and the economy is shown by the figures in paragraph 605 of this Statement. The relationship is particularly close in high technology industries; the Ministry of Defence buys some 20% of British electronics output, about a third of the total output of the shipbuilding industry and about half that of the aerospace industry. Defence-inspired technological advance also benefits the community through spin-offs such as integrated circuitry, advanced avionics and radars in aircraft, visual display units in computing, and digital communications systems.

3. Procurement starts with the formulation of requirements; on these the size and shape of the defence industrial base ultimately depend. It is in formulating these requirements and devising economical programmes to meet them, for our Services and, desirably, for other countries too, that the Government's responsibility for managing the procurement budget in the best national interest comes most keenly into play. The choices involved are not simple: there are many considerations, whose relative weight is not easy to assess. The time factor is a major added complication. Most important equipment items have long development lead-times and

at least equally long projected lives. Threats, and thinking on how to meet them, can change markedly over this timescale and so can costs, including those of spares, support and manpower. The cheapest option is thus not always that which presents the lowest capital cost in the short term. But some of the general choices facing us in procurement can be clearly identified, and the more important of them are discussed below.

4. There are clearly important reasons why we should normally aim to buy British. The arguments for doing so are not limited to the direct benefits to employment and the saving on imports. The long-term commitment of British industry to meeting our defence needs swells the national investment in R & D and technological progress, and helps us to guarantee the maximum pay-off from that investment. It bolsters our defence sales potential and improves British industry's credentials for winning a worthwhile and challenging part in international collaborative projects. Besides, self-reliance in defence - bringing with it the freedom to shape our equipment requirements primarily to our own need - has a value in its own right. It may be false economy to opt for a cheaper foreign product if the result is to weaken or lose altogether British industry's own producing capacity in that line. We would then be dependent for future generations of equipment on foreign suppliers and on their ideas of what to produce and when, and on how much to charge.

5. This does not mean that we should pay an unlimited premium for a Made in Britain label. The Government has a prime responsibility to make a cost-effective use of total defence resources. With current financial constraints and the constant real cost increases of new technologically advanced equipment it becomes essential not just to obtain value for money but to cut costs

wherever possible. There are many ways to do this, from reducing the range of equipment we use, seeking a higher performance from each item so that economies in numbers are possible and devising more cost-effective production, through to the benefits that can be obtained from better competition and larger production runs supported either by sales prospects or the various forms of collaboration. At all points the performance of industry is a crucial factor. Only by offering competitive products of the right quality and standards, on time and at the right price, can the British defence industry hold its own both in national procurement plans and among the vanguard of the technologically advanced nations of the world.

6. Defence sales are discussed on page [ ]. The pros and cons of collaboration were analysed fully in last year's Statement, paragraphs 737-742. Collaborative projects can help us share the financial burden and technical risks associated with development, as well as bringing economies of scale in production and a bonus in interoperability. The Government is determined to play a leading role in encouraging allied cooperation of this kind. In the last year we have continued our efforts with our main NATO partners - who share many of our financial problems - to identify collaborative prospects for future generations of equipment. An important agreement was signed in August 1980 by Britain, France, the Federal German Republic and the United States on future air-to-air missiles (see paragraph 625b). This was the first fruit of initiatives taken to improve transatlantic cooperation through "package" arrangements. It provides for the complementary development in Europe and America of separate systems for which both will have a requirement. The result is to spread costs and to help

maintain a strong defence industrial base on both sides of the Atlantic.

7. Competition is as healthy and desirable in the defence industries as anywhere else. It encourages lower prices and greater efficiency; it also stimulates innovation and encourages high quality. Several areas of the British defence industry have been rationalised to such an extent that an element of competition can in practice only be introduced by maintaining the option of buying abroad. Where competition can be retained without undue cost or penalty the Government welcomes it and will proceed accordingly in both national and collaborative projects. Where it is not practicable, we shall seek to encourage economical performance by contractual incentives.

8. The complexity of individual decisions in procurement - affected by all the factors mentioned above, and more - makes it particularly important that they should be guided by an overall strategy geared to certain fundamental principles. One prime factor is the military requirement. Another is the finite share of resources available. A third is value for money. Within the framework these establish, the Government will use the purchasing power of the defence budget to give the maximum practicable support to British industry, which does not rule out judicious overseas purchase. The precise content of that support is bound to evolve with time, as will the defence industrial base itself. It will be our abiding aim to secure, through our decisions in the procurement field, the maintenance of those vital areas of British expertise which best serve our Forces' needs and which offer the best future opportunities in terms of new technologies, their applications and marketing potential.

6. EQUIPMENT

601. The effectiveness of our forces in the roles described in Part Two depends on their having the right equipment, in the right quantities and at the right time. It is the primary aim of the defence equipment programme to provide this at the right price. The main factors which shape the requirements for individual items of equipment are described in paragraphs 608-610 below.

602. The equipment programme impinges, however, on many other interests besides those of the Armed Forces. The defence industrial base is big enough to figure significantly in national patterns of employment, the development and use of technology, and the performance of the economy as a whole. The complex issues to which these facts give rise in defence procurement policy - including the relative claims of sales prospects, collaborative ventures, and short and longer-term judgements on value for money and competitiveness - are discussed separately on page(s) [ ].

THE PROGRAMME

603. In 1981/82 it is planned to spend £5352 million (at 1981/82 Estimates prices) on equipment: 44% of the defence budget (the comparable figure in the 1980/81 Estimates was 40%). When associated personnel and other costs (£498 million) are added in, the estimate of total procurement expenditure reaches £5850 million, or 48% of the defence budget.

604. This expenditure pays for the purchase of spares and the provision of maintenance items for older equipment; for the production of equipment developed in the 1970s; for the development of new systems for the coming decade; and for research which is already looking ahead to the twenty-first Century. A reasonable balance must be kept between these different elements of the

programme. Figure 12 shows the expected pattern in 1981/82, together with a further analysis of the main areas of production expenditure.

605. In recent years about 75% of equipment expenditure has gone to national contracts placed with British industry. Our share of collaborative projects has taken another 15%. The remaining 10% is spent on contracts placed overseas. Expenditure on defence equipment is estimated to support about 220,000 jobs in direct employment in the defence industries and about the same number indirectly in industry as a whole. (See Figure 14.)

THE MORATORIUM AND AFTER

606. A particular feature of the past financial year was the moratorium on the placing of new defence contracts imposed from the beginning of August to the beginning of November last year, and the period that followed it of stringent discipline in the placing of new contracts. Both measures were made necessary by the fact that industry, with a shortage of civil orders in a time of recession, has been getting through its defence work more quickly than usual, and more quickly also than our financial estimates had provided for. (See also paragraph 808.)

607. Experience has shown that, in present economic circumstances, we have too full an equipment programme for the financial resources available for defence. We have also had to take account of the decision reached in November 1980 to reduce the planned increase in the defence budget by £200 million in each of the next three financial years as one of the measures to restrain the growth in public expenditure. The programme changes announced earlier this year against this background involve the phasing out of some older

equipment, the deferring of some equipment purchases, the trimming of works and training programmes and further reduction of overheads. These changes were selected to ensure the least possible detriment to our defence industrial and technological capabilities consistent with our defence needs and financial circumstances. The same considerations will apply as we adjust the programme for 1982/83 and subsequent years. The remainder of this chapter explains how the equipment programme currently stands following the decisions announced for 1981/82.

THE EQUIPMENT

608. New equipment is developed and produced in response to a new or increasing threat and to replace obsolescent equipment. We have to assess now the threats of the 1990s and beyond, the weapons that are likely to be in hostile hands at that time and the technologies these may incorporate. We have to judge what new requirements and operational concepts are needed in the roles discussed in Part Two and what technological advances we must secure, through research and development, to ensure effective new weapons. Intelligence about the threat therefore plays a vital role in the formulation of our equipment programme.

609. No less crucial, however, is the availability of resources. In the years immediately ahead (as illustrated in Figure 22 of last year's Statement) the bulk of the money available is earmarked for equipment already approved. The pressure on resources is further increased by the escalation in the real costs of successive generations of new equipment. (See Figure 13.) Not all the equipment inventory needs to be renewed at once. Equipment renewal has to be carefully phased, and priorities agreed. We

have bugun several new full development programmes in the past year. These decisions are described later in this chapter and some individual programme costs are given at paragraph 626.

610. The demands of meeting an ever-increasing threat will pull towards solutions which are sophisticated and therefore expensive. On the other hand the limitations on money must pull towards simpler and cheaper solutions if the necessary range of equipments is still to be provided. No one could afford to develop the best possible air-to-air missile if it meant that the aircraft to carry it fell short of the minimum requirement. By the same token there would be no point in developing a superb aircraft at a cost which left no funds for equipping it with missiles. The way to overcome such contradictions lies and has always lain, in a thorough search for value for money: and in satisfying ourselves, particularly before projects enter full development, that cost-effective solutions for requirements have been identified. The specification of an equipment may also be influenced by considerations of overseas sales potential or the opportunity for international collaboration.

611. Several techniques contribute to this. Operational analysis (see page [ ]), both of the best means of countering future threats and of proposed procurement solutions, plays a valuable role. The R & D establishments (see page [ ])and industry also make careful investigations of proposed equipments in feasibility and project definition studies, which reveal whether the necessary technological advances can be made and at a price that can be afforded. Before any decision is taken to commence full development these studies must be completed. In development much emphasis is laid on economising in through-life costs. We

look for high standards of reliability, easier maintenance and (as a result of advances in electronics and automation) economy in manpower. We also place great importance on developing equipment that can be improved during its lifetime to keep pace with the threat. This is known as having 'stretch potential', and exploiting it is often much cheaper than introducing new equipment.

612. The Statement on the Defence Estimates 1980 described the equipment programme comprehensively. The sections that follow concentrate on the major equipment decisions that have been taken in the past year, or are envisaged for the coming year, and on significant new production orders or deliveries to the Services under the three geographical headings used in Chapter 3; the Central Region of Europe, the Eastern Atlantic and Channel, and the United Kingdom base. In addition, the opportunity is taken to explain in more detail one area of very great importance - electronic warfare (see page [ ]).

THE CENTRAL FRONT

613. The high level of expenditure and effort that the Warsaw Pact is devoting to its own equipment programme has been described in Chapter 1. We can generally expect the Warsaw Pact at least to match NATO in the technological sophistication of its weaponry, and it has already demonstrated an ability in some areas to plan, develop and introduce new systems more quickly than NATO. In addition, its forces benefit from greater standardisation in weapons systems.

614. As was described in Chapter 3, armoured strength forms the key element in Warsaw Pact ground forces; modern tanks are supported by armoured personnel carriers, self-propelled guns and self-propelled air defence systems. This armour is supported further by helicopter gunships and tactical attack aircraft. The Warsaw Pact's own airspace will be defended by aircraft and advanced

missile systems. Thus our essential requirement on the Central Front is for forces capable of defeating the main Warsaw Pact armoured and air attack and of penetrating sophisticated air defences to strike at bases, airfields and second-echelon armour and reinforcements.

615. In the past year several decisions on equipment have been taken which will greatly enhance the fighting ability of BAOR during the 1980s in main battle tanks, armoured personnel vehicles, air defence equipment and artillery systems. Major improvements in the capability of Royal Air Force Germany will be secured soon with the introduction of the Tornado GR1, production of which proceeds steadily. Progress on particular programmes of note is set out below.

616. Equipment for Ground Forces

a. Main Battle Tanks. The MBT 80 programme has been discontinued in favour of introducing a new tank to be known as Challenger. This has resulted from a review of requirements in the light of the latest assessment of the threat. Whereas MBT 80 would not have been available until the 1990s, Challenger will come into service much earlier and allow us to increase the total number of tanks. It will incorporate a number of technical advances, including Chobham armour and a more powerful diesel engine. An initial order has been placed for sufficient Challenger to equip one of BAOR's four armoured divisions; the final number to be bought is yet to be decided, but the present planning assumption is that Challenger will replace up to half of the existing Chieftains in BAOR. Longer-term studies into the replacement of the remaining Chieftains will encompass the

possibility of a collaborative project within NATO. The policy of progressive improvement throughout in-service life which has been followed with Chieftain will, it is hoped, apply equally with Challenger.

b. Anti-Armour Ammunition. An improved armour-piercing round is to be introduced in the next few years for use with Chieftain and Challenger, and further work is aimed at procurement of a new anti-armour round, to enter service in the late 1980s. These steps will maintain effectiveness against improved Soviet tank armour.

c. Artillery Systems and Equipments. Deployment of the new FH 70 155mm towed gun has recently been completed. We are also about to take delivery of an additional 69 M109 155mm self-propelled guns from the United States. Together these weapons will significantly increase the firepower of the 1(BR) Corps artillery. Development work is continuing on the Battlefield Artillery Target Engagement System (BATES) which will provide computer processing assistance in the control of artillery systems, including such planned future systems as the multiple launch rocket system (MLRS) and the SP 70 self-propelled howitzer.

d. Air to Ground Weapons. The TOW long-range anti-tank guided weapon (ATGW) system is about to enter service fitted to the Lynx helicopter. Helicopter-borne ATGW provide a rapid-reaction force to counter armoured thrusts. Project definition has been completed on an advanced anti-armour weapon. A

review of the way ahead is now being undertaken which will also take account of recent technological advances. Development of the JP233 airfield attack weapon continues. The withdrawal of the United States from funding of this joint project is disappointing, but the weapon still offers a cost-effective solution and we hope that the United States will reconsider their position on the project.

e. Low Level Air Defence. Delivery of Blindfire Rapier units will be complete to both 1(BR) Corps and RAF Regiment squadrons by the end of this year. The system will be progressively improved in the future. Full development has begun of enhancements to the man-portable Blowpipe anti-aircraft missile; these take advantage of the latest technology and will considerably improve Blowpipe's effectiveness against future enemy aircraft.

f. Mechanised Combat Vehicle (MCV). A new armoured personnel carrier, MCV 80, began full development last year. This will enter service from the mid-1980s, replacing the greater part of the existing FV 430 series, which has been in service since the 1960s. The infantry vehicle will mount a 30mm Rarden cannon capable of destroying enemy light armour, and variants are planned for other roles such as artillery observation, recovery and mortar fire.

g. Communications. The Ptarmigan trunk communications system has now entered production and will enter service in the mid-1980s, replacing the Bruin system in BAOR. It will provide comprehensive and resilient area communications, with automatic re-routing in the event of enemy damage.

h. Chemical Warfare Defensive Equipment. We are continuing with

improvements to our defensive measures, including protective suits and respirators and detection, monitoring and decontamination equipment.

617. Equipment for Air Forces

a. Tornado GR1. The first deliveries to the Tri-National Training Establishment at RAF Cottesmore were made last year and the numbers are being steadily built up. A fourth batch of aircraft has been authorised. This will bring the number of aircraft for the United Kingdom to 200, out of a planned total of 220. The first aircrew training course for front-line squadrons will begin in the autumn and the first operational squadron is expected to start receiving crews next year.

b. Harrier. There are two contenders for the possible development of an improved version of the Harrier: the McDonnell Douglas/British Aerospace AV8B under development for the United States Marine Corps, and the British Aerospace GR5(K) design. Evaluation of these two designs continues, and it is hoped that a decision will be made later this year. The support that the AV8B is receiving from the US Government is most encouraging, and provides the basis for a collaborative solution. A combined Royal Air Force/US Marine Corps order for the aircraft would generate considerable work for the British aerospace industry. A programme of improvements to increase the effectiveness of the existing Harrier GR3 aircraft will be undertaken throughout the 1980s.

c. Jaguar Replacement. Last year a tri-national study reported on the possibility of designing a single type of aircraft to replace British and French Jaguars and Federal German Phantoms. This showed that considerable difficulties remained both in reconciling the different needs and in keeping to a reasonable

cost. Further studies are being undertaken. It is uncertain whether a collaborative solution would provide the best way forward.

d. Support Helicopters. We are improving helicopter support and airlift in RAF Germany. A Puma squadron (to replace Wessex helicopters) was deployed to Germany late last year. The first Chinook helicopters have now been delivered to the RAF. The first squadron will form at RAF Odiham later this year before deploying to Germany in 1982. Studies are in hand for a new light support helicopter.

EASTLANT AND CHANNEL

618. The scale and growth of Soviet maritime forces is a matter of serious concern to the Alliance. In a relatively short period the Soviet Navy has developed from primarily an offshore maritime force into a worldwide instrument of Soviet policy. The resources devoted to this transformation indicate the importance that the Soviet Union attaches to its maritime capability. Chapter 1 has described some of the latest developments in the Soviet Navy: new and highly sophisticated submarines and surface ships are in production as are modern Backfire bombers equipped with long-range stand-off missiles. Our maritime strategy calls for well equipped surface ships, fast, quiet submarines, effective radar and active sonar, and passive listening devices. We also deploy shore-based air defence, and strike/attack and maritime patrol aircraft, together with ship-borne fixed-wing aircraft and helicopters.

619. Anti-Submarine Warfare (ASW) Equipment

a. Nuclear Powered Fleet Submarines. The sixth and last Swiftsure class fleet submarine is about to enter service and HMS Trafalgar, the first of the next class, with improved sonars and noise characteristics, will be launched later

this year. Two further vessels in this class are already on order, and further orders are planned.

b. Anti-Submarine Warfare Ships. HMS Invincible, the first of the three ASW carriers (planned to operate five Sea Harrier aircraft and nine Sea King helicopters) has now entered service. The second, HMS Illustrious, is due to commence sea trials later this year, and will be accepted by the Royal Navy next year; and the third, HMS Ark Royal, will be launched shortly. The third of the Type 22 Frigates, HMS Brilliant, is about to enter service; the fourth, HMS Brazen, has already been launched; and two more are under construction. Further orders are planned. A programme is under way to give major refits to some of the Leander class frigates to equip them with the Sea Wolf point defence missile system, Lynx helicopter and improved sonar.

c. New patrol submarine. Design work is well advanced on a new class of diesel-powered submarines and full development of some major equipments for this vessel, including sonar, fire control and weapon handling and launching equipment, has been set in hand.

d. Future Torpedoes. Prototypes of the British Sting Ray lightweight ship or air-launched torpedo, are now undergoing trials. A decision is due later this year on a successor to the submarine-launched Tigerfish heavyweight torpedo. This will be taken in the light of a project definition study now in progress to evaluate the two contenders; a British development, drawing on the advanced technology used in Sting Ray and a United States development of their Mk 48 torpedo.

e. Anti-Submarine Warfare Technology. A programme of research and development is in hand to maintain the operational effectiveness of our submarine force. It aims to improve the range and discrimination of our active and passive sonars and to reduce the detectability of our vessels despite considerable Soviet progress in this area.

f. Anti-Submarine Aircraft and Helicopters. The Sea King Mk 5, will be introduced into two front-line squadrons during 1981/82. Studies are continuing with Italy into the prospects for a collaborative procurement of a successor. Deliveries of the improved Nimrod Mk 2 maritime reconnaissance aircraft continue.

g. Seabed Operations. The seabed operations vessel (SOV) HMS Challenger will be launched shortly.

620. Maritime Air Warfare Equipment

a. Aircraft. Two Royal Navy Sea Harrier squadrons are now in commission for service in the maritime strike/attack, fighter and reconnaissance roles. One squadron is already embarked in HMS Invincible and the second is due to embark in HMS Hermes later this year after her current refit. From the mid-1980s the RAF Tornado F2 will begin to provide shore-based air defence cover for the Fleet, progressively taking this role over from Phantoms and Lightnings.

b. Type 42 Destroyer. HMS Exeter, the seventh ship of the Type 42 class of guided missile destroyers, has now entered service. Two further ships, HMS Liverpool and HMS Southampton, will enter service in the coming year and five more are in

varying stages of construction. These ships provide area air defence both for ASW task groups and for reinforcement and resupply shipping.

621. Anti-Surface Vessel Equipment

a. Sub-Harpoon. The trials programme for the Sub-Harpoon anti-ship missile is under way.

b. Air launched Anti-Ship Missiles. Development work on the Sea Eagle anti-ship missile will continue, although further consideration will be needed before its place in the programme can be confirmed. The Sea Skua missile will shortly enter service in the Royal Navy's Lynx helicopters on board frigates and destroyers.

622. Communications

a. Satellite Communications. These are becoming increasingly important in the exercise of effective command and control, particularly for the Royal Navy. Studies into the possibility of procuring a new military communications satellite for the mid-1980s are in hand.

623. Amphibious Equipment

a. Landing Craft. Trials of the prototype of the new landing craft are under way, though for financial reasons the order planned for last year has been deferred.

THE HOME BASE

624. The large number and improving quality of longer-range Soviet aircraft increase the demands of defending the United Kingdom and of protecting our air routes and shipping lanes, which face a major threat from mines, torpedoes and missiles in United Kingdom waters.

625. Air defence is now receiving the attention it deserves after a long period of relative neglect. We are making a considerable investment in new aircraft, missiles, radars, command centres and communications, with the aim of developing an integrated air defence system. At the same time, our mine countermeasures and offshore patrol forces are being improved with more new vessels.

a. Tornado F2. All three Tornado F2 development air defence aircraft are now flying. The first 18 production aircraft have been authorised as part of the fourth batch of production aircraft and will enter service with the Royal Air Force during the mid-1980s to replace initially the Lightning, and later the Phantom.

b. Future Air-to-Air Missiles. It has been decided not to proceed with development of an improved version of the Sky Flash missile, but an important step has recently been taken towards the rationalisation of future air-to-air missiles for air defence. The governments of the United Kingdom, Federal Germany and the United States have signed a Memorandum of Understanding under which it is proposed that the next generation of short-range missiles will be developed in Europe and the next generation of medium-range missiles will be developed in the United States. The European partners and the United States will each have the right to produce both missiles, where necessary under licence. France may participate later. In support of this plan a technology demonstrator programme for short-range air-to-air missiles is being undertaken.

c. Hawk. The RAF has taken delivery of /160/ of the 175 Hawks on order. Successful trials firings of Sidewinder missiles from the Hawk have recently been made as part of the plan to give the aircraft a local air defence role. Flight trials of a modified aircraft are due to begin later this year. Eventually over half the Hawk fleet will be able to carry Sidewinder AIM 9L.

d. Nimrod Airborne Early Warning (AEW). The first Nimrod AEW development aircraft began an intensive test and development programme during the middle of last year, and made its first public appearance at the Farnborough Air Show. It is being joined by two further development aircraft. These three aircraft will later be refurbished to production standard. The Nimrod's powerful sensors and comprehensive data handling and communications systems will make a major contribution to Britain's air defence. The full squadron of 11 aircraft is planned to be operational in the mid-1980s.

e. United Kingdom Air Defence Ground Environment (UKADGE). Orders for the first of the new radars for the major UKADGE re-equipment programme have been placed, and the hardening and modernisation of the operations centres is under way. A crucial component of the improved UKADGE is the data handling and communication system which knits together the network of radars and operations centres and the aircraft and missiles. The order for this sytem was won last year by a British-based consortium comprising two British companies and an American company. The system will provide for data from the radars to be fed into the operations centres, automatically processed and displayed on consoles to the

air defence control teams; it will be capable of improvement as requirements change. Work has also started on the gradual replacement of RAF ground communications in the United Kingdom with a secure, survivable and integrated network to be known as Uniter. The network will use digital switches and transmission systems and will be developed in stages over a 10-15 year period.

f. Rapier Ground to Air Missile. (See also paragraph 338.) Delivery of DN 181 Blindfire Rapier to RAF Regiment units will be complete by the end of this year. This version of Rapier can be operated at night and in bad weather.

g. Mine Countermeasures Vessels. HMS Ledbury, the second of the Hunt class has now been accepted into service. The third, HMS Cattistock, will enter service later this year. An order has been placed for four more vessels, bringing the total in service or on order to nine. Pre-feasibility studies into the possibility of developing a new and cheaper design of minehunter are in hand. Tenders for minesweeping trawlers have been received and a decision should be made shortly.

h. Offshore Patrol and Fishery Protection. An order has been placed for two 75-metre offshore patrol vessels. These are both for fishery protection within the 200 mile United Kingdom extended fishery limits and for patrolling offshore oil and gas installations. The first of these vessels, HMS Leeds Castle, has already been launched and the second, HMS Dumbarton Castle, will follow shortly. In addition to the peacetime role, which is described in Chapter 5, these vessels will be capable of tasks such as minelaying in war and will be equipped to refuel and launch helicopters.

EQUIPMENT COSTS

626. The Statement on the Defence Estimates 1980 (Volume I) provided two tables of equipment cost figures. The first of these gave the broad cost estimates for complete development and production programmes (as currently foreseen) for those major projects which had entered full development during the past year. A similar table for 1980-81 is given below.

Programme Costs

Project	Estimated Cost
Challenger Main Battle Tank (initial order)	£ 350 million
Sonar, action information and fire control system for new patrol submarine	£ 240 million
Blowpipe air defence missile improvement programme	£ 200 million
Weapon handling and launching system for new patrol submarine	£ 100 million

Last year's table on unit costs was restricted to equipments for which orders had been placed in the preceding year. The table below, however, gives unit costs at September 1980 prices for some equipments currently in use by the Services or to be introduced by the mid-1980s. The costs quoted are for new items of equipment as specified for and as provided (or to be provided) to the British Armed Forces. These unit costs exclude amortisation of development costs, but those for warships include weapon systems and equipments fitted in the ship.

Unit Costs

Nuclear-powered Fleet Submarine	£ 175 million
Type 22 Frigate	£ 120 million
Hunt Class Mine Countermeasures Vessel	£ 30 million
Tornado F2 Aircraft*	£ 14.3 million
Tornado GR1 Aircraft	£ 11.4 million
Castle Class Offshore Patrol Vessel	£ 10 million
Conversion of Nimrod Mk 1 to Mk 2 standard	£ 6.5 million
Chinook Helicopter	£ 3.5 million
Lynx Helicopter (Army version)	£ 2.1 million
Puma Helicopter	£ 1.6 million
Challenger Main Battle Tank (fully equipped)*	£ 1.5 million
8-tonne vehicles (various types)	£27,000-£37,000
81mm Mortar	£ 7,500
Airborne VHF radio for ATC use	£ 2,500-£3,000
New small arms for the mid 1980s	
- Light Support Weapon*	£ 350
- Personal Weapon*	£ 300

(Estimated cost of single ammunition round for the new small arms is 15 pence)

* Estimated costs (equipment not yet in service)

DEFENCE SALES

1. The Government has reaffirmed its strong support for the sale of defence equipment overseas wherever this is compatible with the United Kingdom's political, strategic and security interests. As a nation we have traditionally maintained a strong defence industry and devoted a higher proportion of our national resources to it than many of our allies. But the strength of this industrial base cannot economically be supported by the needs of our own Services alone. There is consequently a powerful incentive for us to maximise the return on industrial investment in defence. At the same time countries with limited or less sophisticated defence industries naturally look to the United Kingdom and other industrialised nations to supply them with defence equipment.

2. The Government firmly believes that there are both political and economic benefits to be derived from defence sales. In political terms the provision of equipment to our allies and other friendly nations, often backed by military advice, training and support, contributes to international stability, underlines the importance which we attach to maintaining good relations, and helps to safeguard important Western interests. In economic terms defence sales represent some 25% of the output of British defence equipment industry and sustain some 142,000 direct and indirect job opportunities. Moreover, with the increasing cost of military equipment and continuing pressure on the defence budget, we need to build up overseas markets in order to recover our investment in research and development, keep skilled design and production teams together, and obtain the benefits of larger production runs. A significant proportion of defence sales consists of high-technology products with a high added value. It is very important for the United Kingdom to maintain its current capability in this area as a

springboard for future industrial development. However, at a time of worldwide recession, the competition from other countries with major defence industries is more intense than ever. We need to ensure that our own industry can match this competition and increase its share of the market.

3. Major contracts obtained recently cover substantial orders for Jaguar and Rapier, as well as helicopters, fast patrol boats, artillery systems and a wide range of Army equipment. Defence sales also cover a variety of ancillary products such as marine boilers, motor vehicles and communications systems and there is a growing business in projects such as construction work, medical services, storage facilities and training and servicing contracts. We estimate that receipts from all transactions will reach about £1500 million in 1981/82. This is a significant contribution to the balance of payments and represents some 2½% of total British exports. The Government believes that there is considerable scope for further increases in defence sales without provoking conflict or increasing international tension.

4. The Defence Sales Organisation provides a wide range of assistance to industry in promoting equipment and negotiating contracts with overseas customers. This assistance includes collecting of market information, demonstrating equipment, providing expert military advice, training and support, staging exhibitions, negotiating with overseas governments and formulating packages combining equipment, construction work, training, support and other services. Packages of this kind, which involve contributions both from Government and industry, are often handled by International Military Services, a limited company which is the commercial arm of the Defence Sales Organisation.

5. The Government is actively reviewing the ways in which it can assist industry in securing defence sales. However, successful sales depend on offering the right product, on the right terms and at the right time. This can be achieved only by continuing partnership between Government and industry at every stage in the procurement cycle. The Government is committed to improving this partnership and believes that prospects for defence sales will increase as a result.

OPERATIONAL ANALYSIS

1. As costs of replacement weapons continue to rise and development cycles lengthen, it is increasingly important to decide how to allocate resources to obtain the best value for money. Past operational experience may be of only limited value in helping to take such decisions since it often cannot be applied to new threats. There is a need, therefore, for a systematic approach which can assist in evaluating new operational concepts and tactics, an approach in which subjective and speculative factors are reduced to a minimum. Furthermore, it would not be prudent to count on having time or opportunity in any future major conflict to adjust concepts of operation, or to replace equipment that proved to be inadequate.

2. We must use every means at our disposal to help ensure that we get both our operational concepts and our weapon system right first time. Operational analysis in the Ministry of Defence is an important part of this process and uses mathematical and other scientific techniques as an aid to rational and objective choice. It can be broken down into three main categories:

a. Assessment of specific weapon systems and of technological possibilities.

b. Studies predominantly of single Service activities - for instance comparing the relative merits of different weapon systems within the same tactical field.

c. Longer term studies to aid resource allocation decisions on the forces required at sea, on land and in the air.

3. Operational analysis uses mathematical models and computer simulations of operations to examine such questions as the effects of introducing new systems and the importance of specific performance characteristics - speed or range, for instance. War gaming is also used and is particularly appropriate where the detailed representation of tactics is required. Where possible, data for studies are obtained from training exercises, but it is sometimes necessary to hold specially devised trials.

4. Operational analysis is centred on the Defence Operational Analysis Establishment (DOAE) at West Byfleet, but is also undertaken by single-Service scientific advisory groups and by teams located at certain of the R & D establishments. Studies have recently been done at DOAE on the best mix of anti-armour weapons in the NATO Central Region, the best ways of using offensive air support, and the relative effectiveness of varying combinations of ships, aircraft, sensors and weapons in anti-submarine warfare in the Eastern Atlantic.

THE GOVERNMENT'S DEFENCE INDUSTRIES

The Royal Ordnance Factories

1. The Royal Ordnance Factories (ROFs) supply a significant proportion of the equipment used by our Armed Forces. They are a large, modern engineering enterprise operating under a trading fund. The factories are located at Birtley, County Durham; Bishopton, Renfrewshire; Blackburn, Lancs; Bridgwater, Somerset; Chorley, Lancs; Enfield, Middlesex; Glascoed, Gwent; Leeds, West Yorkshire; Nottingham; Patricroft, Manchester; and Radway Green, Crewe. Two further factories at Featherstone, Staffs and Powfoot, Dunfries managed by industry. (See Fig 14). While the ROFs primarily manufacturers of armoured fighting vehicles, ammunition, guns, small arms, engineer eqpmts, explosives and propellants. They make an increasing contribution to design and development. Particular emphasis is being placed on the establishment of links with companies on the continent and in the United States, with an eye to practicable and profitable collaboration.

2. Although 39% of the ROFs' output by value during 1979-80 was for export, the continuing effect of the loss of the Iranian market coupled with difficult trading conditions abroad and an unprecedented level of unrest over pay have led to disappointing trading results in the year.

3. The Government is studying all possible lines of future development for the ROF Organisation and in particular the scope for privatisation. A study group has reported and its recommendations are being considered.

The Royal Dockyards

4. The five Royal Dockyards at Devonport, Portsmouth, Chatham, Rosyth and Gibraltar together constitute the largest industrial enterprise within central government. (See Fig 14). They play a vital role in maintaining, repairing, refitting and modernising the Fleet.

5. Over the past year the Royal Dockyards have been relatively free of industrial troubles. However, their performance, like that of other management areas in the Ministry of Defence, has been affected by the constraints imposed to keep expenditure within cash limits. Moreover, although it has been easier to attract the skilled labour that the Dockyards require, restrictions on Civil Service recruitment have largely prevented the Dockyards from exploiting such opportunities.

6. Last August, the Government issued a consultative document setting out the findings and recommendations of a study into the role, organisation and structure of the Royal Dockyards. The Government noted the recommendations of the report, which represent a complex and inter-connected framework for further action and raise issues that stretch beyond the Dockyards themselves. Much further work will be required before the Government can reach firm decisions. The views of other interested parties have been sought and a large number of organisations and individuals have responded. Most have supported the study's recommendations, which are now being discussed in detail with those principally concerned.

ELECTRONIC WARFARE (EW)

1. The Soviet Union and her allies recognise the importance of radio and the electromagnetic spectrum in warfare. Their doctrine of radio electronic combat support (RECS) envisages attacking the enemy's command, control and communication systems and other sensors such as radar by electronic or physical means, while providing protection for their own electronic systems. In addition, the Soviet main intelligence directorate (GRU) controls a large and comprehensive signal intelligence organisation which is tasked against NATO's communications and radars in both peace and war. The Soviet Union is thus well placed to exploit electronic systems, and RECS substantially enhances the effectiveness of their other weapon systems.

2. There is a pressing need for NATO investment in EW, particularly (electronic counter-countermeasures)(ECCM) systems, which help prevent interference with our transmissions. The Services are procuring a wide variety of EW equipment. This includes, in addition to ECCM systems, electronic support measures (ESM) systems, which intercept and analyse enemy electronic transmissions, and electronic countermeasures (ECM) systems, which disrupt and degrade them.

3. The RAF's programme includes the provision of electronic surveillance equipment for the Nimrod is both the AEW and MR Mk 2 version, and this is proceeding satisfactorily. The RAF's main tactical EW task is to protect its aircraft from surface to air missiles, anti-aircraft artillery and air defence fighters. To counter these threats the Tornado GR1 will be fitted with automatic radar warning and jamming equipments a chaff dispenser, and countermeasures infra-red homing missiles. Similar equipments are being consideredfor the Harrier and Jaguar, and a chaff dispensing pod has already been ordered for the Harrier.

4. EW is playing an increasing role in the Fleet, and substantial improvements in this area are planned for ships, submarines and aircraft. These include Seagnat, a new ship-borne system for decoying anti-ship missiles, the round for which is being developed in the United States by five NATO countries; new ship borne jammers; and new and improved threat alert receivers, which provide ships with early warning of hostile radar emissions.

5. For the land battle, 1(BR) Corps now includes EW support in the form of an EW battalion. A programme of studies on every aspect of land EW is being undertaken to guide for future procurement of new ESM and ECM systems. Communication systems of all three Services are being improved and made ECM resistant.

6. If our forces are not adequately equipped with EW systems attrition rates will be unacceptably high and much of our command and control capability impaired. Provided EW systems can be developed and improved fast enough to keep pace with the threat, EW systems make a vital and cost-effective contribution to our overall capability.

RESEARCH

1. Advances in science and technology make possible increased combat effectiveness and create possibilities for entirely new military capabilities and tactics. Defence research, complementing the wider field of civil research, is carried out to promote advances of particular benefit to defence and to provide a sound basis for advice to those making major operational and equipment procurement decisions. In the United Kingdom defence research is carried out partly under contract in industry and at the universities and partly at the Ministry of Defence's own establishments. The Ministry of Defence also manages research programmes, notably in the field of aerospace, on behalf of a number of other departments on a repayment basis. Furthermore R & D often provides a useful "spin off" in the civil field. A recent example involved investigation at petrochemical installations of the fire hazards arising from high-powered radio and radar transmissions. This work has greatly improved understanding of a potential disaster risk in both land-based and off-shore installations, and has led to a major reassessment of the safety standards involved.

2. As part of the radical review of Civil Service activities launched by the Government in 1979, the Minister of State for Defence chaired a major study whose main aim was to establish whether Government was undertaking activities which could be more appropriately and more effectively performed in industry or elsewhere. The study concluded that industry might well be able to take on some of the work on design, development and project support

now done intramurally. The study also suggested that better value for money might possibly be achieved by contracting out a range of domestic and technical supporting services and that these possibilities should be tested. Both these recommendations were expected to yield further Civil Service manpower reductions in addition to the 15% reduction achieved between 1974 and 1980, including 5% since 1979.

3. The study also recommended a switch of resources to achieve a modest increase in effort within the R & D establishments on long-term research, systems research, and work to formulate concepts for new weapons systems as a precursor to the definition of new requirements. This recommendation reflects an awareness of research as the source of innovation and ideas on which the effectiveness of future weapons must depend, particularly in those areas of technology where the threat is most formidable. For example, our future anti-tank capability will be improved by research now in progress on detector and microprocessor systems for application in precision-guided sub-munitions, which are dispersed from the main projectile to strike accurately at a number of separate targets. This development should facilitate the destruction of enemy tank formations before they reach the battle zone.

Defence Scientific Advisory Council

4. Following the decision to disband the Aeronautical and the Electronics Research Councils as result of the review of non-departmental public bodies (Cmnd 7797), the Defence Scientific Advisory Council has been reorganised. The Council will now survey the full sweep of defence science and technology through a number of "technology boards", which will concern themselves primarily with the defence research programme. The new arrangements,

which came into effect in September 1980, are working well, bringing a wide range of academic and industrial abilities to bear on problems in defence research and development.

7. PEOPLE

701. Manpower is the basic resource on which our defence depends. But it is expensive: so much so that serious tensions arise in defence expenditure between the need to recruit and retain the right number of men and women and the need to provide the right kind of equipment. Over recent years the share of the defence budget spent on equipment has tended to rise and that on personnel to fall; and in 1981-82 (see Table 2.1 of Volume II) the equipment share is for the first time forecast actually to exceed that on personnel. This trend has brought personnel spending within the defence budget under stronger pressure and ever closer scrutiny. It also throws into sharp relief the growing importance of the reserve and auxiliary forces.

702. Personnel policy is concerned with men and women both as a resource and as individuals. It deals not only with manpower planning and strengths, skill categories and the matching of resources to tasks but also with people's pay, conditions of service, accommodation and general welfare. Bad handling of pay and other conditions can damage not only morale but also recruitment, and the chances that we shall have the men and women we need to ensure the effectiveness of British defence.

703. This chapter discusses the Services first, and then civilians. The distinction is convenient, but in some ways artificial: it implies a separation of tasks and roles which does not always exist. There are innumerable areas where civilians and service people work side by side and where the function of one is inseparable from that of the other. For instance, the effectiveness of the British strategic nuclear deterrent force depends not only on the sailors who take the submarines to sea, but also on the dockyard workers at

Rosyth who refit them; the civilians of the Royal Naval Supply and Transport Service at the Royal Naval Armaments Depot, Coulport, who store the missiles; and the scientists and technicians who work to improve the systems.

SERVICE MEN AND WOMEN

704. The United Kingdom is the only major European NATO member to rely entirely on volunteer armed forces. To maintain such a force we must first attract and recruit the right number and right quality of men and women, and then keep them long enough to instil and reap full benefit from their essential skills and experience. The pay award made immediately the Government came to office greatly improved the chances of doing this. It led to improvements in both the number and quality of new recruits in 1979/80 which have been sustained in 1980/81. Higher recruitment and a drop in requests for early release have together begun to close the gap between the number of trained Servicemen and women we need and the number we have. The pace at which the process continues will depend on a number of factors including financial constraints. Full details of these trends and of Services strengths are given in Volume 2.

RECRUITMENT AND RETENTION

705. The final figure for Services recruitment in 1979/80, some 50,700, represented a peak matched only once in the last 17 years. Between April and December 1980 recruitment was 8% higher than in the equivalent period in 1979. In 1979/80 only 45,042 men and women left the Services: 9% less than in the previous year, and the lowest figure since the end of the last war. In April-December 1980 some 29,000 people left the Services, a 15% reduction over the same period in 1979.

706. So recruiting is going well and the Services can look for high standards among those who apply. But there are still shortages

in certain skills, many of which are also in demand in civilian life. Shortfalls exist in the Royal Navy in the seaman and engineer specialisations for both officers and ratings; in the Army in trades such as electronic warfare operator and terminal equipment technician in the Royal Signals; and in several trades in the Army Medical Services. In the Royal Air Force there are still shortages of junior officer pilots and in the engineering, fighter control and medical specialisations. Even with improved recruiting it takes time to replace lost experience. The shortages of artificers in the Royal Navy, of commissioned and non-commissioned officers in the RAF, and of captains and majors in several corps of the Army will not diminish significantly until later in the decade.

707. The time needed to train a highly skilled Serviceman is not dissimilar to the long lead-times for sophisticated equipment. Both the equipment programme and the personnel programme can take many years to recover if in any one period they lose the continuity of replacement and renewal. Neither programme can be curtailed to allow for growth in the other without serious long-term consequences for our defence capabilities.

708. Demographic trends seem likely to make recruiting more difficult in the future. In 1979/80 the numbers of young men recruited by the Armed Forces in 1979/80 represented about 10% of those entering the 16-19 age group, considerably above the average of about 8½% over the five years up to 1978/9. On present plans the Services may be expected to need about 46,000 recruits each year over the next decade. To obtain those numbers we shall have to recruit 9-10% of the young men entering the appropriate age group at the start of the decade, and even higher percentages in the later years, as Figure 15 shows. We shall therefore have to keep up the successful recruiting effort of the last eighteen months for a good few years yet.

709. Recruiting is only half the story: the value of recruits depends on how long they can be persuaded to stay. Pay has a decisive influence here. The maintenance of pay comparability not only means justice for the Services, who are not in a position to negotiate their own pay award, but also offers the best way to ensure that manning levels are maintained. The Government endorses the concept of the Military Salary, under which the Services are paid the appropriate rate for the job and in turn pay a fair price for food and accommodation. It is important that both pay and charges are independently assessed, and we see the Armed Forces Pay Review Body as the best means of achieving this.

710. But money is not the only factor. Many young people are reluctant to commit themselves initially to a long career. Our terms of service must allow for this, or useful recruits will be lost. There is obviously a minimum length of service below which it is not usually cost-effective to recruit and train, but there is still scope for new terms of service which both attract the individual and provide a satisfactory return. For example, this year the Royal Navy introduced a new three-and-a-half-year short career commission for seamen officers and reduced the Royal Marines' five-year commission to four years. The same approach is being adopted in new schemes to find the right kind of graduates. Under the new university bursary schemes the student receives a smaller monetary award than under a traditional cadetship, but unlike a cadet he remains a civilian until after graduation and his subsequent commitment to service is shorter.

711. This flexibility can also be extended to later stages of service. A member of the Armed Forces is unlikely ever to enjoy quite the same freedom as a civilian to join and leave his employment, but it makes sense to avoid unnecessary disincentives. The

Royal Air Force, for example, has recently introduced a second optional retirement point for officers in their mid-forties, and the Royal Navy now offers a wide choice of terms of service for officers and men who have left and wish to re-enter the Service. Ratings who extend their service beyond 22 years may, for instance, opt to remain in one location ashore if a suitable job is available. The Army offers similar flexibility.

712. For people already in the Service, it is part of any good employer's responsibility to maintain satisfactory working, welfare and social conditions. This applies the more strongly in those occupations - the Armed Services being the prime example - where unusual disciplines and demands must be imposed. The Government will continue to look for further improvements, though with due regard to the present financial climate.

713. We hoped last year to introduce schemes for financial assistance with private house purchase, and also a scheme to enable servicemen and women to buy surplus married quarters at discounted prices in line with the arrangements for council house tenants under the 1980 Housing Act. But as with other employers, the Government's ability to bear increased personnel costs at this time is strictly limited. We are therefore not yet able to introduce these schemes; though it remains our intention to do so as soon as the financial situation permits. In the meantime we have introduced from 1 April this year a scheme to give priority in the sale of surplus married quarters to buyers within the Services.

714. The introduction of the Forces' Railcard Scheme launched on 1 July 1980 on a trial basis until the end of 1982, has proved particularly welcome. It allows Service personnel, and their immediate families, subject to some minor restrictions, to travel at half-fare so that families can be reunited more cheaply and more often.

715. A large proportion of Service men and women are less than thirty years old. For them particularly, sports and recreation facilities are important; and the Services provide opportunities to learn and participate in virtually any kind of sport as well as a wide range of cultural and recreational activities. Service sports facilities are made available regularly for civilian competitive club and international meetings.

716. Table 6.11 of Volume 2 of this Statement gives details of some other important 'social' services provided both by the Government directly and by independent organisations such as the Navy, Army and Air Force Institute (NAAFI). In an occupation which involves frequent and sometimes sudden moves, and which concentrates people on or near bases often remote from centres of population, it can mean a great deal to have shops and entertainment close at hand.

ARMED FORCES BILL

717. The Army Act 1955, the Air Force Act 1955 and the Naval Discipline Act 1957 provide a statutory basis for the disciplinary systems of the Armed Forces. They are subject to a five-yearly review by Parliament, which authorises their continuance through the enactment of an Armed Forces Bill. Each new Armed Forces Bill provides an opportunity to keep Service procedures in line with civilian practice, so far as the special characteristics of military activities permit, and also to remedy any omissions or anomalies. Such a Bill is currently being considered by Parliament.

THE RESERVES

718. Regular forces, scarce and expensive as they are, must be supplemented by adequate reserves. The part played by the Territorial Army (TA) in last year's Exercise CRUSADER underlined the vital role of reserve forces and the high state of training and

readiness which they need to maintain. Over the past year a principal aim of the Government has been to build upon the recruiting boom which followed the improvements in bounties and other conditions of reserve service announced in August 1979. High morale should encourage more trained volunteers to prolong their service. While improving training and equipment within the volunteer forces, we have tried also to foster a positive attitude towards them in the community as a whole and to stress the contribution civilians can make to the nation's defence on a part-time basis. Nowhere is the essential link between the Services and the community more clearly expressed than in our volunteer reserves.

719. In all three Services there is a constant effort to make better and more flexible use of reservists. In the Royal Navy Reserve (RNR) and the Royal Marines Reserve (RMR) both recruitment and retention have improved; more training is being done and standards are rising correspondingly. The RNR (Air) Branch which was announced last year has now come into being.

720. The strength of the TA has continued to grow since bounties were increased, and the force is better manned than at any time since the 1967 reorganisation. Wastage is still too high but this long-standing problem can only be overcome by the Government's policy of consistent support outlined above. The past year has seen the first issues to the TA of Clansman radios. The two Field Regiments and Commando Battery have been re-equipped with the 105 mm Light Gun, and the three Air Defence Regiments with the Blowpipe air defence missile. In addition the TA is shortly to receive the Milan anti-tank weapon.

721. The RAF Volunteer Reserve and the Royal Auxiliary Air Force (R Aux AF) have an important and expanding function in support of the Royal Air Force. Recruitment has gone very well in the three R Aux AF Regiment Squadrons, which were formed on a trial basis in 1979 to assist in the defence and security of airfields in the UK. They have reached good standards of training and should be able to make a significant contribution in their intended role. The trial R Aux AF programme is being carefully monitored with a view to possible further expansion.

722. In the regular reserves, an initial issue of uniforms has been made to Army reservists under the new Individual Reinforcement Plan. These arrangements will eventually cover more than 50,000 soldiers and, together with the new system of local reporting on call-out, will halve the time taken to mobilise them. We will shortly introduce provisions for members of the Women's Royal Army Corps to serve a period of reserve service when they leave the Army. This brings them into line with their male colleagues. In due course we intend to bring forward a scheme to make it possible for suitably experienced TA soldiers to volunteer for a period of reserve service in the same way as regular soldiers. This would harness the talent of those volunteers who for some reason may be unable to continue to meet their full TA training commitment.

THE WOMEN'S SERVICES

723. The boost which manpower shortages gave to moves to extend the role of women in the Armed Forces has been sustained over the past year. The Army has completed the first part of a review of all establishments to identify posts which could be filled equally well by men or women. So far, some 500 officer and 4,000 soldiers' posts previously filled by men have been put in this

category: about 400 of them are already being filled by women. The number of suitably qualified women available, together with the general manning situation, will determine the number of 'dual' posts they occupy at any one time. A similar review is in hand for the TA.

724. In those areas of the Royal Navy where members of the Women's Royal Naval Service (WRNS) are already employed, an increasing number of posts are being opened to either sex. The main constraint is that a number of posts ashore must be reserved for men returning from sea duties, to preserve a balance between sea and shore service; and for the most part women cannot serve at sea. WRNS Fleet Analysis Officers and Weapons Analysis Ratings do, however, frequently go to sea on a daily basis, and WRNS Air Mechanics have gone to sea with their squadron on board the Royal Fleet Auxiliary Engadine and are likely to do so again. During the next decade the requirement for WRNS ratings will increase by over 25% and for officers by some 40% as the planned range of their duties expands. As for the RAF, members of the Women's Royal Air Force do not belong to a separate female establishment and already compete directly with men in a wide range of jobs.

THE ARMING OF WOMEN

725. The Government has announced that some members of the WRAC and the WRAF will be trained in the use of arms for defensive purposes. This step was taken only after the deepest consideration and after weighing public views, including the comments made in Parliament and outside on the ideas in last year's Statement. Most of those who commented believed that the arming of Servicewomen on a limited scale was sensible, timely and should go ahead. The decision now taken does not mean that women are to be employed in combat units; it remains the Government's policy that they should

not be. But in the Army women do certain jobs in which they at present have to be guarded by armed men, and if the women can themselves be armed these men can be freed for other tasks. In the Royal Air Force, women trained in the use of arms can now be employed in the defence of air stations. As last year's Statement made clear, the options for employing WRNS personnel are not critically dependent on arming them; it remains possible, however, that they will undertake operational duties short of combat.

CADET FORCES

726. The Cadet Forces have long been recognised as an important source of recruitment for the Armed Forces. Last year we announced that an experimental scheme had been introduced to allow girls to join selected Army Cadet Force detachments in schools. A companion trial scheme has since started for the Air Training Corps, so that girls now participate in the Cadet Forces of all three Services.

SERVICES TRAINING

727. There is an enormous range of skills available in the British Armed Forces. In the Army alone there are no less than 230, ranging from combat soldier to cook, sniper to avionics artificer. The long training times needed to establish and maintain such expertise have already been mentioned: as in civil life, the highest qualifications can take several years to acquire. The forms of training also vary widely, from the achievement of purely military skills, through formal instruction courses and on-the-job training, to the acquisition of civil qualifications and diplomas.

728. Apart from the direct usefulness of these skills to the Services, the professional image which they foster helps both recruitment and retention. The use of skills also promotes job satisfaction and raises morale. Overseas training facilities

such as those at Suffield in Canada are particularly valuable in offering realistic operational situations. But the skills acquired by Servicemen and women are also of interest to the general community. They can, for example, be used to help and protect the public in all the ways described in Chapter 5. They also tend to attract outside employers. The outflow of trained personnel into industry contributes to the national reservoir of skilled manpower, and in that sense the Service's loss is the community's gain. However, the premature loss of skilled people from the Services is a serious drain on defence resources particularly given the cost and effort needed to train replacements. Hence the importance of the efforts to improve retention (see paras 709-712).

729. We are increasing cooperation in training with our NATO allies. A major milestone was the opening in July 1980 of the Tri-national Tornado Training Establishment at RAF Cottesmore, where pilots from Italy and the Federal Republic of Germany, as well as the Royal Air Force, will learn to fly the Tornado GR1. The Royal Air Force, along with most other NATO nations, also plans to participate in a new jet pilot training scheme due to start this autumn in the United States.

730. A study is now almost complete into officer training at the Royal Military Academy, Sandhurst. It has considered:

- the length of the initial military training at Sandhurst.
- changes in the Regular Careers Course.
- the merging of the two major graduate courses into one.
- the functional incorporation of the WRAC college.

Any changes agreed are likely to be introduced in 1982.

HIGHER DEFENCE STUDIES

731. The Ministry of Defence finances a number of defence lectureships designed to stimulate defence studies at the universities and to increase professionalism in defence. In 1980 two new lectureships were established at Cambridge: one to specialise in the study of air power. Under a scheme started in 1980 five officers are currently taking the one-year M Phil degree course in international relations at Cambridge; this should help officers of good career potential to broaden their knowledge and develop intellectually.

CIVILIANS

732. The analysis of the skills of civilian staff set out in last year's Statement brought out the primarily executive, as against administrative or regulatory, nature of Civil Service work in the Ministry of Defence. The Ministry's civilians play a key part in all aspects of defence activity: in the refinement and application of the policies outlined in Part One of this Statement; in support of the roles and activities described in Parts Two and Three; and in the financial management described in Part Four.

CIVILIAN NUMBERS

733. The Ministry of Defence (including Royal Ordnance Factories) employs at present some 267,300 civilians, of whom 231,400 are based in the United Kingdom. This represents approximately one third of the Home Civil Service and includes three-quarters of all industrial civil servants. The overall size of the British defence establishment is similar to that of West Germany and France, but our all-volunteer and all-regular Armed Forces imply a proportionately greater role for civilians. Tasks which elsewhere would be undertaken by conscripts are in Britain performed by established civil servants. This almost certainly works out cheaper and reduces the disruption involved in heavy and recurring

training of new recruits. Civilians provide vital backing for the ability of the Armed Forces to operate in peacetime and war, and are closely integrated with military personnel throughout the Ministry and throughout the Armed Forces.

734. The Government also requires the Ministry of Defence to make the most efficient use possible of its manpower and to contribute to the overall aim of reducing the size of the Civil Service. The Ministry is working towards a target of 200,000 United-Kingdom-based civilians at 1 April 1984, compared with a strength of 247,660 at 1 April 1979. To complete this reduction in the least damaging way while maximising efficiency means examining every corner of the Department's activity. Much has already been done to streamline staffing requirements, and over the last decade a wide range of productivity schemes has been introduced for industrial personnel. These efforts will continue. Increasing attention is also being turned on a number of areas in support services to see if the commercial sector can be more fully involved, by contracting out areas of work to industry or transferring entire functions. We are also thinking of rationalising management organisation in certain support areas, and relaxing certain controls, in order to make best use of limited and expensive manpower.

735. There will be full consultation with trade unions about reductions. Selective use is being made of recruitment controls and voluntary retirement to reduce the impact of cuts, but redundancy for some staff will be unavoidable.

736. The target of 200,000 staff in post for 1 April 1984 has been mentioned above. For comparison, the numbers of UK-based

civilians currently provided for in the Defence Estimates (with those employed and separately funded in the Royal Ordnance Factory (ROF) organisation) are:

	1 April 1981	31 March 1982
MOD	210,300	203,000
ROF Organisation	21,100	20,600
Total	231,400	223,600

Provision is also made in the Estimates for 35,892 staff locally engaged overseas on 1 April 1981 and 35,431 on 31 March 1982.

737. Since the Government took office civilian numbers (including ROFs) will have been reduced by 18,552 (6.5%) in comparison with the 1 April 1981 provision, and a further reduction of 8,261 is planned during 1981/82. This will bring the total reduction to 26,813 (9.4%), made up of 24,040 reductions (9.7%) in UK-based civil servants and 2,773 (7.3%) in locally-engaged civilians.

738. These numbers reflect the reductions made in 1979/80 and 1980/81 to meet the cash limit restrictions on civilian pay in those years. During the forthcoming year the Ministry will also complete its commitment, announced by the Minister of State at the Civil Service Department on 6 December 1979, to reduce staff numbers by 7,500 by 1 April 1982 by various economies. These measures include contracting out some domestic support functions, especially cleaning; administrative savings from revised procedures for processing contractors' bills; and further changes in quality assurance arrangements, placing greater reliance on industry. They are more fully described in Chapter 8. Economies in headquarters staff are being pursued vigorously and will also contribute to the reductions. In addition to the 10% reduction under the 1974 Defence Review, a further 10% reduction in civilian and military staff is aimed at by 1 April 1982.

PAY AND PRODUCTIVITY

739. The pay of Ministry of Defence (MOD) civilians is in general settled as the result of the Civil Service central pay negotiations. Fewer trained people were lost to outside employers during 1980, and this trend should continue during 1981. A number of specific problems on pay structure (eg differentials between supervisors and supervised) have, however, needed special study.

740. The Ministry of Defence is the largest Civil Service employer of industrial labour, with about 117,000 employees in the Royal Dockyards, ROFs, stores, engineering, R & D and other establishments engaged primarily in serving the Armed Forces. Given such numbers, the Ministry of Defence has always attached great importance to efficiency in its industrial establishments. Within almost all defence establishments with industrial employees, some kind of productivity agreement is now operating to achieve more flexible working practices and reduction of the manpower needed for a given task. By helping reduce the size of the support "tail", these schemes make more money available for the "teeth".

741. Outside the ROFs, the bulk of industrial work in defence establishments is non-repetitive and therefore difficult to measure. Productivity schemes based on work measurement do however operate in the Royal Dockyards, larger depots of the Royal Naval Supply and Transport Service, Royal Naval Aircraft Yards, Royal Electrical and Mechanical Engineers (REME) Central and Command Workshops, the larger Royal Army Ordnance Corps (RAOC) stores and the engineering and stores depots of RAF Support Command. About 30,000 industrial employees were on such schemes in 1980 and the involvement of the total workforce is steadily growing. Plans are well in hand to introduce new work-measured schemes, more in keeping with management's needs, in the four Royal Dockyards in this country.

RECRUITMENT AND TRAINING

742. Selective restrictions on recruitment, rigorously applied, have played an important part in controlling manpower costs over the last twelve months. They are less expensive and less damaging to morale than a large programme of compulsory redundancies. In implementing them we have taken care to protect key areas of the defence effort, such as the strategic nuclear deterrent, and to keep up recruitment of suitably qualified specialist staff, such as engineers, scientists, computer programmers, systems analysts and management accountants. A table illustrating the inflow and outflow of the various grades of civilian staff is given at Figure 16.

743. The Ministry of Defence has more apprentices under training - 8,000 - than any other single employer in Britain. Some 1,000 are technician apprentices and many progress to take higher diplomas, certificates and degrees in engineering subjects. In 1980 manpower and expenditure constraints held the total entry of craft and technician apprentices to some 2,000, lower than the peak reached in previous years and less than the places available in training schools. Recruitment was, however, kept as high as possible both to provide opportunities for school-leavers and to ensure a skilled workforce for the future. The training given encompasses a wide range of skills, covering the latest technology in fields such as aerospace, warship design, military vehicles, and the associated research and development. It is highly regarded in outside industry and many MOD apprentices in fact leave for other jobs soon after finishing their training. This represents a bonus for the nation's industrial capacity, although at some cost to the Ministry of Defence.

744. Training is an essential element in the career development of staff in all grades and specialisations. Increased emphasis is now placed on functional training (eg personnel management, project management, finance, and ADP) and on management training in industrial relations. In the Administration Group, greater functional specialisation and professionalism is vital if we are to continue to cope with the growing complexity of the tasks of defence. Suitable staff are encouraged and helped to obtain external qualifications relevant to their professional skills.

MANAGEMENT STUDIES

745. The Ministry of Defence aims to develop continuously the skills required by its managerial staff, and to give staff greater responsibility and personal accountability. A key objective is the elimination of excess bureaucracy. The recent study of the Royal Dockyards, for example, found that with less (and more devolved) management and a cut in planning and paperwork, the structure could be streamlined to produce more direct supervision and executive action, more accountability and responsibility, and improved job quality in general. Studies in other areas of support activity are reaching similar conclusions.

746. Two studies have also been launched into management hierarchies within the Department. One study, covering middle management grades from Higher Executive Officer to Assistant Secretary, will look for ways to make best use of managerial ability at all levels through shorter chains of command and wider spans of responsibility. A second study will analyse current financial control procedures and see how they can be simplified to achieve clearer responsibilities and better accountability. The Ministry is also looking ahead to the

application of advanced office technology to assist the work of executive, clerical and secretarial grades. Since 1960, pay, personal records, supply and accounting have been transferred to computer systems. The focus is now on the application of new technology including communicating word processors, advanced reprographic and facsimile equipment, and mini - and micro - computers.

THE CIVILIAN WORK FORCE

1. The Ministry of Defence employs about one third of the Home Civil Service. It employs such large numbers partly because it is an executive department running a considerable number of major businesses, and partly because our forces are all regular: we employ civilians in Britain to release servicemen for front-line duties and to carry out many tasks which are done by national servicemen in other NATO countries.

2. Among the Ministry's industrial concerns are the Royal Ordnance Factories, which produce a whole range of equipment - from tanks to radio components - for the Forces; the Royal Dockyards which refit the Royal Navy's ships and submarines; the REME Workshops which maintain and repair the Army's vehicles; the Aircraft Repair and Maintenance Units of the RAF; and the R & D Establishments. Among the tasks which civilians carry out in place of servicemen are those of policemen, firemen, drivers, cooks, instructors, mechanics, storemen, computer operators, and clerks.

3. To carry out such a wide range of functions the Ministry of Defence requires an equally wide range of skills. Over half of the UK-based staff - some 117,000 - are industrials, of whom some 38,000 are craftsmen (welders, plumbers, fitters, boiler-makers, blacksmiths, carpenters, armourers, radio technicians etc). There are 8,000 apprentices, whose numbers have been maintained despite the overall reductions - partly to help provide a flow of craftsmen for the future and partly to provide job opportunities for the young.

4. Of the 114,000 UK-based non-industrials some 35,500 are scientists and technologists who provide the expertise needed in such areas as the R & D Establishments, the Dockyards, and the

ROFs, and some 32,500 are specialists such as teachers (for children of servicemen overseas), instructors, data processors, policemen and communications operators. Clerical and secretarial back-up for the whole organisation (35,000) and a surprisingly small number (11,000) of administrative and executive grades make up the balance. The great majority of this last group is engaged in executive functions such as bill-paying, letting contracts, computer operations and programming, and project and personnel management.

5. This large civilian workforce is administered by relatively few senior managers. This reflects in part the structure of the workforce and in part the determined efforts made to secure efficiency at the highest levels. The number of civilian posts at Under Secretary level and above is now down to 104, a ratio of 1 to 2200 staff: that of the Civil Service outside the Ministry of Defence is 1:700.

6. To achieve a reduction of nearly 48,000 UK-based staff (nearly 20%) over five years, which is the target set by the Government, will inevitably mean cuts across the whole spectrum of activity. It is not, and cannot be, just a matter of 'cutting back the bureaucracy'. Instead we have to cut out what is less essential and streamline our operations at all levels and in all areas, handing over to private industry wherever it is more efficient or cheaper to do so.

7. A good start has been made. In the two years since the Government came to power the Ministry of Defence has reduced its civilian numbers by over 16,000 as its contribution to the overall rundown of 37,000 in the size of the Civil Service.

PART FOUR

MONEY

Having discussed policy, described the roles by which our forces enact that policy, and examined the human and material resources which support those roles, we are inevitably led to the basic question of finance. In this final section we consider the Defence Estimates themselves and the management of the defence budget. We also describe the various efforts within the Ministry of Defence aimed at achieving value for money and eliminating waste.

8. THE DEFENCE BUDGET

801. The Government gives high priority to defence. At the same time it is pledged to restrain public expenditure. A balance has to be struck - and has been struck - between these aims, while maintaining real growth in defence budgets.

802. The Defence Estimates for 1981/82 total £12,274 million, equivalent to the target of £9,753 million at 1980 Survey Prices. This allows for the reduction of £200 million announced in November 1980. The Estimates represent an increase of 8% at constant prices over the out-turn in 1978/79 and 5% over 1979/80. The relationship between 1980/81 and 1981/82 will depend on the out-turn for 1980/81, which is still uncertain.

803. Figure 17 breaks down the defence budget total by major categories of expenditure. Figure 18 analyses defence resources by major programmes.

804. Figure 19 compares the defence spending of most NATO countries in 1980 in terms of total expenditure, expenditure as a proportion of gross domestic product (GDP), and per capita expenditure. The expenditure figures are based on average market exchange rates during 1980 and reflect the fact that sterling appreciated much faster against the US dollar than did other NATO currencies. Volume II of this Statement contains a number of analyses comparing the Defence Estimates for 1981-82 with those of previous years.

BUDGETARY MANAGEMENT

805. Budgetary management is a continual process of adjusting the programme to the resources likely to be available. Since much defence spending involves long-term commitments, the Ministry of Defence undertakes annual costings of the programme, looking ten years ahead. These are examined in relation to budgetary planning assumptions based on Ministerial decisions about the

level of defence budgets during the period covered by the Public Expenditure Survey (normally three years ahead) and likely trends thereafter as indicated by Government policy.

806. Because of the extent of forward commitments on the budget, any major shift of emphasis in equipment or manpower planning needs to be undertaken deliberately and carefully to avoid undue disruption. However, budgetary planning must be sufficiently flexible to adapt to modifications in the programme to counter foreseen changes in the threat. Furthermore, long-term plans have to be reconciled with short-term pressures arising from developments in the economy. 1980/81 has been a particularly difficult year in this respect. The cost of defence equipment has continued to rise, while the recession has placed unexpectedly heavy demands on defence funds, as industry concentrated more on defence work.

807. The cash limit for 1980/81 was originally set at £10,125 million; this was increased by £164 million in July, following redistribution of the central provision made for Civil Service pay, and by a further amount in August. The latter increase provided for the extra cost of the Armed Forces pay settlement (£54 million) and an addition of £200 million in the light of international considerations and the priority attached to the defence programme. It was offset by a reduction of £50 million on account of the cash limit over-spend in 1979/80 and by the effect of one or two minor adjustments, leaving £203 million net.

808. Despite these cash limit increases it was still necessary to take steps to restrain spending. These included reducing levels of activity to cut fuel consumption, restricting travel and postponing some orders for equipment and supplies. In addition,

a moratorium on new contracts for equipment and supplies was introduced in August 1980 and lasted until November. This was followed by a period of stringent discipline on new commitments for the rest of the financial year. Despite these drastic measures to curb spending, it was necessary to take a Supplementary Estimate of £376 million on the equipment vote, which was expected to be offset by reductions in spending of £113 million in other areas of the programme.

809. On 20 January 1981 the Secretary of State for Defence outlined measures for accommodating the programme to the revised budget for 1981/82 and affirmed the aim of a continuing annual increase in defence expenditure from the revised 1981/2 baseline in the region of 3% in constant-price terms. With regard to overspend, it is the Government's normal practice to require overspending on a cash limit in one year to be offset by a similar deduction from that limit in the following year. The position for 1981/82 will be reviewed when the out-turn for 1980/81 is known. Cash flow in 1981/82 and the effects on defence expenditure of developments in the economy will be carefully monitored, and corrective action taken as necessary. In the meantime, studies have been commissioned on our machinery for monitoring cash flow and on our system of financial control.

810. Table 2.10 of Volume II of this Statement shows that net invisible expenditure overseas on defence is expected to amount this year to about £960 million of which local defence expenditure in the Federal Republic of Germany (the stationing costs of the British Forces in Germany (BFG)) amounts to £682 million. The recent rise in the value of the pound has produced some short-term relief, but since last year the United Kingdom has had to meet

these costs unaided. We are continuing a drive to reduce these costs by administrative means without affecting military effectiveness, and a number of useful, though necessarily small-scale, measures have been taken, such as closing civilian messes and implementing the recommendations of the recent review of secondary education overseas.

THE NEED FOR ECONOMY

811. It is a fundamental principle of the Government's policy that in defence no less than in other departments the criterion of value for money should be applied at all levels of decision. Though value for money is a simple enough principle in itself - and is particularly pertinent when considering the approval of new projects or proposals (as described, for instance, in paragraphs 610-611) - the disciplines and management tools needed to achieve an economical use of resources in long-established projects or procedures are inevitably more complex.

812. The department has its own machinery to help managers deploy manpower and money as efficiently as possible. The Inspectorates of Establishments carry out regular staff inspection and complementing exercises - for both Service and civilian personnel - to check that there is a proper match between tasks and available manpower; they also monitor the overall control of civilian numbers. A central management services division advises on organisation, methods and procedures to help management make best use of manpower. Each of the Services also has its own management services division. The Director General of Internal Audit leads three directorates responsible for measuring and evaluating the effectiveness and propriety of Departmental control systems. The directorates work closely with the Exchequer and Audit Department who perform a related function in external audit.

813. One area where the Government is determined to achieve the greatest possible economy and value for money is in overheads and support of the Armed Forces. Some examples of the areas under examination and the results achieved so far are set out below.

THE SEARCH FOR SAVINGS

814. The search for savings in administration and support is inextricably linked with economy in the use of civilian manpower. Measures to reduce numbers of civilian staff are described in more detail in Chapter 7. The Ministry has now completed six major studies aimed at reducing the size of the Civil Service while maintaining efficiency. A number of common themes have emerged. These include the possibility, either of greater involvement of non-Civil Service organisations in the provision of services, or of putting work out to contract. Proposals have also been made for a variety of measures to tighten up management by improving accountability, clarifying responsibility, simplifying the management structure and reducing bureaucratic controls.

815. Accounts of the findings and recommendations have been placed in the Libraries of both Houses of Parliament. Where possible, their implementation is already under way. Further studies will be conducted during 1981. The six studies completed last year are:

a. Contract Cleaning and Catering. (See page .)

b. Bill Paying. Procedures for contract bill paying are being improved by reducing paperwork and by making checking systems more cost-effective. In particular, progress has been made in extending the facility for contractors to submit their bills on computer-produced magnetic tape, saving paperwork and speeding payment. A total of 58 posts have already been saved, at an annual cost of nearly £0.5 million, and there

will be more to come.

c. Quality Assurance. The recommendations of the report are being put into effect where practical. Economies and improved efficiency will be achieved through greater dependence on contractors' own quality control arrangements where these are satisfactory; through more selective monitoring of these arrangements; through greater emphasis on quality assurance at the design and contract stages; and through rationalisation of the Ministry's own quality assurance organisation. Staff numbers (excluding apprentices) in this area have already fallen by about 650 as a result of this study and of restrictions on recruitment.

d. Research and Development Establishments.) These studies are
e. Royal Dockyards.) covered in Chapter 6
) (page).

f. Supply Management. The Supply Management Study has looked at the cost-effectiveness and the security and operational implications of extending the use of outside organisations for the storage, handling and distribution of certain ranges of stores. The possibility of commercialising some aspects of the supply of petrol, oil and lubricants and accommodation stores is being examined in detail. Organisations are being streamlined and some stocks reduced as a result of the recommendations of the study. We are also looking in detail at the financial and other implications of increasing NAAFI responsibilities in the supply of food to the Services.

816. A series of short studies was undertaken by officials last year as part of the scrutiny programme conducted under Sir Derek Rayner, the Prime Minister's special adviser on efficiency in

central government. The outcome of these was as follows:

a. Children's Secondary Education Overseas. The report recommended that secondary education should still be provided for the children of Servicemen overseas, but proposed economies through:

- closing two boarding schools in Germany.
- introducing weekly lodging at existing day schools.
- simplifying the administrative structure.

b. Inspection and Audit. This study examined internal audit, central management services and staff inspection. The report concluded that, while all these functions were needed, there was scope for a more selective and better-coordinated approach to the functions, which should be brought together under the control of a Director General of Management Audit. The report proposed a substantial reduction in cyclical staff inspection and routine audit compliance checks, and recommended that greater reliance be placed on managers and selective checks on their performance. These measures could lead to substantial staff savings.

c. The Claims Commission. The Commission handles most common-law claims against the Ministry at home and abroad, and claims against most civil Departments arising from traffic accidents. The report recommended competitive quotations from insurance brokers to cover motor accident and employers' liability claims either through conventional insurance or through a claims handling agency. This should establish whether a comparable but cheaper service could be provided. A number of simplified office procedures were also recommended and should lead to staff economies.

d. Assisted Travel Schemes. Assisted travel schemes help with employees' costs of travelling to work at establishments which, because of their location, have serious difficulty in recruiting and retaining an effective industrial workforce. The report concluded that in remote areas where there is no adequate public transport, such schemes serve a valuable purpose and are not administratively costly. It recommended that the qualifying distance for financial assistance should be raised from three miles to five miles. This could save over £1 million a year at present rates. The report also proposed rationalised procedures for the administration of the 121 schemes in operation.

e. Defence Statistical Services. This additional review was part of a Civil Service-wide study of Government statistical services. The report has recommended greater cost-consciousness and a more critical attitude on the part of managers in asking for statistical data. It has recommended a 15% reduction in the amount of data being collected, reductions in the maintenance of data - principally in the personnel and logistics field - and more use of pay and records computers as sources.

f. Economy in Major New Building Works. This study was undertaken jointly by the Ministry of Defence and the Property Services Agency to examine the standards, quality and cost of recent building projects. The study team confirmed that scales of domestic accommodation for the Services were in no way lavish and indeed in some instances compared unfavourably with outside analogues. The report made a number of detailed proposals for more standardisation of design and

greater flexibility in planning and contract procedures leading to quicker implementation of building projects.

817. Defence Estate - Maintenance Economy Reviews. It is Government policy to dispose of surplus and under-used public sector property wherever possible. The Ministry of Defence is therefore continuing to scrutinise the defence estate to ensure that it retains only essential land and accommodation. In collaboration with the Property Services Agency, the Ministry has set in hand a fresh programme of maintenance economy reviews of selected defence establishments. These involve a physical inspection of all an establishment's land and buildings by an independent team to see whether savings can be made by using them more efficiently. The indications so far are that this approach should produce good results.

818. As part of the drive for increased economy and efficiency throughout the Ministry, a system called "Support: Reviews and Projects" has been introduced on an experimental basis at larger establishments, and units employing 1,000 or more staff. Under this scheme directors or commanding officers will review overheads annually, and will undertake one or more specific economy projects. The choice will be left to them, but the project will concentrate on one area of activity - perhaps stemming from the annual review of overheads. One or two officers from the unit or establishment will carry out the project, which should take no longer than three months.

GOOD HOUSEKEEPING

1. Work to economise on overheads goes on all the time throughout the Ministry of Defence. It is by no means confined to major reviews or even to studies conducted by the management services organisation. Recent work has included:

- The initial stages of a comprehensive review of reprographic and printing services. The first study has concentrated on the Portsmouth area, where there are over 40 establishments with reprographic facilities under a number of different line managers. The second study is on other methods of producing publications currently printed by Her Majesty's Stationery Office, either by making the best possible use of in-house facilities or perhaps also by putting some work out to contract. Later studies will be mounted in other areas where experience has shown that a degree of rationalisation could offer benefits.
- A drive by the Department's Common Services division to remove surplus telephone extensions and lines from all headquarters buildings. 1041 extension lines and 1645 instruments have been removed so far, at an annual saving of £55,000.
- A pilot study of typing and secretarial services in one headquarters building. This has recommended a trial of a remote typing facility using communicating word processors between central

London and a typing pool elsewhere. The manuscript will be transmitted to the pool by facsimile and the completed work printed out in London. We are consulting staff representatives to seek their co-operation in a trial of the system. Over 100 stand-alone word processors have already been installed throughout the Department.

2. A detailed review has recently been conducted into the movement of defence official mail. The study was given added impetus by the decision of the Post Office to withdraw Official Paid stationery facilities from Government Departments over the next two years. The Ministry of Defence will complete the transfer to normal public methods by April 1982.

3. Although headquarters buildings in London and in Bath and certain other major establishments are already linked by scheduled van services, the bulk of official mail is carried by the Post Office. There are some 2400 separate Service and civilian postal points throughout the UK all of which pass mail - some 200,000 items per day - directly into the Post Office system for delivery elsewhere within the Ministry of Defence, as well as to outside concerns and private individuals. At current postal rates this costs some £8 million per year.

4. As part of the initial survey the study team visited a large selection of units and establishments in the United Kingdom, and one in the British Army of the Rhine (BAOR). They examined methods and procedures and advised local management on immediate improvements. A comprehensive census was taken of the mail distribution pattern. From this it was clear that there was scope for moving bulk mail between

larger centres at no extra cost by establishing a system of strategically located central posting points throughout the UK; and by using, where possible, the existing Service supply transport (and civilian carriers in several places).

5. The South West of England was chosen as the first trial area, as it contains a representative mix of establishments. Several central posting points have been set up and are now linked by a network of feeder routes with the Army's priority trunk route between Plymouth and the Central Ordnance Depot, Bicester, via Exeter, Taunton and Bath. The Plymouth route was brought into trial service in October 1980 and the indications of savings are very encouraging. Trunk routes are also being brought into use in other areas when suitable arrangements can be made. From sampling mail brought into British Forces Post Office (BFPO) Mill Hill by this method, we estimate that the savings from Central Ordnance Depot Donnington to BFPO addressees will be about £190,000 per year, while collections on the South West trunk for BFPO alone are estimated to save around £25,000 a year. When the Defence Mail Service is fully developed by April 1982 it should produce savings of about £2 million per year at current rates.

6. In line with the Government's policy of reducing the size and scope of the Civil Service, the Department has been looking at the possibilities for contracting out a wide range of activities. A decision to contract out would not be taken unless it is demonstrated in the particular case that contracting out gives good value for money. Catering, typing, printing, cataloguing of new equipment and parts, and providing press-cuttings are among the areas being looked at.

7. The review that affects most staff and is furthest advanced is on cleaning. A consultative document, published in October 1979, identified some 7,400 complemented posts for directly employed cleaners, at 744 establishments. It discussed both financial and non-financial factors (such as standards, security and safety), noted that the Department already ran some 100 centrally let cleaning contracts, and recommended further study at establishment level, including the invitation of contract tenders in suitable cases. This further exercise was to start with the establishments employing most cleaners, and the aim - subject to consultation with staff interests - was to let contracts wherever it would save money.

8. The study began with the 78 establishments with cleaning complements of 25 or more, a total of just under 4,000 cleaners. Cases for exemption on non-financial grounds were examined by Service and Procurement Executive Boards and three establishments were excluded. Tenders were or are being invited for each of the remaining establishments and the results compared with the cost of the existing service. Staff interests are consulted at local and Departmental level before each decision is taken to go to contract. For the most part contract has been found to be significantly cheaper than directly employed labour; the exercise was therefore extended last autumn to a further 106 establishments, with a total of nearly 1800 cleaning posts.

9. Decisions have been taken to go to contract at 38 establishments with some 1300 complemented posts. Actual strengths have been significantly below complement as a result of restrictions on replacing wastage. Potential savings so far are estimated at over £2 million a year.

ANNEXES

ANNEX A - EXERCISES

ALLIANCE EXERCISES

EXERCISE TEAMWORK 80 (10-24 SEP 80)

1. This was the major maritime/amphibious exercise of the year spanning all three of the NATO Commands. Its aim was to improve the ability and readiness of NATO and national forces to implement contingency and general defence plans. Forces from Belgium, Canada, Denmark, France , Federal Germany, Netherlands, Norway, Portugal, the United Kingdom and the United States participated. The United Kingdom contributed a total of 34 warships with afloat support; the British element of the UK/NL Amphibious Force, consisting of the brigade HQ, two Royal Marines Commandos together with combat and logistic support; and the majority of UKAIR assets.

2. The exercise ranged from the Western to the Eastern Atlantic Area and concentrated on support to the Northern and Central European Commands and to the Island Commanders.

3. SACLANT declared it to be successful and many lessons were learned, particularly in the fields of command and control, anti-submarine warfare and air defence.

EXERCISE COLDFIRE 80 (15-26 SEP 80)

4. This was a combined live land and air exercise conducted throughout the Central Region of Allied Command Europe, and its aim was to exercise to the maximum extent possible the Central Region tactical air forces in both joint and autonomous operations.

5. Personnel and aircraft from Britain, Canada, Federal Germany, Netherlands and the United States participated; the United Kingdom contributed squadrons from the Second Allied Tactical Air Force and a British-based squadron.

6. The exercise supported the major national and international land exercises going on at the same time including the 1 (BR) Corps live exercise SPEARPOINT 80.

EXERCISE ANVIL EXPRESS 80 (11 SEP TO 6 OCT 80)

7. This was an exercise deployment of the Allied Command Europe Mobile Force to Turkish Thrace designed to demonstrate NATO solidarity, and to exercise plans for deterring aggression alongside Turkish forces. Exercise ANVIL EXPRESS 80 had to be reduced in scale but was adjudged a success by its British commander.

EXERCISE ELDER FOREST 80 (15-16 APR)

8. The aim of this exercise was to assess Britain's air defence when opposed by a comprehensive air and electronic warfare threat. "Enemy" forces from Belgium, Britain, Canada, Denmark, Federal Germany, Netherlands, Norway and the United States flew more than 600 sorties against the UK Air Defence region, which was defended by British and US forces assigned to the exercise. HM Ships Bristol and Norfolk acted as air defence pickets in the deepfield.

9. This was the first exercise of a series to be conducted to test our air defences and proved valuable for 'enemy' aircraft coming from continental bases, and for the 'defenders' of British airspace.

EXERCISE DAWN PATROL 80 (5-17 MAY)

10. DAWN PATROL was the annual live exercise carried out in the Southern Region of Allied Command Europe and comprised maritime, amphibious, land and air activity. Forces from Britain, Canada, France , Italy, Netherlands, Turkey and the United States took part. The United Kingdom contributed HM Ships Bulwark, Bristol, Sirius and Tartar with afloat support, 45 Commando Group, and Canberra aircraft of No 13 Squadron RAF.

11. Part of this exercise was devoted to preplanned training for in-place and external forces, while the remainder was devoted to sea-control operations.

OTHER EXERCISES

12. The foregoing list of exercises shows only a small part of the large number of NATO and bilateral exercises in which UK forces participated during the year. Other exercises on a smaller scale were carried out throughout the NATO area. The Norwegian exercise KALD VINTER 81, for instance, was the culmination of the annual arctic warfare training period in Norway in which units of 3 Commando Brigade RM, RN amphibious shipping and helicopters, and RAF Pumas and Harriers took part. Forces from the Netherlands, Norway, the United States and Canada also participated.

13. Outside the NATO area Exercise BEACON COMPASS took place in the Indian Ocean and Arabian Sea in late October. This involved part of the RN Task Group which was passing through and US naval forces stationed in the area.

MINOR EXERCISES

ROYAL NAVY

1. Four Joint Maritime Courses were planned during the year and were well supported by our NATO Allies. One course was cancelled in order to save fuel. The annual Fleet weapon training period, SPRINGTRAIN, was conducted in the Atlantic and Gibraltar areas.

2. Royal Marines have taken part in a number of small exercises, including mountain climbing in the Italian Alps and diving and raiding training in Gibraltar. 3 Commando Brigade RM conducted exercise ROUGH DIAMOND 80 in late June. The exercise included amphibious movement of stores over a beach in Southern England, leading to the resupply of the brigade deployed on Salisbury Plain.

ARMY

3. The Army took part in battalion level training in Canada (Suffield and Wainwright), Kenya and Norway and at company level in the Antipodes, Brunei, the Caribbean, Cyprus, Gibraltar and USA.

AIR FORCE

4. RAF aircrews with Harrier, Jaguar and Vulcan aircraft took part in exercises RED FLAG (USA) and MAPLE FLAG (Canada) during the year. The facilities provided for these exercises are without parallel in the Western world, and enable aircrew to fly missions against realistic targets in hostile air-to-air and air-to-ground environments.

ANNEX B

MERCHANT FLEETS

1. There are important differences in the organisation and character of NATO and Warsaw Pact merchant fleets. Although the latter are smaller (see table below), they are entirely controlled by their respective governments with a minister in each country in direct charge of all aspects of their operations. They are thus able to provide direct support to the political and military objectives of their governments to an extent which is unparalleled in peacetime elsewhere in the world. Though their commercial operations are important, they can be immediately set aside to allow merchant ships to participate in naval operations, exercises or other military activity. 2. A significant part of the Soviet fleet is involved in delivering military and economic aid to countries in the Third World. The ability to assemble shipping rapidly and to rush strategically important cargoes to favoured recipients has been used to advantage on many occasions. Potential military requirements are taken fully into account in the design and construction of practically all Soviet, and probably most other Warsaw Pact, merchant ships.

3. The very freedom NATO is designed to protect prevents it from attempting to match this tight control of merchant fleets. There are nonetheless arrangements, in which the United Kingdom plays a leading role, to coordinate the activities of NATO merchant

shipping in tension and war. The coordination would encompass the support of military activities such as reinforcement, as well as the transport of essential commodities. The United Kingdom also has national plans to take up a number of vessels from the merchant fleet to support defence operations in a crisis.

4. Since 1975, the merchant fleets of the Warsaw Pact countries have increased in tonnage by over 30%, largely as a result of a very active and sustained shipbuilding programme. The range and scope of their shipping operations also underwent a marked expansion till the beginning of 1980 when the adverse effects of Western reaction to the invasion of Afghanistan began to be felt. It is significant that increases in capability and operations are considerably greater than is the increase in their seaborne trade; this has risen by only some 20 - 25% in the period. Since 1975 the increase in tonnage of the merchant fleets of NATO countries has matched that of the Warsaw Pact countries, but whereas the numbers of Warsaw Pact merchant ships has increased by about 13% in the period, the number of NATO merchant ships has fallen by about 2%.

1980 NATO AND WARSAW PACT MERCHANT FLEET STRENGTHS

	Numbers of Ships	Ton Deadweight
NATO	7,400	239,144,000
of which UK	1,300	45,422,000
Warsaw Pact	2,500	29,971,000
of which USSR	1,700	18,708,000

NOTE: Figures cover ships 1,000 gross registered tons and over, including all ocean-going cargo-carrying units and passenger ships (but not short-haul ferries).

ANNEX C

Strength of the Fleet

Table 1. Ships of the Royal Navy

All ships at Serials 1 to 7, the Island class at Serial 8 and three of the coastal minehunters at Serial 9 are assigned to NATO. The remaining ships are under national control though available for the support of NATO operations.

Serial	Type/Class	No	Operations, preparing for service or engaged in trials or training	No	Undergoing long refit or conversion, on Standby etc
1	Submarines				
	Polaris	3	Renown, Repulse, Resolution	1	Revenge
	Fleet	8	Conqueror, Courageous, Sovereign, Superb, Sceptre, Spartan, Splendid, Valiant	4	Churchill, Dreadnought, Swiftsure, Warspite
	Oberon Class	10	Ocelot, Odin, Olympus, Onslaught, Onyx, Opportune, Oracle, Osiris, Otter, Otus	3	Oberon, Opossum, Orpheus
	Porpoise Class	1	Porpoise	2	Sealion, Walrus
2	ASW Carrier	1	Invincible		
3	ASW/Commando Carriers	1	Hermes		
4	Assault Ships	1	Intrepid	1	Fearless

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Serial	Type/Class	No	Operations, preparing for service or engaged in trials or training	No	Undergoing long refit or conversion, on Standby etc
5	Guided Missile Destroyers				
	County	4	Antrim, Glamorgan, London, Norfolk	1	Fife
	Type 82	1	Bristol		
	Type 42	9	Birmingham, Cardiff, Coventry, Exeter, Glasgow, Liverpool* Newcastle, Sheffield, Southampton*		
6	General Purpose Frigates				
	Leander Class	20	Achilles, Ajax, Andromeda, Apollo, Arethusa, Argonaut, Ariadne, Aurora, Bacchante, Cleopatra, Danae, Dido, Diomede, Euryalus, Galatea, Leander, Minerva, Naiad, Phoebe, Sirius	6	Charybdis, Hermione, Juno, Jupiter, Penelope, Scylla
	Rothesay Class	5	Brighton, Lowestoft, Plymouth, Rhyl, Rothesay	3	Berwick, Falmouth, Yarmouth
	Type 21	8	Active, Alacrity, Amazon, Ambuscade, Antelope, Ardent, Arrow, Avenger		
	Type 22	3	Battleaxe, Brilliant*, Broadsword		

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Serial	Type/Class	No	Operations, preparing for service or engaged in trials or training	No	Undergoing long refit or conversion, on Standby etc
7	Anti-Submarine Frigate				
	Type 12	1	Torquay		
8	Offshore Patrol				
	Island Class	7	Alderney, Anglesey, Guernsey, Jersey, Lindisfarne, Orkney, Shetland		
	Castle Class	2	Dumbarton Castle*, Leeds Castle*		
9	MCMVs Coastal Minesweepers/ Minehunters				
	Ton Class	28	Alfriston, Bickington, Bildeston, Bossington, Brereton, Brinton, Bronington, Crighton, Crofton, Cuxton, Gavinton, Hodgeston, Hubberston, Iveston, Kedleston, Kellington, Kirkliston, Lewiston, Maxton, Nurton, Pollington, Shavington, Soberton, Stubbington, Upton, Walkerton, Wilton, Wooton	1	Sheraton

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Serial	Type/Class	No	Operations, preparing for service or engaged in trials or training	No	Undergoing long refit or conversion, on Standby etc
	Chartered Trawlers	2	St David, Venturer		
	Hunt Class	3	Brecon, Ledbury, Cattistock*		
10	Patrol Craft				
	Patrol Craft	6	Alert, Cygnet, Kingfisher, Peterel✓, Sandpiper✓, Vigilant		
	Coastal Patrol Craft	6	Beachampton, Laleston, Monkton, Wasperton, Wolverton, Yarnton		
	Seaward Defence Boats	2	Dee✓, Droxford✓		
	Jetfoil	1	Speedy		
11	Support Ships				
	Submarine Tender	1	Wakeful		
	MCM Support Ship	1	Abdiel		
	MCM Support Hovercraft	1	VT2		
12	Royal Yacht/ Hospital Ship	1	Britannia		
13	Training Ships				
	Fast Target Boats	3			Cutlass, Sabre, Scimitar
	Ex Inshore Minesweepers	4	Aveley, Dittisham, Flintham, Thornham		
	Fleet Tenders	2	Manley*, Mentor*		

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Serial	Type/Class	No	Operations, preparing for service or engaged in trials or training	No	Undergoing long refit or conversion, on Standby etc
14	Ice Patrol Ship	1	Endurance		
15	Survey Ships	12	Beagle, Bulldog, Echo, Egeria, Enterprise, Fawn, Fox, Hecate, Hecla, Herald, Hydra, Woodlark/		
16	Trials Ship	1	Londonderry		

Notes:

(1) This table includes ships due for completion or disposal during the course of 1981/82 and the numbers of each type are not therefore an accurate indication of the ships available at any one time. It does not include those ships solely engaged in harbour training duties.

(2) Ships marked * will be under construction on 1 April 1981, and are planned to enter service during 1981/82.

(3) Ships marked / are engaged partially on trials or training.

(4) Ships approved during 1980/81 for disposal: Ashanti, Blake, Bulwark, Eskimo, Glasserton, Gurkha, Isis, Lincoln, Lynx, Mohawk, Nubian, Tartar, Tenacity, Triumph, Waterwitch, Zulu

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TABLE 2: SHIPS OF THE ROYAL FLEET AUXILIARY SERVICE STRENGTH AT 1 APRIL 1981

Serial	Type	No	Operational, preparing for service or engaged on trials	No	Refit
1	Fleet Tankers, Large	4	Olna Olwen Olmeda Tidepool	1	Tidespring
2	Fleet Tankers, Small	5	Green Rover Grey Rover Blue Rover Black Rover Gold Rover		
3	Support Tankers	3	Appleleaf Pearleaf Plumleaf	1	Brambleleaf
4	Coastal Tankers	1	Eddyfirth		
5	Fleet Replenishment Ships	3	Fort Austin Fort Grange Regent	1	Resource
6	Stores Support Ships	1	Stromness		
7	Store Carrier	1	Bacchus		
8	Helicopter Support Ship	1	Engadine		
9	Landing Ships Logistic		Sir Lancelot Sir Galahad Sir Tristram Sir Bedivere Sir Percivale	1	Sir Geraint

Notes: 1. Stores Support Ships

a. Tarbatness is held in reserve.

2. Disposals

a. RFAs approved for disposal during 1980-81:
Lyness - disposal by sale

b. RFAs approved for disposal during 1981-82:
Eddyfirth and Bacchus

TABLE 3. NAVAL AIRCRAFT

Serial	Type	Role	Deployment	No of Squadrons	No of Flights
	Fixed Wing				
1	Sea Harrier	FRS	HMS Hermes	1	
	Sea Harrier	FRS	HMS Invincible	1	
	Sea Harrier	Aircrew Training	RNAS Yeovilton	1	
	Helicopters				
2	Sea King Mk 2(v)	ASW	HMS Hermes	1	
	Sea King Mk 2	ASW	HMS Hermes	1	
	Sea King Mk 2(v)	ASW	HMS Invincible	1	
	Sea King Mk 2(i)	ASW	RFAs	1	
	Sea King Mk 2	ASW	HMS Gannet (Prestwick)	1	
	Sea King Mk 2(ii)	Aircrew Training	RNAS Culdrose	1	
3	Lynx Mk 2	ASW	Leander Class and Type 21 and Type 22 frigates and Type 42 destroyers		23
	Lynx Mk 2	Aircrew Training	RNAS Yeovilton	1	
4	Wasp	ASW	Leander, Rothesay and Type 21 frigates		17
	Wasp(ii)	Aircrew Training	RNAS Portland	1	
	Wasp(ii)	Hydrography and Aerial Photography	Ocean Survey Ships and HMS Endurance		5
5	Wessex Mk 3	ASW	County Class destroyers		2
	Wessex Mk 3(iv)	Aircrew Training	RNAS Portland	1	
6	Wessex Mk5(iii)	Commando Assault	RNAS Yeovilton	1	
	Wessex Mk 5(ii)	Aircrew Training	RNAS Yeovilton	1	
	Wessex Mk 5(ii)	Aircrew/SAR Training	RNAS Culdrose	1	
	Wessex Mk 5(ii)	Fleet requirements	RNAS Portland	1	
7	Sea King Mk 4(iii)	Commando Assault	RNAS Yeovilton	1	

Notes:
(i) Aircraft of this squadron will be deployed in single and multi flights as required.
(ii) All aircraft are assigned to NATO except those marked (ii) which would be made available to NATO in war.
(iii) Available to embark in HMS Hermes as required.
(iv) Half the squadron is assigned to NATO and the other half is earmarked to NATO.
(v) These squadrons are being re-equipped with Sea King Mk 5 during 1981/82.

Abbreviations: ASW - Anti-submarine warfare
FRS - Fighter, reconnaissance and strike aircraft
RFA - Royal Fleet Auxiliary
RNAS - Royal Naval Air Station

TABLE 4. ROYAL MARINES COMMANDO FORCES

Serial	Type	No
1	Headquarters Brigade Headquarters RM	1
2	Commando Units RM Commandos	3
3	Artillery Commando Regiment RA	1
4	Engineers Commando Squadron RE	1
	Commando Squadron RE (Volunteer)	1
5	Light Helicopter Support Brigade Air Squadron RM	1
6	Logistic Units Commando Logistic Regiment RM	1
7	Special Boat Squadron Squadron RM	1
8	Raiding Squadrons Squadron RM	2
	Squadron RMR	1

ANNEX D

Strength of the Army

Major Combat Headquarters and Combat Arm Numbers (i)

	Regular Army BAOR	Berlin	UK	Elsewhere	TA UK
Headquarters					
Corps Headquarters	1				
Armoured Divisional Headquarters	4				
Artillery Divisional Headquarters	1				
Field Force Headquarters	1		3	1(ii)	
Brigade Headquarters	8	1	3		
Armour					
Armoured Regiments	9		2		
Armoured Reconnaissance Regiments	4		4		2
Artillery (iii)					
Field Regiments (incl one Commando Regt)	9		5		2
Heavy Regiments	1				
Missile Regiments	1				
Guided Weapon Regiments			1		
Independent Anti-Tank Batteries (iv)	4				
Air Defence Regiments	2		1		3
Locating Regiments	1				
Engineers					
Armoured Division Engineer Regiments	4				
Armoured Engineer Regiments	1				
Engineer Regiments			4	1(v)	7
Amphibious Engineer Regiments	1				
Infantry					
Battalions	15	3	30(vi)	3	38(vii)
Gurkha Battalions			1 (viii)	4	
Special Air Service Regiments			1		2
Army Air Corps (ix) Regiments	5		1		
Honourable Artillery Company Regiments					1

Notes:

(i) Normal deployment locations as at 1 April 1981 are shown; no account is taken of temporary or emergency deployments.

Notes (continued)

(ii) Gurkha Field Force.

(iii) Artillery unit equipments consist of:

Field Regiment - depending on role, 105 mm light guns, varying combinations of 105 mm and 155 mm self-propelled guns and 8 inch self-propelled howitzers and towed 155 mm FH70 guns.

Heavy Regiments-175 mm SP guns.

Missile Regiments-Lance.

Guided Weapon Regiments-Swingfire and Blowpipe.

Anti-Tank Batteries-Swingfire.

Air Defence Regiments-Rapier and Blowpipe.

(iv) One allocated to each armoured division.

(v) Queen's Gurkha Engineer Regiment. An additional Gurkha Engineer Squadron will be stationed at the Royal School of Military Engineering, Chatham, from April 1981.

(vi) Includes Composite Infantry Demonstration Battalion.

(vii) Includes three Yeomanry regiments in the infantry role.

(viii) Includes additional manpower at the Royal Military Academy, Sandhurst and Brecon.

(ix) Aircraft types are:

Beaver

Alouette

Scout

Lynx

Gazelle.

ANNEX E

D/DS8/37/43

STRENGTH OF THE ROYAL AIR FORCE
Front Line Units (i)

SERIAL	ROLE	AIRCRAFT OR EQUIPMENT	UK	RAF(G)
1	Strike/ Attack	Vulcan B2	9 Squadron 35 Squadron 44 Squadron 50 Squadron 101 Squadron 617 Squadron	
		Buccaneer	12 Squadron 208 Squadron 216 Squadron	15 Squadron 16 Squadron
		Jaguar		14 Squadron 17 Squadron 20 Squadron 31 Squadron
2	Ground Support	Harrier	1 Squadron	3 Squadron 4 Squadron
		Jaguar	6 Squadron 54 Squadron	
3	Maritime Patrol	Nimrod	42 Squadron 120 Squadron 201 Squadron 206 Squadron	
4	Reconnaissance	Canberra PR7 Canberra PR9 Vulcan SR2 Jaguar	13 Squadron 39 Squadron 27 Squadron 41 Squadron	2 Squadron
5	Air Defence	Lightning	5 Squadron (ii) 11 Squadron (ii)	
		Phantom FG1	43 Squadron 111 Squadron (ii)	19 Squadron (ii) 92 Squadron (ii)

SERIAL	ROLE	AIRCRAFT OR EQUIPMENT	UK	RAF(G)
		Phantom FGR2	23 Squadron (ii) 29 Squadron 56 Squadron (ii)	
		Bloodhound	85 Squadron (ii)	25 Squadron (ii)
		Rapier	27 Squadron RAF Regiment (ii) 48 Squadron RAF Regiment (ii)	16 Squadron RAF Regiment (ii) 26 Squadron RAF Regiment (ii) 37 Squadron RAF Regiment (ii) 63 Squadron RAF Regiment (ii)
6	Airborne Early Warning	Shackleton	8 Squadron	
7	Air Transport	VC10	10 Squadron	
		Hercules	24 Squadron 30 Squadron 47 Squadron 70 Squadron	
		Wessex Helicopters	72 Squadron	18 Squadron
		Puma Helicopters	33 Squadron 230 Squadron	
8	Tanker	Victor K2	55 Squadron 57 Squadron	
9	Search and Rescue	Sea King Helicopters	202 Squadron	
		Whirlwind/ Wessex Helicopters	22 Squadron	
10	Ground Defence	Infantry Weapons	2 Squadron RAF Regiment 15 Squadron RAF Regiment 51 Squadron RAF Regiment 58 Squadron RAF Regiment 2503 (County of Lincoln) Squadron	1 Squadron RAF Regiment

SERIAL	ROLE	AIRCRAFT OR EQUIPMENT	UK	RAF(G)
			R Aux AF (iv) Regiment 2622 (Highland) Squadron R Aux AF Regiment (iv) 2623 (East Anglian) Squadron R Aux AF Regiment (iv)	

Notes:

(i) Normal deployment locations as at 1 Jan 1981 are shown; no account has been taken of temporary or emergency re-deployments. All front line aircraft, together with certain training aircraft are assigned to NATO or available in support of NATO operations.

(ii) Squadrons marked (ii) are part of NATO Command Forces.

(iii) Additional deployments (outside NATO) are: one squadron of Whirlwind helicopters and one RAF Regiment Squadron in Cyprus; one squadron of Wessex helicopters in Hong Kong; and a detachment of 4 Harriers, 4 Puma helicopters and a Rapier air defence unit in Belize.

(iv) R Aux AF - Royal Auxiliary Air Force.

ANNEX F

ACCIDENTS INVOLVING LOSS OR SERIOUS DAMAGE TO AIRCRAFT OF THE THREE SERVICES

1 JANUARY 1980 to 31 DECEMBER 1980

DATE	AIRCRAFT	PARENT SERVICE	SERVICE CASUALTIES		CIVILIAN CASUALTIES	
			Killed	Serious Injury	Killed	Serious Injury
08 JAN	GAZELLE	ARMY	-	-	-	-
14 JAN	BEAVER	ARMY	2	-	-	-
14 JAN	SEA KING	RN	-	-	-	-
24 JAN	SEA HERON	RN	-	-	-	-
07 FEB	BUCCANEER	RAF	2	-	-	-
12 FEB	HUNTER	RAF	1	-	-	-
18 FEB	GAZELLE	ARMY	2	-	-	-
05 MAR	PHANTOM	RAF	-	1	-	-
12 MAR	HARRIER	RAF	-	-	-	-
08 MAY	JET PROVOST	RAF	-	2	-	-
08 MAY	WHIRLWIND	RAF	-	1	-	-
17 MAY	HAWK	RAF	-	-	-	-
22 MAY	WESSEX	RN	-	-	-	-
28 MAY	HUNTER	RAF	-	1	-	-
28 MAY	JAGUAR(2)	RAF	1	-	-	-
29 MAY	HUNTER	RAF	-	-	-	-
03 JUN	PHANTOM	RAF	-	-	-	-
10 JUN	GAZELLE	ARMY	-	1	-	-
27 JUN	WESSEX	RN	3	-	-	-
30 JUN	LYNX	ARMY	-	-	-	-
11 JUL	PHANTOM	RAF	2	-	-	-
17 JUL	JAGUAR	RAF	-	1	-	-
31 JUL	JET PROVOST	RAF	-	1	-	-
14 AUG	SCOUT	ARMY	-	-	-	-
19 AUG	HAWK	RAF	-	-	-	-
15 SEP	GAZELLE	ARMY	3*i	-	-	-
18 SEP	BULLDOG	RAF	-	1	-	-
14 OCT	HARRIER	RAF	1	-	-	-
28 OCT	HARRIER	RAF	-	-	-	-
07 NOV	CANBERRA	RAF	2	-	-	-
11 NOV	CHIPMUNK	ARMY	-	-	-	-
12 NOV	PHANTOM	RAF	2	-	-	-
17 NOV	NIMROD	RAF	2*ii	1	-	-
18 NOV	GAZELLE	RAF	-	1*iii	-	-
01 DEC	SEA HARRIER	RN	-	1	-	-
01 DEC	GAZELLE	ARMY	-	-	-	-
09 DEC	PHANTOM	RAF	-	-	-	-

NB

*i Royal Marines
*ii Includes 1 Royal Australian Airforce
*iii Royal Navy

Notes (continued)

(ii) Gurkha Field Force.

(iii) Artillery unit equipments consist of:

Field Regiment - depending on role, 105 mm light guns, varying combinations of 105 mm and 155 mm self-propelled guns and 8 inch self-propelled howitzers and towed 155 mm FH70 guns.

Heavy Regiments-175 mm SP guns.

Missile Regiments-Lance.

Guided Weapon Regiments-Swingfire and Blowpipe.

Anti-Tank Batteries-Swingfire.

Air Defence Regiments-Rapier and Blowpipe.

(iv) One allocated to each armoured division.

(v) Queen's Gurkha Engineer Regiment.

(vi) Includes Composite Infantry Demonstration Battalion.

(vii) Includes three Yeomanry regiments in the infantry role.

(viii) Includes additional manpower at RMAS and Brecon.

(ix) Aircraft types are:

Beaver

Alouette

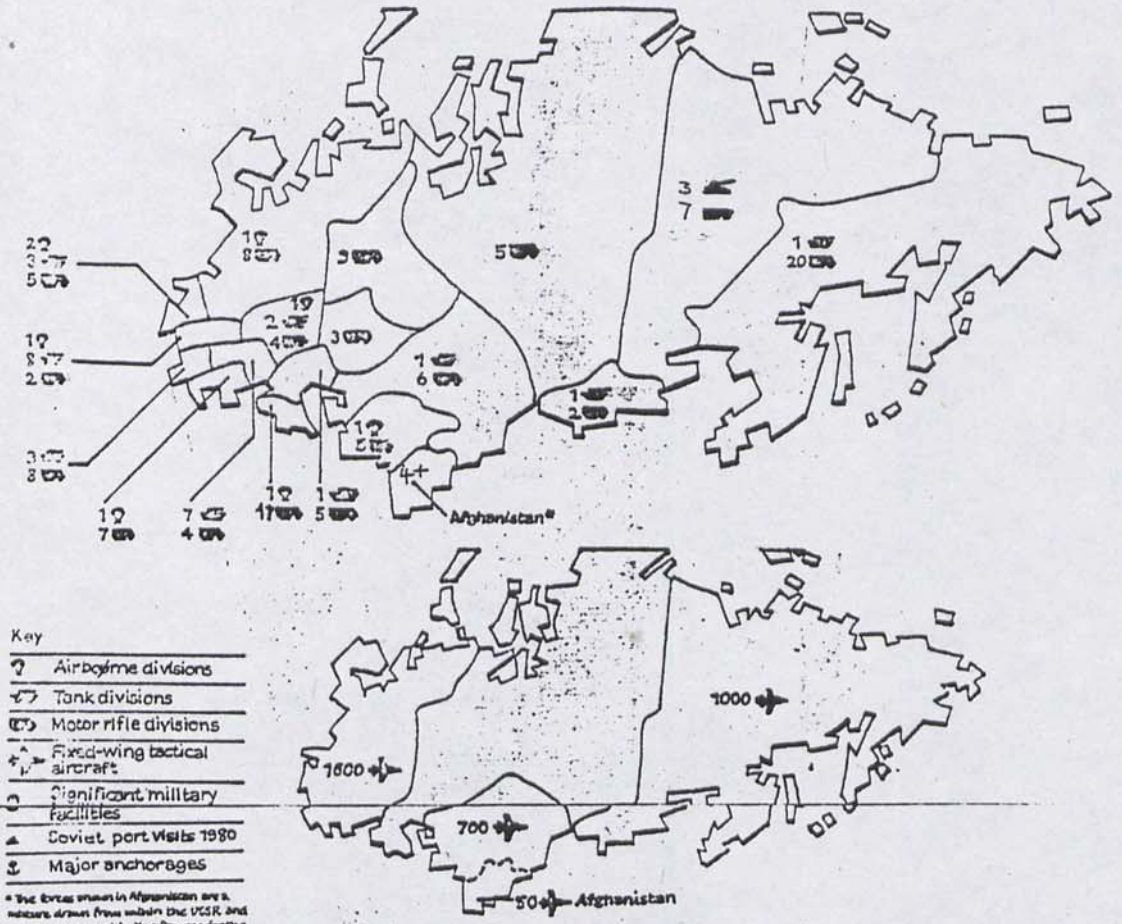
Scout

Lynx

Gazelle.

DIAGRAMS AND ILLUSTRATIONS

Fig 1.



Key

- Airborne divisions
- Tank divisions
- Motor rifle divisions
- Fixed-wing tactical aircraft
- Significant military facilities
- Soviet port visits 1980
- Major anchorages

* The forces shown in Afghanistan are a mixture drawn from within the USSR and are also included in the figures for the districts from which they originate

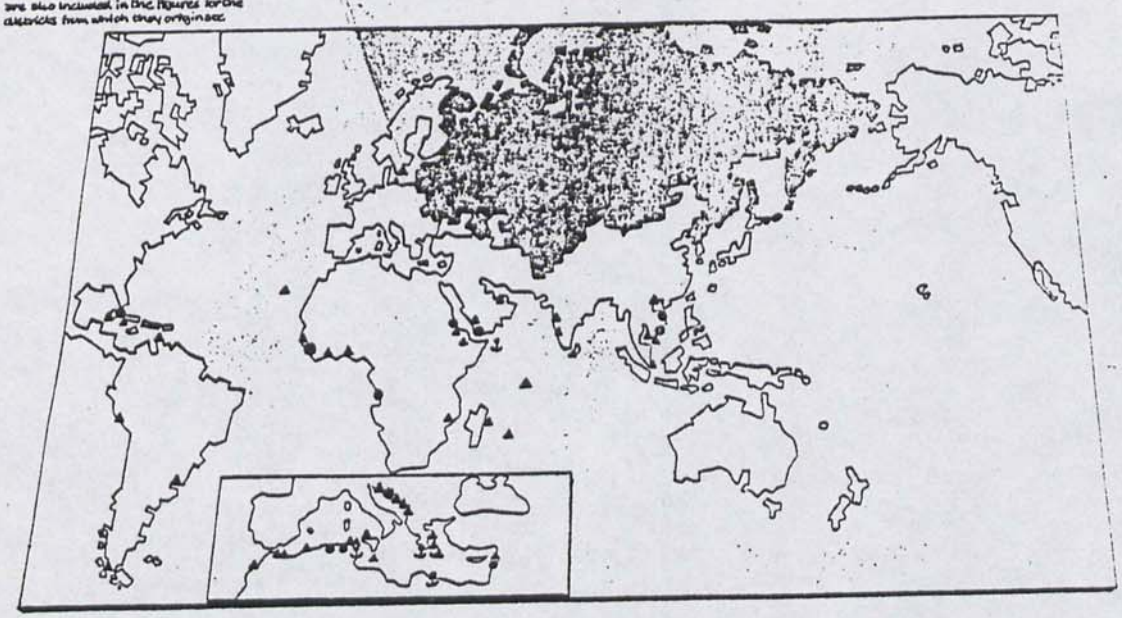
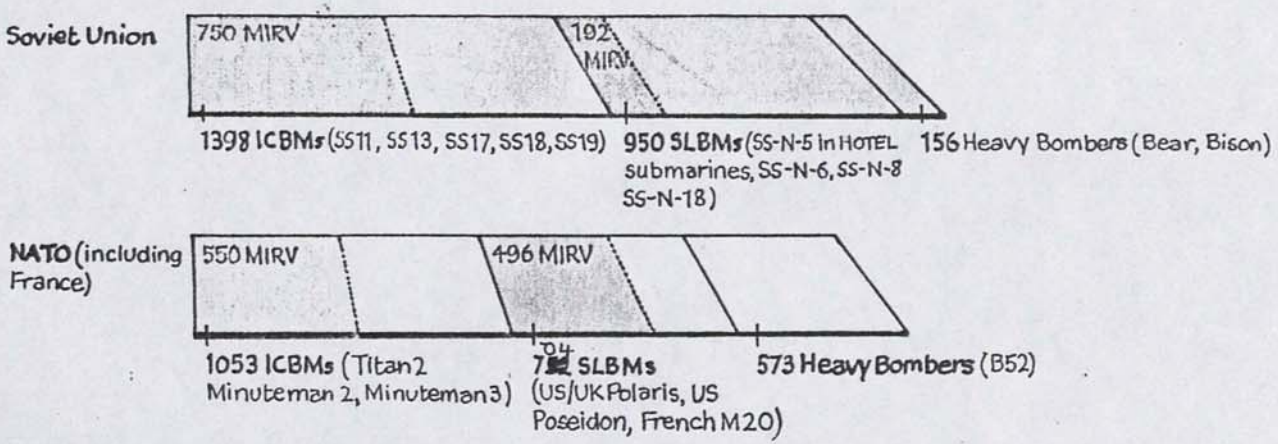


Fig 2

Strategic Systems[2]



European Theatre (Land Based)[3,4]

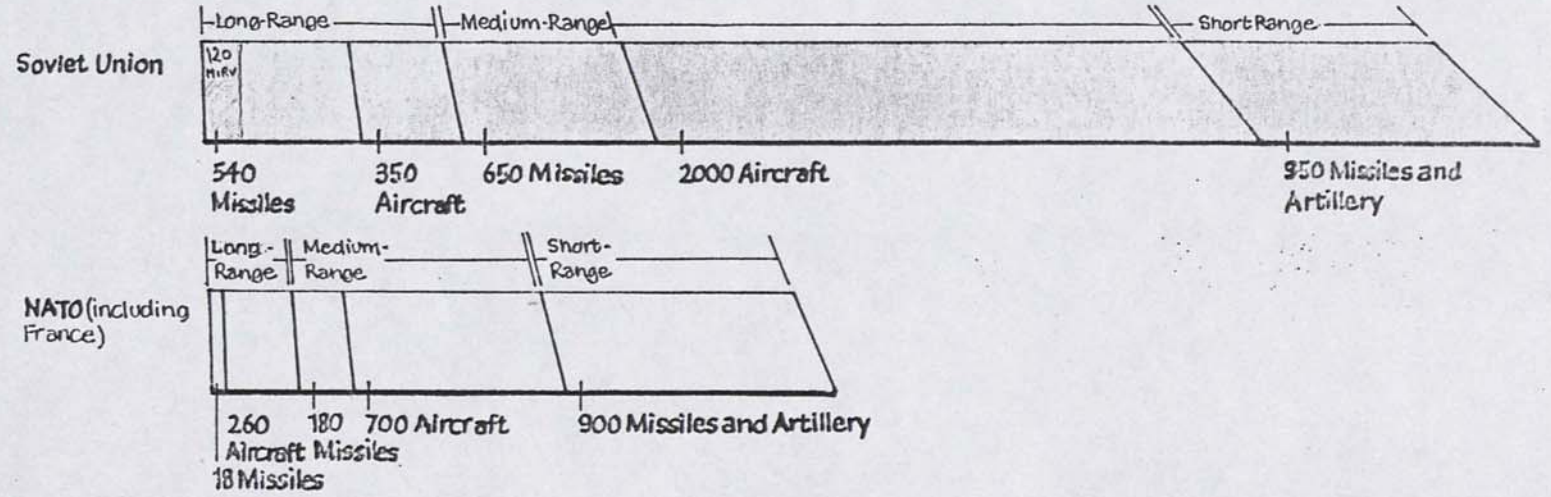
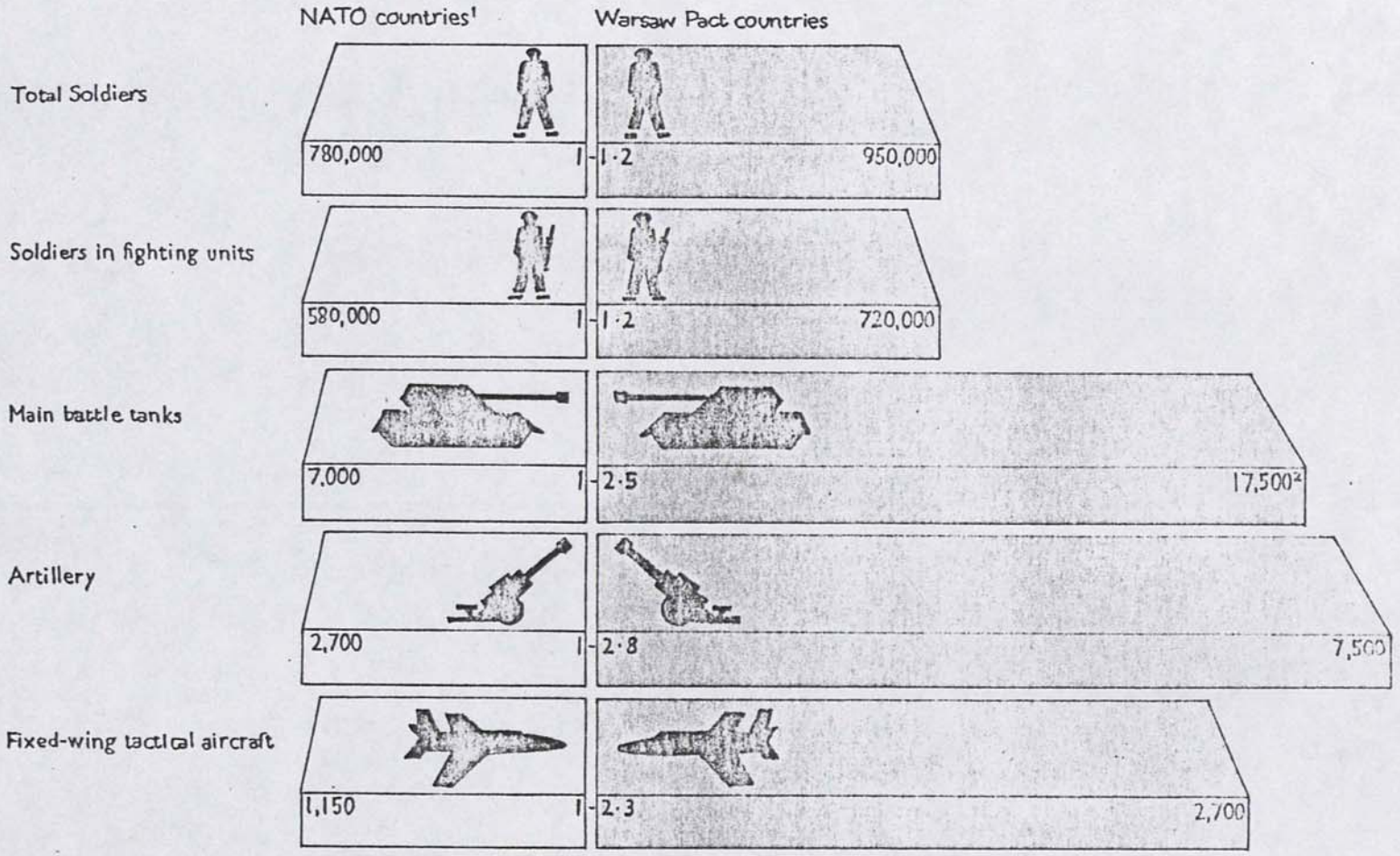


Fig. 3

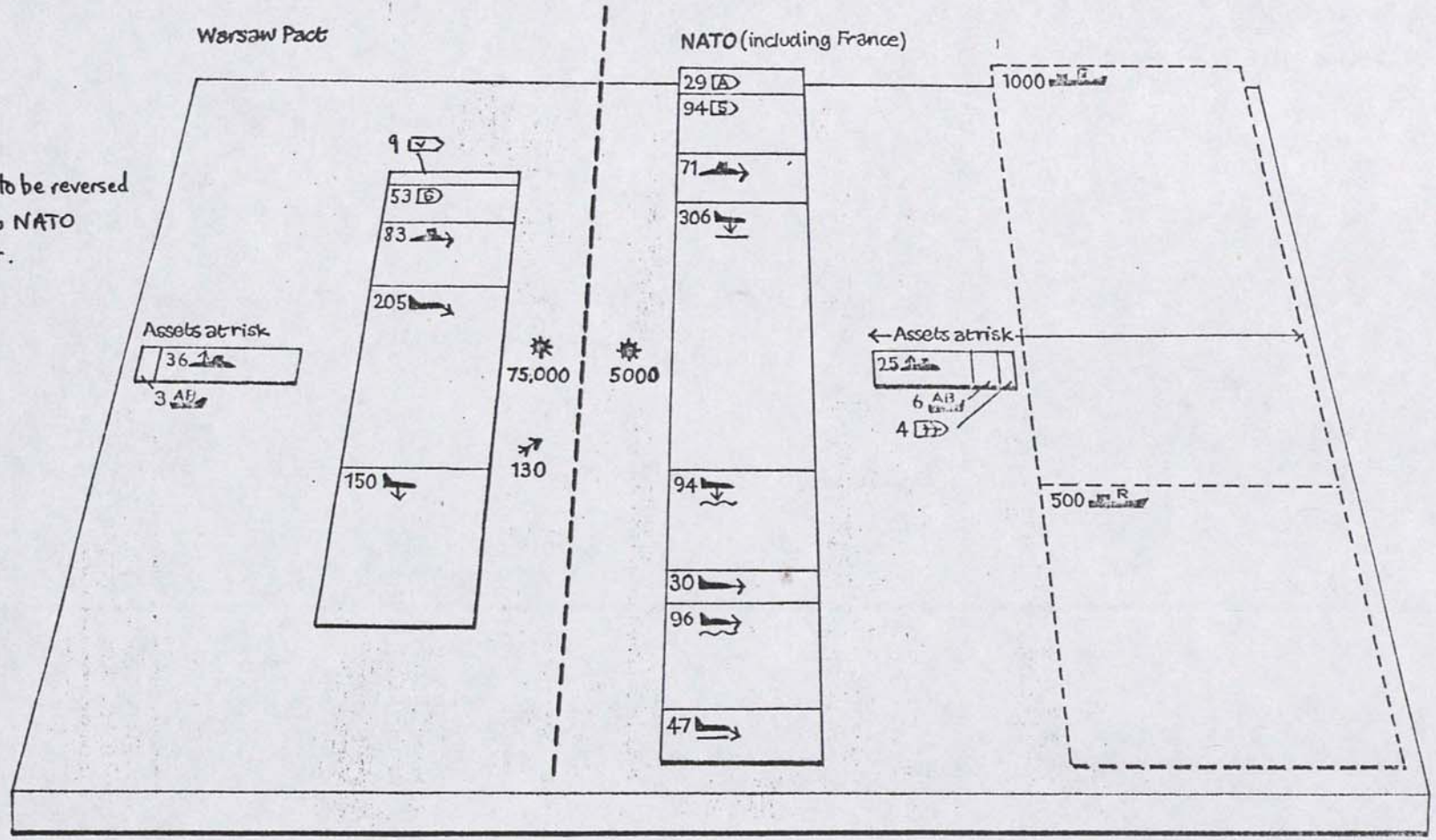


[1] Including French forces in the Federal Republic of Germany, but excluding the Berlin garrison, which is not declared to NATO

[2] Includes some Warsaw Pact tanks in training units and storage which would be available for operational use

Fig 4

Figure to be reversed to show NATO on left.



Key

Surface Warships
- A AAW
- S ASW
- ASVW (Anti-Surface Vessel)

Submarines
- Attack
- Ballistic Nuclear Missile

Weapon Systems
- Ship and Submarine Launched Anti Ship Missiles over 200 km range²
- Mines

Aircraft
- Ship Attack
- ASW
- ASW Shore based fixed wing or rotary
- ASW Ship borne
- Air Defence
- Air Defence Ship borne

- Aircraft carriers
- Amphibious battalions
- R Reinforcement/Military Resupply Shipping – per month
- E Economic Resupply Shipping minimum per month

THE MARITIME BALANCE

1. The balance of forces in the Eastern Atlantic, which has been presented in previous years has a particular significance for the United Kingdom not only in strategic terms but also because it is where the bulk of the British maritime forces are deployed. Such a presentation does, however, exclude most of the powerful United States forces in the Atlantic and takes no account at all of the roles which the forces of each side are capable of fulfilling.

2. This year therefore we present in Fig. 4 a balance that covers the North Atlantic as a whole and attempts to show the maritime forces of NATO and the Warsaw Pact not in simple, and potentially misunderstood, ship-against-ship terms, but in relation to a background of maritime responsibilities and tasks. It makes no attempt to show or predict the outcome of a campaign between the opposing forces presented.

3. The large block on the extreme left-hand side represents the minimum passage of reinforcement and resupply shipping on which NATO countries would depend. There is no equivalent on the other side since the Warsaw Pact countries as a whole have the advantage of being self-sufficient in energy and in most of the strategically important raw materials; and their shipping, while itself vulnerable, is not vital to their survival.

4. Immediately behind the main breakdown of combat forces are the major maritime assets at risk. These are units which are not themselves capable of taking active part in a maritime battle but nevertheless require protection. The aircraft carriers are included here since their main capability - their aircraft - is included in the combat forces. Of the forces shown on the NATO side approximately half are from the United States - these forces, including all the aircraft carriers and their aircrafts, might not be available in the key Eastern Atlantic area at the outbreak of war.

Figure 5

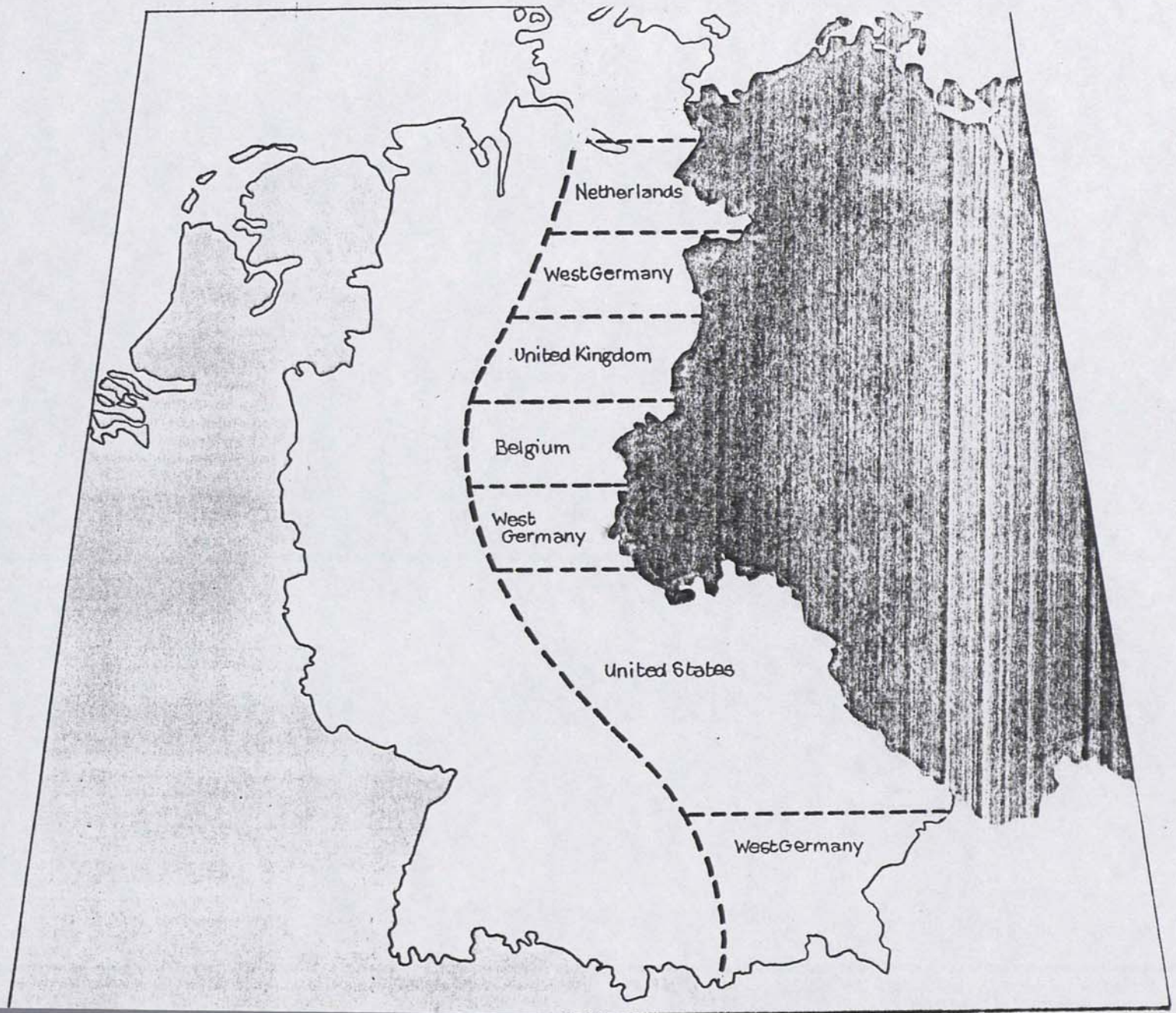

Netherlands
West Germany
United Kingdom
Belgium
West Germany
United States
West Germany

Fig. 6

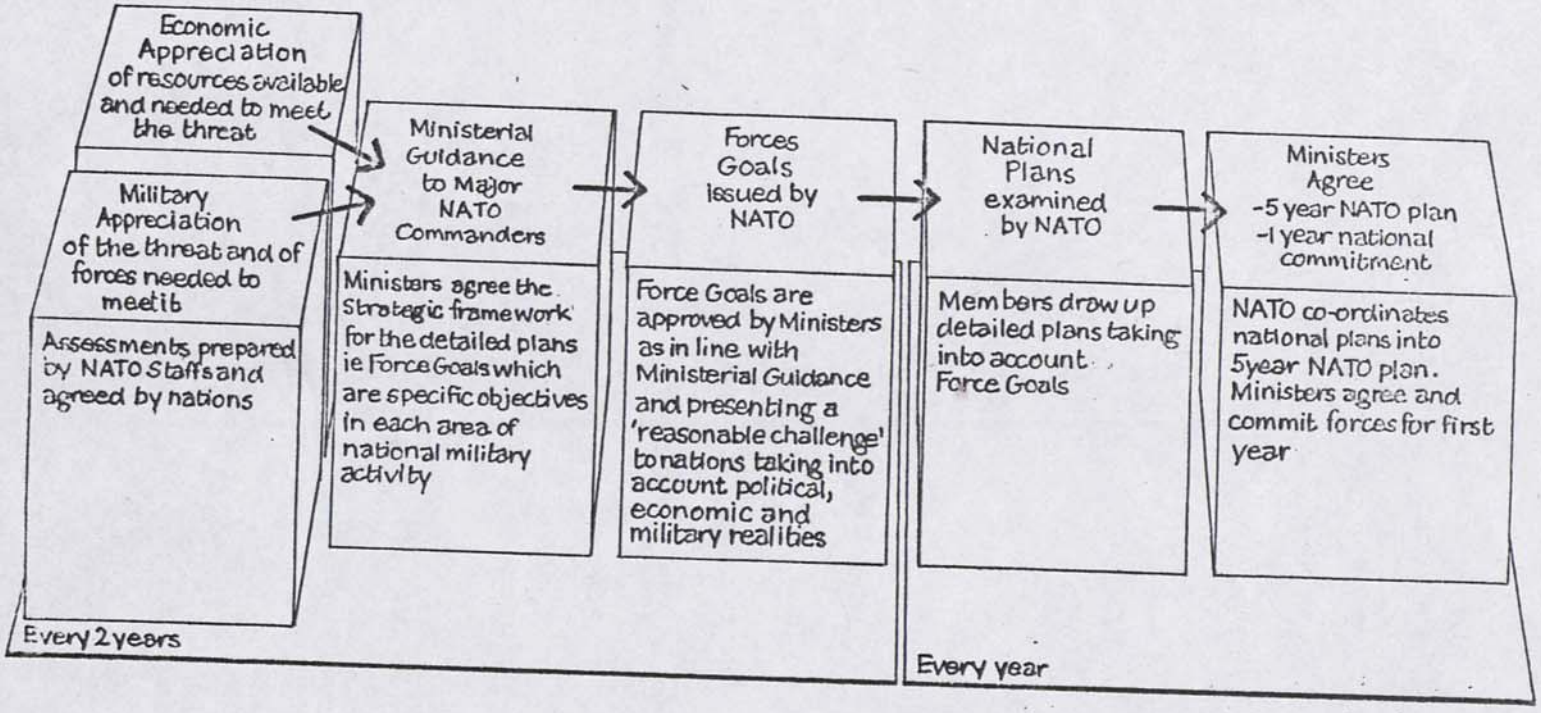

Economic Appreciation of resources available and needed to meet the threat
Military Appreciation of the threat and of forces needed to meet it
Assessments prepared by NATO Staffs and agreed by nations
Ministerial Guidance to Major NATO Commanders
Ministers agree the 'strategic framework' for the detailed plans ie Force Goals which are specific objectives in each area of national military activity
Forces Goals issued by NATO
Force Goals are approved by Ministers as in line with Ministerial Guidance and presenting a 'reasonable challenge' to nations taking into account political, economic and military realities
National Plans examined by NATO
Members draw up detailed plans taking into account Force Goals
Ministers Agree
-5 year NATO plan
-1 year national commitment
NATO co-ordinates national plans into 5year NATO plan. Ministers agree and commit forces for first year
Every 2 years
Every year

Figure 7

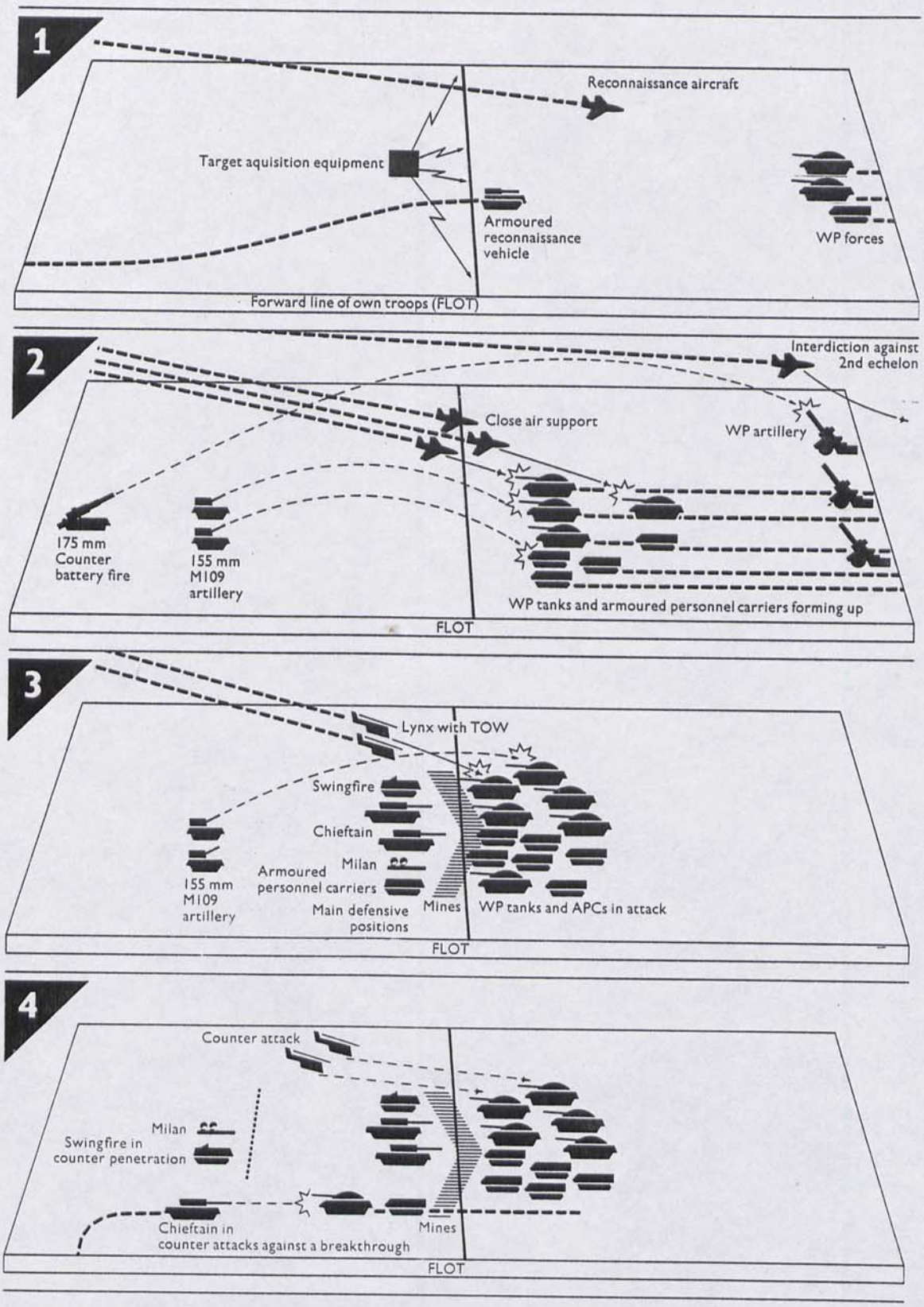

1
Reconnaissance aircraft
Target aquisition equipment
Armoured reconnaissance vehicle
WP forces
Forward line of own troops (FLOT)
2
Interdiction against 2nd echelon
Close air support
WP artillery
175 mm Counter battery fire
155 mm M109 artillery
WP tanks and armoured personnel carriers forming up
FLOT
3
Lynx with TOW
Swingfire
Chieftain
Milan
Armoured personnel carriers
155 mm M109 artillery
Main defensive positions
Mines
WP tanks and APCs in attack
FLOT
4
Counter attack
Milan
Swingfire in counter penetration
Chieftain in counter attacks against a breakthrough
Mines
FLOT

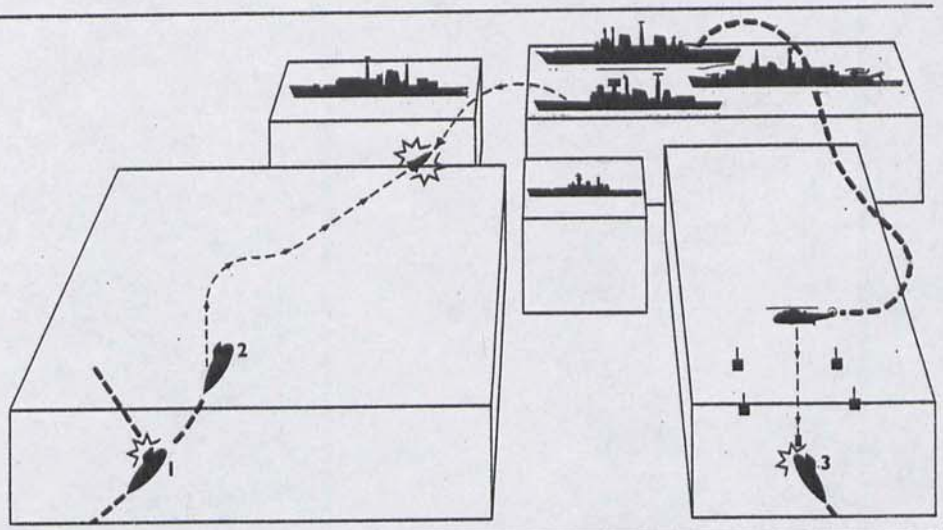
Figure 8

1

1 Hostile submarines shown under attack from British nuclear submarine.

2 Launching unsuccessful missile attack on anti-submarine carrier.

3 Under torpedo attack from a Sea King Mk 5 helicopter after being located by sonobuoy.

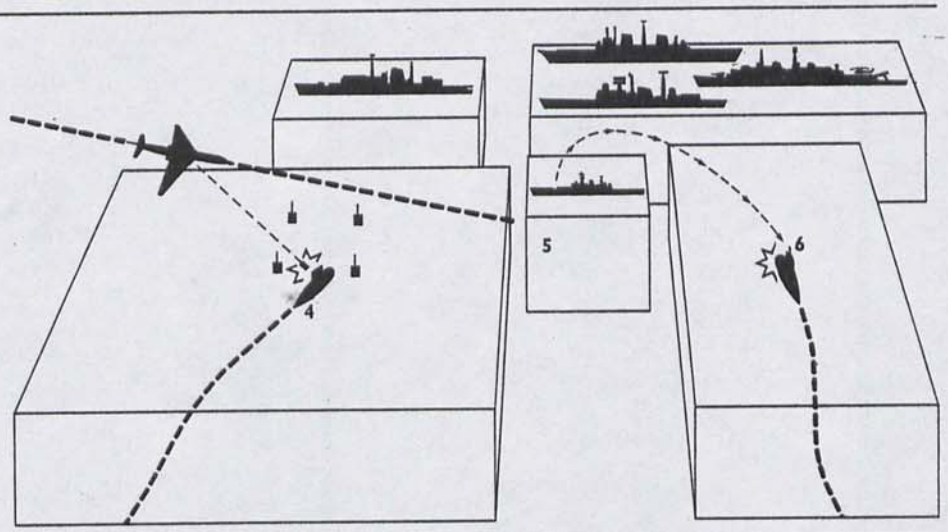


2

4 Submarine under attack from Nimrod aircraft which has located it by sonobuoy.

5 Nimrod radar detects submarine and communicates with Leander frigate.

6 Submarine under attack by Ikara missile fired from Leander.



3

7 Hostile submarine under torpedo attack from Lynx helicopter.

8 Firing torpedo (which is decoyed) at a County class destroyer.

9 Under torpedo attack from Wessex Mk 3 helicopter which has located it by active dipping sonar.

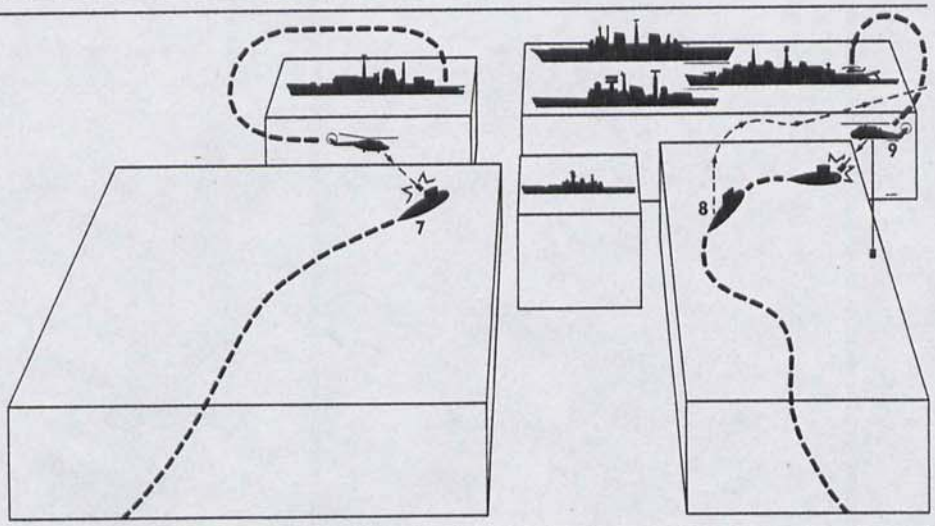
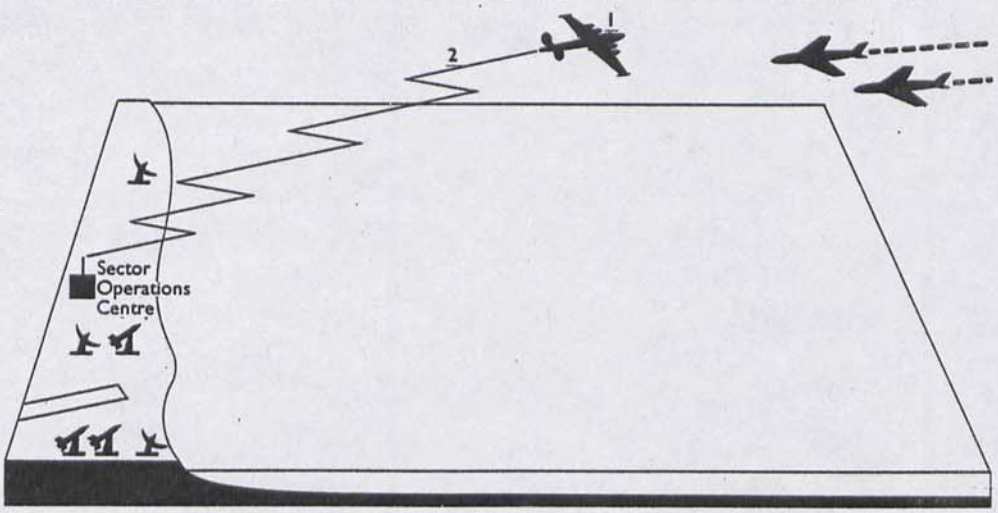


Figure 9

1

1 At several hundred miles from coastline a Shackleton AEW aircraft identifies incoming raid.

2 Information transmitted to network of operations centres for command decisions.

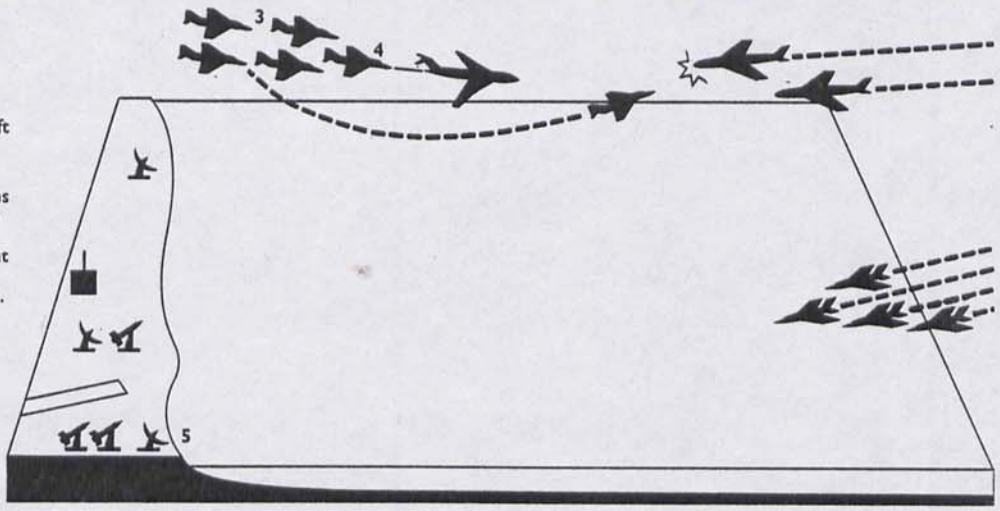


2

3 Phantom aircraft commanded to intercept.

4 Other Phantoms standing by (with Victor tanker providing in-flight refuelling) on combat air patrol.

5 Low-level incoming raid identified by coastal radars.



3

6 Lightning fighters on ground-alert scrambled to intercept low-level raid.

7 Bloodhound surface-to-air missiles (SAM) provide further line of defence; (also Rapier short-range SAM – not shown).

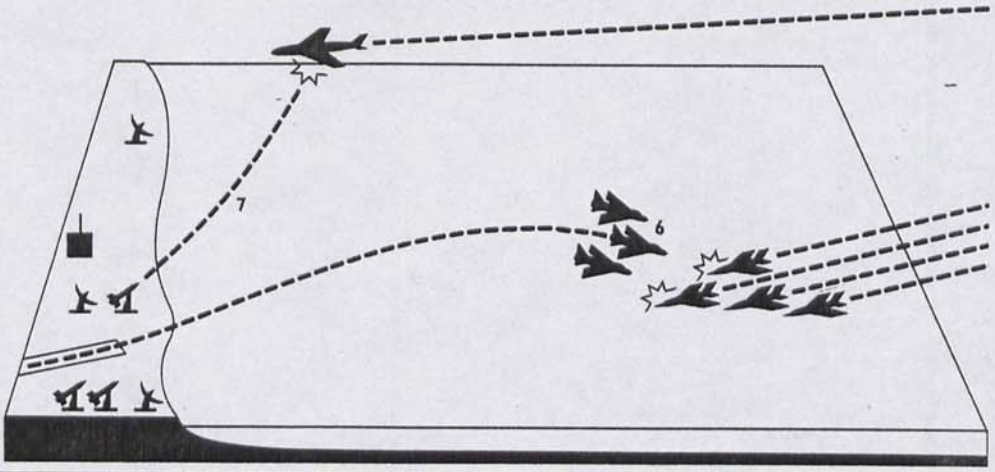


Fig. 10

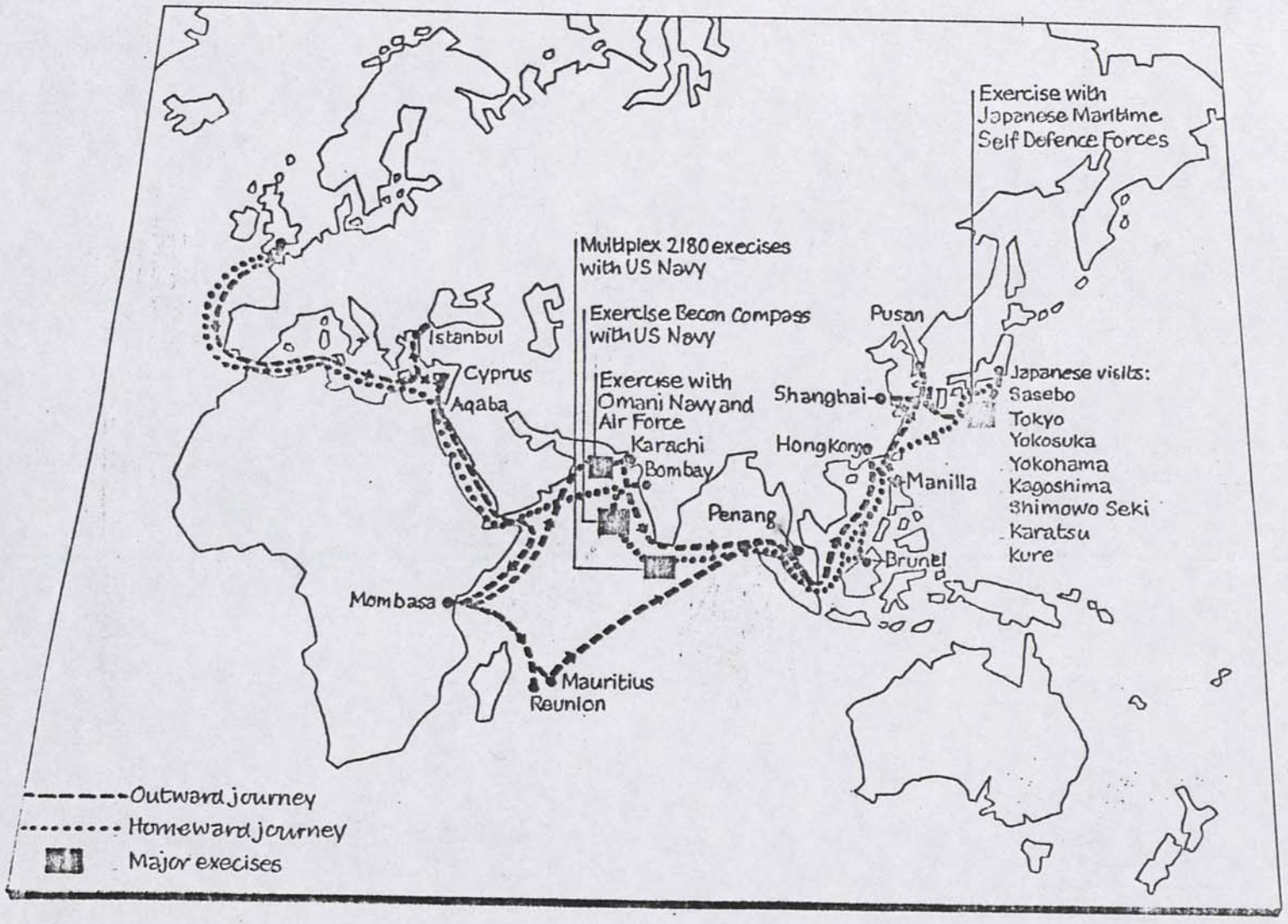
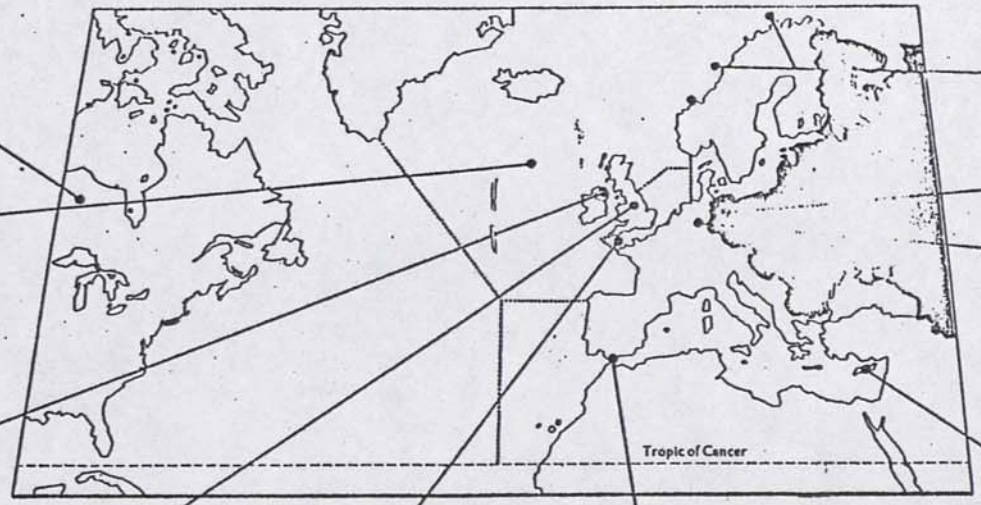

Exercise with
Japanese Maritime
Self Defence Forces
Multiplex 2180 execises
with US Navy
Exercise Becon Compass
with US Navy
Exercise with
Omani Navy and
Air Force
Pusan
Japanese visits:
Sasebo
Tokyo
Yokosuka
Yokohama
Kagoshima
Shimowo Seki
Karatsu
Kure
Istanbul
Cyprus
Aqaba
Karachi
Bombay
Shanghai
HongKong
Manilla
Penang
Brunei
Mombasa
Mauritius
Reunion
Outward journey
Homeward journey
Major execises

Fig. 11

Figure Deployment of the Armed Forces, Early 1981



Canada
Army Training Unit

Eastern Atlantic and North Sea

Royal Navy
CVS
Destroyers
Frigates
Submarines
Survey Vessels
MCMVs
Offshore Patrol Vessels

Royal Air Force
Nimrods

Northern Ireland

Royal Navy
CMS Patrol

Army
HQ Northern Ireland
3 Brigade HQs
1 Armd Recce Regt
3 Engineer Squadrons
5 resident Infantry Bns
4 units in Infantry role
1 SAS Squadron
2 Squadrons Army Air Corps
11 UDR Bns

Royal Air Force
Wessex
Pumas
1 Squadron RAF Regt

Great Britain

Royal Navy
Destroyers
Frigates
Submarines
MCMVs
Survey Vessels
2 Royal Marines Commando with combat and logistic support
Royal Marines SBS
Royal Marines Raiding Squadron

Army
Elements of SACEUR's Strategic Reserve
Reinforcements for BAOR
Forces for UK defence.
1 SAS Regt
1 Gurkha Infantry Bn

Royal Air Force
Buccaneers, Canberras, Harriers, Jaguars, Lightnings, Nimrods, Phantoms, Shackletons, Tornadoes, Victors, Vulcans, transport aircraft and helicopters
RAF Regiment Squadrons
Bloodhound, Rapier

Channel

Royal Navy
Destroyers
Frigates
Submarines
MCMVs
Offshore Patrol Vessels

Royal Air Force
Nimrods

Gibraltar

Royal Navy
CVS
Destroyer

Army
1 Specialist Team RE
1 Infantry Bn
½ Surveillance Troop RA

Forces outside NATO Area

Royal Navy

West Indies
LPD
Frigate
Submarines

Hong Kong
Patrol Craft
Hovercraft
Royal Marines Raiding Squadron

Indian Ocean
Destroyers
Frigates

Diego Garcia
Naval Party

Falkland Islands
Royal Marines Detachment

Antarctica
Ice Patrol Ship

Army

Belize
1 Armd Recce Troop
1 Artillery Battery
1 ~~Light~~ AD Troop
1 Engineer Squadron
1 Infantry Bn

1 Flight Army Air Corps

Brunei
1 Gurkha Infantry Bn

Hong Kong
1 Gurkha Engineer Regiment
1 UK Infantry Bn
3 Gurkha Infantry Bns (increasing to 4)
1 Squadron Army Air Corps plus additional Scout helicopters

Royal Air Force

Belize
Harriers
Pumas
½ Squadron RAF Regt

Hong Kong
1 Wessex Squadron

Norway

Royal Marines Commando Brigade HQ
2 Royal Marines Commandos with combat and logistic support

Berlin

1 ~~Field Force~~ Infantry Brigade

West Germany

British Army of the Rhine
1 Corps HQ
4 Armd Divisions
1 Artillery Division
1 Field Force

RAF Germany
Buccaneers, Jaguars, Phantoms, Harriers, Puma helicopters, Bloodhound, Rapier
RAF Regt Squadrons

Cyprus

Army
1 Armd Recce Squadron
1 Engineer Support Squadron
1½ Infantry Bns
1 Flight Army Air Corps

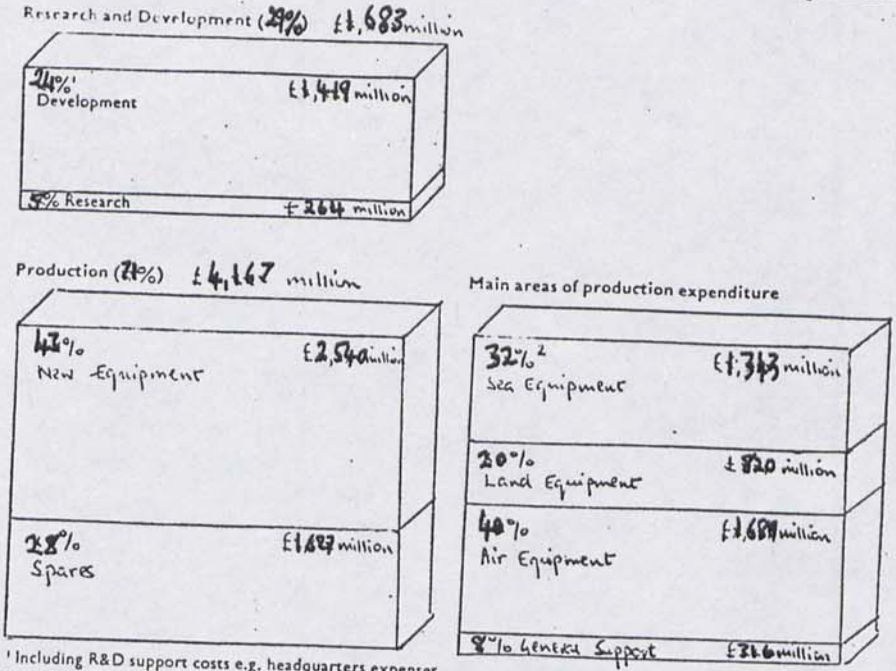
Royal Air Force
Whirlwinds
1 RAF Regt Squadron

UNFICYP Contingent
1 Armd Recce Squadron
½ Infantry Bn
1 RAF Helicopter Flight
1 Flight Army Air Corps

B-7

CVS – Anti-Submarine Carrier
MCMV – Mine Counter-measures Vessel
RE – Royal Engineers
Regt – Regiment
HQ – Headquarters
SACEUR – Supreme Allied Commander Europe
SBS – Special Boat Squadron
UNFICYP – United Nation Force in Cyprus

Figure 5. Main Divisions of the Procurement Programme, 1981/82 Fig. 12.



[1] Including R&D support costs e.g. headquarters expenses
[2] Including the cost of equipment for dockyard services

Note: Figures relate to expenditure at Estimates prices and are net of Appropriations-in-Aid

Figure 13

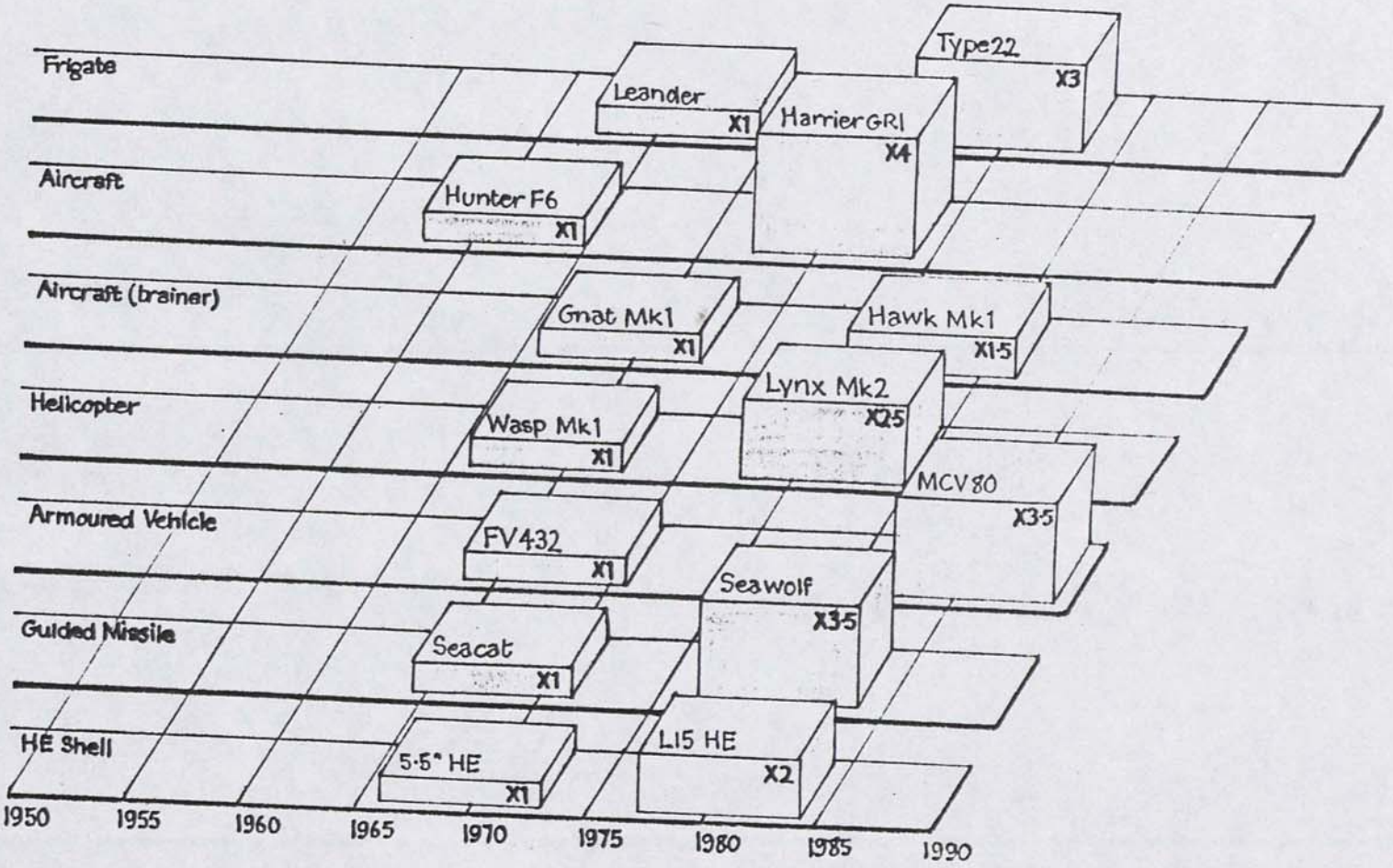
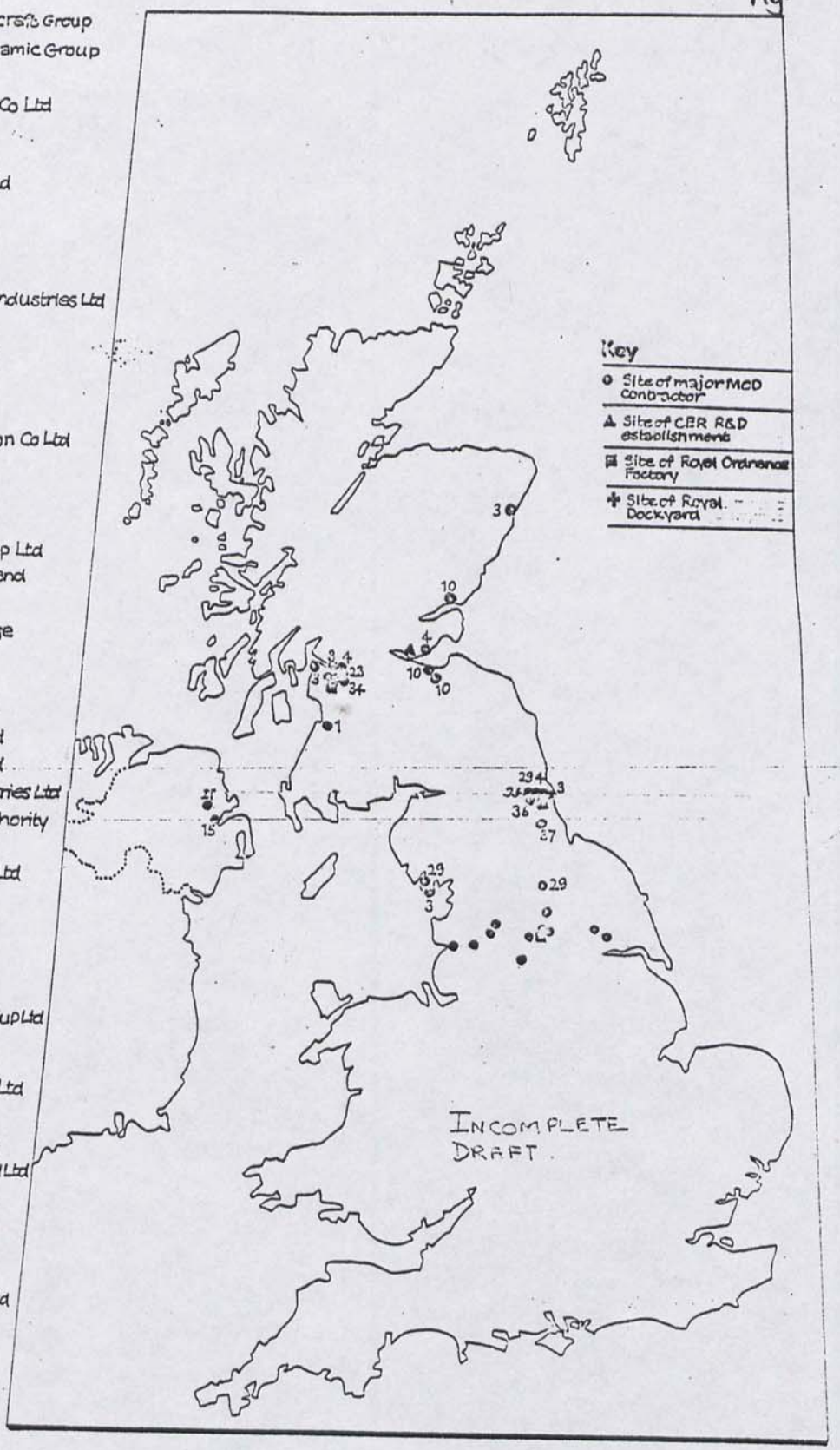

Frigate
Leander X1
Harrier GR1 X4
Type 22 X3
Aircraft
Hunter F6 X1
Aircraft (trainer)
Gnat Mk1 X1
Hawk Mk1 X1·5
Helicopter
Wasp Mk1 X1
Lynx Mk2 X2·5
Armoured Vehicle
FV432 X1
MCV80 X3·5
Guided Missile
Seacat X1
Seawolf X3·5
HE Shell
5·5" HE X1
L15 HE X2
1950
1955
1960
1965
1970
1975
1980
1985
1990

Fig. 14



1 British Aerospace Aircraft Group
2 British Aerospace Dynamic Group
3 [illegible]ish Shipbuilders
4 The General Electric Co Ltd
5 The Plessey Co Ltd
6 Rolls Royce Ltd
7 Westland Aircraft Ltd
8 BL Ltd
9 EMI Ltd
10 Ferranti Ltd
11 Hunting Associated Industries Ltd
12 Dowty Group Ltd
13 Lucas Industries Ltd
14 Racal Electronics
15 Short Bros. Ltd
16 British Electric Traction Co Ltd
17 Decca Ltd
18 Vauxhall Motors
19 Gresham Lion Ltd
20 Hawker Siddley Group Ltd
21 Standard Telephone and Cables Ltd
22 Marshalls of Cambridge (Engineering) Ltd
23 Pilkington Bros
24 Cossor Electronics Ltd
25 The Singer Co (UK) Ltd
26 Smiths Industries Ltd
27 Thorn Electrical Industries Ltd
28 UK Atomic Energy Authority
29 Vickers Ltd
30 David Brown Holdings Ltd
31 BTR
32 Cable and Wireless
33 Chloride Group Ltd
34 Courtaulds Ltd
35 Pickinson Robinson Group Ltd
36 Dunlop Holdings Ltd
37 Philips Electronic & Associated Industries Ltd
38 Ford Motor Co
39 Grindlay Holdings Ltd
40 Guest Keen & Nettlefold Ltd
41 Rank organisation Ltd
42 Rolls Royce Motor Holdings Ltd
43 Ropner Holdings Ltd
44 Stone Platt Industries Ltd
45 Vantona Group Ltd
46 Weir Group Ltd
47 Yarrow & Co Ltd

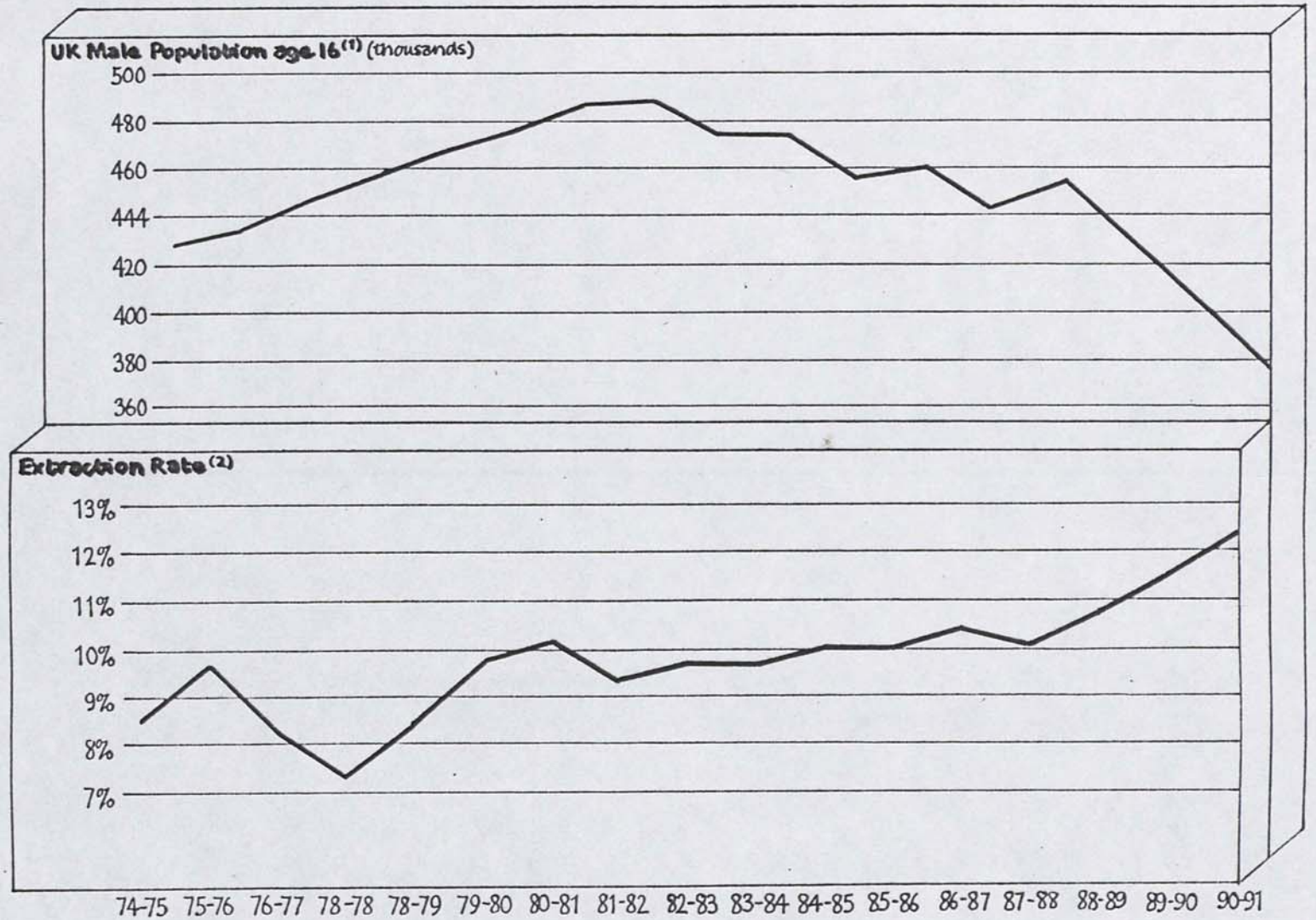

UK Male Population age 16 (1) (thousands)
500
480
460
444
420
400
380
360
Extraction Rate (2)
13%
12%
11%
10%
9%
8%
7%
74-75
75-76
76-77
78-78
78-79
79-80
80-81
81-82
82-83
83-84
84-85
85-86
86-87
87-88
88-89
89-90
90-91

Figure 15

Figure 16

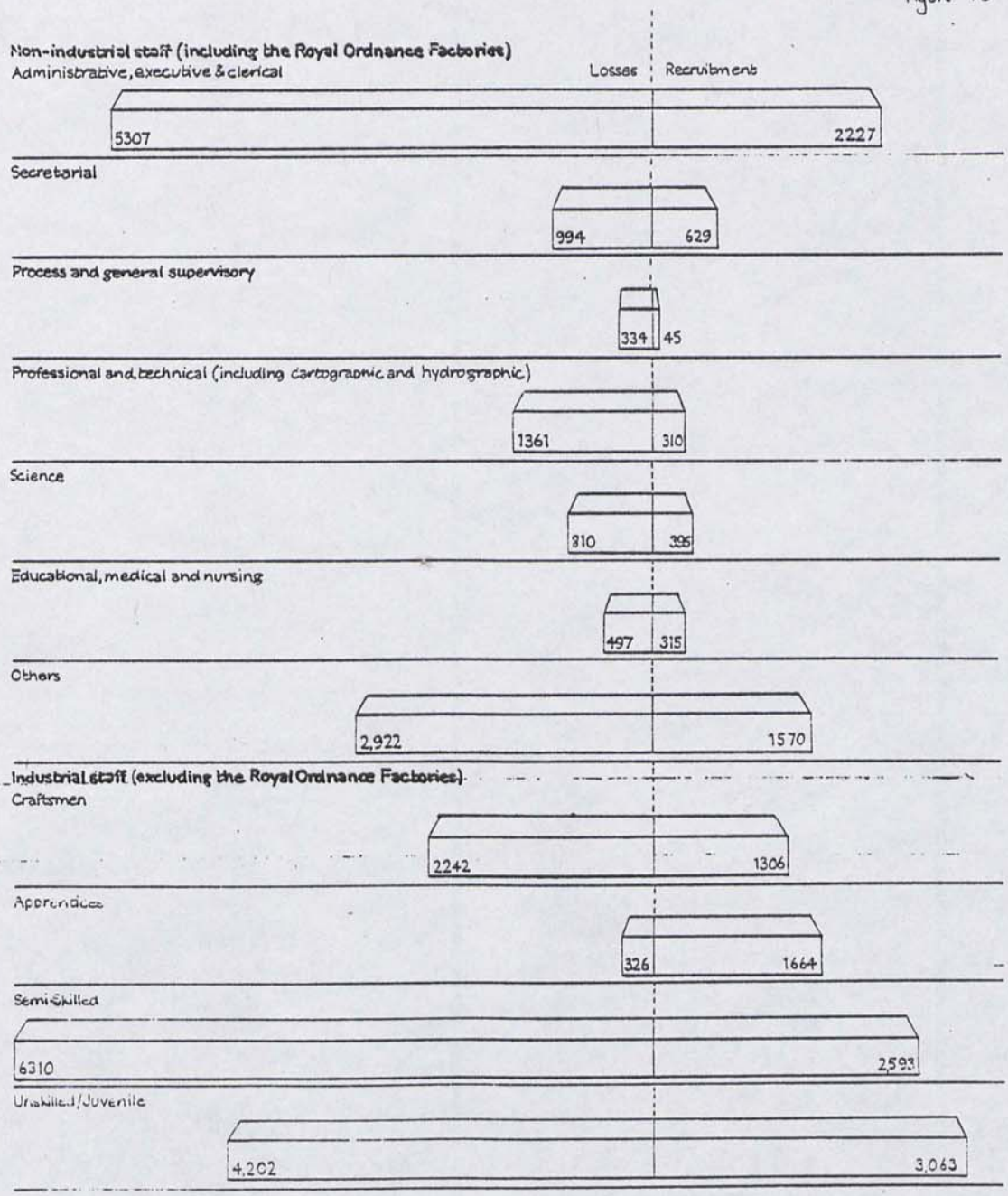

Non-industrial staff (including the Royal Ordnance Factories)
Losses
Recruitment
Administrative, executive & clerical
5307
2227
Secretarial
994
629
Process and general supervisory
334
45
Professional and technical (including cartographic and hydrographic)
1361
310
Science
810
395
Educational, medical and nursing
497
315
Others
2,922
1570
Industrial staff (excluding the Royal Ordnance Factories)
Craftsmen
2242
1306
Apprentices
326
1664
Semi-Skilled
6310
2593
Unskilled/Juvenile
4,202
3,063

Fig. 17.

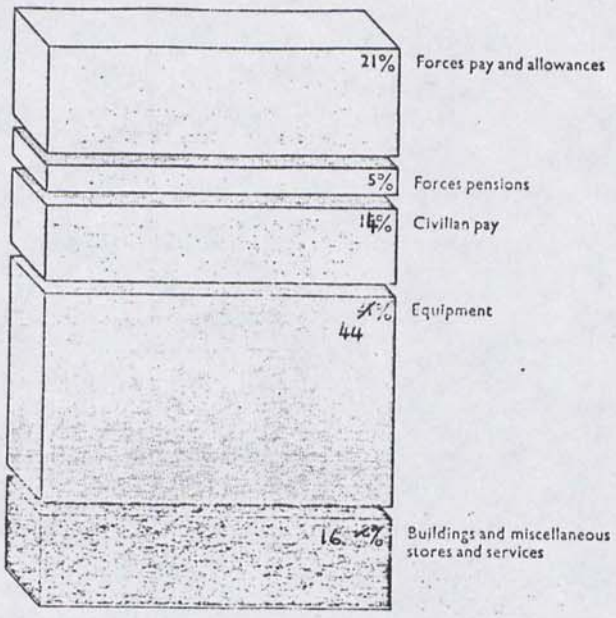

21%
Forces pay and allowances
5%
Forces pensions
14%
Civilian pay
44
Equipment
16
Buildings and miscellaneous stores and services

Figure 18

17
Figure 18 Analysis of Defence Resources (1981/82) by Major Programmes

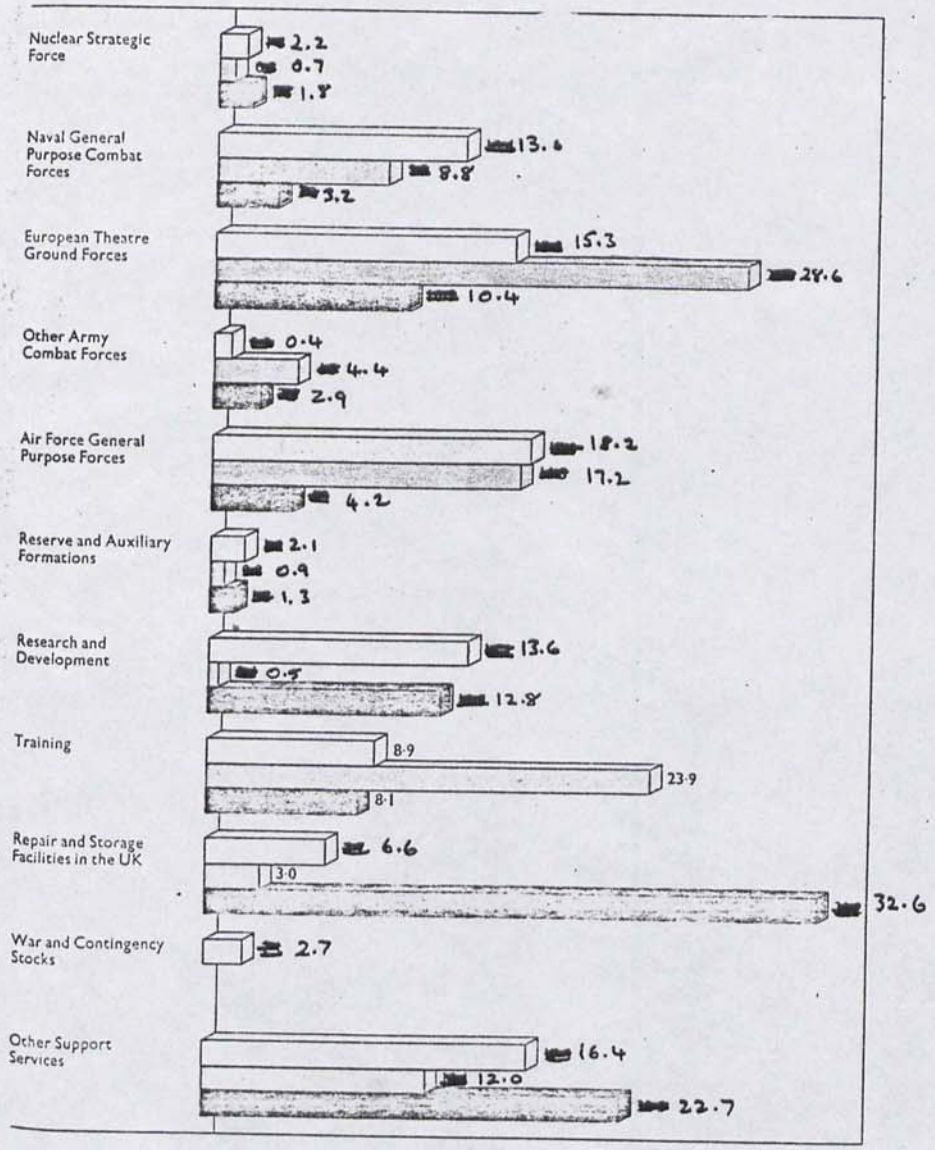
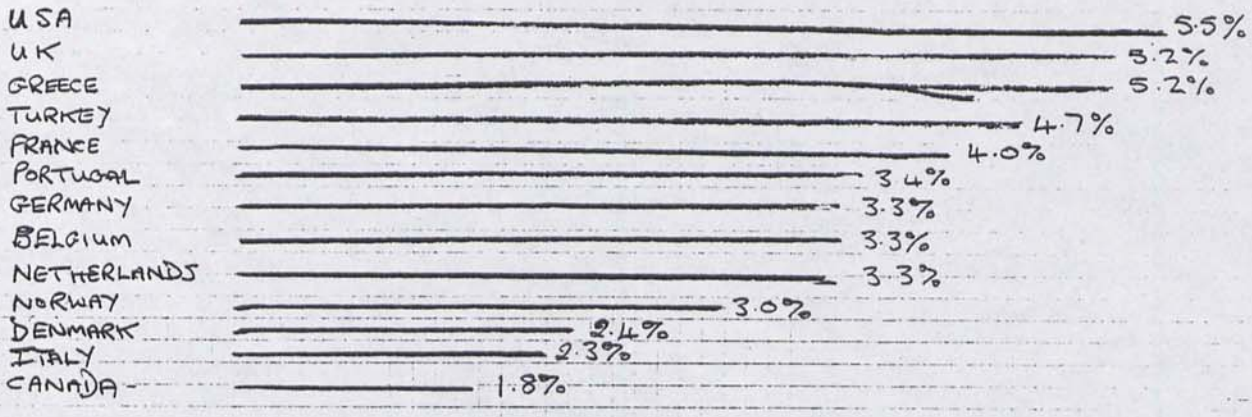
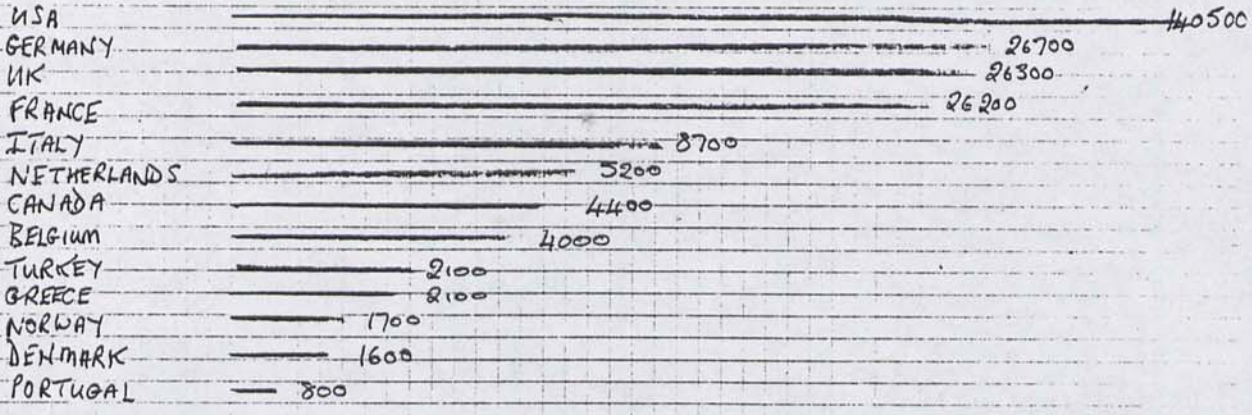


Figure [18] Defence Expenditure Comparisons: NATO members 1980 Fig. 19

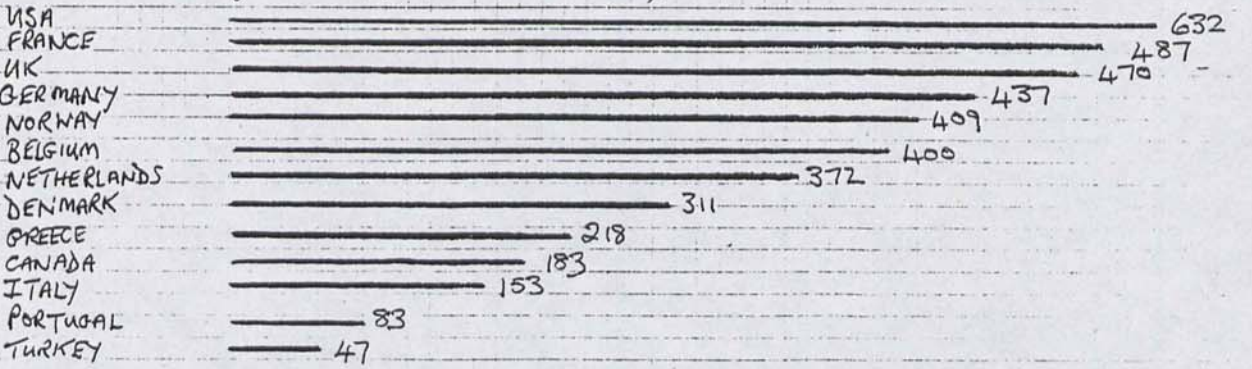
Defence Expenditure as a percentage of GDP (at market prices)



Total Defence Expenditure (US $ million)



Per capita Defence Expenditure (US $)



Note These figures, which are provisional, have been compiled from NATO sources. The total expenditure and per capita figures are based on 1980 average market exchange rates. They reflect the fact that in 1980 sterling appreciated much more quickly against the dollar than did other NATO currencies. Market exchange rates do not necessarily reflect the relative purchasing powers of international currencies, and so are not a complete guide to comparative resource allocation to defence.

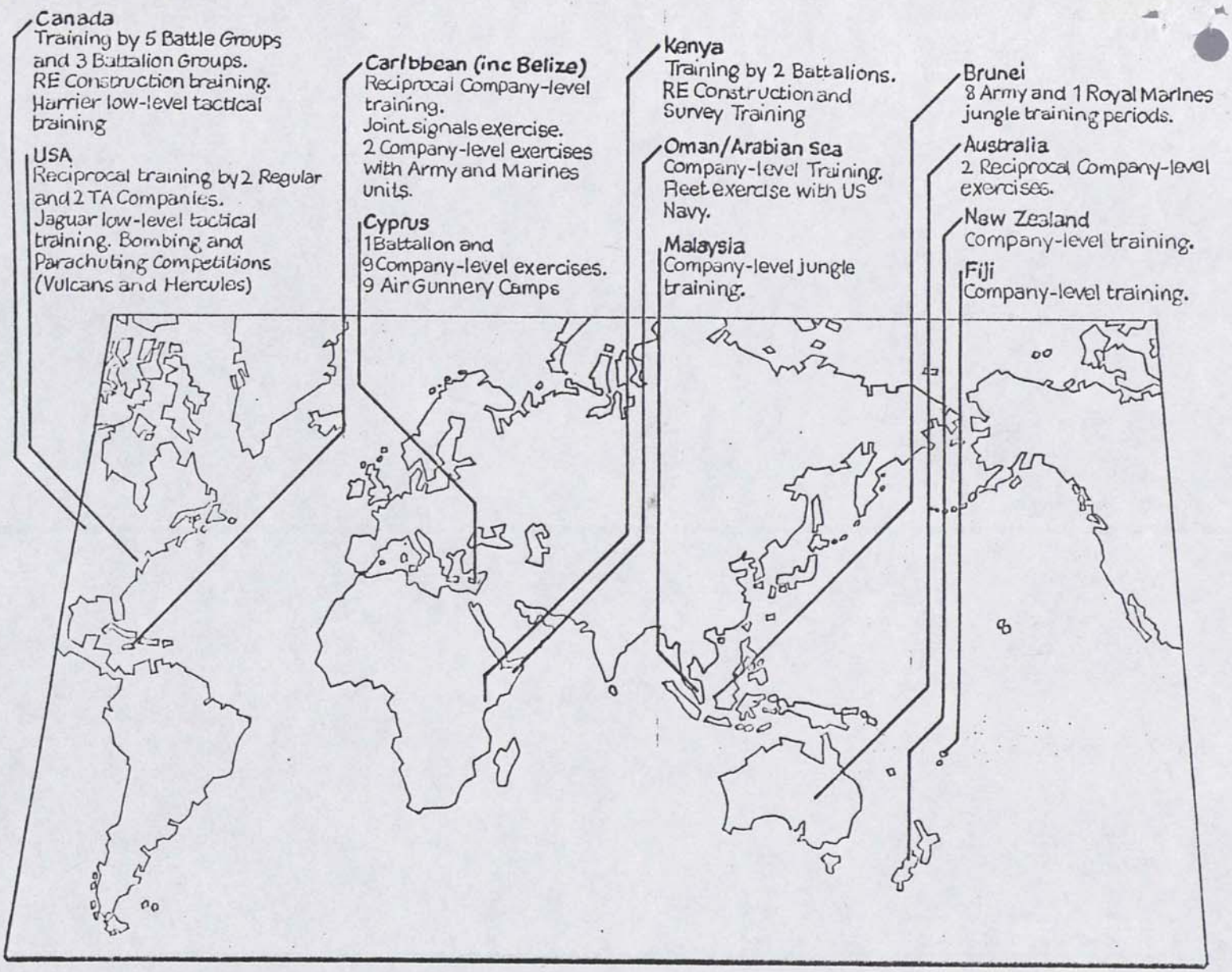

Canada
Training by 5 Battle Groups and 3 Battalion Groups.
RE Construction training.
Harrier low-level tactical training
USA
Reciprocal training by 2 Regular and 2 TA Companies.
Jaguar low-level tactical training. Bombing and Parachuting Competitions (Vulcans and Hercules)
Caribbean (inc Belize)
Reciprocal Company-level training.
Joint signals exercise.
2 Company-level exercises with Army and Marines units.
Cyprus
1 Battalion and
9 Company-level exercises.
9 Air Gunnery Camps
Kenya
Training by 2 Battalions.
RE Construction and Survey Training
Oman/Arabian Sea
Company-level Training.
Fleet exercise with US Navy.
Malaysia
Company-level jungle training.
Brunei
8 Army and 1 Royal Marines jungle training periods.
Australia
2 Reciprocal Company-level exercises.
New Zealand
Company-level training.
Fiji
Company-level training.

Figure 20

DRAFT

STATEMENT

ON THE

DEFENCE ESTIMATES

1981

VOLUME II

DEFENCE STATISTICS

Government Statistical Service

A service of statistical information and advice is provided to the Government by specialist staffs employed in the statistical divisions of the individual Departments. Statistics are made generally available through their publications and further information and advice on them can be obtained from the Departments concerned.

CONTENTS

Section 0 – Summary

Budget and personnel (Table 0.1) This table summarises and brings together figures on the Defence budget from Table 2.1, on Service personnel strengths from Table 4.1 and civilian staff numbers from Table 5.1. The outturn is shown for earlier years and the estimated provision for the current and forthcoming year.

Functional analysis of Defence budget and personnel numbers (Table 0.2) This table shows the provision in the 1981–82 *Supply Estimates* for the Defence budget and the average numbers of Service and civilian personnel provided for in those Estimates. It summarises the data for 1981–82 given in Tables 2.4 (Defence budget), 1.2 (Service personnel) and 5.2 (civilian staff).

Section 1 – The Armed Forces

Formation of the Armed Forces (Table 1.1) This table shows the number of units which comprise the 'teeth' elements of the Armed Forces and excludes supporting units. The number of personnel and the amount of equipment in each vessel, regiment, battalion and squadron vary according to the role currently assigned.

Functional analysis of Service personnel (Table 1.2) The strengths shown in this table are the averages provided for in the annual Estimates.

Section 2 – Finance and trade

The tables in this section are particularly relevant to Chapter 8 of Volume 1. The meanings of certain financial terms are given in the glossary on page 13 below.

Principal headings of the Defence budget (Table 2.1) Actual expenditure on Service and civilian personnel, on equipment and on works, buildings, miscellaneous stores and services is shown for earlier years. The Estimates provision is shown for the current and forthcoming years. The percentage of total Defence expenditure represented by each heading is also shown.

Defence budget and related expenditure (Table 2.3) The amounts in the Defence budget, consisting of the sums for which the Secretary of State for Defence is responsible together with those spent by the Department of the Environment on his behalf, have to be modified to arrive at the NATO and National Accounts definitions of defence expenditure. The additional items include common supporting services from other departments listed under the titles of Table 2 of the *Supply Estimates, Class 1.*

Functional analysis of the Defence budget (Table 2.4) The Defence budget is analysed into the major Defence functions using the Estimates for each year.

Industrial analysis of Defence expenditure (Table 2.7) Taking account of the commodity groups involved this table gives an estimated analysis of most of the direct Defence expenditure with UK industry. The expenditure covered broadly corresponds to the Defence budget less the pay element, general administrative expenses and some local payments. Each individual contract let is allocated to a particular industry, as defined in the *Standard Industrial Classification* (1968), according to the nature of the goods or services to be supplied. All payments against that contract are then recorded to that industry irrespective of the actual industry to which the establishment supplying the goods may be classified in other official statistics.

Exports and imports of defence equipment (Tables 2.8 and 2.9) Certain exports and imports of defence equipment can be identified through the *Customs and Excise Tariff* (at f.o.b. and c.i.f. prices respectively). A revision to the *Tariff* has enabled some military communications and radar equipment to be identified and data are given for these items from 1978 onwards. The destination and origin of identified exports and imports are also shown in broad regional groupings. In addition the *Society of British Aerospace Companies* compile statistics on the sales of goods and services by its member companies from which it is possible to identify the exports of other aerospace products for military purposes, most of which cannot be separately identified in the Customs statistics. These figures together with information supplied by individual electronics and motor vehicle manufacturing companies are shown in a supplementary table in order to give a more complete picture of the exports of defence equipment. It should be noted that the figures in Table 2.8 refer to actual deliveries of defence equipment. As such they are on a different basis to the figure given in the defence sales essay in Volume 1 which constitutes a forecast of expected sales in the Estimates year 1981–82 and additionally covers infrastructure projects outside the scope of the statistics in Table 2.8.

Defence balance of payments: invisible transactions (Table 2.10) This table shows the identifiable incidence on the balance of payments of our forces stationed overseas, of our contributions to international defence organisations and of other military services. It also shows receipts, including payments by the US Government to the UK Government in respect of forces stationed in the United Kingdom. The figures for local defence expenditure represent the drawings of foreign exchange necessary to support our forces overseas. They take no account of offsetting factors, including the reduction in imports to the United Kingdom and the generation of exports from the United Kingdom which result from the stationing of forces overseas. Data are given for the outturn in earlier years and the estimated provision for the current and forthcoming years.

In addition estimates are made of non-governmental transactions related to defence. Official payments by the US Forces in the United Kingdom to UK firms and agencies other than central government plus private expenditure by US personnel are expected to amount to about £200 million in 1981–82.

Section 3 – Equipment

The tables in this section are particularly relevant to Chapter 6 of Volume 1.

Equipment procurement expenditure (Table 3.1) This table summarises the costs of equipment procurement. Procurement includes the costs of material and repairs purchased but excludes the intra-mural costs of maintenance, which cannot easily be identified. The first part of the table separates the costs of the equipment programme from the associated costs of managing this programme which cover pay of MOD personnel and other administrative costs. The second part of the table subdivides the same total cost into research and development and production expenditure.

Defence Research and Development expenditure (Tables 3.2 and 3.3) Defence research and development (R & D) is carried out both in MOD R & D establishments and extramurally by industry and universities. Civil aerospace programmes and other civil research work are also undertaken and managed by the Ministry of Defence under agency arrangements. Table 3.2 gives details of the gross Defence expenditure on research and development ie total money disbursed by MOD before offsetting receipts and the way in which it was spent. It differs from the similar data on Defence expenditure given in Table 4 of *Research and development: expenditure and employment*, published periodically by the Central Statistical Office (CSO) in their *Studies in Official Statistics* series, in that it includes payments to Civil Votes and central government funds as part of gross Defence expenditure. Non-defence work carried out by MOD on repayment terms on behalf of outside customers is excluded. Table 3.3 gives details of the net cost of Defence R & D to public funds, ie gross expenditure less receipts which are mainly for work done on a repayment basis.

Defence production expenditure (Table 3.4) The main items of equipment production expenditure are presented in a form similar to that used in the *Appropriation Accounts* and *Supply Estimates*.

Service supply systems: major depots (Table 3.5) The supply systems of the Armed Forces cover a wide variety of articles stored at numerous different points. The figures in the table relate to major stockholding depots only and cover general, electronic, technical and accommodation stores, weapons, ammunition, petrol, oil, lubricants, food and medical supplies. Repairable items at these depots are included. There are, however, some differences between the make up of the figures for each Service, in particular the RAF holdings of explosives and weapons, including guided weapons, are excluded; whilst petrol, oil and lubricants (POL) are only included for the Royal Navy. Stocks of POL held by the other two Services are generally small, their major reserves being held at commercial depots. The same item types held in the supply systems of more than one Service are counted more than once. The table excludes the Procurement Executive and the research and development establishments.

Defence energy consumption (Table 3.6) This table covers the three Services, the Procurement Executive and the Royal Ordnance Factories. Fuel used in MOD buildings which are part of the Civil Estate is excluded. The different fuels are expressed on a common basis of tonnes of oil. In the case of electricity the figures represent the quantity of oil required to generate the electricity in power stations of average efficiency.

Royal Dockyards (Table 3.7) Production cost figures are given for the 5 Dockyards combined (Devonport, Portsmouth, Chatham, Rosyth and Gibraltar) in form similar to that used in the Appendix to the *Dockyard Services Vote* and in the *Dockyard Operating Accounts*. The figures represent costs, which do not necessarily correspond to cash payments from Votes during the year. For example 'direct labour' includes notional liability for civil superannuation, 'direct material' relates to material used during the year, though some of it may have been bought in previous years, and 'overheads' include provision for the depreciation of fixed assets, many of which may have been acquired in previous years, and (for 1979–80 onwards) for notional interest on capital.

'Dockyard services' covers the provision of facilities such as docks, cranes and electricity supply. 'Contract services' includes services by outside contractors in support of projects, and services by other Ministry departments such as the berthing of ships by the Royal Maritime Auxiliary Service which can be charged directly to production.

Two forms of overhead are distinguished, 'Production overhead' covers indirect costs susceptible to control by operating divisions within a Dockyard and 'Administration and general overheads' cover, inter alia, the repair and maintenance of buildings and works, the depreciation of administrative buildings, general Dockyard administrative costs and a share of the costs of the Ministry's headquarters administration.

Figures are given for the numbers of vessels refitted, distinguishing major and normal refits. 'Major refits' comprise comprehensive repairs and modernisation to prolong the life of HM Ships in acceptable condition and occasionally to convert to new operational roles. All refits to nuclear-powered submarines are included in this category. 'Normal refits' comprise periods of Dockyard support programmed at routine intervals, when preventive and corrective maintenance is carried out to defect lists. Usually a limited amount of Alterations and Additions is undertaken, but this seldom comprises more than 10% of the work. 'Other shipwork' comprises routine intermediate dockings, programmed/unprogrammed essential defects, emergency repairs, etc.

Figures are given for the number of employees which relate to all those employed in the Dockyard General Managers'

Departments in Devonport, Portsmouth, Chatham, Rosyth and Gibraltar, and in the Dockyard Department HQ in Bath.

Royal Ordnance Factories (Table 3.8) The Royal Ordnance Factories' task is to meet the munitions requirements of the Services and undertake approved work of a defence nature for Commonwealth and other friendly governments. Commercial work is undertaken to assist in maintaining essential defence capacity. From 1 July 1974 the operation of the ROFs has been financed by means of a Trading Fund though the organisation remains under the control of the Secretary of State for Defence and its employees are Civil Servants.

Section 4 – Service Personnel

The tables in this section are particularly relevant to Chapter 7 of Volume 1.

The tables show the numbers of personnel of the Regular Forces and of the Reserves and Auxiliary Forces. The Regular Forces consist entirely of volunteers, both male and female, who are serving on a whole-time basis. They comprise both UK Service personnel and locally entered personnel. UK Service personnel are normally recruited in the United Kingdom for service world wide. Locally entered personnel are recruited in the United Kingdom to serve in special formations with special conditions of service. In some cases they may also be restricted as to the areas in which they are required to serve. Troops of the Brigade of Gurkhas now form the bulk of locally entered personnel.

The Regular Forces are supported by the Reserves and Auxiliary Forces. The Reserves comprise both Regular Reserves and Volunteer Reserves. The Regular Reserves consist of former members of the Regular Forces who have a liability for service in the Reserve. The Volunteer Reserves and Auxiliary Forces comprise personnel in civilian occupations who undertake to give a certain amount of their time to train in support of the Regular Forces. The liability to call out of the Reserves and Auxiliary Forces varies according to their role.

All three Services run cadet forces for young people. Additionally the Combined Cadet Force, which is maintained in certain schools where education continues to age 17 or above, may have specific sections for individual Services.

In some tables, the figures shown for officers include candidates for commissioned service who are required to complete successfully a period of training before they are appointed to commissions. Some will have entered direct from civil life, and others will have been selected from the ranks.

The figures shown for females comprise the Women's Services and female members of the Nursing Services. Certain professionally qualified female officers are not commissioned in the Women's Services but in the Branch or Corps that is appropriate to their qualifications. These officers, of whom there were 81 at 1 January 1981 serving in the medical, dental, veterinary and legal specialisations, are included in the numbers of male officers.

Strengths of UK Service personnel: Regular Forces (Table 4.1) The numbers of UK Service personnel in the Regular Forces include those undergoing initial training.

Strengths of trained UK Service personnel: Regular Forces (Table 4.2) The numbers shown are of UK Service personnel who have completed the initial training necessary to fit them to carry out their assigned tasks.

Strengths of the Reserves and Auxiliary Forces (Table 4.3) This table includes both full-time and part-time members of the Ulster Defence Regiment.

Strengths of locally entered Service personnel (Table 4.4) Most of the Army personnel are Gurkha troops. There have been no personnel in Malta since British Forces withdrew in 1979.

Strengths of cadet forces (Table 4.5) The numbers shown for each Service include those in the appropriate Service component of the Combined Cadet Force. The numbers of officers, training staff and administrative staff are excluded.

Deployment of UK Service personnel: United Kingdom (Table 4.6) The table shows the total numbers of UK Service personnel in the United Kingdom, the numbers in England, Wales, Scotland and Northern Ireland separately, and the numbers in each of the standard regions of England. The sum of the four countries' totals does not match the United Kingdom total because the figures are compiled from different sources. The Northern Ireland numbers include all personnel from other parts of the United Kingdom and from the British Army of the Rhine who are serving on emergency tours of duty, but exclude the Ulster Defence Regiment.

Deployment of UK Service personnel: overseas (Table 4.7) The table shows the numbers of UK Service personnel in each Service who were stationed in each of the principal geographical areas overseas. This table is also relevant to Chapter 4 of Volume 1.

Recruitment of UK Service personnel (Table 4.8) This table show the numbers of UK Service personnel who have joined the Regular Forces from civil life. As explained above, some of those shown to have entered as officers will not have been commissioned without first successfully completing a period of training.

Recruitment of UK male officers (Table 4.9) This table shows the numbers of male officers who entered the Services from civil life in each entry category. Pre-cadets are Army officer candidates who undertake a short period of service as soldiers before appearing before the Army's officer selection board. Officer cadets are entrants who have been selected to serve as officers but who are required to complete successfully a period of training before being appointed to commissions. In the Royal Navy and Royal Marines the category shown as 'officer cadets' comprises midshipmen, acting sub-lieutenants and acting second lieutenants. University cadets are students at universities and comparable educational establishments who have been appointed as midshipmen in the Royal Navy, as acting second lieutenants in the Royal Marines or as officers in the Army and Royal Air Force and who, on graduation, will take up wholetime duty with the Services.

Recruitment of UK servicemen (Table 4.10) This table shows the numbers of servicemen recruited in each of the main categories.

Outflow of UK Service personnel: from each Service (Table 4.11) The numbers comprises all those UK Service personnel who left the Regular Forces, whatever the reason. Some personnel have a liability for Reserve Service. In order to

include all losses to the Services, the numbers who died are also included.

Outflow of UK Service personnel: categories of exit (Table 4.12) The All Services totals given in Table 4.11 are sub-divided to show the cause of leaving. The category shown as 'officers designate' comprises the 'pre-cadets' and 'officer cadets' shown in Table 4.9. As the numbers for female officers designate are small, they have been included in the numbers for female officers. The numbers shown as 'Premature release at own request', for both officers and servicemen, relate only to trained personnel. The Services differ from one another in their engagement structures and in their arrangements for granting premature release. Consequently, the categories of exit included in 'Premature release at own request' for servicemen are not the same for each Service but they all represent premature voluntary wastage from the Services.

Strengths of male UK Service personnel and numbers married: age distribution (Table 4.13) This table shows the numbers of male UK Service personnel in each age group, and the numbers of personnel in each age group who are married.

Strengths of male UK Service personnel and numbers married: rank distribution (Table 4.14) This table shows the numbers of male UK Service personnel in each rank, and the numbers in each rank who are married. It is for all Services combined though the ranks are quoted in Army terms.

Male recruitment and the changing population (Table 4.15) This table shows the number of male recruits (officers and servicemen) who entered the Services in each of the financial years 1974–75 to 1979–80 expressed as a percentage of the numbers of 16 year old males in the population. For the financial year 1980–81 the number of recruits shown is an estimate. For later years the number shown in the annual average that, on current plans, the Services may be expected to seek to recruit over the whole of the period. This average figure will be subject to change, as plans are modified over time.

Comparison of the number of recruits with the 16 year old male population is used because it provides the most appropriate method of deriving an extraction rate for the purpose of year-by-year comparison. About 85% of servicemen recruits fall into the 16–19 age group, and almost half of that number are 16. Confining the comparison to the numbers of 16 year old avoids counting the same people more than once, as they progress through the age group, and also avoids counting the 17–19 year olds who may have applied to join the Services at 16 and been rejected. The method used ensures that potential recruits in the population are counted once only, at the outset of their working lives.

Service pensioners (Table 4.16) This table show the number of recipients of Service retired pay (officers) and pensions (servicemen) and invaliding and attributable retired pay and pensions. The figures for the latest year are further analysed both by age of recipient and date of commencement of pension.

Service pay (Table 4.17) The table gives information on the levels of Service pay relating to the dates in question. The Armed Forces Pay Review Body (AFPRB) reports annually recommending rates of pay for all Service ranks up to and including Brigadier or equivalent. The reports on top salaries by the Review Body on Top Salaries include recommendations for the salaries of senior Service officers of Major General or equivalent and above. The index numbers of military salary are based on April 1975 = 100, a date at which fully up to date rates of pay were implemented. Illustrative annual rates of pay for all ranks are also shown, these are quoted in terms of Army ranks. Within each rank servicemen are divided for the purposes of pay into classes, bands and scales according to their employment classification, the nature of their specialisation and the period of their commitment to serve.

Section 5 – Civilian Staff

The tables in this section are particularly relevant to Chapter 7 of Volume 1.

The responsibilities of the Ministry of Defence have not remained constant over the period of the tables and consequently there have been a number of transfers of staff between the Ministry of Defence and other bodies and Departments. The tables show only the staff within the Ministry of Defence as constituted at each date shown and the figures for successive years are therefore not always comparable. In the strengths tables part-time staff are counted as half. In some cases the figures shown do not add precisely to the totals shown because of rounding.

Strengths of civilian staff employed in the Ministry of Defence (Table 5.1) UK-based civilian staff are those recruited in the United Kingdom even though in some cases they may be serving overseas. Locally engaged staff are those recruited overseas. The costs of staff at the Royal Ordnance Factories are borne on a Trading Fund.

Functional analysis of civilian staff (Table 5.2) All MOD civilian staff (UK-based and locally engaged, industrial and non-industrial), except those at the Royal Ordnance Factories, are included in this table in terms of average annual Estimates provision. Royal Ordnance Factory numbers appear in the footnotes.

Organisational strengths of UK-based civilian staff (Table 5.3) Both industrial and non-industrial staff are included in this table which gives the actual numbers in each of the organisations making up the Ministry of Defence.

Strengths of civilian staff: United Kingdom (Table 5.4) The table shows the total numbers of MOD civilian staff in the United Kingdom, the numbers in England, Wales, Scotland and Northern Ireland, and the numbers in each of the standard regions of England.

Strengths of civilian staff employed overseas (Table 5.5) Staff shown as employed in the Federal Republic of Germany include those in support of the British Army of the Rhine (BAOR) and Royal Air Force Germany (RAFG) in contiguous countries, e.g, Belgium.

Strengths of occupational groups or classes of civilian non-industrial staff (Table 5.6) This table covers all UK-based non-industrial staff including those at the Royal Ordnance Factories.

Occupational recruitment and losses of UK-based civilian non-industrial staff (Table 5.7) In this table the numbers shown for recruitment are those entering the MOD from outside the UK Civil Service, and for losses those leaving the MOD and the UK Civil Service. The net gains or losses for individual groups in this table do not explain entirely the year

to year changes in the corresponding group strength shown in Table 5.6 as transfers between groups, transfers from industrial grades and transfers to and from other government departments are excluded from this table.

Civilian apprentices (Tables 5.8 and 5.9) The figures shown comprise both craft and technician apprentices.

Section 6 – Health, Education and Accommodation of the Services

Health (Tables 6.1 and 6.2) The Services operate a number of hospitals in the United Kingdom and in areas abroad where there is a significant British military presence. These hospitals take as patients members of all three Services and their dependents. In the United Kingdom hospitals take other civilian patients under arrangements agreed with the National Health Service. The hospitals abroad also admit UK-based MOD civilians and their dependants and certain other personnel (eg Hong Kong Government employed personnel and Gurkhas and their dependants). Medical support is also supplied by uniformed medical staff at individual units and stations.

Sickness of UK Service personnel: selected diagnoses of cases (Table 6.3) The number of cases of sickness and injury affecting Regular UK Service personnel for all Services combined is given in this table according to principal diagnosis or cause of injury. It should be noted that whereas the Royal Navy and Royal Air Force content is for all cases of off-duty sickness lasting 2 days or more terminating in the year, that for the Army covers only those cases admitted to hospitals or medical units. Sickness at Army unit level, at home or on leave, is not included.

Medical discharges of UK Service personnel (Table 6.4) This table gives the numbers of Regular UK Service personnel who are invalided out of the Services before the completion of their engagement. It is for all Services combined. There is sometimes a delay in collating the data on invalidings and the latest figures are liable to amendment.

Deaths of UK Service personnel (Table 6.5) This table presents information on the deaths of all Regular UK Service personnel on and off duty. There is sometimes a delay in the statistical reporting of deaths, especially those occuring overseas, and the latest figures are liable to be altered slightly. The classification of deaths in recent years is also subject to revision as a result of, for example, a delayed inquest verdict.

Service aircraft: accidents, rates and casualties (Table 6.6) This table shows the number of accidents resulting in loss of or serious damage to Service aircraft, and the accident rates per 10,000 flying hours. The table also includes the number of those killed or seriously injured in the accidents. Further details of aircraft accidents of the three Services in 1980 are given in Annex E of Volume 1.

Service married accommodation (Table 6.7) Accommodation is provided for Service families in the United Kingdom and abroad, partly by building to approved standards and partly by renting accommodation. The multiple hirings in British Army of the Rhine (BAOR) and Royal Air Force Germany (RAFG) relate to accommodation built by private developers and leased by the Federal German Authorities on behalf of the British Forces. Small numbers of multiple hirings are held elsewhere and are included in the 'hirings' figures. Service married quarters are available to Ministry of Defence civilians serving abroad.

House ownership by Service personnel (Table 6.8) The figures on house ownership by married male personnel in this table derive from the results of the *Armed Forces Accommodation and Family Education surveys*. The 1978 survey covered accommodation only. The information for these surveys is collected by means of questionnaires posted to a random sample of personnel, stratified by rank, from all three Services. The size of the sample has been between 11,000 and 14,000.

Service Children's Education Authority schools (Table 6.9) The Service Children's Education Authority (SCEA) administer primary and secondary schools in overseas military commands for the children of serving personnel. Enrolment in SCEA schools also includes children of MOD and other UK Civil Service employees serving overseas. The total number of Service children attending schools of all kinds, based on replies to sample surveys, was estimated to be 173,800 in 1977.

Social expenditure included in the Defence budget (Table 6.10) Services are provided for members of the Armed Forces and their families, i.e, education, married accommodation, medical services. UK-based civilians serving overseas also benefit from these services. The figures shown in this table for education cover the Service Children's Education Authority and also include contributions towards the cost of educating Service children in other schools. The costs of married accommodation and medical services are net of rents payable for quarters and repayments for civilian patients not entitled to treatment in Service hospitals respectively. The cost of Service pensions which do not relate to the current Defence effort, is also shown. Civil superannuation, not covered by the Defence budget, is not included in this table.

Land (Tables 6.12 and 6.13) All land and foreshore held by the Ministry of Defence is included. Nearly half the total of land owned or leased by the Ministry of Defence is used for grazing and other agricultural purposes.

Section 7 – Defence Services, and the Civilian Community

The tables in this section are particularly relevant to Chapter 5 of Volume 1.

There are three kinds of Service activity in relation to civilians viz:

a. In support of the civil power, where the forces are employed to assist in the maintenance of law and order;

b. In support of other departments (eg the Home Office in connection with fire-fighting);

c. In support of the civil community (eg search and rescue operations).

Armed Forces and security in Northern Ireland (Table 7.1) Annual figures of the Regular Forces in Northern Ireland are given in terms of major units of the combat arms, e.g, battalion or regiment, the size of which may vary according to the primary role. These include Royal Marine commandos in the infantry role. Figures are also given of the number of deaths of Service personnel resulting from violence attributable to terrorist activity in the province.

Search and rescue operations at home (Table 7.2) This table covers incidents in which Rescue Co-ordinating Centres

(RCCs) in the UK co-ordinated search and rescue (SAR) action in which elements of the Armed Forces were involved. The table also includes urgent medical incidents in which the Forces SAR facilities gave assistance (e.g, inter hospital transfers). In addition to SAR action co-ordinated by RCCs, all units of the Armed Forces provide assistance in appropriate circumstances as do the civilian rescue services and individuals. Central records of such occasional ad hoc assistance are not kept and consequently the details are not reflected in this table.

Expenditure on offshore tasks included in the Defence budget (Table 7.4) The cost of the Royal Navy and Royal Air Force units engaged in offshore tasks on a regular basis falls on the Defence budget. Some of the costs shown are recoverable from other government departments.

Fishery protection (Table 7.5) The data in this table relates to activities by the Royal Navy Fishery Protection Squadron carried out on behalf of and financed by the fishery departments. Routine boardings of vessels to ensure compliance with United Kingdom fishery protection legislation are included.

Selected qualifications obtained under Service sponsorship (Table 7.6) As a result of training and assistance given by the Services to their personnel, formal qualifications are often obtained. Those given in this table are illustrative of the wide range involved.

University cadetships are awarded to undergraduates before or during their degree courses. Medical cadetships are usually awarded only in the final years of training. Service personnel are also sponsored at universities. A number of degree courses are run at the Service education establishments, Royal Naval Engineering College Manadon and Royal Military College of Science Shrivenham.

In Service units and ships, education officers organise instruction for a range of General Certificate of Education and other academic examinations. In addition, Service personnel may attend local education authority and other external courses and will normally be eligible for financial assistance, but these instances are not recorded centrally and are excluded from this table.

Much of the training given to Service personnel results in the acquisition of skills valuable in later civilian life and in some cases formal qualifications are obtained of which heavy goods vehicle (HGV) licences are one example. The table records passes of tests for all classes of heavy goods vehicles.

Outflow of trained Service personnel: skill or trade (Table 7.7) This table shows the numbers of personnel leaving the Services who possessed certain skills useful to the civil community. Only personnel in readily identifiable groups of reasonable size have been included. Personnel are classified according to their primary employment in the Services at the time of leaving, in the case of Army officers by the function of their Arm or Corps. Each group covers the full range of skills from the professionally qualified to the semi-skilled.

Hydrographic services (Table 7.8) The Hydrographer of the Navy is the national authority responsible for hydrographic and oceanographic surveys and nautical charting. The Survey Flotilla is an integral part of the Royal Navy and in 1981–82, 11 ships will be employed for the most part in United Kingdom and North Atlantic waters. The Admiralty chart series comprises some 3,400 basic charts and 600 latticed versions covering nearly the whole world. They are constantly updated by weekly *Notices to Mariners*. Although a few other countries also provide charts in their national series, none provides the comprehensive coverage of the British Admiralty series which meets about 60% of the world requirements.

Meteorological Office (Table 7.9 and 7.10) The Meteorological Office is the State meteorological service and forms part of the Ministry of Defence. The Director-General is responsible to the Secretary of State through the Parliamentary Under Secretary of State for Defence for the Royal Air Force. The Office provides meteorological services for the Army, the Royal Air Force and the Procurement Executive, and basic information for use by the Royal Navy, The Office is responsible for the organisation of meteorological observations and research in meteorology and geophysics. Work is also undertaken for other govenment departments and local authorities.

Some free services are provided to the general public through weather centres in major cities and through the news media. More specialised services are provided on a repayment basis, principally for civil aviation, public utilities, agriculture, offshore oil production and industry.

Except for the services provided by the Property Services Agency on an allied service basis, the net cost of the Meteorological Office is borne by the Defence budget. Outturn data on Meteorological Office expenditure has to be partially estimated since some of it is not distinguishable from other similar Defence expenditure.

Glossary

Appropriation Accounts are prepared after the end of the financial year and record the actual payments and receipts.

Appropriations-in-aid are receipts used to offset expenditure. They generally arise from the provision of repayment services, the sale of surplus goods or of equipment purchased on behalf of the Defence Sales organisation.

Defence budget consists of all the expenditure for which the Secretary of State for Defence is responsible. It comprises the net total of voted expenditure by the Ministry of Defence and by the Property Services Agency on behalf of the Ministry of Defence.

Defence Programme comprises the Defence budget (q.v.) plus net Government lending to the Royal Ordnance Factories from the National Loans Fund.

Estimates, Supply Estimates are prepared before the beginning of the financial year and give the proposed expenditure. These are then voted by Parliament.

Estimates prices are the prices used in the Estimates presented to Parliament. Prior to 1979–80 these were the prices ruling in the autumn preceding the financial year in question. From 1979–80 onwards they are forecasts of the prices expected to rule when the expenditure occurs. However in 1980–81 no allowance was included for civilian pay increases beyond those approved for non-industrials at 1 January 1980 and for industrials at 1 April 1980, Estimates provision for Civil Service pay increases was made in Class XIII.

Outturn, forecast outturn describes actual expenditure or estimates of it made on the basis of incomplete information i.e. before the Appropriation Accounts are prepared.

Outturn prices are the prices of the period when the expenditure occurs, also described as current prices.

Public Expenditure Survey is the annual review of public expenditure plans undertaken by the Government.

Survey prices are the prices used in the Public Expenditure Survey. For purchases of goods and services (including pay) they are the prices ruling in the Autumn preceding the Survey year i.e. the 1980 Survey prices are those of Autumn 1979. For transfer payments e.g. pensions and benefits they are the average price level for the current year i.e. the 1980 Survey prices are those of 1980–81.

General notes on the tables

Symbols

– nil or less than half the final unit shown
. . not available
* not applicable

Sources

Except where otherwise stated all information is from records maintained by the Ministry of Defence for departmental purposes.

Rounding

In many of the tables the figures are individually rounded and thus may not sum precisely to the totals shown.

Budget and personnel

TABLE 0.1

	Outturn				Estimate	
	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
	£ thousand million					
Defence budget: total[1]	6.2	6.8	7.5	9.2	10.8	12.3
Personnel	2.9	3.0	3.3	3.9	4.5	4.9
Equipment	2.1	2.6	3.0	3.6	4.3	5.4
Other	1.2	1.2	1.2	1.6	1.9	2.0
	1 April Actual				1 April Estimate	
	1977	1978	1979	1980	1981	1982[2]
	Thousands					
Service personnel[3]: total	330.5	320.7	315.0	320.6	330.9	331.8
Royal Navy	68.5	67.8	65.1	64.4	66.3	66.4
Royal Marines	7.7	7.5	7.4	7.6	7.9	7.9
Army	167.3	160.8	156.2	159.0	163.3	164.3
Royal Air Force	86.9	84.6	86.3	89.6	93.5	93.3
Civilian staff[4]: total	300.9	290.4	285.9	276.2	267.3	259.0
Non-industrial	137.8	133.7	131.8	129.5	125.5	..
Industrial	163.1	156.6	154.1	146.7	141.8	..

1. Further detail on the Defence budget is given in Table 2.1
2. Civilian staff estimates for 1982 are as at 31 March.
3. Regular Service personnel only. Locally entered Service personnel are excluded, details of these and further details of UK Service personnel are given in Section 4.
4. Including staff of the Royal Ordnance Factories, locally engaged civilians and UK-based civilians serving abroad but excluding DOE civilians engaged on Defence work. Further details are given in Section 5.

Functional analysis of Defence budget and personnel numbers

Estimates 1981–82

TABLE 0.2

	Budget	Average strength[1]	
		Service personnel[2]	Civilian staff[3]
	£ thousand million	Thousand	
Total	12.3	340.6	242.3
Nuclear strategic force	0.3	2.4	4.4
Navy general purpose combat forces	1.7	30.1	7.7
European theatre ground forces	1.9	97.3	25.2
Other Army combat forces	–	15.0	6.9
Air force general purpose forces	2.2	58.6	10.2
Reserves and auxiliary formations	0.3	2.9	3.2
Research and Development	1.7	1.5	31.0
Training	1.1	81.5	19.7
Repair and associated facilities in the UK	0.8	10.3	78.9
War and contingency stocks	0.3	*	*
Other support functions	2.0	41.0	55.1

1. Provided for in the *Supply Estimates.*
2. Service personnel strengths include locally entered personnel.
3. Civilian staff strengths include locally engaged staff but exclude civilians in the Royal Ordnance Factories and DOE civilians engaged on Defence work.

Formation of the Armed Forces: front line units
1 April

TABLE 1.1

	Unit[1]	1976	1977	1978	1979	1980	1981[2]
Royal Navy[3]							
Submarines	Vessels	22	24	24	22	23	22
Carriers and assault ships	Vessels	3	3	4	3	4	3
Cruisers and destroyers	Vessels	9	10	12	11	10	12
Frigates	Vessels	46	40	43	42	36	37
Mine counter-measure[4]	Vessels	37	34	35	35	35	32
Patrol ships and craft	Vessels	13	15	19	19	23	22
Fixed wing aircraft	Squadrons	3	3	3	–	2	3
	Flights	1	1	1	–	–	–
Helicopters	Squadrons	12	12	12	13	14	14
	Flights	40	41	47	49	43	47
Royal Marines	Commandos	4	3	4	4	4	3
Commando logistic	Regiments	1	1	1	1	1	1
Army[5]							
Royal Armoured Corps	Regiments	19	19	19	19	19	19
Royal Artillery	Regiments	26	21	22	22	22	22
Royal Engineers[6]	Regiments	13	10	10	9	10	11
Infantry[6]	Battalions	55	55	55	56	56	56
Special Air Service	Regiments	1	1	1	1	1	1
Army Air Corps[7]	Regiments	–	6	6	6	6	6
Royal Air Force[5]							
Strike/attack	Squadrons	13	14	14	14	15	15
Ground support	Squadrons	6	5	5	5	5	5
Air defence	Squadrons	9	9	9	9	9	9
Maritime patrol	Squadrons	5	5	4	4	4	4
Reconnaissance	Squadrons	5	5	5	5	5	5
Airborne early warning	Squadrons	1	1	1	1	1	1
Transport[8]	Squadrons	11	10	10	10	10	9
Tankers	Squadrons	3	2	2	2	2	2
Search and rescue	Squadrons	3	3	3	3	3	3
Surface to air missiles	Squadrons	7	7	7	7	8	8
Ground defence	Squadrons	5	5	5	6	6	6

1. The number of personnel and the amount of equipment in each vessel, regiment, etc, varies according to the role currently assigned.
2. Forecast figures.
3. Excludes vessels undergoing major refit, conversion, or on stand-by etc.
4. In 1981 4 ex-inshore minesweepers used for training are excluded.
5. Regular forces only.
6. Includes Gurkhas.
7. Prior to 1977 the Army Air Corps was not organised in regiments.
8. Includes helicopters.

Functional analysis of Service personnel[1]
average strengths provided for in the Estimates

TABLE 1.2

Thousands

	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Total Service manpower	340.4	337.1	332.5	330.0	330.2	340.6
Nuclear strategic force	2.8	2.8	2.8	2.5	2.5	2.4
Navy general purpose combat forces	32.7	32.7	32.4	32.2	30.4	30.1
Submarines	2.5	2.6	2.5	2.5	2.7	2.7
Aircraft and ASW carriers	1.7	1.7	2.5	2.8	1.9	1.5
Amphibous forces	4.8	4.4	3.9	5.0	4.6	4.8
Cruisers	1.4	1.4	1.4	1.3	1.0	0.7
Destroyers and frigates	15.1	15.1	14.9	14.0	13.0	13.0
Mine counter-measure vessels	1.0	1.1	1.1	1.1	1.1	1.1
Other vessels	1.6	1.8	1.7	1.7	1.8	1.7
Aircraft	2.3	2.4	2.5	1.9	2.2	2.4
Fleet headquarters	0.7	0.7	0.7	0.9	1.1	1.1
Overseas shore establishments	1.6	1.5	1.2	1.0	1.0	1.1
European theatre ground Forces	103.1	102.6	101.8	98.4	95.2	97.3
British Army of the Rhine	54.7	55.8	57.0	58.0	55.0	56.8
Berlin	3.1	3.1	3.1	3.1	3.1	3.0
Home forces	45.3	43.7	41.7	37.3	37.1	37.5
Other Army combat forces	14.2	14.1	14.1	14.4	14.9	15.0
Mediterranean	4.3	4.1	4.1	4.1	4.2	4.2
Hong Kong and other Far East	9.3	9.2	8.8	8.8	9.0	9.2
Other areas	0.6	0.8	1.2	1.5	1.7	1.6
Air Force general purpose forces	56.6	54.7	53.7	53.8	54.6	58.6
Air defence	3.7	3.6	3.8	3.6	3.9	4.4
Offensive support	1.1	1.2	1.3	1.1	1.1	1.1
Strike/attack/reconnaissance	4.9	4.8	4.8	4.8	5.1	5.3
Maritime aircraft	1.8	1.7	1.5	1.5	1.6	1.6
Transport aircraft	3.3	2.9	2.9	2.9	3.3	3.4
Tanker aircraft	0.6	0.4	0.4	0.4	0.4	0.5
Other aircraft	2.5	2.6	2.8	3.0	3.3	3.8
Operational stations	18.8	18.2	17.9	18.8	18.1	19.9
Headquarters	2.8	2.8	2.7	2.7	2.7	2.8
General support	17.1	16.5	15.6	15.0	15.1	15.8
Reserve and Auxiliary formations	2.6	2.6	2.5	2.5	2.8	2.9
Navy	0.3	0.3	0.3	0.3	0.3	0.3
Army	2.0	2.0	1.9	1.9	2.2	2.3
Air Force	0.3	0.3	0.3	0.3	0.3	0.3
Research and development	1.4	1.3	1.3	1.3	1.4	1.5
Ship construction and underwater warfare	0.2	0.1	0.1	0.1	0.1	0.1
Ordnance and other Army	0.3	0.3	0.3	0.3	0.3	0.3
Military aircraft	0.3	0.3	0.3	0.3	0.2	0.3
Guided weapons	0.1	0.1	0.1	0.1	0.1	0.1
Other electronics	0.1	0.1	0.1	0.1	0.1	0.1
Other research and development	0.4	0.4	0.4	0.4	0.6	0.6
Training	72.6	73.8	71.6	76.2	78.8	81.5
Service colleges	4.2	4.3	4.1	3.9	4.3	4.7
Navy	22.8	22.9	22.8	23.2	22.3	24.0
Army	31.7	32.6	30.6	31.9	34.2	35.2
Air Force	13.9	14.0	14.1	17.2	18.0	17.6
Repair and associated facilities in UK	9.5	9.6	9.9	9.7	9.8	10.3
Royal Dockyards	0.1	0.1	0.1	0.1	0.1	0.1
Other repair and maintenance	5.8	5.9	6.2	6.3	6.5	6.9
Storage and supply	3.3	3.3	3.3	3.1	3.0	3.1
Quality assurance	0.3	0.3	0.3	0.2	0.2	0.2
Other support functions	44.9	42.9	42.4	39.0	39.8	41.0
Whitehall organisation	2.8	2.7	2.6	2.8	2.7	2.8
Local administration communications etc in UK	18.6	17.8	18.1	16.9	18.0	19.5
Family and personnel services in UK	7.4	6.9	6.7	6.4	6.6	6.6
Other support services	16.1	15.5	15.0	12.9	12.5	12.1

1. Comprising regular forces and locally entered personnel.

Principal headings of the Defence budget

TABLE 2.1

	Outturn				Estimate	
	1976–77	1977–78	1978–79	1979–80	1980–81[1]	1981–82
	£ Million					
Total expenditure[2]	6,158	6,787	7,455	9,178	10,785	12,274
of which:						
Expenditure on personnel	2,864	3,021	3,293	3,912	4,527	4,942
Pay, etc, of the Armed Forces	1,465	1,519	1,639	2,099	2,474	2,623
Retired pay, etc, of the Armed Forces	316	361	432	459	543	603
Pay, etc, of civilian staff	1,083	1,141	1,222	1,354	1,510	1,716
Expenditure on equipment	2,138	2,565	2,984	3,640	4,336	5,352
Sea	590	672	878	1,110	1,334	1,680
Land	486	612	601	740	803	1,030
Air	844	1,010	1,214	1,427	1,737	2,137
Other	218	271	291	363	462	505
Other expenditure	1,156	1,201	1,178	1,626	1,922	1,980
Works, buildings and land	463	462	405	600	717	742
Miscellaneous stores and services	693	739	773	1,026	1,205	1,238
Total expenditure at constant (1975–76) prices	5,247	5,126	5,089	5,243	5,457	5,533
	Per cent					
Percentage shares of the total expenditure						
Expenditure on personnel	*46.5*	*44.5*	*44.2*	*42.6*	*42.0*	*40.3*
Pay, etc, of the Armed Forces	*23.8*	*22.4*	*22.0*	*22.9*	*22.9*	*21.4*
Retired pay, etc, of the Armed Forces	*5.1*	*5.3*	*5.8*	*5.0*	*5.0*	*4.9*
Pay, etc, of civilian staff	*17.6*	*16.8*	*16.4*	*14.7*	*14.0*	*14.0*
Expenditure on equipment	*34.7*	*37.8*	*40.0*	*39.7*	*40.2*	*43.6*
Sea	*9.6*	*9.9*	*11.8*	*12.1*	*12.4*	*13.7*
Land	*7.9*	*9.0*	*8.1*	*8.1*	*7.4*	*8.4*
Air	*13.7*	*14.9*	*16.3*	*15.5*	*16.1*	*17.4*
Other	*3.5*	*4.0*	*3.9*	*4.0*	*4.3*	*4.1*
Other expenditure	*18.8*	*17.7*	*15.8*	*17.7*	*17.8*	*16.1*
Works, buildings and land	*7.5*	*6.8*	*5.4*	*6.5*	*6.6*	*6.0*
Miscellaneous stores and services	*11.3*	*10.9*	*10.4*	*11.2*	*11.2*	*10.1*

1. The figures in this column are the original Estimates as published in the *Statement on the Defence Estimates 1980* (Cmnd 7826 II). Current forecast outturn at constant 1975–76 price is £5,531 million.
2. Outturn and Estimates are given at outturn and Estimates prices respectively.

Defence budget: comparison of Cmnd. 8175 expenditure plans with previous plans and with the 1981–82 Estimates

at 1980 Survey prices

TABLE 2.2

£ million

	1979–80	1980–81	1981–82	1982–83	1983–84
1978 Public Expenditure Survey (Cmnd. 7439)	9,526	9,840	9,922	9,930	*
1979 Public Expenditure Survey (Cmnd. 7841)	*	9,620	9,946	10,242	10,545
1980 Public Expenditure Survey (Cmnd. 8175)[1]	*	*	9,753	10,051	10,353

1. To arrive at the Defence budget at 1981–82 Estimates prices it is necessary to make adjustments as follows:

	£ million
Defence budget target at 1980 Survey prices	9,753
Pay and price additions (covering inflation from Autumn 1979 to Autumn 1980 (£1,740 million) and forecast inflation from Autumn 1980 to the date on which the provision will actually be spent (£781 million).)	2,521
Defence budget at 1981–82 Estimate prices	12,274

(This total includes provision on Defence Votes of £12,147 million plus other expenditure attributed to the Defence budget (£127 million).)

Defence budget and related expenditure[1]

TABLE 2.3

£ million

	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Defence budget	5,632.4	6,328.9	6,918.8	8,557.7	10,784.5	12,273.8
Military aid to overseas countries	1.9	2.4	2.3	13.6	6.9	11.4
Supporting services[2]						
Accommodation (maintenance and rental)	37.5	36.5	47.8	41.9	60.1	66.0
Stationery and printing[3]	33.0	29.6	28.7	32.7	–	–
Home publicity	3.6	3.8	4.7	8.6	10.7	7.5
Civil superannuation	96.7	116.7	153.9	181.5	208.3	248.8
Computers and telecommunications[3]	7.3	13.1	14.7	14.4	–	–
Rates	48.7	49.9	58.7	64.3	77.9	92.7
Services by Exchequer and Audit	1.1	1.3	1.2	1.4	1.7	5.6
Services by Paymaster General's Office[4]	..	..	..	..	..	1.6
Services by Treasury Solicitor[4]	..	..	..	..	..	2.0
Valuation Services by Inland Revenue[4]	..	..	..	..	..	0.1
Various other Services	1.8	1.9	2.1	2.3	3.2	0.2
Less cost of **Meteorological services** in Defence budget	–22.0	–20.5	–24.0	–28.9	–36.5	–34.2
Other adjustments	–2.2	–5.2	–5.2	–4.2	–4.2	–4.2
Defence expenditure (NATO definition)[5]	5,839.8	6,558.4	7,203.7	8,885.3	11,112.6	12,668.2
US military aircraft loan (net)[6]	–7.8	–	–	–	–	–
Accounting adjustments	39.2	15.7	9.1	–	–	–
Defence expenditure (National Accounts definition)	5,871.2	6,574.1	7,212.8	8,885.3	11,112.6	12,668.2

1. The figures given in the table are based on the *Supply Estimates* and reflect the price levels of *Supply Estimates* for the years in question.
2. These are the Defence portion of services performed by certain government departments for government generally.
3. These items are included in the Defence budget after 1979–80.
4. Prior to 1981–82 included under 'Various other services'.
5. The Defence budget figures have to be adjusted as shown to meet the standard NATO definition of defence expenditure.
6. Drawings under the Military Aircraft (Loans) Act, 1966 for the purchase of US military aircraft.

Functional analysis of the Defence budget[1]

TABLE 2.4

£ million

	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Total expenditure	5,632	6,329	6,919	8,558	10,785	12,274
Nuclear strategic force	78	96	93	126	165	269
Navy general purpose combat forces	726	843	1,017	1,131	1,461	1,663
Submarines	112	130	155	197	253	339
Aircraft and ASW carriers	14	15	26	23	23	26
Amphibious forces	30	29	28	36	44	52
Cruisers	45	63	92	89	98	95
Destroyers and frigates	280	319	402	418	537	594
Mine counter-measures vessels	29	41	52	50	75	90
Other vessels	109	116	126	159	206	210
Aircraft	68	92	102	108	158	175
Fleet headquarters	3	5	6	13	18	23
Overseas shore establishments	36	33	28	38	49	59
European theatre ground forces	985	1,091	1,251	1,496	1,746	1,881
British Army of the Rhine	700	779	905	1,079	1,227	1,302
Berlin	18	22	18	20	27	27
Home forces	267	290	328	397	492	552
Other Army combat forces	64	70	74	81	105	44
Mediterranean	39	44	43	50	64	56
Hong Kong and other Far East	20	18	20	17	19	–35
Other areas	5	8	11	14	22	23
Air Force general purpose forces	906	1,034	1,107	1,462	1,865	2,240
Air defence	112	160	128	145	199	287
Offensive support	51	52	61	63	68	76
Strike/attack/reconnaissance	234	280	335	458	620	785
Maritime aircraft	48	50	50	64	85	108
Transport aircraft	69	65	82	135	168	168
Tanker aircraft	19	17	15	26	32	43
Civil charter	9	5	7	11	13	14
Other aircraft	39	65	69	101	104	100
Operational stations	135	148	158	221	268	279
Headquarters	29	30	33	41	50	57
General support	161	162	169	197	258	323
Reserve and Auxiliary formations	91	105	122	148	213	253
Navy	5	6	6	8	14	12
Army	78	91	107	130	182	222
Air Force	8	8	9	10	17	19
Research and development[2]	699	823	872	1,151	1,479	1,676
Ship construction and underwater warfare	73	79	81	149	209	298
Ordnance and other Army	58	62	67	92	120	150
Military aircraft	258	319	332	439	509	498
Guided weapons	74	98	105	124	183	223
Other electronics	97	107	126	163	231	259
Other research and development	139	158	161	184	227	248
Training	484	565	604	777	975	1,097
Service colleges	34	38	38	48	71	78
Navy	151	170	183	249	311	358
Army	186	236	263	312	377	429
Air Force	113	121	120	168	216	232
Repair and associated facilities in UK	409	447	449	590	705	814
Royal Dockyards	73	87	87	91	108	114
Other repair and maintenance	114	122	115	177	218	257
Storage and supply	163	179	188	247	289	337
Quality assurance	59	59	59	75	90	106
War and contingency stocks	116	108	178	160	224	326
Navy	33	39	44	56	73	94
Army	56	29	79	61	88	145
Air Force	27	40	55	43	63	87
Other support functions	1,067	1,139	1,255	1,481	1,820	2,081
Whitehall organisations	108	111	103	130	164	195
Local administration communications etc in UK	368	394	452	535	666	812
Meteorological services[2]	22	21	24	29	36	34
Family and personnel services in UK	137	122	125	163	197	229
Service pensions	299	345	397	458	554	603
Other support services	133	146	154	166	203	208
Miscellaneous expenditure and receipts	7	8	–103	–45	27	–70

1. The figures given in this table reflect the price levels of the Estimates for the years in question.
2. Meteorological research and development is included under Meteorological services.

Defence and other spending from the National Income

TABLE 2.5

	1975	1976	1977	1978	1979
	£ thousand million				
At market prices:					
Consumers expenditure: total	64.4	74.8	85.5	98.4	114.8
of which:					
Food	12.0	14.1	16.2	17.9	20.5
Housing	9.2	10.6	12.4	14.3	16.5
Clothing and Footwear	5.2	5.7	6.5	7.7	8.9
Drink and tobacco	7.6	8.9	10.2	11.4	13.2
Fuel and light	2.9	3.6	4.3	4.7	5.3
General government[1] final consumption[2]	23.1	26.8	29.2	32.9	38.3
of which:					
Defence	5.1	6.1	6.8	7.5	9.0
National Health Service	4.9	5.8	6.5	7.4	8.5
Education	5.1	5.5	5.9	6.6	7.5
Gross domestic fixed capital formation	20.4	23.6	25.7	29.7	33.6
of which:					
General government	5.0	5.4	4.8	4.6	5.1
Increase in stocks and work in progress	−1.5	0.9	1.9	1.1	2.8
plus Exports	27.0	35.2	43.4	47.4	54.7
minus Imports	−29.0	−36.9	−42.6	−45.5	−54.5
Gross Domestic Product at market prices	104.4	124.3	143.1	164.0	189.7
	Per cent				
Defence expenditure[3] as a percentage of Gross Domestic Product	*4.9*	*4.9*	*4.8*	*4.6*	*4.8*

Source: *National Income and Expenditure* (1980 edition)

1. General government consists of central and local government. It excludes the nationalised industries.
2. Final consumption is current expenditure plus an imputed charge for the consumption of non-trading capital. All expenditure by government trading bodies, expenditure on grants, subsidies and all other transfers, and expenditure on fixed assets and stocks, are excluded.
3. In this comparison Defence gross domestic fixed capital formation is included and the NATO definition of Defence expenditure is used rather than that of the National Income and Expenditure tables. From 1979 onwards the two definitions coincide, before that year the accounting adjustments were less than 0.1% of GDP.

Defence and other general government spending

TABLE 2.6

£ thousand million

	1975	1976	1977	1978	1979
General government total expenditure[1]	51.7	58.5	61.8	71.9	84.9
of which					
Defence	5.2	6.2	6.8	7.5	9.1
National Health Service	5.2	6.1	6.7	7.6	8.9
Education	6.6	7.3	7.8	8.5	9.5
Social Security benefits	8.9	11.2	13.2	15.8	18.5
Other grants in UK	1.7	2.0	2.2	2.7	2.9
Other grants abroad	0.3	0.7	1.0	1.5	1.9
Debt interest	4.2	5.4	6.4	7.2	8.8
Non-trading capital consumption	0.7	0.9	1.0	1.2	1.4

Source: *National Income and Expenditure* (1980 Edition)

1. Including debt interest, and allowance for non-trading capital consumption, not allocated to specific services.

Industrial analysis of Defence expenditure in the United Kingdom[1]

estimated allocation by commodity group

at current prices VAT exclusive

TABLE 2.7

£ million

	SIC 68 Order or MLH[2]	1977–78	1978–79	1979–80
Total		2,968	3,325	3,876
Food[3]	III (part)	74	78	93
Solid Fuels[3]	101	5	5	6
Petroleum products[3]	104	263	239	382
Chemicals, including explosives	V	89	30	34
Metal manufacture	VI	7	8	9
Ordnance and small arms	342	244	297	224
Other mechanical engineering	VII nes	78	99	114
Instrument engineering	VIII	70	92	93
Radio and electronic components	364	43	57	84
Radio, radar and electronic capital goods	367	361	429	540
Other electrical engineering	IX nes	94	115	145
Shipbuilding and marine engineering	370	303	354	409
Aerospace equipment	383	951	1,089	1,239
Other vehicles	XI nes	97	92	107
Metal goods not elsewhere specified	XII	16	14	19
Textiles and clothing[3]	XIII-XV	44	53	60
Other manufacturing industry	XVI-XIX	27	40	42
Gas, electricity and water supply[3]	XXI	78	90	101
Professional and scientific services	XXV	25	35	47
Other industries and services (including unallocated)	nes	99	109	128

1. Gross expenditure excluding receipts of Appropriations-in-Aid. Also excluding pay and allowances, general administrative expenses (amounting to about £580 million in 1979-80) and some local payments (amounting to about £90 million in 1979-80). General administrative expenses include conveyance of personnel and stores, telecommunications and stationery.
2. Code numbers relate to minimum list headings (MLHs) or Orders of the 1968 revision of the *Standard Industrial Classification* (SIC).
3. Includes payments for goods and services purchased overseas.

Exports of defence equipment

TABLE 2.8

£ million

	1975	1976	1977	1978	1979	1980
Armoured fighting vehicles and parts	42	50	52	61	53	50
Combat aircraft including helicopters[1]	43	42	48	15	11	40
Military non-combat aircraft including helicopters[1]	..	..	9	34	22	64
Military aircraft including helicopters, other than newly constructed	..	..	6	10	19	66
Warships including air cushion vehicles	42	36	123	39	82	59
Guns, small arms and parts	15	19	32	36	52	64
Guided weapons and missiles	13	18	27	24	24	25
Ammunition	43	53	59	97	76	102
Radio communication and radar apparatus	..	..	..	56	42	55
Optical equipment and training simulators	..	..	..	20	12	12
Identified defence equipment[2]: total	198	218	356	392	393	537
of which						
NATO countries and other W Europe	52	43	48	77	82	111
Middle East and N African countries	91	128	162	202	127	158
Sub-Saharan Africa	5	12	10	18	36	121
Latin America and Caribbean	30	23	117	49	85	13
Asia and Far East	20	12	19	46	63	134

Source: Her Majesty's Customs and Excise

1. Newly constructed only.

2. Categories of equipment which can be identified through the *Customs and Excise Tariff*. In addition there are substantial exports of defence equipment which it is not possible to separately distinguish from similar goods for civilian purposes in the Customs records. However information is available from the Society of British Aerospace Companies and individual electronics and motor vehicle manufacturing companies which gives rise to the following estimates for these items:

£ million

	1975	1976	1977	1978	1979
Military airframe parts (a)	134	163	253	240	191
Military aeroengines and parts (a)	65	78	70	98	95
Military aircraft equipment (b)	80	78	88	108	140
Military space equipment	—	—	10	2	11
Other military electronics	..	..	..	140	155
Other military road vehicles	..	..	..	90	90

a. The exports of aircraft parts, aeroengines and aeroengine parts in connection with international collaborative projects are excluded.

b. Other than military airborne radars and ground flying trainers, which are identified through the Tariff and included in Table 2.8 above.

Imports of defence equipment[1]

TABLE 2.9

£ million

	1975	1976	1977	1978	1979	1980
Armoured fighting vehicles and parts	5	6	7	7	7	7
Combat aircraft including helicopters[2]	–	–	1	–	–	2
Military non-combat aircraft including helicopters[2]	..	..	–	–	–	–
Military aircraft including helicopters, other than newly constructed	..	..	–	–	1	–
Warships including air cushion vehicles	–	–	–	–	–	–
Guns, small arms and parts	6	12	16	19	16	32
Guided weapons and missiles	25	22	23	41	41	65
Ammunition	14	25	20	15	26	20
Radio communication and radar apparatus	..	..	..	5	11	19
Optical equipment and training simulators	..	..	..	2	3	2
Identified defence equipment :total	50	65	67	89	105	147
of which:						
NATO countries and other W Europe	46	56	64	82	100	137
Middle East and N African countries	–	–	1	2	1	1
Sub-Saharan Africa	–	–	–	–	–	3
Latin America and Caribbean	–	2	–	1	2	1
Asia and Far East	4	7	2	4	2	5

Source: Her Majesty's Customs and Excise.

1. Categories of equipment which can be identified through the *Customs and Excise Tariff* only. Such items as aircraft engines and parts not distinguishable from similar civilian goods are excluded.
2. Newly constructed only.

Defence balance of payments: invisible transactions[1]

TABLE 2.10

£ million

	Outturn[2]				Estimate[2]	
	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Total debits	815	811	917	961	1,215	1,077
Total military services	796	789	894	938	1,187	1,047
Local defence expenditure	670	673	769	739	935	796
of which:						
Germany	513	527	619	612	763	682
Other NATO area	34	39	41	40	49	51
Mediterranean	68	70	77	70	80	88
Gulf	3	1	1	1	1	2
Far East	33	17	10	–8	14	–55
Other areas	19	19	21	24	28	28
Other military services[3]	126	116	125	199	252	251
Transfers – contributions to international defence organisations	19	22	23	23	28	30
Total credits	64	78	166	82	113	119
Receipts from US Forces	28	47	51	47	70	80
Other receipts[4]	36	31	115	35	43	39
Net balance (– = debit)	–751	–733	–751	–879	–1,102	–958

1. Non-governmental transactions are excluded but details of these are given in the Introduction on page 8
2. Outturn and Estimates are given at outturn and Estimates prices respectively.
3. Including contributions to infrastructure projects (net) and payments for R & D levies. Receipts for R & D levies, etc are entered as 'other receipts'.
4. Includes offset receipts from the Federal Republic of Germany (*Exchange of Notes between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Federal Republic of Germany for Offsetting the Foreign Exchange Expenditure on British Forces in the Federal Republic of Germany:* Cmnd 6970).

Equipment procurement expenditure[1]

TABLE 3.1

£ million

	Outturn				Estimate	
	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Procurement expenditure: total	2,430	2,863	3,303	4,017	4,752	5,850
Equipment	2,138	2,565	2,984	3,640	4,336	5,352
Associated costs	292	298	319	377	417	498
Procurement expenditure: total	2,430	2,863	3,303	4,017	4,752	5,850
Research and development	760	880	1,028	1,305	1,493	1,683
Production and repair	1,670	1,984	2,275	2,712	3,259	4,167
Sea	590	672	878	1,110	1,334	1,680
Development	65	79	127	199	231	338
Production and repair	525	593	751	911	1,103	1,343
Land	486	612	601	740	803	1,030
Development	49	63	80	114	136	210
Production and repair	436	549	521	626	667	820
Air	844	1,010	1,214	1,427	1,736	2,137
Development	250	290	330	393	441	448
Production and repair	595	720	884	1,034	1,295	1,689
General support	509	569	610	739	879	1,003
Research and Development	396	448	491	598	685	687
Production	113	121	119	141	194	316

1. This table is derived from the *Appropriation Accounts* and the *Supply Estimates*. The expenditure is net of Appropriation-in-aid. Outturn and Estimates are given at outturn and Estimates prices respectively.

Defence research and development expenditure[1]

TABLE 3.2

£ million

	Outturn				Estimate	
	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Gross expenditure: total[2]	793	943	1,070		1,558	
Intra-mural R & D	279	303	330		457	
Current:						
Salaries and wages	170	175	190		242	
Materials and equipment	67	78	90		135	
Other	12	13	14		20	
Capital						
Land and buildings	11	14	13		17	
Plant and equipment	19	22	23		43	
Extra-mural R & D	513	640	740		1,100	
Other Votes and central government funds	9	7	11		13	
Universities and further educational establishments	3	3	3		4	
Private industry and public corporations	433	555	641		963	
Other	–	–	–		1	
Overseas	67	74	85		119	

1. Total money disbursed by MOD for Defence R & D before off-setting receipts. Excludes civil work carried out by MOD on repayment terms. Outturn and Estimates are given at outturn and Estimates prices respectively.
2. Including social science R & D which is not covered in the detailed breakdown.

Defence research and development expenditure net cost to the Defence budget[1]

TABLE 3.3

£ million

	Outturn				Estimate	
	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Net cost: total	760	880	1,028	1,305	1,493	1,683
Pay, etc.	157	160	174	202	222	256
Royal Navy personnel	3	3	3	4	5	6
Army personnel	2	2	2	4	5	5
Royal Air Force personnel	3	3	3	4	4	5
Civilian staff[2]	148	151	165	189	208	241
Stores, supplies and miscellaneous services	3	3	3	9	9	6
Procurement Executive R & D						
Administration and common services[3]	214	257	287	354	415	375
Sea equipment development	65	79	127	199	231	338
Land equipment development	49	63	80	114	136	210
Air equipment development	250	290	330	393	441	448
Accommodation services	22	29	27	33	38	50

1. Outturn and Estimates are given at outturn and Estimates prices respectively.
2. Includes the cost of Procurement Executive staff.
3. Includes the cost of research and development establishments.

Defence production expenditure[1]

TABLE 3.4

£ million

	Outturn				Estimates	
	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Gross expenditure: total	1,965	2,298	2,674	3,088	3,840	4,865
Sea equipment	590	671	824	992	1,209	1,467
of which:						
Ships hulls and machinery	197	230	289	331	401	427
Weapon systems etc.	213	181	250	298	361	528
Ship equipment and support services	118	187	202	258	294	364
Dockyard services etc.	62	73	82	105	152	148
Land equipment	578	690	704	792	908	1,053
of which:						
Guns, small arms and CD stores	30	43	46	48	66	51
Ammunition, mines and explosives	151	226	179	176	255	204
Fighting vehicles	74	73	95	96	101	111
Load carrying vehicles	94	91	105	127	128	135
Engineering equipment	39	37	31	49	42	51
Guided weapons, electronic equipment and instruments	169	193	218	258	273	442
Plant and machinery	1	1	1	1	5	3
Other stores	21	26	30	39	38	55
Air equipment	664	797	1,004	1,139	1,502	2,001
of which:						
Aircraft, aero-engines and aircraft equipment	550	655	809	916	1,132	1,411
Guided weapons and electronic equipment	105	142	195	223	370	590
Military aircraft loan – repayment and interest	9	–	–	–	–	–
General support[2]	133	140	142	165	222	345
Appropriations-in-aid: total[3]	296	314	399	376	581	698
Sea equipment	65	78	73	81	106	125
Land equipment	141	141	183	167	241	233
Air equipment	69	76	120	105	207	312
General support	20	19	23	24	28	29
Net expenditure: total	1,670	1,984	2,275	2,712	3,259	4,167
Sea equipment	525	593	751	911	1,103	1,343
Land equipment	436	549	521	626	667	820
Air equipment	595	720	884	1,034	1,295	1,689
General support	113	121	119	141	194	316

1. This table is based on the *Appropriation Accounts* and the *Supply Estimates*. Outturn and Estimates are given at outturn and Estimates prices respectively.
2. Including provision of facilities and quality assurance.
3. Appropriations-in-aid arise from the sale of surplus and of goods purchased on behalf of the Defence Sales organisation.

Service supply systems: major depots[1]

TABLE 3.5

	1978–79	1979–80
	£ million	
Value of stock at end of year[2]: total	3,898	4,551
Royal Navy[3]	1,966	2,312
Army	889	1,021
Royal Air Force	1,043	1,218
	Thousands	
Item types in inventory at end of year: total	2,885	2,912
Royal Navy	835	849
Army	878	883
Royal Air Force[4]	1,172	1,180
Issue transactions during year: total	8,200	8,200
Royal Navy	3,200	3,000
Army	3,200	3,300
Royal Air Force	1,800	1,900

1. The coverage of items included in this table differs from one Service to another, and the totals are therefore not directly comparable with each other. For example, the figures for the Royal Air Force exclude weapons and for both the Army and the Royal Air Force exclude petrol, oil and lubricants. The Army figures, which cover major depots in the United Kingdom, are made up as follows:

	Value of stock at 1 April		Item types at 1 April		Issue transactions	
	1979	1980	1979	1980	1978–79	1979–80
	£ million		Thousands			
Ordnance stores	685	784	821	819	2,922	3,022
Medical stores (a)	15	20	38	46	256	258
Engineer stores	25	31	18	18	19	17
Ammunition	164	186	1	1	21	30

a. The number of items of medical stores held and their values are approximate.

2. The value of stock is based as far as possible on the best estimate of prices ruling at the end of each financial year.
3. For the Royal Navy the valuations exclude the value of stocks held on board Royal Fleet Auxiliary Vessels.
4. Excludes items stocked only by contractors- approximately 285,000 in 1978–79 and 317,000 in 1979–80.

Defence energy consumption[1]

TABLE 3.6 Thousands of tonnes oil or oil equivalent

	1976–77	1977–78	1978–79	1979–80
Total	3,854	3,872	3,873	3,702
Royal Navy[2]	1,176	1,163	1,146	1,111
Army	757	744	788	722
Royal Air Force	1,466	1,502	1,478	1,453
Procurement Executive	287	281	279	248
Royal Ordnance Factories	170	183	181	169
Liquid fuels: total	2,884	2,898	2,873	2,747
Aviation fuel	1,096	1,127	1,091	1,083
Petrol	102	94	92	87
Diesel	544	517	551	566
Furnace oil	1,122	1,139	1,119	992
Other	20	21	21	20
Non-liquid fuels: total:	971	974	1,000	955
Solid fuel	156	153	139	128
Gas	164	176	189	190
Electricity	650	644	671	637

1. Consumption of energy in the United Kingdom and overseas is included.
2. Royal Navy figures include the Royal Dockyards.

Royal Dockyards

TABLE 3.7

	1975–76	1976–77	1977–78	1978–79	1979–80
	£ million				
Dockyard costs charged to production: total[1]	207.4	255.1	308.1	338.9	403.6
Direct labour	54.4	59.7	67.2	68.7	73.9
Direct material	33.7	51.1	74.0	87.4	89.1
Dockyard services	18.5	21.6	26.3	29.4	36.1
Contract services	4.4	7.2	7.7	7.4	8.9
Production overhead	47.4	53.9	60.4	68.4	76.8
Administration and general overhead	49.0	61.6	72.5	77.6	118.8
less **Increase in work in progress**	46.5	9.9	83.1	44.3	21.3
Cost of completed work: total	160.9	245.2	225.0	294.6	382.3
For MOD customers: total	154.9	235.5	217.4	290.5	375.1
Ship repairs and alterations	111.1	182.4	155.9	222.9	289.3
Major refits	62.5	76.8	66.3	113.8	119.2
Normal refits	36.4	58.1	70.2	81.8	87.9
Other shipwork	12.2	47.5	19.4	27.3	82.2
Ship construction	1.4	2.6	0.8	5.0	2.0
Repair and modification of stores for MOD stock	12.6	16.1	19.8	20.4	27.9
Manufacture of stores for MOD stock	5.8	6.9	8.0	8.0	10.7
Plant and machinery for other MOD establishments	0.7	0.9	0.7	0.3	3.5
Maintenance etc for other MOD establishments	23.3	26.6	32.2	33.9	41.7
For non-MOD customers, on repayment	3.3	6.1	1.3	1.0	1.0
Plant and machinery for Dockyard use	2.7	3.6	6.3	3.1	6.2
	Number				
Major refits completed: total	12	5	11	9	6
Submarines	3	3	2	2	1
Destroyers	2	–	–	–	–
Frigates	4	–	3	1	3
Mine counter measure vessels	1	1	3	4	2
Others	2	1	3	2	–
Normal refits completed: total	66	53	42	37	33
Royal Navy vessels					
Aircraft carriers	–	1	1	–	–
Commando/assault vessels	–	1	–	1	–
Submarines	2	1	1	3	1
Crusiers/destroyers	1	3	2	1	1
Frigates	11	8	8	5	9
Mine counter measure vessels	12	12	11	10	7
Patrol vessels	4	3	3	4	3
Others	8	13	9	7	10
Royal Fleet Auxiliary vessels: total	2	–	2	–	–
Royal Maritime Auxiliary Services vessels: total:	26	11	5	6	2
Average number of employees: total	36,008	35,882	35,355	34,628	34,049
Civilian personnel	35,930	35,803	35,277	34,555	33,982
Service personnel	78	79	78	73	67

1. Costs do not necessarily correspond to cash payments from Votes during the year: see introduction.

Royal Ordnance Factories

TABLE 3.8

	1975-76	1976-77	1977-78	1978-79	1979-80
	£ million				
Sales: total	149.1	211.0	263.2	284.0	277.7
Sales: destination					
United Kingdom	79.2	102.3	123.4	132.9	169.6
Overseas	69.9	108.7	139.8	151.1	108.1
Sales: final product					
Ammunition	86.5	136.4	149.1	157.9	150.2
Vehicles	23.3	27.4	53.1	49.8	41.6
Guns and small arms	19.5	24.4	34.2	31.3	25.1
Electronics and guided weapon components	3.6	5.6	8.0	14.2	22.6
Chemicals and explosives	3.6	4.1	5.5	5.4	6.4
Engineers' equipment	1.6	3.7	3.0	10.1	13.5
Experimental and development work	6.4	6.9	7.1	8.3	13.6
Other work	4.6	2.5	3.2	7.0	4.7
Sales: customer					
Ministry of Defence: total	74.4	94.1	111.6	117.9	149.7
Sea equipment	6.8	7.5	7.7	6.2	4.1
Land equipment	56.7	77.3	87.9	90.9	118.7
Air equipment	6.0	5.3	10.4	12.3	14.8
Common services	4.9	4.0	5.6	8.5	12.1
Overseas customers	69.9	108.7	139.8	151.1	108.1
UK commercial work	4.8	8.2	11.8	15.0	19.9
Operating results[1]					
Surplus on operations[2]	13.9	34.3	38.6	32.7	12.2
Net interest receivable	−2.9	3.3	1.4	5.5	6.0
Surplus after interest	11.0	37.6	40.0	38.2	18.2
of which:					
Dividend payable to the Consolidated Fund	5.6	5.3	8.5	11.5	10.5
Transferred to general reserve	3.0	28.7	27.3	22.1	2.1
Transferred to additional depreciation reserve	2.4	3.6	4.2	4.6	5.6
	Thousands				
Average number of employees	20.6	22.5	23.2	23.3	22.1
	£ thousand				
Value added per employee[3]	4.5	5.9	6.4	6.6	6.5

1. From 1 July 1974, the operations of the ROFs have been financed by means of a Trading Fund.
2. Includes in 1978–79 an extraordinary item of £1.5 million arising from premature repayment of part of the originating debt from the National Loans Fund.
3. Value added is the difference between the sale value of goods produced and the cost of materials and bought-in services used in manufacturing these goods.

Strengths of UK Service personnel: Regular Forces

TABLE 4.1

Thousands

	Actual					Estimate[1]	
	1 April				1 January	1 April	
	1977	1978	1979	1980	1981	1981	1982
All Services: total	330.5	320.7	315.0	320.6	333.9	330.9	331.8
Male	316.0	306.1	299.7	304.4	317.0	314.7	316.0
Officers	42.1	40.7	39.8	39.9	40.5	40.6	40.6
Servicemen	273.9	265.4	259.9	264.5	276.5	274.0	275.5
Female	14.5	14.6	15.3	16.2	16.9	16.3	15.8
Officers	1.9	1.9	1.9	2.0	2.1	2.1	2.1
Servicewomen	12.6	12.7	13.4	14.2	14.8	14.2	13.6
Royal Navy	68.5	67.8	65.1	64.4	65.8	66.3	66.4
Male	64.6	63.8	61.2	60.5	61.8	62.3	62.5
Officers	9.2	9.0	9.0	9.1	9.2	9.3	9.3
Servicemen	55.4	54.8	52.2	51.5	52.6	53.1	53.2
Female	4.0	4.0	3.8	3.8	4.0	3.9	3.9
Officers	0.5	0.4	0.4	0.4	0.5	0.5	0.4
Servicewomen	3.5	3.6	3.4	3.4	3.5	3.5	3.4
Royal Marines	7.7	7.5	7.4	7.6	7.8	7.9	7.9
Male	7.7	7.5	7.4	7.6	7.8	7.9	7.9
Officers	0.6	0.6	0.6	0.6	0.7	0.7	0.7
Servicemen	7.1	6.8	6.8	6.9	7.2	7.2	7.2
Army	167.3	160.8	156.2	159.0	167.3	163.3	164.3
Male	161.6	155.1	150.4	152.8	160.7	156.9	158.1
Officers	17.3	16.8	16.3	16.2	16.3	16.3	16.5
Servicemen	144.2	138.3	134.1	136.6	144.3	140.6	141.6
Female	5.8	5.7	5.8	6.3	6.6	6.3	6.2
Officers	0.9	0.9	0.9	0.9	0.9	0.9	1.0
Servicewomen	4.9	4.9	4.9	5.4	5.7	5.4	5.3
Royal Air Force	86.9	84.6	86.3	89.6	93.0	93.5	93.3
Male	82.2	79.7	80.7	83.5	86.7	87.5	87.6
Officers	15.0	14.3	14.0	14.1	14.3	14.4	14.2
Servicemen	67.2	65.5	66.7	69.4	72.4	73.2	73.5
Female	4.8	4.9	5.6	6.1	6.3	6.0	5.7
Officers	0.6	0.6	0.6	0.7	0.7	0.7	0.7
Servicewomen	4.1	4.3	5.0	5.4	5.6	5.3	4.9

1. The figures shown are those used for the financial costings.

Strengths of trained UK Service personnel: Regular Forces

TABLE 4.2

Thousands

	Actual					Estimate[1]	
	1 April				1 January	1 April	
	1977	1978	1979	1980	1981	1981	1982
All Services: total	300.7	291.0	284.1	285.1	293.8	296.4	299.7
Male	287.3	277.7	270.4	270.6	278.5	281.0	285.1
Officers	38.3	37.2	36.3	36.0	36.0	36.3	36.4
Servicemen	249.0	240.6	234.2	234.6	242.5	244.7	248.7
Female	13.4	13.2	13.7	14.5	15.3	15.3	14.7
Officers	1.8	1.8	1.8	1.9	1.9	2.0	2.0
Servicewomen	11.6	11.4	11.9	12.6	13.4	13.4	12.6
Royal Navy	61.8	61.9	59.3	57.2	57.9	58.4	59.4
Male	58.1	58.2	55.7	53.8	54.3	54.8	55.8
Officers	7.8	7.9	7.7	7.6	7.6	7.7	7.8
Servicemen	50.3	50.3	48.0	46.2	46.7	47.2	48.1
Female	3.7	3.7	3.5	3.4	3.6	3.6	3.6
Officers	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Servicewomen	3.3	3.3	3.1	3.0	3.1	3.2	3.1
Royal Marines	7.1	6.9	6.6	6.5	6.8	6.9	7.2
Male	7.1	6.9	6.6	6.5	6.8	6.9	7.2
Officers	0.6	0.5	0.5	0.5	0.6	0.6	0.6
Servicemen	6.5	6.4	6.1	6.0	6.2	6.3	6.6
Army	150.1	143.3	138.6	139.1	144.1	145.1	146.2
Male	145.0	138.2	133.5	133.6	138.1	138.9	140.5
Officers	16.2	15.8	15.3	15.2	15.3	15.4	15.5
Servicemen	128.7	122.4	118.2	118.4	122.8	123.5	124.9
Female	5.2	5.1	5.1	5.4	6.0	6.1	5.7
Officers	0.8	0.8	0.9	0.9	0.9	0.9	0.9
Servicewomen	4.4	4.4	4.3	4.6	5.1	5.2	4.8
Royal Air Force	81.7	79.0	79.7	82.2	85.1	86.0	87.0
Male	77.2	74.7	74.7	76.7	79.3	80.4	81.6
Officers	13.8	13.1	12.7	12.7	12.6	12.7	12.5
Servicemen	63.4	61.5	62.0	64.0	66.7	67.7	69.1
Female	4.5	4.4	5.0	5.6	5.8	5.6	5.4
Officers	0.5	0.6	0.5	0.6	0.6	0.6	0.7
Servicewomen	3.9	3.8	4.5	4.9	5.1	5.0	4.7

1. The figures shown are those used for the financial costings.

Strengths of the Reserves and Auxiliary Forces

TABLE 4.3

Thousands

	1 April				1 January
	1977	1978	1979	1980	1981
All Services					
Regular Reserves:					
Male	173.2	176.0	184.6	188.3	191.6
Female	1.7	1.6	1.5	1.4	1.4
Volunteer Reserves and Auxiliary Forces:					
Male	70.1	69.6	67.9	70.8	73.5
Female	5.1	5.7	5.6	6.2	7.0
Royal Navy					
Regular Reserves:					
Male	27.8	26.2	28.3	26.9	26.6
Female	0.1	0.1	0.1	0.1	0.1
Volunteer Reserves and Auxiliary Forces:					
Male	4.5	4.6	4.5	4.2	4.3
Female	0.9	0.8	0.9	0.8	1.0
Royal Marines					
Regular Reserves:					
Male	2.4	2.4	2.4	2.2	2.2
Volunteer Reserves and Auxiliary Forces:					
Male	0.9	1.0	0.9	0.8	0.8
Army					
Regular Reseves:					
Male	110.3	117.7	126.1	132.3	136.3
Female	0.9	0.8	0.8	0.8	0.8
Volunteer Reserves and Auxiliary Forces:					
Territorial Army:					
Male	57.4	56.7	55.5	58.8	61.2
Female	3.5	3.9	3.9	4.5	5.1
Ulster Defence Regiment:					
Male	7.0	7.2	6.9	6.7	6.7
Female	0.6	0.7	0.7	0.7	0.7
Royal Air Force					
Regular Reserves:					
Male	32.7	29.7	27.8	26.9	26.5
Female	0.7	0.7	0.6	0.5	0.5
Volunteer Reserve and Auxiliary Forces:					
Male	0.2	0.2	0.2	0.4	0.5
Female	0.1	0.1	0.1	0.1	0.1

Strengths of locally entered Service personnel

TABLE 4.4

Number

	1 April				1 January
	1977	1978	1979	1980	1981
All Services: total	8,544	8,403	8,368	8,189	9,298
United Kingdom	589	719	767	841	993
Gibraltar	44	44	44	44	44
Malta	550	380	–	–	–
Hong Kong	5,220	5,195	5,708	5,352	6.305
Brunei	792	745	796	784	893
Nepal	1,349	1,320	1,053	1,168	1,063
Royal Navy: total	480	399	261	307	338
Malta	193	133	–	–	–
Hong Kong	287	266	261	307	338
Army: total	7,759	7,789	8,107	7,882	8,960
United Kingdom	589	719	767	841	993
Gibraltar	44	44	44	44	44
Malta	52	32	–	–	–
Hong Kong	4,933	4,929	5,447	5,045	5,967
Brunei	792	745	796	784	893
Nepal	1,349	1,320	1,053	1,168	1,063
Royal Air Force: total	305	215	–	–	–
Malta	305	215	–	–	–

Strengths of cadet forces

TABLE 4.5

Thousands

	1 April				1 January
	1977	1978	1979	1980	1981
All Services					
Male	141.2	141.6	139.3	140.6	142.4
Female	0.4	0.6	0.6	0.9	0.9
Royal Navy cadets					
Male	25.1	24.9	23.8	22.7	24.8
Female	0.1	0.1	0.1	0.1	0.1
Army cadets					
Male	72.5	73.1	72.2	74.0	74.0
Female	0.2	0.4	0.4	0.5	0.5
Royal Air Force cadets					
Male	43.6	43.6	43.3	43.9	43.5
Female	0.1	0.2	0.2	0.2	0.2

Deployment of UK Service personnel: United Kingdom[1]

1 July

TABLE 4.6

Thousands

	1976	1977	1978	1979	1980
United Kingdom: total	247.3	241.9	230.2	232.2	238.1
males	234.7	229.7	217.7	219.1	224.2
females	12.5	12.2	12.5	13.1	13.9
England	203.3	202.8	192.7	192.6	200.0
males	192.0	191.7	181.2	180.5	187.5
females	11.3	11.1	11.5	12.1	12.5
Wales	6.7	6.4	6.3	6.3	6.9
males	6.6	6.4	6.2	6.2	6.7
females	0.1	0.1	0.1	0.1	0.2
Scotland	19.2	19.1	19.3	19.0	18.1
males	18.6	18.4	18.6	18.3	17.3
females	0.6	0.6	0.7	0.7	0.7
Northern Ireland[2]	15.7	14.7	14.4	13.6	11.9
males	15.5	14.4	14.1	13.3	11.5
females	0.3	0.3	0.3	0.3	0.3
Standard regions of England					
North	1.3	1.3	1.1	1.1	1.2
males	1.2	1.3	1.0	1.1	1.1
females	–	–	–	0.1	0.1
Yorkshire and Humberside	13.9	13.0	14.8	13.9	14.6
males	13.3	12.5	14.2	13.3	14.0
females	0.6	0.5	0.6	0.7	0.6
East Midlands	12.2	12.5	12.3	12.8	13.9
males	11.7	11.9	11.6	12.0	13.0
females	0.6	0.6	0.6	0.8	0.9
East Anglia	15.8	14.7	13.8	14.5	13.8
males	15.2	14.1	13.2	13.8	13.1
females	0.6	0.6	0.6	0.7	0.8
South East	98.1	95.3	91.1	92.0	94.8
males	91.6	88.9	84.5	85.4	88.0
females	6.5	6.4	6.6	6.7	6.9
South West	51.0	55.4	49.6	46.6	50.0
males	48.8	53.2	47.4	44.5	47.7
females	2.2	2.2	2.2	2.2	2.3
West Midlands	8.7	8.2	8.1	9.5	9.7
males	8.0	7.5	7.3	8.6	8.8
females	0.7	0.7	0.8	0.9	0.9
North West	2.3	2.3	1.9	2.0	2.0
males	2.3	2.2	1.9	2.0	2.0
females	–	–	–	0.1	0.1

1. Royal Navy and Royal Marines personnel on board ships in home waters are included. The source from which the individual national and regional totals are compiled is different from that used to obtain the total United Kingdom strength and consequently the national figures do not add to the United Kingdom figures.

2. The figures for Northern Ireland include all personnel from other parts of the United Kingdom and from the British Army of the Rhine who are serving on emergency tours of duty, but exclude the Ulster Defence Regiment.

Deployment of UK Service personnel: overseas[1]

1 July

TABLE 4.7

Number

	1976	1977	1978	1979	1980
All overseas areas					
Royal Navy and Royal Marines	8,773	3,392	7,846	4,465	5,878
Army[2]	69,902	70,463	69,445	66,484	67,445
Royal Air Force	15,405	14,696	14,458	13,908	14,324
Federal Republic of Germany					
Royal Navy and Royal Marines	22	24	19	24	38
Army[2]	56,564	58,153	56,579	55,038	55,545
Royal Air Force	8,976	8,971	9,090	9,556	9,745
Elsewhere in Continental Europe[3]					
Royal Navy and Royal Marines	353	1,215	366	376	362
Army	4,104	3,995	3,919	3,679	3,690
Royal Air Force	1,655	1,637	1,609	1,625	1,657
Gibraltar					
Royal Navy and Royal Marines	1,245	841	1,556	920	1,998
Army	814	857	741	691	755
Royal Air Force	439	456	420	415	419
Malta					
Royal Navy and Royal Marines	331	477	322	7	–
Army	231	103	79	–	–
Royal Air Force	1,172	1,212	889	–	–
Cyprus					
Royal Navy and Royal Marines	7	12	15	25	15
Army	3,464	3,337	3,311	2,698	3,268
Royal Air Force	1,403	1,347	1,267	1,303	1,409
Elsewhere in Mediterranean, Near East and Gulf					
Royal Navy and Royal Marines	830	47	42	20	15
Army	316	300	284	263	278
Royal Air Force	565	117	88	78	78
Hong Kong					
Royal Navy and Royal Marines	296	261	257	262	334
Army	2,855	2,002	1,938	1,896	1,941
Royal Air Force	392	324	241	218	249
Elsewhere in Far East					
Royal Navy and Royal Marines	46	42	45	1,724	1,614
Army	221	216	214	103	105
Royal Air Force	21	17	18	15	19
Other Locations[4]					
Royal Navy and Royal Marines	5,643	473	5,224	1,107	1,502
Army	1,333	1,500	2,380	2,116	1,863
Royal Air Force	782	615	836	698	748

1. The figures include personnel who are on loan to countries in the areas shown. The Royal Navy and Royal Marine figures include personnel who are at sea in each area at the situation date.
2. Personnel serving in Northern Ireland on emergency tours of duty but remaining under the command of the Commander-in-Chief, British Army of the Rhine, are included in these numbers.
3. These figures include personnel stationed in Berlin and Sardinia.
4. These figures include Defence Attaches and Advisers and their staffs.

Recruitment of UK Service personnel

TABLE 4.8

Number

	Financial years				1 April–31 December	
	1976–77	1977–78	1978–79	1979–80	1979	1980
All Services: total	40,244	38,237	43,366	50,652	38,419	41,626
Male	36,390	34,188	38,774	46,206	35,241	38,521
Officers	2,007	1,957	2,110	2,547	1,770	2,053
Servicemen	34,383	32,231	36,664	43,659	33,471	36,468
Female	3,854	4,049	4,592	4,446	3,178	3,105
Officers	320	297	280	333	221	276
Servicewomen	3,534	3,752	4,312	4,113	2,957	2,829
Royal Navy	8,195	7,167	6,791	8,526	6,208	6,480
Male	7,238	6,269	5,978	7,701	5,622	5,777
Officers	485	487	533	649	472	451
Servicemen	6,753	5,782	5,445	7,052	5,150	5,326
Female	957	898	813	825	586	703
Officers	34	42	27	22	20	29
Servicewomen	923	856	786	803	566	674
Royal Marines	929	903	1,282	1,676	1,308	1,321
Male	929	903	1,282	1,676	1,308	1,321
Officers	46	48	51	42	42	64
Servicemen	883	855	1,231	1,634	1,266	1,257
Army	24,088	22,550	25,254	29,189	22,567	25,109
Male	22,344	20,868	23,528	27,164	21,226	23,707
Officers	1,003	1,020	1,021	1,127	703	870
Servicemen	21,341	19,848	22,507	26,037	20,523	22,837
Female	1,744	1,682	1,726	2,025	1,341	1,402
Officers	134	149	156	154	95	133
Servicewomen	1,610	1,533	1,570	1,871	1,246	1,269
Royal Air Force	7,032	7,617	10,039	11,261	8,336	8,716
Male	5,879	6,148	7,986	9,665	7,085	7,716
Officers	473	402	505	729	553	668
Servicemen	5,406	5,746	7,481	8,936	6,532	7,048
Female	1,153	1,469	2,053	1,596	1,251	1,000
Officers	152	106	97	157	106	114
Servicewomen	1,001	1,363	1,956	1,439	1,145	886

Recruitment of UK male officers

TABLE 4.9

Number

	Financial years				1 April–31 December	
	1976–77	1977–78	1978–79	1979–80	1979	1980
All Services: total	2,007	1,957	2,110	2,547	1,770	2,053
Pre-cadets	500	505	523	518	331	416
Office cadets	840	799	856	977	661	681
University cadets	273	238	255	288	236	234
Specialists, graduates, and other direct commission entrants	394	415	476	764	542	722
Royal Navy	485	487	533	649	472	451
Officers cadets	282	306	337	377	270	272
University cadets	92	76	96	92	76	47
Specialists, graduates and other direct commission entrants	111	105	100	180	126	132
Royal Marines	46	48	51	42	42	64
Officer cadets	38	39	37	30	30	47
University cadets	3	7	5	6	6	8
Specialists, graduates and other direct commission entrants	5	2	9	6	6	9
Army	1,003	1,020	1,021	1,127	703	870
Pre-cadets	500	505	523	518	331	416
Office cadets	297	274	243	275	130	134
University cadets	75	64	65	81	75	66
Specialists, graduates and other direct commission entrants	131	177	190	253	167	254
Royal Air Force	473	402	505	729	553	668
Officer cadets	223	180	239	295	231	228
University cadets	103	91	89	109	79	113
Specialists, graduates and other direct commission entrants	147	131	177	325	243	327

Recruitment of UK servicemen

TABLE 4.10

Number

	Financial years				1 April–31 December	
	1976–77	1977–78	1978–79	1979–80	1979	1980
All Services: total	34,383	32,231	36,664	43,659	33,471	36,468
Royal Navy	6,753	5,782	5,445	7,052	5,150	5,326
Adults[1]	1,575	1,372	1,392	2,085	1,156	1,276
Apprentices	588	515	516	555	370	418
Juniors[2]	4,590	3,895	3,537	4,412	3,624	3,632
Royal Marines	883	855	1,231	1,634	1,266	1,257
Adults[1]	397	380	565	689	453	464
Juniors[2]	486	475	666	945	813	793
Army	21,341	19,848	22,507	26,037	20,523	22,837
Adults[1]	9,208	9,299	9,496	12,254	8,769	10,229
Young Soldiers[3]	3,456	2,336	4,389	4,413	3,297	2,970
Apprentices	1,672	1,640	1,562	1,625	1,481	1,843
Juniors[4]	7,005	6,573	7,060	7,745	6,976	7,795
Royal Air Force	5,406	5,746	7,481	8,936	6,532	7,048
Adults[1]	2,916	2,957	3,575	4,196	2,880	4,423
Young Airmen[2]	2,310	2,537	3,675	4,593	3,505	2,386
Apprentices	180	252	231	147	147	239

1. Entrants over the age of 17½, but excluding RN and RAF apprentices. (In the Army all apprentices are below the age of 17½ on entry.)
2. Entrants below the age of 17½, but excluding apprentices.
3. Entrants between the ages of 17 and 17½, but excluding apprentices.
4. Entrants below the age of 17, but excluding apprentices.

Outflow of UK Service personnel: from each Service

TABLE 4.11

Number

	Financial years				1 April–31 December	
	1976–77	1977–78	1978–79	1979–80	1979	1980
All Services: total	46,412	48,002	49,306	45,042	33,971	28,977
Male	42,215	44,096	45,369	41,465	31,299	26,561
Officers	3,865	3,894	3,596	3,138	2,524	2,040
Servicemen	38,350	40,202	41,773	38,327	28,775	24,521
Female	4,197	3,906	3,937	3,577	2,672	2,416
Officers	361	337	299	285	213	217
Servicewomen	3,836	3,569	3,638	3,292	2,459	2,199
Royal Navy	8,013	7,921	9,803	9,155	6,902	5,696
Male	7,116	7,059	8,828	8,314	6,276	5,110
Officers	716	787	710	708	558	431
Servicemen	6,400	6,272	8,118	7,606	5,718	4,679
Female	897	862	975	841	626	586
Officers	66	76	66	46	36	36
Servicewomen	831	786	909	795	590	550
Royal Marines	1,012	1,125	1,348	1,568	1,161	1,061
Male	1,012	1,125	1,348	1,568	1,161	1,061
Officers	59	68	67	48	43	42
Servicemen	953	1,057	1,281	1,520	1,118	1,019
Army	26,610	29,072	29,807	26,348	19,717	16,917
Male	24,749	27,343	28,162	24,753	18,531	15,894
Officers	1,591	1,799	1,847	1,549	1,248	1,040
Servicemen	23,158	25,544	26,315	23,204	17,283	14,854
Female	1,861	1,729	1,645	1,595	1,186	1,023
Officers	164	155	130	169	127	101
Servicewomen	1,697	1,574	1,515	1,426	1,059	922
Royal Air Force	10,777	9,884	8,348	7,971	6,191	5,303
Male	9,338	8,569	7,031	6,830	5,331	4,496
Officers	1,499	1,240	972	833	675	527
Servicemen	7,839	7,329	6,059	5,997	4,656	3,969
Female	1,439	1,315	1,317	1,141	860	809
Officers	131	106	103	70	50	80
Servicewomen	1,308	1,209	1,214	1,071	810	727

Outflow of UK Service personnel: categories of exit

TABLE 4.12

Number

	Financial years				1 April–31 December	
	1976–77	1977–78	1978–79	1979–80	1979	1980
Total	46,412	48,002	49,306	45,042	33,971	28,977
Male officers: total	3,865	3,894	3,596	3,138	2,524	2,040
Commissioned officers	3,393	3,339	3,083	2,598	2,110	1,624
Time and age expiries or exercise of right at option point	1,266	1,182	1,023	1,040	814	643
Premature release at own request	1,179	1,368	1,444	1,220	1,047	759
Redundancies	535	386	287	37	29	–
Medical reasons and deaths	174	167	145	142	107	87
Other reasons	239	236	184	159	113	135
Officers designate	472	555	513	540	414	416
At own request	105	144	167	160	119	112
Medical reasons and deaths	6	10	10	20	16	6
Other reasons	361	401	336	360	279	298
Servicemen: total	38,350	40,202	41,773	38,327	28,775	24,521
Before completion of 6 months service	8,903	8,445	10,574	11,473	7,967	7,972
By exercise of right	5,612	5,725	7,410	8,164	5,672	4,871
Unsatisfactory, for disciplinary or other reasons	2,958	2,481	2,891	3,094	2,129	2,936
Medical reasons and deaths	321	229	270	199	151	160
Compassionate release	12	10	3	16	15	5
After completion of 6 months service	29,447	31,757	31,199	26,854	20,808	16,549
Time and age expiries or exercise of right at option point	15,272	15,096	13,783	12,031	9,538	8,270
Premature release at own request	7,209	8,840	10,720	9,695	7,669	5,156
Redundancies	1,243	1,843	1,364	153	111	2
Unsatisfactory, for disciplinary or other reasons	3,785	3,874	3,327	3,446	2,281	2,240
Medical reasons and deaths	1,655	1,714	1,586	1,289	1,017	764
Compassionate release	283	390	419	240	192	117
Female officers: total	361	337	299	285	213	217
Time and age expiries or exercise of right at option point	183	183	140	139	108	105
At own request	153	130	145	128	95	103
Medical reasons and deaths	13	3	6	9	4	4
Other reasons	12	21	8	9	6	5
Servicewomen: total	3,836	3,569	3,638	3,292	2,459	2,199
Time and age expiries or exercise of right at option point	312	250	166	114	90	64
By exercise of right to give 18 months notice	312	373	489	545	400	331
At own request	854	737	738	644	456	368
Marriage, pregnancy	1,905	1,859	1,730	1,502	1,166	1,065
Unsatisfactory, for disciplinary or other reasons	378	275	431	417	302	330
Medical reasons and deaths	59	54	70	54	40	31
Compassionate release	16	21	14	16	5	10

Strengths of male UK Service personnel and numbers married[1]: age distribution

1 July

TABLE 4.13

Number

	1977		1978		1979		1980	
	Total Strength	Numbers Married	Total Strength	Numbers Married	Total Strength	Numbers Married	Total Strength	Numbers Married
Male officers: all ages	41,651	32,756	40,006	31,260	39,359	30,281	39,810	30,135
Age groups								
17–19	1,005	3	836	–	861	1	870	–
20–24	4,712	686	4,645	577	4,838	546	5,248	521
25–29	6,379	4,280	5,647	3,617	5,230	3,173	5,237	3,053
30–34	7,487	6,653	7,401	6,550	7,227	6,366	6,893	6,075
35–39	6,298	5,966	6,283	5,928	6,423	6,032	6,753	6,313
40–44	6,605	6,368	6,246	6,003	5,859	5,626	5,702	5,457
45–49	5,607	5,381	5,702	5,489	5,571	5,341	5,510	5,284
50 and over	3,558	3,419	3,246	3,096	3,350	3,196	3,597	3,432
Servicemen: all ages	270,966	146,735	263,443	140,956	259,291	134,238	267,154	133,567
Age groups								
16–19	59,226	1,975	58,092	1,708	58,634	1,498	64,220	1,591
20–24	78,449	29,809	79,383	29,647	80,096	28,166	83,306	28,602
25–29	52,763	40.785	48,055	37,739	44,625	34,688	43,828	33,643
30–34	38,348	34,510	37,935	34,324	36,250	32,680	34,959	31,485
35–39	26,194	24,542	24,941	23,311	24,512	22,843	25,475	23,746
40–44	10,373	9,834	9,990	9,469	10,191	9,680	10,129	9,572
45–49	3,943	3,723	3,644	3,450	3,413	3,208	3,434	3,233
50 and over	1,670	1,557	1,403	1,308	1,570	1,475	1,803	1,695

1. Widowed and divorced personnel who have not married again, except those in the Royal Navy, the Royal Marines and the Army with dependent children, are excluded from the numbers married.

Strengths of male UK Service personnel and numbers married[1]: rank distribution in Army terms

1 July

TABLE 4.14

Number

	1977		1978		1979		1980	
	Total Strength	Numbers Married	Total Strength	Numbers Married	Total Strength	Numbers Married	Total Strength	Numbers Married
Male officers: all ages	41,651	32,756	40,006	31,260	39,359	30,281	39,810	30,135
Major General and above	231	221	225	218	229	221	228	219
Brigadier	394	380	370	359	377	366	384	373
Colonel	1,477	1,435	1,392	1,344	1,444	1,384	1,458	1,385
Lieutenant-Colonel	4,717	4,557	4,553	4,358	4,502	4,312	4,516	4,307
Major	11,903	11,216	11,642	10,926	11,577	10,836	11,614	10,797
Captain	15,545	12,958	14,887	12,223	14,203	11,433	14,100	11,237
Lieutenant and below	7,384	1,989	6,937	1,832	7,027	1,729	7,510	1,817
Servicemen: all ranks	270,966	146,735	263,443	140,956	259,291	134,238	267,154	133,567
Warrant Officer	11,154	10,797	11,024	10,698	10,953	10,611	11,219	10,860
Staff Sergeant	23,998	22,181	22,698	21,180	22,363	20,859	22,930	21,305
Sergeant	35,289	31,216	34,261	30,551	34,218	30,299	34,651	30,581
Corporal	47,073	35,818	46,682	35,762	47,548	35,492	48,440	35,329
Lance-Corporal	21,938	13,773	20,915	12,779	20,624	11,554	21,693	11,631
Private (including juniors)	131,514	32,950	127,863	29,986	123,585	25,423	128,221	23,861

1. Widowed and divorced personnel who have not married again, except those in the Royal Navy, the Royal Marines and the Army with dependent children are excluded from the numbers married.

Male recruitment and the changing population

TABLE 4.15

	Number of recruits[1]	Number of young men entering the recruiting age group[2]	Rate[3]
	Number	**Thousands**	**Per cent**
1974–75	36,852	429	8.6
1975–76	41,686	434	9.6
1976–77	36,390	441	8.3
1977–78	34,188	458	7.5
1978–79	38,774	466	8.3
1979–80	46,206	475	9.7
1980–81	46,700	486	9.6
1981–82	46,000	487	9.4
1982–83	46,000	475	9.7
1983–84	46,000	474	9.7
1984–85	46,000	459	10.0
1985–86	46,000	460	10.0
1986–87	46,000	443	10.4
1987–88	46,000	452	10.2
1988–89	46,000	431	10.7
1989–90	46,000	403	11.4
1990–91	46,000	376	12.2

1. The figures show the number of male officers and servicemen recruited in each financial year and in 1980–81 an estimate of the number expected to be recruited. The number shown for the years 1981–82 to 1990–91 is the annual average that, on current plans, the Services may be expected to seek to recruit over the whole of the period. This average figure will be subject to change, as plans are modified over time.

2. The figures show the number of males who reach the age of 16 at 1 July in each year and thus become available for recruitment. (Source: Government Actuary's Department.)

3. The number of recruits expressed as a proportion of the 16 year old male population.

Service pensioners[1]

TABLE 4.16

Number

	Total		Officers			Servicemen/women		
	Male	Female	Total	Male	Female	Total	Male	Female
At 1 January								
1975	213,265	..	..	56,983	..	..	156,282	..
1976	214,823	..	..	56,226	..	..	158,597	..
At 1 April								
1977	212,718	2,092	57,600	56,475	1,125	157,210	156,243	967
1978	216,500	2,131	58,520	57,378	1,142	160,111	159,122	989
1979	216,861	2,134	58,972	57,828	1,144	160,023	159,033	990
1980	216,921	2,165	59,294	58,132	1,162	159,792	158,789	1,003
At 1 April 1980								
age of pensioner								
under 40	7,685	68	817	808	9	6,936	6,877	59
40–49	47,266	188	6,930	6,836	94	40,524	40,430	94
50–59	59,307	695	17,340	17,024	316	42,662	42,283	379
60–69	57,804	812	20,535	20,082	453	38,081	37,722	359
70–79	35,871	323	10,991	10,776	215	25,203	25,095	108
80 and over	8,988	79	2,681	2,606	75	6,386	6,382	4
pension commenced[2]								
pre 1945	15,428	17	1,438	1,421	17	14,007	14,007	–
1945–55	36,594	91	10,234	10,151	83	26,451	26,443	8
1956–61	35,760	267	12,269	12,045	224	23,758	23,715	43
1962–69	49,096	1,002	15,323	14,875	448	34,775	34,221	554
1970–79	80,043	788	20,030	19,640	390	60,801	60,403	398

1. Comprises recipients of Service retired pay (officers) and pensions (servicemen) and invaliding and attributable retired pay and pensions but not purely disability pensions.
2. Financial years beginning 1 April, except 1945 when the effective date was 19 December.

Service pay: indices and illustrative rates of military salary[1]

1 April

TABLE 4.17

	1976	1977	1978	1979	1980
	April 1975 = 100				
Military salary index: all ranks[2]	110.0	115.3	130.1	173.7	201.7
Senior Officers (Major General and above)	100.0	101.6	111.8	140.5	171.9
Officers (up to Brigadier)	105.9	109.8	123.3	163.5	194.3
Other ranks (Sergeant and above)	108.4	113.8	129.2	175.7	204.2
Other ranks (up to Corporal)	112.6	118.4	133.4	176.9	203.4
	£				
Illustrative rates of military salary (in terms of Army ranks)[3]					
General	17,925	18,133	19,947	25,474	31,000
Brigadier	10,001	10,209	11,545	15,251	18,250
Colonel *after 4 years in the rank*	8,599	8,807	10,063	13,502	16,151
Lieutenant Colonel *after 4 years in the rank*	7,413	7,621	8,581	11,500	13,750
Major *after 4 years in the rank*	5,913	6,121	6,877	9,249	11,001
Captain *after 3 years in the rank*	4,763	4,971	5,548	7,250	8,501
Lieutenant *after 2 years in the rank*	3,814	4,004	4,457	5,677	6,650
Second Lieutenant	2,989	3,139	3,478	4,352	5,201
Warrant Officer I *class 1, band 6, scale C; after 18 years*[4]	4,756	4,964	5,636	7,631	8,983
Warrant Officer II *class 1, band 6, scale C; after 18 years*[4]	4,570	4,778	5,413	7,324	8,592
Staff Sergeant *class 1, band 5, scale C; after 18 years*[4]	4,150	4,358	4,891	6,555	7,669
Sergeant *class 1, band 5, scale C; after 12 years*[5]	3,891	4,084	4,599	6,182	7,172
Corporal *class 1, band 2, scale C*	3,519	3,694	4,183	5,662	6,482
Lance Corporal *class 1, band 1, scale C*	2,957	3,103	3,497	4,670	5,344
Private *class 2, band 1, scale C*	2,559	2,686	2,993	3,894	4,453

1. All forms of additional pay, e.g. flying pay, diving pay, parachute pay are excluded since they are not paid to the majority of Service personnel.
2. The index covers adult male UK Service personnel. In the weighting, based on paid strengths at April 1977, chaplains, legal and educational officers are excluded.
3. For officers, the mid point of the incremental scales have been used. For soldiers, the pay bandings have been selected which contain the largest number at each rank. For an explanation of classes, bands and scales, see the Introduction.
4. Includes length of service increments – £219 (up to 1979) and £328.50 (1980).
5. Includes length of service increments – £128 (up to 1979) and £182.50 (1980).

Strengths of civilian staff employed in the Ministry of Defence

TABLE 5.1

Thousands

	Actual					Estimate
	1 April				1 January	1 April
	1977	1978	1979	1980	1981	1981
MOD civilian staff: total	300.9	290.4	285.9	276.2	268.7	267.3
UK based[1]						
United Kingdom (excluding Royal Ordnance Factories):						
Non-industrial	115.0	111.4	109.8	107.8	108.9	104.2
Industrial	114.2	109.6	108.5	104.0	102.3	100.1
Royal Ordnance Factories:						
Non-industrial	5.4	5.7	5.9	5.9	5.9	5.8
Industrial	17.3	17.2	17.1	15.9	15.8	15.3
Overseas:						
Non-industrial	5.5	5.2	4.9	4.8	4.6	4.7
Industrial	1.3	1.4	1.5	1.4	1.3	1.4
Locally engaged:						
Non-industrial	11.9	11.5	11.2	11.0	10.9	10.9
Industrial	30.3	28.5	27.1	25.5	25.0	25.0

1. UK based personnel are those recruited in the UK even though in some instances they may be serving overseas. Locally engaged staff are those recruited overseas.

Functional analysis of civilian staff

TABLE 5.2

Thousands

	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Total civilian staff[1]	289.4	278.8	266.8	263.3	255.5	242.3
Nuclear strategic force	4.1	4.2	4.1	4.4	4.5	4.4
Navy general purpose combat forces	9.9	9.3	8.4	8.2	8.1	7.7
Amphibious forces	0.3	0.2	–	–	–	–
Other vessels	5.9	5.5	5.5	5.5	5.4	5.1
Aircraft	0.1	0.1	0.1	0.1	0.1	0.1
Fleet headquarters	0.1	0.1	0.1	0.2	0.2	0.2
Overseas shore establishments	3.5	3.4	2.7	2.4	2.4	2.3
European theatre ground forces (British Army of the Rhine)	30.1	29.2	28.2	27.7	26.9	25.2
Other Army combat forces	7.4	7.2	6.9	6.8	6.6	6.9
Mediterranean	3.3	3.4	3.1	2.9	2.6	2.7
Hong Kong and other Far East	4.0	3.7	3.7	3.7	3.8	4.0
Other areas	0.1	0.1	0.1	0.2	0.2	0.2
Air Force general purpose forces	12.7	12.1	11.6	11.4	11.0	10.2
Air defence	0.2	0.1	0.1	0.1	0.1	0.1
Other aircraft	0.3	0.2	0.3	0.3	0.3	0.3
Operational stations	5.4	5.2	5.1	5.1	4.9	4.6
Headquarters	1.0	1.0	1.1	1.0	0.9	0.9
General support	5.8	5.6	5.0	4.9	4.8	4.3
Reserve and Auxiliary formations	3.6	3.6	3.6	3.5	3.3	3.2
Navy	0.2	0.2	0.2	0.2	0.2	0.2
Army	2.9	2.9	2.9	2.8	2.6	2.5
Air Force	0.5	0.5	0.5	0.5	0.5	0.5
Research and Development	36.7	35.2	33.7	33.2	32.0	31.0
Ship construction and underwater warfare	3.3	3.0	3.1	3.5	3.4	3.5
Ordnance and other army	5.4	5.2	5.0	4.8	3.9	3.7
Military aircraft	7.1	7.0	6.8	6.5	6.5	7.5
Guided weapons	3.1	3.1	3.0	2.5	2.9	2.6
Other electronics	4.4	4.0	3.7	4.3	4.7	3.7
Other research and development	13.4	12.9	12.1	11.6	10.6	10.0
Training	21.6	21.1	20.5	21.0	20.8	19.7
Service colleges	3.5	3.5	3.3	3.3	3.3	3.0
Navy	4.1	4.0	3.9	4.0	3.8	3.6
Army	11.0	10.6	10.5	10.9	10.9	10.4
Air Force	3.0	3.0	2.8	2.8	2.8	2.7
Repair and associated facilities in UK	97.5	93.5	88.3	87.2	84.9	78.9
Royal dockyards	34.6	34.5	34.2	33.8	32.8	31.0
Other repair and maintenance	18.6	17.3	15.6	15.7	15.8	15.1
Storage and supply	32.6	31.1	28.9	28.3	27.2	24.7
Quality assurance	11.7	10.6	9.6	9.4	9.1	8.1
Other support functions	65.8	63.4	61.5	59.9	57.4	55.1
Whitehall organisations	14.0	13.0	12.2	12.4	11.6	11.1
Local administration communications, etc, in UK	30.7	30.4	30.2	29.0	28.1	27.1
Meteorological services	3.5	3.4	3.3	3.2	3.1	2.9
Family and personnel services in UK	11.6	11.2	10.6	10.5	9.8	9.3
Service and pensions	0.2	0.2	0.2	0.2	0.2	0.2
Other support services	5.8	5.2	5.0	4.6	4.6	4.5

1. These figures are the average strengths of industrial and non-industrial staff provided for in the Estimates and include locally engaged staff. Civilians employed in the Royal Ordnance Factories and Department of Environment staff directly employed on Defence work are excluded, figures for such staff are as follows:

	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Royal Ordnance Factories	22.0	23.0	23.5	23.5	21.9	20.9
Department of Environment civilians engaged on Defence work	22.0	28.0	28.0	26.0	24.7	23.3

Organisational strengths of UK-based civilian staff[1]

1 April

TABLE 5.3

Thousands

	1976	1977	1978	1979	1980
Ministry of Defence: total	266.2	258.7	250.4	247.7	239.8
Headquarters					
Centre	6.6	6.3	6.5	6.2	5.8
Navy	0.8	0.7	0.7	0.7	0.7
Army	1.0	0.9	0.8	0.7	0.7
Air	1.2	1.1	0.9	0.9	0.8
Procurement Executive	6.4	6.0	5.1	4.8	4.7
Maintenance, repair, storage and supply organisations					
Centre	0.6	0.6	0.6	0.5	0.5
Navy, including Royal Dockyards	59.8	59.0	59.0	58.6	57.4
Army	29.6	28.6	27.9	27.7	26.5
Air	11.3	10.5	8.5	7.7	7.7
Command and support services[2]					
Centre	17.7	16.7	15.3	14.9	14.6
Navy	10.7	10.6	10.5	10.7	10.3
Army	32.9	31.6	30.4	30.4	28.8
Air	15.0	14.4	14.3	15.1	14.1
Procurement Executive[3]	47.6	45.6	43.7	43.0	42.3
Meteorological services	3.3	3.2	3.1	3.1	3.1
Royal Ordnance Factories	21.7	22.8	22.9	23.0	21.8

1. This table includes UK-based staff serving overseas.
2. Including medical, educational and training establishments
3. Including research and development establishments.

Strengths of civilian staff[1]: United Kingdom

1 January

TABLE 5.4

Thousands

	1977	1978[2]	1979	1980	1981
United Kingdom	254.4	243.8	242.1	235.4	226.8
Non-industrial	121.5	117.1	116.9	114.2	110.1
Industrial	132.9	126.7	126.2	121.2	116.7
England	216.4	208.8	206.8	200.9	192.3
Non-industrial	108.8	105.2	104.1	102.5	98.4
Industrial	107.6	103.5	102.7	98.4	93.9
Wales	9.7	9.7	9.8	9.4	9.5
Non-industrial	3.4	3.4	3.4	3.4	3.4
Industrial	6.2	6.4	6.4	6.1	6.1
Scotland	22.8	21.9	22.2	21.9	21.9
Non-industrial	7.5	7.4	7.4	7.3	7.4
Industrial	15.2	14.6	14.8	14.6	14.5
Northern Ireland	5.5	3.4	3.3	3.2	3.1
Non-industrial	1.7	1.1	1.0	1.0	1.0
Industrial	3.9	2.2	2.3	2.2	2.1
Standard regions of England					
North	6.4	6.6	6.4	6.4	6.3
Non-industrial	2.3	2.3	2.2	2.4	2.3
Industrial	4.2	4.2	4.2	4.1	4.0
Yorkshire and Humberside	9.7	10.3	10.3	9.6	9.1
Non-industrial	4.7	5.1	5.1	5.1	4.9
Industrial	5.0	5.2	5.2	4.5	4.2
East Midlands	10.2	9.8	9.7	9.4	8.8
Non-industrial	3.5	3.5	3.4	3.4	3.2
Industrial	6.7	6.4	6.3	6.0	5.6
East Anglia	2.8	2.8	3.0	2.8	2.7
Mon-industrial	1.2	1.3	1.4	1.3	1.3
Industrial	1.6	1.6	1.6	1.4	1.4
South East	108.0	101.9	99.9	96.8	92.4
Non-industrial	60.4	57.0	55.6	54.1	51.8
Industrial	47.5	44.9	44.4	42.6	40.6
South West	54.0	53.0	53.0	51.9	49.8
Non-industrial	26.0	25.6	25.8	25.6	24.7
Industrial	28.0	27.3	27.2	26.4	25.0
West Midlands	11.7	11.3	11.2	11.2	10.8
Non-industrial	5.4	5.5	5.4	5.5	5.3
Industrial	6.2	5.8	5.8	5.7	5.5
North West	13.6	13.0	13.3	12.8	12.5
Non-industrial	5.2	4.9	5.2	5.1	4.9
Industrial	8.4	8.1	8.0	7.7	7.6

1. This table includes staff at the Royal Ordnance Factories.
2. At 1 April.

Strengths of civilian staff employed overseas

1 April

TABLE 5.5

Number

	1976	1977	1978	1979	1980
All overseas areas					
UK based	7,038	6,722	6,557	6,371	6,220
Locally engaged	44,557	42,205	40.001	38,204	36,442
Federal Republic of Germany					
UK based	2,496	2,498	2,387	2,301	2,191
Locally engaged	29,499	27,981	26,800	26,875	25,098
Elsewhere in Continental Europe[1]					
UK based	..	88	76	84	92
Locally engaged	..	865	826	792	766
Gibraltar					
UK based	310	299	297	303	299
Locally engaged	2,711	2,716	2,661	2,673	2,656
Malta					
UK based	172	160	130	4	1
Locally engaged	2,416	2,139	1,589	18	14
Cyprus					
UK based	381	346	349	363	370
Locally engaged	3,623	3,082	2,878	2,880	2,913
Elsewhere in Mediterranean, Near East and Gulf					
UK based	7	10	10	8	8
Locally engaged	–	–	1	2	–
Hong Kong					
UK based	507	424	380	394	383
Locally engaged	3,770	3,380	3,313	3,253	3 273
Elsewhere in Far East					
UK based	17	19	23	16	27
Locally engaged	842	800	793	730	754
Other areas[2]					
UK based	3,148	2,878	2,905	2,898	2,849
Locally engaged	1,696	1,242	1,140	981	968

1. In 1976, included with Federal Republic of Germany.
2. Including duty afloat and Royal Fleet Auxiliary crews.

Strengths of occupational groups or classes of civilian non-industrial staff[1]

1 April

TABLE 5.6

Thousands

	1976	1977	1978	1979	1980
Total	130.1	125.9	122.2	120.6	118.5
Administrative, executive and clerical	47.0	44.6	43.2	42.8	41.4
Secretarial	7.2	7.0	6.8	6.6	6.4
Supervisory	4.9	4.8	4.7	4.7	4.7
Professional and technological	27.6	27.2	26.7	26.6	26.5
Science	11.5	11.2	10.8	10.7	10.6
Cartographic and hydrographic	1.1	1.1	1.1	1.2	1.1
Retired officers	1.9	1.9	1.9	1.9	1.9
Police	4.4	4.2	4.0	3.8	3.9
Education	2.7	2.8	2.6	2.5	2.4
Medical and nursing	1.0	1.0	0.9	0.9	0.9
Others	20.7	20.2	19.5	18.9	18.7

1. This table covers all UK based non-industrial staff employed within the Ministry of Defence, including those working at the Royal Ordnance Factories.

Occupational recruitment and losses[1] of UK based civilian non-industrial staff[2]

TABLE 5.7

Number

	1975–76	1976–77	1977–78	1978–79	1979–80
Total:					
Recruitment	10,134	6,659	8,503	10,022	8,825
Losses	10,724	11,269	12,778	13,028	12,297
Administrative, executive and clerical:					
Recruitment	4,393	2,952	4,198	5,151	4,147
Losses	4,834	4,870	5,305	5,841	5 763
Secretarial:					
Recruitment	1,227	730	862	994	799
Losses	1,104	907	1,034	1,096	1 014
Supervisory:					
Recruitment	91	54	66	71	69
Losses	331	383	426	379	397
Professional and technological:					
Recruitment	829	266	155	226	236
Losses	1,017	1,300	1,662	1 436	1,475
Science:					
Recruitment	640	248	313	719	744
Losses	534	547	690	820	771
Cartographic and Hydrographic:					
Recruitment	124	84	137	117	78
Losses	65	67	78	116	100
Retired Officers:					
Recruitment	15	68	227	235	208
Losses	142	177	230	203	195
Police:					
Recruitment	605	179	264	246	401
Losses	329	368	475	420	357
Educational:					
Recruitment	421	403	251	256	265
Losses	301	337	369	394	366
Medical and nursing:					
Recruitment	198	189	164	190	173
Losses	202	183	212	181	151
Others:					
Recruitment	1,591	1,486	1,866	1,817	1,705
Losses	1,865	2,130	2,297	2,142	1,708

1. Recruitment figures refer to staff entering the Ministry of Defence from outside the UK Civil Service and losses relate to those leaving the Ministry of Defence and the UK Civil Service. Royal Ordnance Factory recruitment and losses are included.
2. This table excludes Royal Fleet Auxiliary crews and some staff serving on ocean weather ships.

Civilian apprentices: type of establishment

1 April

TABLE 5.8

Number

	1976	1977	1978	1979	1980
Total	6,975	7,327	7,541	7,776	7,904
Royal Dockyards[1]	3,139	3,493	3,521	3,547	3,612
Stores and maintenance establishment:					
Navy	232	259	399	445	355
Army	826	748	714	701	731
Air Force	283	257	218	240	251
Research and Development establishments	1,143	1,149	1,221	1,269	1,418
Royal Ordnance Factories	779	891	962	1,012	997
Other establishments	573	530	506	562	540

1. Also includes Clyde submarine base.

Civilian Apprentices: Location

1 April 1980

TABLE 5.9

Number Number

	Total	Royal Ordnance Factories		Other MOD Organisations	
		Male	Female	Male	Female
United Kingdom	7,904	997	–	6,860	47
England	6,412	887	–	5,478	47
Wales	402	56	–	346	–
Scotland	1,057	54	–	1,003	–
Northern Ireland	33	–	–	33	–
Standard regions of England					
North	71	47	–	24	–
Yorkshire and Humberside	327	176	–	145	6
East Midlands	369	170	–	193	6
East Anglia	–	–	–	–	–
South East	3,294	98	–	3,174	22
South West	1,755	35	–	1,715	5
West Midlands	205	–	–	198	7
North West	391	361	–	29	1

Service hospitals and in-patients

TABLE 6.1

Number

	1976	1977	1978	1979	1980
Average number of beds					
United Kingdom: total	2,798	2,555	2,352	2,297	2,287
Royal Navy	615	615	598	574	574
Army	1,354	1,117	1,020	989	979
Royal Air Force	829	823	734	734	734
Overseas: total	1,432	1,422	1,351	1,243	1,231
Royal Navy	135	133	88	65	65
Army	1.033	1.025	999	914	902
Royal Air Force	264	264	264	264	264
Average number of occupied beds					
United Kingdom: total	1,771	1,637	1,490	1,537	1,504
UK Service personnel	852	785	700	655	638
Service dependants	324	259	234	221	204
NHS/others	595	593	556	661	662
Overseas: total	870	837	762	727	749
UK Service personnel	292	282	250	226	253
Service dependants	381	332	311	301	297
Others	197	223	201	199	199
Average percentage of beds occupied					
United Kingdom	*63.3*	*64.1*	*63.4*	*67.0*	*65.8*
Overseas	*60.8*	*58.9*	*56.4*	*58.5*	*60.8*
Total number of inpatient admissions					
United Kingdom: total	77,665	73,246	68,331	72,291	76,030
UK Service personnel	31,863	30,511	28,439	27,415	28,208
Service dependants	18,781	15,832	14,479	14,396	14,620
NHS/others	27,021	26,903	25,429	30,480	33,202
Overseas: total	45,249	45,546	43,506	42,095	43,800
UK Service personnel	13,747	12,827	12,562	12,360	13,153
Service dependants	25,316	24,725	23,303	20,811	21,818
Others	6,186	8,000	7,582	8,924	8,829
Average number of admissions per bed					
United Kingdom: total	27.8	28.7	29.1	31.5	33.2
UK Service personnel	11.4	11.9	12.1	11.9	12.3
Service dependants	6.7	6.2	6.2	6.3	6.4
NHS/others	9.7	10.5	10.8	13.3	14.5
Overseas: total	31.6	32.0	32.2	33.9	35.6
UK Service personnel	9.6	9.0	9.3	9.9	10.7
Service dependants	17.7	17.4	17.2	16.7	17.7
Others	4.3	5.6	5.6	7.2	7.2
Average days in hospital per patient					
United Kingdom: total	8.3	8.2	8.0	7.8	7.2
UK Service personnel	9.8	9.4	9.0	8.7	8.3
Service dependants	6.3	6.0	5.9	5.6	5.1
NHS/others	8.1	8.0	8.0	7.9	7.3
Overseas: total	7.0	6.7	6.4	6.3	6.2
UK Service personnel	7.8	8.0	7.3	6.7	7.0
Service dependants	5.5	4.9	4.9	5.3	5.0
Others	11.7	10.2	9.7	8.1	9.0

Strengths of uniformed medical staff[1]

TABLE 6.2

Number

	1 April				1 January
	1977	1978	1979	1980	1981
Qualified doctors: total	1,254	1,243	1,181	1,176	1,196
Royal Navy	283	286	282	272	295
Army	539	544	504	496	504
Royal Air Force	432	413	395	408	397
Qualified dentists: total	384	371	366	376	376
Royal Navy	93	90	91	95	99
Army	181	171	172	173	173
Royal Air Force	110	110	103	108	104
Nursing services: total[2]	2,772	2,719	2,686	2,917	2,996
QARNNS[3]	607	581	568	586	600
QARANC[4]	1,483	1,463	1,418	1,402	1,517
PMRAFNS[5]	682	675	700	929	879
Medical and dental support staff: total	5,991	5,870	5,807	5,575	5,620
Royal Navy	1,245	1,243	1,295	1,253	1,212
Army	3,158	3,108	3,002	2,893	2,976
Royal Air Force	1,588	1,519	1,510	1,429	1,432

1. Includes staff employed at units (including ships) and in hospitals.
2. Comprises trained personnel and personnel undertaking 'on-the-job' training and held against established posts.
3. Queen Alexandra's Royal Naval Nursing Service.
4. Queen Alexandra's Royal Army Nursing Corps.
5. Princess Mary's Royal Air Force Nursing Service (from 1980 includes male nurses).

Sickness of UK Service personnel: selected diagnoses of cases[1]

TABLE 6.3

Number

	Code numbers[2]		1975	1976	1977	1978	1979
Average strength		male	319,959	318,539	312,597	304,466	300,573
		female	14,500	14,601	14,485	14,763	15,467
All causes	001–999	male	56,848	60,827	51,292	53,101	50,034
		female	5,067	5,621	4,652	5,098	5,151
All diseases	001–799	male	43,107	47,090	37,985	40,883	38,341
		female	4,575	5,058	4,138	4,633	4,591
Infective and parasitic diseases	001–139	male	4,610	5,118	4,302	4,803	3,688
		female	470	618	453	470	353
Neoplasms	140–239	male	579	688	585	517	524
		female	77	85	87	91	42
Endocrine, nutritional and metabolic diseases	240–279	male	506	491	436	356	342
		female	28	29	39	41	29
Diseases of blood and blood forming organs	280–289	male	112	100	98	100	104
		female	16	27	17	14	12
Mental disorders	290–319	male	1,620	1,549	1,333	1,151	1,292
		female	193	149	131	125	148
Diseases of the nervous system and sense organs	320–389	male	1,345	1,324	1,181	1,150	1,174
		female	112	120	71	87	92
Diseases of the circulatory system	390–459	male	1,888	2,829	1,774	1,730	1,633
		female	59	61	54	40	49
Diseases of the respiratory system	460–519	male	12,611	15,482	10,175	13,235	10,828
		female	1,420	1,803	1,098	1,627	1,357
Diseases of the digestive system	520–579	male	6,718	6,614	5,952	5,605	6,705
		female	635	594	606	616	808
Diseases of the genito-urinary system	580–629	male	1,778	1,723	1,595	1,591	1,812
		female	476	419	411	388	458
Complications of pregnancy, childbirth and the puerperium	630–676	female	111	120	143	162	185
Diseases of skin and subcutaneous tissue	680–709	male	2,320	2,368	2,223	2,117	1,996
		female	136	156	117	139	155
Diseases of the musculoskeletal system	710–739	male	5,142	5,169	5,115	5,176	5,590
		female	330	353	394	385	441
Congenital anomalies	740–759	male	309	258	270	310	283
		female	33	37	40	32	28
Symptoms and ill-defined conditions	780–799	male	3,569	3,377	2,946	3,042	2,369
		female	479	487	477	416	434
All injuries	800–999	male	11,047	10,971	10,664	9,610	9,380
		female	420	472	448	369	442
Aircraft accident injuries[3]		male	160	151	137	138	142
		female	4	4	7	4	18
Training and exercise injuries[3]		male	515	511	490	480	673
		female	6	10	1	11	22
Road traffic accident injuries[3]		male	1,675	1,786	1,718	1,540	1,548
		female	57	54	57	61	46
Other injuries[3]		male	8,697	8,523	8,319	7,452	7,017
		female	353	404	383	293	356
Supplementary classifications[4]	V01–V82	male	2,694	2,766	2,643	2,608	2,313
		female	72	91	66	96	118

1. Based upon spells of off-duty sickness lasting 2 days or more terminating during the year, excluding for the Army, sickness not requiring admission to a medical unit. Includes all cases whether occurring on or off duty.
2. Code numbers refer to the Ninth Revision (1977) of the *International Statistical Classification of Diseases, Injuries and Causes of Death.* Prior to 1979 the Eighth Edition (1967) was used and this may mean that some groups of diseases are not exactly comparable, the changes however are small.
3. Where an injury could be classified under more than one cause (eg aircraft crash during an exercise) then the injury is shown under the first listed cause (ie in the example 'Aircraft accident').
4. Used where no classifiable diagnosis is reported or where the person is not sick, eg admission for investigation, preventive measure or elective surgery.

Medical discharges of UK Service personnel

TABLE 6.4

Number

	Code numbers[1]		1975	1976	1977	1978	1979
Average strength		male	319,959	318,539	312,597	304,466	300,573
		female	14,500	14,601	14,485	14,763	15,467
All causes	001–999	male	1,746	1,694	1,630	1,575	1,330
		female	76	55	61	57	52
All diseases	001–799	male	1,462	1,436	1,352	1,307	1,130
		female	75	51	59	56	50
Infective and parasitic diseases	001–136	male	15	13	8	14	9
		female	1	1	–	–	–
Malignant neoplasms	140–208	male	17	16	18	13	15
		female	1	1	2	4	–
Benign neoplasms & neoplasms of unspecified nature	210–239	male	7	6	3	8	4
		female	–	–	–	–	–
Endocrine, metabolic and blood diseases	240–289	male	42	66	56	56	42
		female	–	2	2	3	2
Psychoses & non-psychotic mental disorders	290–316	male	407	358	323	178	170
		female	36	16	22	13	7
Epilepsy	345	male	70	81	74	68	62
		female	2	4	2	2	4
Migraine	346	male	22	18	4	6	12
		female	2	1	–	3	–
Other diseases of the nervous system & sense organs	320–379 nes	male	55	74	50	60	66
		female	2	2	4	2	–
Diseases of the ear	380–389	male	95	99	129	124	124
		female	1	2	1	8	3
Hypertensive disease and ischaemic heart disease	401-414	male	43	47	49	37	31
		female	–	–	–	–	–
Other diseases of the circulatory system	390–459 nes	male	48	33	37	37	35
		female	–	2	2	2	1
Bronchitis, emphysema & asthma	490–493	male	69	58	63	75	54
		female	2	1	1	3	3
Other diseases of the respiratory system	460–519 nes	male	13	16	6	12	7
		female	–	–	–	1	2
Peptic ulcers	531–533	male	52	40	28	39	16
		female	–	–	1	–	–
Other diseases of the digestive system	520–579 nes	male	38	27	27	25	22
		female	2	2	2	2	1
Diseases of genito-urinary system	580–629	male	11	13	14	7	19
		female	–	–	–	1	–
Diseases of the skin & subcutaneous tissue	680–709	male	55	54	48	51	47
		female	3	4	–	2	5
Arthritis and spondylitis	(710–716) (720–721)	male	42	49	50	47	29
		female	4	–	2	1	1
Other diseases of the musculoskeletal system	710–739 nes	male	269	260	279	355	299
		female	12	11	14	8	15
Congenital anomalies	740–759	male	38	55	46	51	40
		female	3	1	2	1	4
All other diseases	000–799 nes	male	54	53	40	44	27
		female	4	1	2	–	2
All injuries	800–999	male	284	258	278	268	200
		female	1	4	2	1	2

1. Code numbers refer to the Ninth Revision (1977) of *the International Statistical Classification of Diseases, Injuries and Causes of Death.* Prior to 1979 the Eighth Edition (1967) was used and this may mean that some groups of diseases are not exactly comparable, the changes however are small.

Deaths of UK Service personnel[1]

TABLE 6.5

Number

	Code numbers[2]	1976	1977	1978	1979	1980
All Services						
All causes	001–999	413	412	393	384	365
Male	001–999	405	404	387	378	363
Female	001–999	8	8	6	6	2
All diseases	001–799	169	165	125	133	118
Neoplasms	140–239	54	62	43	50	37
Ischaemic heart disease	410–414	62	57	38	47	41
Other heart disease	390–429 nes	7	6	10	5	4
Cerebrovascular disease	430–438	14	12	9	7	6
Other diseases	001–799 nes	32	28	25	24	30
All injuries	800–999	244	247	268	251	247
Road traffic injuries		119	142	135	132	143
Other injuries		125	105	133	119	104
Royal Navy and Royal Marines						
All causes	001–999	67	91	61	73	77
All diseases	001–799	27	32	18	24	28
Neoplasms	140–239	10	11	11	12	8
Ischaemic heart disease	410–414	7	10	3	6	7
Other heart disease	390–429 nes	3	4	2	1	4
Cerebrovascular disease	430–438	3	1	1	1	3
Other diseases	001–799 nes	4	6	1	4	6
All injuries	800–999	40	59	43	49	49
Road traffic injuries		22	32	20	32	28
Other injuries		18	27	23	17	21
Army						
All causes	001–999	236	233	232	215	193
All diseases	001–799	87	82	62	69	56
Neoplasms	140–239	19	29	17	19	13
Ischaemic heart disease	410–414	36	27	20	30	23
Other heart diseases	390–429 nes	3	2	6	3	–
Cerebrovascular disease	430–438	9	8	4	5	3
Other diseases	001–799 nes	20	16	15	12	17
All injuries	800–999	149	151	170	146	137
Road traffic injuries		76	86	90	67	81
Other injuries		73	65	80	79	56
Royal Air Force						
All causes	001–999	110	88	100	96	95
All diseases	001–799	55	51	45	40	34
Neoplasms	140–239	25	22	15	19	16
Ischaemic heart disease	410–414	19	20	15	11	11
Other heart disease	390–429 nes	1	–	2	1	–
Cerebrovascular disease	430–438	2	3	4	1	–
Other diseases	001–799 nes	8	6	9	8	7
All injuries	800–999	55	37	55	56	61
Road traffic injuries		21	24	25	33	34
Other injuries		34	13	30	23	27

1. Regular Service personnel only. For average strengths see table 6.3. Includes all deaths whether occuring on or off duty.
2. Code numbers refer to the Ninth Revision (1977) of the *International Statistical Classification of Diseases, Injuries and Causes of Death.*

Service aircraft: accidents, rates and casualties

TABLE 6.6

	1976	1977	1978	1979	1980
Number of accidents					
All Service: total	39	28	39	39	37
Helicopters	11	11	14	15	12
Fixed wing	28	17	25	24	25
Royal Navy	9	8	8	3	5
Helicopters	7	7	6	3	3
Fixed wing	2	1	2	–	2
Army	3	4	7	11	9
Helicopters	3	3	6	10	7
Fixed wing	–	1	1	1	2
Royal Air Force	27	16	24	25	23
Helicopters	1	1	2	2	2
Fixed wing	26	15	22	23	21
Rates per 10,000 flying hours					
Royal Navy	*1.00*	*0.88*	*0.88*	*0.35*	*0.54*
Helicopters	*1.22*	*1.13*	*0.95*	*0.47*	*0.49*
Fixed wing	*0.62*	*0.34*	*0.73*	–	*0.65*
Army	*0.29*	*0.39*	*0.69*	*1.18*	*0.95*
Helicopters	*0.31*	*0.32*	*0.65*	*1.17*	*0.81*
Fixed wing	–	*1.31*	*1.26*	*1.22*	*2.48*
Royal Air Force	*0.58*	*0.34*	*0.51*	*0.52*	*0.47*
Helicopters	*0.18*	*0.18*	*0.35*	*0.33*	*0.33*
Fixed wing	*0.64*	*0.36*	*0.53*	*0.55*	*0.49*
Casualties					
Killed: total	25	14	32	21	23
Royal Navy personnel	1	4	2	3	3
Royal Marine personnel	–	–	–	–	3
Army personnel	4	1	7	4	3
Royal Air Force personnel [1]	20	6	23	11	13
Civilians	–	3	–	3	1
Seriously injured: total	9	16	17	12	12
Royal Navy personnel	1	1	1	–	2
Royal Marine personnel	–	–	–	–	–
Army personnel	–	1	4	3	1
Royal Air Force personnel	8	14	9	9	9
Civilians	–	–	3	–	–

1. Including Allied Air Force officers on exchange (1 in 1976, 1 in 1978, 2 in 1979 and 1 in 1980) and 1 foreign Air Force student in 1978.

Service married accommodation

15 January [1]

TABLE 6.7

Thousands

	1976	1977	1978	1979	1980
United Kingdom: total	102.4	98.3	98.0	95,4	92.7
Royal Navy:					
Permanent holdings	16.0	16.2	16.3	15.9	15.7
Furnished hirings	0.9	0.6	0.3	0.2	0.1
Army:					
Permanent holdings [2]	44.4	45.1	45.5	44.7	44.4
Furnished hirings	2.0	1.5	0.6	0.3	0.1
Royal Air Force:					
Permanent holdings	38.0	34.2	34.9	34.1	32.2
Unfurnished hirings	0.1	0.1	0.1	–	–
Furnished hirings	1.0	0.6	0.3	0.2	0.1
Overseas: total	47.2	47.6	47.3	46.8	46.5
Royal Navy:					
Permanent holdings	0.8	0.8	0.9	0.7	0.7
Hirings	0.7	0.5	0.1	–	–
Army:					
Permanent holdings	15.5	16.0	16.1	16.1	16.1
Multiple hirings in BAOR	16.4	16.5	16.7	17.3	17.2
Other hirings	4.2	3.9	3.8	3.2	2.8
Royal Air Force:					
Permanent holdings	4.7	4.7	4.5	4.4	4.3
Unfurnished hirings in RAFG[3]	3.7	4.1	4.3	4.3	4.5
Other hirings	0.6	0.5	0.4	0.1	0.3
Tri-service hirings	0.6	0.6	0.6	0.6	0.6

1. Prior to 1978 the different Services collated information at different times but all figures were collected between 1 December in the previous year and 1 February.
2. Including a small number of unfurnished hirings taken on from local authorities and the Scottish Special Housing Association, which are not recorded separately.
3. Includes multiple hirings.

House ownership by Service personnel[1]

TABLE 6.8

	September–October			October–November	November–December
	1970	1973	1977	1978	1980[3]
	Thousand				
Estimated number of house owners[2]					
All ranks: total	45.6	55.0	55.2	54.8	56.4
Royal Navy and Royal Marines	20.7	21.1	20.8	20.7	20.7
Army	11.0	14.1	15.1	15.5	16.9
Royal Air Force	14.0	19.8	19.4	18.6	20.8
Officers	14.7	19.9	19.8	20.0	20.5
Royal Navy and Royal Marines	5.4	6.0	5.9	5.9	6.0
Army	4.1	6.1	6.8	6.9	8.0
Royal Air Force	5.2	7.8	7.0	7.3	8.5
Servicemen	30.9	35.1	35.4	34.8	35.9
Royal Navy and Royal Marines	15.3	15.1	14.9	14.9	14.7
Army	6.9	8.1	8.2	8.7	8.9
Royal Air Force	8.8	12.0	12.3	11.3	12.3
	Per cent				
Percentage of personnel owning their own houses[2]					
All ranks: total	*22*	*26*	*31*	*33*	*35*
Royal Navy and Royal Marines	*45*	*50*	*57*	*60*	*62*
Army	*12*	*15*	*17*	*19*	*21*
Royal Air Force	*19*	*27*	*36*	*36*	*41*
Officers	*40*	*54*	*62*	*66*	*69*
Royal Navy and Royal Marines	*69*	*80*	*83*	*85*	*90*
Army	*30*	*45*	*54*	*57*	*69*
Royal Air Force	*34*	*50*	*57*	*63*	*74*
Servicemen	*18*	*21*	*24*	*25*	*27*
Royal Navy and Royal Marines	*40*	*43*	*51*	*53*	*55*
Army	*9*	*10*	*11*	*12*	*13*
Royal Air Force	*15*	*22*	*29*	*29*	*31*

1. These figures derive from surveys and are thus subject to sampling error. Surveys were conducted only in the years shown. House is taken to include flat and maisonette but to exclude caravan or mobile home.
2. Married male personnel only.
3. Provisional

Service Children's Education Authority schools

TABLE 6.9

Thousands

	1976	1977	1978	1979	1980
Pupils in SCEA schools –enrolment in Autumn term					
All schools: total	41.1	39.2	36.3	34.5	33.7
Infants and Juniors	29.9	28.6	26.6	25.2	24.3
BAOR and NW Europe	24.7	24.1	22.7	21.1	20.5
Elsewhere overseas	5.2	4.5	3.9	4.0	3.8
Secondary	11.2	10.6	9.7	9.3	9.4
BAOR and NW Europe	9.2	8.8	8.4	8.0	8.0
Elsewhere overseas	2.0	1.8	1.3	1.3	1.4
Teachers in SCEA schools: total	2.5	2.4	2.2	2.1	2.0
BAOR and NW Europe	2.0	2.0	1.9	1.7	1.7
Elsewhere overseas	0.5	0.4	0.3	0.3	0.3

Social expenditure included in the Defence budget[1]

TABLE 6.10

£' million

	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Total expenditure	570	633	697	830	963	1,022
Education[2]	70	86	94	114	123	131
Married accommodation	93	85	79	108	106	76
Medical services	108	117	127	150	191	212
Service pensions[3]	299	345	397	458	543	603

1. The figures given in this table are based on Estimates and reflect the price levels of the Estimates for the years in question.
2. Largely education of Service children.
3. Expenditure on Service pensions is included above as a social payment because it does not relate to the current defence effort.

Service entertainment and welfare

TABLE 6.11 — Number

	1976	1977	1978	1979	1980
British Forces Broadcasting Service (BFBS) – estimated audiences[1]					
BFBS radio (4 stations)	203,000	204,000	197,500	187,300	195,500
BFBS TV (Federal Republic of Germany)	18,000	18,000	40,500	100,000	145,000
Combined Services Entertainment					
Production of stage and cabaret shows (for Northern Ireland and overseas)	33	43	43	42	44
Cinemas					
Service cinemas overseas	64	65	64	63	60
of which					
Federal Republic of Germany	48	48	48	47	45
Publishing – circulation of Service journal[2]					
Navy News (monthly)	72,200	77,500	79,750	81,800	84,900
Soldier News[3] (fortnightly)	–	–	–	21,870	18,978
Soldier Magazine (monthly)	37,166	38,333	38,833	35,545	34,650
RAF News (fortnightly)	36,669	34,565	32,442	31,412	31,808
NAAFI trading outlets[4]					
United Kingdom	710	690	679	683	690
BAOR/RAFG	321	325	317	317	280
Elsewhere including H.M. Ships	201	196	194	184	177

1. Comprising Service personnel and their dependants and UK-based civilians. The radio broadcasting had the following sources for a typical week in 1980:

Hours

BFBS Station	Total	Programmes produced		BBC
		locally	in London	
Cologne	168	76.1	38.5	53.4
Cyprus (2 channels)	175.8	95.9	50.2	29.7
Gibraltar (2 channels)	176.9	101.9	34.7	40.2
Hong Kong				
English	30	2.6	22.8	4.7
Nepali	59.7	51.5	0.3	7.9

The London Programme Unit of BFBS Radio supplies approximately 30 hours of packaged programmes weekly, some of which are repeated the same week. Programmes are also supplied to HM ships. Television programmes are drawn proportionately from the 3 UK TV channels for the 56 weekly hours in the Federal Republic of Germany. A TV cassette service of 21 hours a week, drawn from BFBS TV for British Forces in the Federal Republic of Germany started at the end of 1980 to serve British Service personnel in Belize, Sardinia and the Falkland Islands.

2. The figures quoted give the average per issue for each year.
3. First published in April 1979.
4. Trading outlets comprise shops and messing issue stores, Junior Ranks clubs and ships canteens. Figures for petrol stations, sub-post offices, bowling alleys and shops attached to Junior Ranks clubs are included but shops and stores opened for military exercises or temporary training camps are excluded.

Land and foreshore holdings: location[1]

1 April

TABLE 6.12

Thousand acres

	1976	1977	1978	1979	1980
United Kingdom					
Land: Freehold	554.1	551.4	548.9	546.6	544.1
Leasehold	29.5	29.4	29.5	29.5	29.5
Foreshore: Freehold	32.6	32.6	32.6	32.8	32.7
Leasehold	12.0	12.2	12.2	12.2	12.2
Rights	72.9	74.9	75.3	77.3	76.8
England					
Land: Freehold	451.8	449.4	447.2	446.3	444.5
Leasehold	19.8	19.9	19.8	19.8	19.7
Foreshore: Freehold	26.0	26.0	26.0	26.0	25.9
Leasehold	11.4	11.4	11.4	11.5	11.5
Rights	63.2	64.5	65.5	67.4	67.0
Wales					
Land: Freehold	50.9	50.8	50.8	50.3	49.9
Leasehold	1.7	1.7	1.7	1.7	1.7
Foreshore: Freehold	2.6	2.6	2.6	2.6	2.6
Leasehold	–	–	–	–	–
Rights	3.0	3.0	3.0	3.0	3.0
Scotland					
Land: Freehold	45.4	45.4	45.1	44.3	44.0
Leasehold	6.4	6.4	6.1	6.1	6.1
Foreshore: Freehold	3.6	3.6	3.6	3.8	3.8
Leasehold	0.5	0.5	0.5	0.4	0.5
Rights	6.5	6.5	6.5	6.6	6.6
Northern Ireland					
Land: Freehold	6.0	5.8	5.8	5.7	5.7
Leasehold	1.6	1.4	1.9	1.9	2.0
Foreshore: Freehold	0.4	0.4	0.4	0.4	0.4
Leasehold	0.1	0.3	0.3	0.3	0.2
Rights	0.2	0.9	0.3	0.3	0.2
Defence land (freehold and leasehold) **used for agricultural purposes**					
Used for grazing only	149.6	153.0	148.6	151.1	148.7
For agricultural use	127.9	124.2	127.2	127.0	132.3
Total	277.5	277.2	275.8	278.1	281.0
of which:					
England	214.5	213.0	212.6	216.5	218.3
Wales	37.3	37.7	37.7	37.2	37.9
Scotland	23.7	24.4	23.6	21.9	22.1
Northern Ireland	2.0	2.1	1.9	2.5	2.7

1. Comprises land and foreshore owned by the Ministry of Defence and land and foreshore over which it has limited rights under grants or licences. Includes also land declared as surplus to Defence requirements: in 1980 about 15,500 acres were awaiting disposal by the Property Services Agency. MOD office buildings, which are held by the Department of the Environment as part of the Civil Estate, are excluded.

Land and foreshore holdings: type of use

1 April 1980

TABLE 6.13

Thousand acres

	Land				Foreshore		
	Free-hold	Lease-hold	Rights		Free-hold	Lease-hold	Rights[1]
			Perma-nent	Licence			
Total	544.1	29.5	8.5	67.4	32.7	12.2	0.8
Royal Navy	27.5	6.5	0.9	32.9	2.0	–	–
Airfields, etc	3.6	0.3	–	0.1	–	–	–
Naval bases	2.4	–	–	–	0.2	–	–
Training areas, ranges and camps	4.4	5.8	0.1	32.8	0.1	–	–
Barracks and camps, etc	3.5	0.1	0.4	–	0.1	–	–
Storage and supply depots	8.4	0.1	0.1	–	0.5	–	–
Radio and W/T stations	3.2	–	0.2	–	–	–	–
Miscellaneous	2.1	0.1	0.1	–	1.1	–	–
Army	365.9	10.6	4.2	28.8	4.3	0.8	0.8
Airfields, etc	1.1	–	0.1	–	–	–	–
Training areas, ranges and camps	326.5	9.7	3.8	28.8	3.7	0.8	0.8
Barracks and camps, etc	22.7	0.7	0.3	–	0.6	–	–
Storage and supply depots	12.4	–	–	–	–	–	–
Radio and W/T stations	0.7	–	–	–	–	–	–
Miscellaneous	2.4	0.2	0.1	–	–	–	–
Royal Air Force	98.1	11.4	2.3	3.8	0.1	9.5	–
Airfields, etc	67.5	0.1	1.8	0.4	–	–	–
Training areas, ranges and camps	9.1	10.1	–	3.0	–	9.4	–
Barracks and camps, etc	2.7	0.1	0.1	–	–	–	–
Storage and supply depots	7.4	0.2	0.1	–	–	–	–
Radio and W/T stations	9.4	0.9	0.1	0.5	–	–	–
Miscellaneous	2.0	0.1	0.2	–	–	–	–
Research establishments, etc	52.6	1.1	1.2	1.9	26.4	1.9	–

1. All rights over foreshore in 1980 were under licences.

Armed Forces and security in Northern Ireland

TABLE 7.1

Number

	1976	1977	1978	1979	1980	1981
Regular Army[1]						
Force level at 1 April[2]:						
Major units of the combat arms[3]	15	14	13	13	12	10
of which:						
Resident units	5	5	5	6	6	6
Roulement units	10	9	8	7	6	4
Total units which served in the province during the year	53	47	41	40	32	..
Ulster Defence Regiment at 1 April[2]						
Full time: total	1,528	1,669	2,192	2,469	2,554	2,712
Males	1,510	1,639	2,113	2,346	2,416	2,556
Females	18	30	79	123	138	156
Part time: total	6,137	5,962	5,670	5,154	4,819	4,719
Males	5,547	5,355	5,039	4,556	4,267	4,139
Females	590	607	631	597	552	580
Deaths						
Service personnel	29	29	21	48	16	..
of which serving in the Ulster Defence Regiment	15	14	7	10	8	..
Security						
Bombs neutralised	426	169	178	143	120	..
Weight of explosives (lbs):						
Neutralised	16,252	2,188	5,860	4,530	6,405	..
In explosions (estimated)	17,596	2,839	5,443	11,180	9,059	..
Finds:						
Explosives (lbs)	21,714	3,809	2,108	1,966	1,810	..
Firearms	837	590	400	301	201	..
Ammunition	70,306	52,091	43,511	46,280	28,078	..
Persons charged with serious security-type offences	1,276	1,308	843	670	540	..

1. Includes Royal Marine commandos in the Infantry role.
2. In 1981 at 1 January.
3. Excludes temporary deployments.

Search and rescue operations at home

TABLE 7.2

Number

	1976	1977	1978	1979	1980
Incidents: total[1]	1,316	1,206	1,373	1,268	1,063
Royal Navy	295	277	401	355	308
Royal Air Force	1,030	952	940	925	763
Call outs[2]					
of Helicopters: total[3]	1,535	1,206	1,317	1,309	1,082
Royal Navy[3]	324	312	404	407	347
Royal Air Force[3]	1,211	894	913	902	735
of Other aircraft: total	58	67	113	98	68
Royal Navy	–	3	–	2	–
Royal Air Force	58	64	113	96	68
of Marine craft (Royal Air Force only)	7	7	11	2	9
of Mountain rescue teams (Royal Air Force only)	45	47	60	55	45
Persons assisted: total[4]	659	713	1,030	986	856
by Helicopters: total	648	692	945	974	834
Royal Navy	179	181	275	314	190
Royal Air Force	469	511	670	660	644
by Marine craft (Royal Air Force only)	–	3	6	–	1
by Mountain rescue teams (Royal Air Force only)	11	18	79	12	21

1. Since both the Royal Navy and the Royal Air Force are involved in some incidents, the total may not be the sum of the incidents attended by the Services separately.
2. More than one element of the Search and Rescue services may be called out to a reported incident.
3. For 1976 these figures are estimated numbers of journeys based on the reported flying hours and the average flight length.
4. Figures for persons assisted relate only to numbers of persons who were actually removed (alive) from a hazard or who were assisted in an urgent medical incident.

Military aid to civil ministries during industrial disputes: involvement of Service personnel

TABLE 7.3

	Service personnel on reduced standby[1] (Estimated man weeks)	Service personnel deployed		
		Period (Weeks)	Number	Total Effort (Estimated man weeks)
1977–78:				
All disputes	20,000			
of which:				
Firemen		9	20,000	180,000
1978–79:				
All disputes	150,000			
of which:				
Oil tanker drivers[2]		1	350	350
Ambulance drivers		4	300	1,200
1979–80:				
All disputes	–			
1980–81: to 28 February 1981				
All disputes	60,000			
of which:				
Prison officers		17	1,000	17,000

1. 72 or less hours notice to deploy. The shorter the notice the greater the domestic disruption.
2. During this dispute, Service personnel were deployed only in Northern Ireland.

Expenditure on offshore tasks included in the Defence budget[1]

TABLE 7.4

£ million

	1978–79	1979–80	1980–81	1981–82
Total expenditure on offshore tasks	15.97	21.80	26.60	37.00
Offshore protection				
Fishery protection and the protection of oil and gas installations:				
RN Fishery Protection Squadron—Offshore Divsion[2]	2.01	2.80	3.80	7.90
RAF Nimrod aircraft[2]	3.26	4.00	4.90	6.30
Fishery protection only:				
RN Fishery Protection Squadron—Coastal Division[3]	4.34	5.60	5.20	6.80
RN Sea Devon aircraft	0.09	0.10	0.20	–
RN Sea King helicopters	–	–	–	0.20
Headquarters of Captain Fishery Protection	0.11	0.20	0.40	0.40
Traffic Separation Scheme—Dover Straits Patrol[4]				
HM Ships	0.29	–	–	–
RN Sea Devon Aircraft	0.05	0.10	–	–
Hydrographic surveys of home waters	5.82	9.00	12.10	15.40

1. The figures given in this table are based on Estimates and reflect the price levels of the Estimates for the years in question.
2. These costs recoverable from Department of Energy and the Fisheries Departments, with the exception of the Offshore Division figure for 1981–82, which includes non-recoverable running costs for 2 RN vessels.
3. Includes £0.75 million capital expenditure in 1978–79, and £0.7 million in 1979–80.
4. Department of Trade contributed towards these costs. HM ships and RN aircraft are no longer employed on a regular basis for this purpose.

Fishery protection[1]

TABLE 7.5

Number

		1977	1978	1979	1980
Vessels boarded: total		1,702	1,637	1,563	1,508
of which in	*sea areas*[2]				
North Sea	IV	904	783	746	638
Faroes	Vb	5	14	6	26
West of Scotland/Rockall	VI				
Irish Sea/Celtic Sea/Bristol Channel/ Western Approaches/English Channel	VII	793	840	811	844
Convictions arising from RN boardings[3]**:** total		22	20	24	16
of which					
France		6	8	4	8
Holland		1	–	2	–
Belgium		1	1	–	–
Denmark		5	–	3	2
Spain		9	9	3	1
Eire		–	–	–	1
United Kingdom		–	2	12	4

Source: Ministry of Agriculture, Fisheries and Food

1. This table relates to activities of the Coastal and Offshore Divisions of the RN Fishery Protection Squadron operating within the total UK fishing limits. Boardings carried out by vessels of the Department of Agriculture and Fisheries for Scotland are not included.
2. Sea areas as defined by the International Council for the Exploration of the Sea.
3. Up to 1979 convictions obtained from prosecutions initiated by the Ministry of Agriculture, Fisheries and Food only. In 1980 comprises convictions obtained from prosecutions initiated by all United Kingdom Fisheries Departments.

Selected qualifications obtained under Service sponsorship

TABLE 7.6

Number

	1975	1976	1977	1978	1979
Degrees[1]					
Postgraduate degrees: total	127	121	113	115	94
Royal Navy and Royal Marines	7	10	18	22	20
Army	103	95	78	74	62
Royal Air Force	17	16	17	19	12
Medical and dental degrees: total	80	112	145	126	118
Royal Navy and Royal Marines	12	35	22	22	29
Army	39	40	73	81	60
Royal Air Force	29	37	50	23	29
Other first degrees: total	357	361	378	376	397
Royal Navy and Royal Marines	105	135	112	130	125
Army	98	102	171	165	204
Royal Air Force	154	124	95	81	68
Higher National Certificates: total[2]	20	19	29	19	44
Royal Navy and Royal Marines	6	3	11	5	–
Army[3]	14	16	18	14	44
Royal Air Force	–	–	–	–	–
Ordinary National Certificates: total[2]	434	326	439	444	247
Royal Navy and Royal Marines	240	229	218	232	123
Army[3]	40	30	35	37	46
Royal Air Force	154	67	186	175	78
General Certificate of Education[2]					
Certificates awarded: total[4]	4,524	4,324	3,466	3,023	2,930
Royal Navy and Royal Marines	1,569	1,689	1,414	1,183	1,248
Army	783	670	542	534	640
Royal Air Force	2,172	1,965	1,510	1,306	1,042
Advanced level passes: total	58	59	49	29	58
Royal Navy and Royal Marines	8	4	8	8	8
Army	16	23	17	4	32
Royal Air Force	34	32	24	17	18
Ordinary level passes: total[4]	5,261	4,898	4,016	3,347	2,936
Royal Navy and Royal Marines	1,778	1,799	1,657	1,268	1,240
Army	965	859	650	600	511
Royal Air Force	2,518	2,240	1,709	1,479	1,185
City and Guilds of London Institute					
Operator certificates: total[2]	701	859	3,265	1,503	604
Royal Navy and Royal Marines	351	420	2,878	1,058	202
Army[3]	350	439	387	327	402
Royal Air Force	–	–	–	–	–
Craft certificates: total[2]	1,727	2,584	2,141	2,499	4,411
Royal Navy and Royal Marines	243	309	319	172	737
Army[3]	548	971	685	784	1,604
Royal Air Force	936	1,304	1,137	1,543	2,070
Technician certificates: total[2]	766	903	1,018	850	1,006
Royal Navy and Royal Marines	306	299	251	159	46
Army[3]	333	339	314	361	616
Royal Air Force	127	265	453	330	344
Technician Education Council					
Higher certificates/diplomas: total[2]	–	–	..	..	15
Royal Navy and Royal Marines	–	–	–	–	–
Army[3]	–	–	10	5	15
Royal Air Force	–	–	–	–	–
Certificates/diplomas: total[2]	–	–	..	..	843
Royal Navy and Royal Marines	–	–	–	144	362
Army[3]	–	–	..	..	..
Royal Air Force	–	–	–	192	481
Heavy Goods Vehicle driving test passes: total[5]	8,771	8,792	8,389	9,322	9,046
Royal Navy and Royal Marines	162	199	152	44	41
Army	7,771	7,570	7,411	8,310	7,611
Royal Air Force	838	1,023	826	968	1,394

1. Includes degrees obtained by serving personnel and University Cadets at Universities and Service educational establishments.
2. Includes only candidates studying for and/or taking examinations directly through their Service.
3. Army figures shown are minima: true Army figures may be considerably higher.
4. Excluding Ordinary level passes gained in Advanced level examinations.
5. All heavy goods vehicle classes combined.

Outflow of trained Service personnel: skill or trade

TABLE 7.7

Number

	1978–79	1979–80
Engineering:		
Mechanical	4,023	3,616
Electrical	2,856	2,997
Civil	990	734
Administration and personnel management[1]	188	86
Accounting and secretarial	1,953	1,229
Supply and stores	1,576	1,250
Catering	1,889	1,448
Communications[2]	2,537	1,916
Mechanical transport[3]	4,181	3,046
Aviation[4]	1,313	1,199
Education[5]	272	184
Medical and dental[6]	1,451	900
Security and fire services	915	751

1. Including officers of the rank of Captain RN and above, and equivalent ranks in the other Services, who are not included in other categories.
2. Comprising all personnel trained in the control and operation of communication systems.
3. Comprising all personnel trained in the control and operation of wheeled and tracked vehicles.
4. Comprising flying and ground control personnel.
5. Including Physical Education, but excluding instructors in skills covered by other categories.
6. Comprising doctors, dentists, nurses and supporting staff.

Hydrographic services

TABLE 7.8

	1975	1976	1977	1978	1979
	Number				
Surveying vessels					
Ocean	4	4	4	4	4
Coastal	4	4	4	4	4
Inshore	5	5	5	5	5
Charts and publications produced					
New charts: total	189	212	203	207	236
Navigational	129	112	114	122	108
Lattice	42	82	69	54	78
Miscellaneous	18	18	20	31	50
New editions of charts: total	174	193	250	289	353
Navigational	119	173	175	183	248
Lattice	39	7	63	78	76
Miscellaneous	16	13	12	28	29
Small corrections to charts	5,179	6,444	5,853	5,723	5,934
Notices to Mariners	2,829	2,959	3,239	3,376	3,030
Block corrections to charts	135	160	145	156	157
Radio Navigational Warnings	1,263	1,270	1,142	917	1,017
Revised volumes:					
Sailing Directions (a series of 75 books)	6	9	3	2	7
Lights list (a series of 12 books)	10	9	9	8	9
Admiralty list of radio signals (6 volumes)	6	6	4	6	5
Tide tables (3 volumes)	3	3	3	3	3
Supplements to Sailing Directions	51	49	44	40	40
	Thousands				
Sales and issues					
Charts printed	3,890	3,879	4,280	3,455	3,519
Charts sold	2,892	3,064	3,296	2,570	2,672
Charts issued to government departments	584	584	607	627	640
Books sold	436	606	599	506	539

Meteorological Office: finance

TABLE 7.9

£ million

	Outturn[1]				Estimate	
	1976–77	1977–78	1978–79	1979–80	1980–81	1981–82
Expenditure[2]	28.30	29.00	33.60	34.29	50.05	54.47
Receipts	8.60	9.50	10.85	11.75	19.82	20.23
Civil Aviation Authority[3]	7.00	7.80	9.25	9.26	15.12	..
Gas and Electricity Boards	0.12	0.14	0.14	0.16	0.26	..
Oil Industry	0.60	0.50	0.40	0.49	0.65	..
Automatic Telephone Weather Service	0.08	0.08	0.14	0.20	0.19	..
General public and local authorities	0.34	0.09	0.10	0.16	0.18	..
Commerce and industry		0.27	0.36	0.46	0.44	..
Others	0.46	0.62	0.46	1.02	2.98	..
Net Expenditure	19.70	19.50	22.75	22.54	30.23	34.24
apportioned to:						
Defence	13.50	13.80	16.00	14.09	19.86	22.50
Civil – free service to the public	4.40	4.40	5.10	4.56	6.43	7.28
Civil – on repayment net of recoveries made	1.80	1.30	1.65	3.89	3.94	4.46

1. These figures combine actual expenditure, where known, and the original Estimates where Meteorological Office expenditure cannot be distinguished from that of other establishments. Allied Services expenditure is excluded.
2. Works expenditure is included from 1979–80: comparable information is not available for the previous years.
3. Adjusted annually for recoveries in arrears from the Civil Aviation Authority, except for 1980–81 which includes an amount of £1.43 million outstanding from 1979–80.

Meteorological Office: Activities

TABLE 7.10

	1975–76	1976–77	1977–78	1978–79	1979–80
	Thousands				
For Aviation					
Meteorological briefings in UK	361	362	360	374	368
Forecasts in UK	1,811	1,868	1,956	2,131	2,124
Other than for aviation					
Forecast enquiries answered	1,847	1,897	2,051	2,222	2,253
Automatic Telephone Weather Service-calls made	16,764	16,914	21,531	28,992	25,567
Climatological enquiries	24	27	30	34	36
	Number				
Local radio stations for which Meteorological Office staff broadcast forecasts[1]	13	12	16	18	19

1. Scripts are also provided for both national and local radio services.

Bibliography

Additional information may be found in the following publications:

Armed Forces Pay Review Body reports

Fifth	1976 Cmnd. 6470
Sixth	1977 Cmnd. 6801
Seventh	1978 Cmnd. 7177
Eighth	1979 HMSO, 17 April 1979
Ninth	1980 Cmnd. 7899

Annual Abstract of Statistics, HMSO (The Defence chapter includes longer runs of data for some of the tables included here).

Appropriation Accounts: Class I Defence (in Volume I : Classes I–III)

1976–77	HC 136 10 January 1978
1977–78	HC 137 15 January 1979
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1979–80	HC 96 15 January 1981

Civil Service Statistics, HMSO ; annual

Exchange of Notes between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Federal Republic of Germany for Offsetting the Foreign Exchange Expenditure on British Forces in the Federal Republic of Germany. Cmnd. 6970

The Government's Expenditure Plans 1981–82 Cmnd 8175

Guide to the Classification for Overseas Trade Statistics 1980; obtainable from the Controller, Statistical Office, Customs & Excise, Southend-on-sea SS2 9AL

Report by the Hydrographer of the Navy; annual; obtainable from the Hydrographic Department, MOD, Taunton, Somerset.

Meteorological Office–annual report, HMSO

National Income and Expenditure, HMSO; annual

Navy, Army and Air Force Institutes (NAAFI)–annual report and accounts; obtainable from NAAFI, Imperial Court, London SE11

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Statistical News, HMSO; No.51 November 1980, contains an article entitled 'Employment and Defence' by Chris Pite

Supply Estimates, Class I Defence 1980–81 HC 469
1981–82 HC 190

JU

CONFIDENTIAL

DEPARTMENT OF INDUSTRY
ASHDOWN HOUSE
123 VICTORIA STREET
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TELEPHONE DIRECT LINE 01-212 3301
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Secretary of State for Industry

13 March 1981

The Rt Hon John Nott MP
Secretary of State for Defence
Main Building
Ministry of Defence
Whitehall SW1

Dear Secretary of State

STATEMENT ON DEFENCE ESTIMATES 1981

In OD on 5 March, I expressed reservations about the tone of the paragraphs on Defence Procurement Strategy (pages 6.1 to 6.4) in the Draft Statement on Defence Estimates circulated with your note (OD(81)13). You countered this by observing that the main British suppliers had done and were doing well out of defence.

2 I agree with the substance of what you said. My concern, however, is primarily presentational. I do not think that the Government will derive the maximum credit from the policies which you are pursuing if they are presented by way of the Defence Procurement Strategy item as it now stands. There seems to be a certain inconsistency with both the Government's initiative on public purchasing policy and the Prime Minister's speech at the Farnborough Flying Display Dinner in September last.

3 May I in this letter indicate two examples where changes seem to me to be useful. These are not all the changes desirable, only illustrative examples:-

a the opening sentence in paragraph 4 reads "The critical and often very complex question is whether to buy British". The rest of paragraph 4 then sets out well and cogently the arguments for buying British. Could not the opening sentence be amended to read: "There are clearly important reasons why we should normally aim to buy British.";

/ b ...

CONFIDENTIAL

b the opening sentence of paragraph 5 reads: "This does not mean that we should pay a fixed premium for a Made in Britain label". I do not think that anyone is asking this. Might not the opening sentence and the beginning of the following sentence read better somewhat as follows:- "At the same time, the aim normally to buy British must be pursued within the framework of a strict financial discipline. The Government has a prime responsibility .....".

4 I am copying this to members of OD and to Sir Robert Armstrong.

Yours sincerely

for KEITH JOSEPH

(approved by the Secretary of State and signed in his absence)

Prime Minister.

More bad news from Defence, I am afraid, as past over-commitment on the equipment programme comes home to roost still more. Mr Nott is proposing further cuts of £105M next year but even then he will still be £36M short of his target. He suggests a meeting on his return from Washington with you, the Home Secretary, Foreign Secretary, Chancellor and Industry Secretary. I think this is right. Agree?

Copy No 1 of 8 copies

NOT TO BE PHOTOCOPIED

MO 8/2/12

PRIME MINISTER

12 iii

Can we get as far as we can with Treasury first?

DEFENCE EXPENDITURE 1981/82

When OD considered the draft White Paper on Defence I indicated that I would come forward shortly with a list of the further measures required to find the remaining £40 million out of the total programme reduction of £200 million in 1981/82. I must now add, however, to the £40 million a further minimum £14 million as a safeguard against a higher settlement than 6% for the civil service pay award; as well as measures amounting to a further £81 million which are required to balance expectation of even faster progress on the equipment programme for 1981/82.

2. Having reviewed in greater detail a number of the items included in the original (unannounced) list of reductions towards meeting the £200 million, I need to reprieve a £6 million cut in the Special Nimrod Squadron (required for essential intelligence work). This means that I still need to find a total of £141 million in 1981/82, ie £40 million + £6 million (Nimrod); £81m for block adjustments and a minimum of £14 million for pay cash limits.

3. The question I put to colleagues is this. a) Should I do it? If the answer is Yes b) How should I do it and when? And c) Do I need to announce publicly - and inform NATO - of what I am doing (only a few weeks after the earlier announcement).

4. Colleagues should remember that, although my announcement of 20th January, spoke of a £200 million reduction, it did, in fact amount to £850 million as a result of £650 million earlier adjustments

to 1981/82 resulting from the review of costings. In the process of finding this £650m we have already cut to the bone our ammunition stocks, training, recruiting, fuel usuage and activity generally, compounding the difficulties caused by this year's moratorium on new orders and cuts in activity of the Services. This has proved necessary because the equipment budget is already over-committed and it is a fact of life that there is continuing upwards pressure on it. There is nothing else to cut. But if we carry on cutting activity there comes a point when the Government is made to look ridiculous, particularly one that claims to uphold the morale of the armed services. Indeed there is an urgent need to lift the restrictions on training and ammunition.

5. Nevertheless I must tell you how I would set about it, if we decide to go now for the full £141m; at the same time I must assure you that there are no easier options. The Annex sets out all those measures which I have considered. These total £158m or slightly more than would be needed. At Item No 25 I have drawn a heavy line which represents my own political judgement of how far we can go. Industry will of course feel the effects of the cuts, and we can expect some criticism, but if we stop at this point I do not think any further public announcements or messages to NATO are required, although I would need to talk around the subject during the debates on the White Paper.

6. If we were to stop where I recommend involving further programme reductions of £105m out of a total required of £141m, how do we find the balance of the estimated amounts required to bring the Defence Budget within the announced figures for 1981/82? I can only suggest the following broad path.

7. Next month I shall be considering the Long Term Costings covering the next 10 years. From these discussions will emerge in June/July my recommendations to OD for our future defence policy. It is likely to involve a number of major re-adjustments to our role, but more particularly a fairly radical set of proposals for the "mix" of forces and equipment to carry out our present commitment. I believe that, whilst it will be controversial particularly so far as industry is concerned, it will represent a coherent attempt to up-date and streamline our front-line capability to meet the changing nature of the Soviet threat. The important feature is that in place of continuing salami slicing we can explain to the Services, the country, and the Party what we are doing and why. This review will have to incorporate substantial savings in future years, not least because we are massively over-committed.

8. We should be ready with the result of this fundamental reappraisal at about the time that we review the 1981/82 cash limits (following the results of the 1980/81 cash outturn, and the Armed Forces Pay Review Body recommendations, together with the need to assess the Relative Price Effect of defence equipment). If we feel that we cannot go further now than I recommend, then we must find a method of absorbing the excess in the review of cash limits for 1981/82.

9. I conclude as follows: All programmes have their problems. Defence should not be exempt from the general rules. But the procurement programme is grossly over-extended. It cannot be changed to generate savings in the short-term. This means cuts have to continue to fall on activity. There is nowhere else to go.

Whilst I am quite prepared to undertake another exercise to include the whole of the list attached, announce it publicly and inform NATO; I think such a course would be politically daft. The consequences of the changes listed below the line in the Annex, set beside the relatively small sums involved - and put alongside £1 billion for BL and £5 billion for British Steel etc etc - would lead the general public to believe that we had taken leave of our senses. I could not recommend such a course of action to my colleagues as much as anything due to the likely consequences for the Conservative Party.

10. Finally it must be quite clear from the list - and from what I have said - that I see no possible means of finding a cash clawback for the expected £300m 1980/81 overspend when we come to review this matter.

11. In view of the highly sensitive nature of this minute I am sending copies only to the Home Secretary, the Foreign Secretary, the Chancellor, the Secretary of State for Industry and to Sir Robert Armstrong. You might like an early meeting to discuss it on my return from Washington.

JN.

Ministry of Defence

11th March 1981

	SAVINGS	£M
1.	Further cut in civilian numbers	13.7
2.	Do not place order for one destroyer/frigate (Type 42-15 (Vospers))	3.4
3.	Reduce purchases of Sea Wolf missiles	1.0
4.	Individual measures within the Naval weapons area including sonars, navigation equipment, missiles, radars and torpedoes	7.0
5.	Further cuts in orders for Naval stores	5.1
6.	Wavell battlefield computer (development work only and Plessey to fund)	4.8
7.	Ptarmigan trunk communications system re-phasing	7.1
8.	Possible diversion of CVR(T) (Tracked Combat Vehicle) production to overseas sales	3.0
9.	Army internal security vehicle: delay one year	1.0
10.	Army works - further reductions	4.0
11.	Cut orders for B Vehicles (4 tonners and Land Rovers)	8.6
12.	Reduce flying hours in RAF Fast Jet Force by more than one hour/pilot/month	8.5
13.	Defer expenditure on the improved Harrier GR5/AV8B (ASR 409)	3.1
14.	Sell Canberra B2s	6.0
15.	Delete Griffon engine (Shackletons) repair capability	0.4
16.	VC10 spares and engines; obtain cheap supplies by purchase of BA fleet	8.1
17.	Consequential effects of economies already made in Long Term programme, mainly RAF equipment	6.4
18.	Defer expenditure on meteorological satellite programmes	0.7

		£M
19.	Reduce airmen recruiting to 5,000 from planned level of 8500	3.5
20.	Suspension of RAF extra/mural training	0.3
21.	Defer refurbishment of TV Whitehall closed circuit TV system	0.4
22.	Cut in R&D capital equipment programme	2.0
23.	Cut in R&D works programme	2.0
24.	Further economy on travel	2.8
25.	Reduction in expenditure on HMSO stores and supplies, office machinery, administrative computers and central civilian training	2.0
	SUB-TOTAL	104.9

26.	Make greater cuts in Vulcan force by equivalent of further squadron:	
	a. Five Maritime Radar Reconnaisance aircraft	3.5
	b. Three strike aircraft	2.0
27.	Delay Type 23 Frigate programme	0.9
28.	Lay up three more destroyers/frigates	2.8
29.	Further reduce fleet activity to produce 30% overall cut in planned level	5.1
30.	Further reduce purchases of Sea Wolf missiles	3.0
31.	Cut Milan top up order	1.5
32.	Further cut in Army ammunition	6.0
33.	Still further delay in ordering first batch of 4 Minesweeper vessels (MSF: EDATS) by 3 years (Hall Russell, Aberdeen)	4.2

		£M
34.	Cancel existing orders for Mine Counter-measures vessels (MCMV) programme (Vospers)	6.5
35.	Sea-bed operations vessel (SOV): continue construction, launch and then put in mothballs without completion (Scott Lithgow) (£75m already committed)	9.0
36.	Reduce TA man training days	1.0
37.	Further cut in training ammunition (pyrotechnics, fuzes and explosives)	1.0
38.	Further reduction of flying hours in RAF Fast Jet Force	4.5
39.	Defer elements of the Nimrod MR Programme	1.8
	SUB-TOTAL	52.8

PART 4 ends:-

6.3.87

PART 5 begins:-

11.3.87