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DEFENCE EXPENDITURE IN FUTURE YEARS.

FURTHER REPORT BY THE MINISTER FOR CO-ORDINATION OF DEFENCE.

I.—INTRODUCTORY.

IN the Interim Report* which I submitted to the Cabinet in December last, I set out a general statement of the policy on which, in my view, our Defence Programmes should be based. I explained that, in order to complete the task assigned to me by the Cabinet, it was necessary that the Defence Departments should be invited to submit revised forecasts of the cost of their programmes, if the basis of the policy outlined in my Report were approved, and I indicated the points on which I should require further information for this purpose.

2. On the 22nd December, 1937, the Cabinet approved my Interim Report, subject to a number of observations on particular points. For convenience of reference the Cabinet conclusions are reproduced as Appendix I to this Report.

3. In accordance with this decision the Defence Departments were invited to submit revised forecasts of the costs of their programmes on the basis indicated in my Interim Report. The revised forecasts submitted by Departments are printed as Appendices II, III and IV to this Report.

II.—SUMMARY OF THE MAIN FEATURES OF THE REVISED FORECASTS.

Navy.

4. The revised forecast submitted by the Admiralty has been prepared under the same two alternative headings—described as the D.R.C. Fleet and the Proposed New Standard Fleet—as formed the basis of the October forecasts. The First Lord, however, states in his explanatory memorandum that, although the forecast has been prepared under these headings, in his view the D.R.C. Fleet is now a purely paper conception which is in no way related to the present international situation or to the barest necessities of Imperial Defence. At the

* The principal documents referred to in this Report are as follows:—

- (1) Memorandum on Defence Expenditure by the Chancellor of the Exchequer, dated June 1937 (C.P. 165 (37)).
- (2) Forecasts submitted by the Defence Departments and the Home Office, circulated to the Cabinet in October 1937 (C.P. 256 (37)).
- (3) Memorandum by the Chancellor of the Exchequer summarising these forecasts, dated October 1937 (C.P. 257 (37)).
- (4) Interim Report by the Minister for Co-ordination of Defence, dated December 1937 (C.P. 316 (37)).

Numbers (2) and (3) are referred to in this Paper as "the October forecasts," and Number (4) as "the Interim Report." The forecasts printed in the Appendix to this Report are referred to as "the revised forecasts."

time of the completion of this Report the Admiralty had not been able to furnish, in accordance with the Cabinet decision of the 22nd December, 1937, a statement of the modified proposals they wished to submit to meet the contingency of the premature scrapping of ships under the D.R.C. Programme.

5. The outstanding point of difference between the revised forecast and the October forecast lies in the great increase in cost now foreshadowed. This is shown in the following table:—

(£ millions.)

	D.R.C. Fleet.		Proposed New Standard Fleet.	
	October Forecast.	Revised Forecast.	October Forecast.	Revised Forecast.
1937	105	105	105	105
1938	122	130.6	124.5	130.6
1939	123	151.5	131	152
1940	103.5	128	123.5	141.5
1941	81	110	115.5	138
Total for 5 years	534.5	625.1	599.5	667.1

6. It will be seen that over the whole 5 years, the cost of the D.R.C. Fleet has increased by £90 millions, and that of the New Standard Fleet by £68 millions. For the 3 years 1939–41, the increases are £82 millions and £61 millions respectively.

7. The First Lord in his covering memorandum gives an explanation of the proposed increase of expenditure of £61 millions in three years, if the New Standard Fleet is adopted. £8 millions is due to increased expenditure on the Fleet Air Arm. Of the remaining £53 millions, two-fifths is due to increases in prices and wages, two-fifths to major new items (that is, projects of magnitude not taken into account in the previous forecast, but now either approved or on the point of approval), and one-fifth to minor increases which appear likely as a result of examination of the position during the preparation of the 1938 Sketch Estimates.

8. No corresponding explanation is given of the greatly increased cost of the forecast under the heading "D.R.C. Fleet." It appears, however, that this increase is accounted for as follows:—

- (i) A substantial proportion of the total increase is attributable to the causes set out in the preceding paragraph.
- (ii) The Admiralty are now proposing to lay down much larger New Construction Programmes in the remaining years of the quinquennium than was anticipated at the time when the October forecast was compiled.
- (iii) It is now proposed to incur considerably greater expenditure on the Fleet Air Arm.

The revised forecast with regard to the D.R.C. Fleet seems from the figures to relate to a materially larger Fleet than the Fleet so described in the October forecast.

9. The Vote A numbers (Personnel) have been calculated on a somewhat different basis from the October forecasts. As regards the D.R.C. Fleet, the revised Vote A forecast differs from the previous forecast owing to the provision of additional personnel for the Fleet Air Arm. In the New Standard Fleet, the figure in the October forecast is increased by the Fleet Air Arm provision, but is reduced by savings effected by making greater use of reserves. The savings in personnel which it is hoped to effect in this way rise from 2,000 men in 1939 to 10,000 men in 1941.

10. To sum up: the revised Admiralty forecast now contemplates expenditure which exceeds the October forecast by £90 millions on the basis of Hypothesis A (D.R.C. Fleet), and by £68 millions on the basis of Hypothesis B (New Standard Fleet).

Army.

11. *Basis of forecast.*—It is desirable to explain at the outset a factor which affects the presentation of the War Office figures.

In submitting the October forecast, the War Office stated that their estimates of yearly expenditure made no provision for a number of items. For some of these items actual figures of cost were given, but others, which represented new requirements likely to emerge, or schemes not yet fully examined, could not be evaluated. With considerable reserve the Secretary of State for War indicated that, while he would prefer not to attempt to evaluate the cost of these items, the total cost thereof might be in the neighbourhood of £100 millions.

12. The War Office, in preparing their revised forecast, have proceeded on the basis of first allocating this £100 millions between the various items comprised in the October forecast, and then revising the figures so arrived at on the basis of the general policy set out in my Interim Report.

13. *Revised Basis for the Field Force.*—The October forecast included provision for a Field Force of four divisions, one mobile division and three A.A. groups (one on a supplementary reserve basis), capable of disembarking on the Continent within approximately 15 days of mobilisation.

14. The present forecast assumes a Field Force as follows:—

- (a) One Corps of two divisions, plus a mobile division, plus two A.A. groups with full reserves, ready to complete embarkation in 21 days.
- (b) Two divisions plus the 3rd A.A. group ready to begin embarkation in 40 days, with war equipment plus half scales of reserves.
- (c) A pool of equipment to enable *either* two Territorial Army *or* two Regular Divisions to take the field after 4 months.

15. *Assumption of an Eastern Campaign.*—It has been assumed that this Force would be called upon to operate in an Eastern campaign. In present circumstances the term "Imperial commitments" has been taken by the War Office to include a campaign for the defence of Egypt. This assumption would obviously require reconsideration in the event of any permanent improvement in our relations with Italy. This change in the assumed theatre of operations has affected both the quantity, and the type of stores and equipment required. On the one hand, the modifications in the rôle and composition of the Field Force have enabled substantial reductions to be effected in the provision of tanks and reserves of ammunition. On the other hand, the assumption of an Eastern theatre has necessitated heavy increases of various stores owing to the distance from the source of supply. In particular, increased reserves of mechanical transport have been found necessary, both for this reason and because of the heavy wear and tear in desert country.

16. The total estimated capital cost of the War Office deficiencies programme on the Regular Field Force is now almost identical with the amount given in the October forecast. If, however, account is taken of the proportion of the £100 millions referred to earlier, which is attributable to the Field Force, the War Office calculate that the net effect of the modifications proposed in the rôle of the Field Force is to reduce the capital cost by some £14 millions, as compared with the October forecast.

17. *Air Defence of Great Britain.*—The revised forecast provides for the full "Ideal" scheme, including the conversion of two further Territorial divisions into Anti-Aircraft divisions, increased scales of ammunition and 150 light A.A. sections.

18. *Territorial Army.*—As a result of the conversion of two further divisions into Anti-Aircraft Divisions, there will now be ten Territorial Army divisions. The approved programme already provides for a pool of training equipment for all these divisions. In addition, as stated in paragraph 14, a pool of equipment is proposed to enable *either* two Territorial Army *or* two Regular Divisions to take the field after 4 months. The remainder of the Territorial Army could not take the field until after the eighth or tenth month of war.

19. *Other prospective increases.*—The revised Army forecast also includes provision under a number of heads for increased expenditure which does not result from the policy set out in my Interim Report.

For example—

	£
Improved accommodation for the Regular Army:	
Increase of	11,450,000
Improved accommodation for Territorial Army	4,000,000
Passive Defence	5,000,000
Recruiting and amenities: Proposed expenditure in the years 1938-41	16,800,000
Total	37,250,000

20. *Summary.*—The total Army and Royal Ordnance Factories expenditure over the five years 1937-41 is now put at £576·4 millions. This compares with the October forecast of £467·4 millions, plus the problematic £100 millions in respect of additional items. The expenditure now proposed by the War Office stands, therefore, at an even higher level than the expenditure proposed in the October forecast. The main reason for this is that the proposed additional expenditure on the Air Defence of Great Britain, and on the items set out in paragraph 19, more than counter-balance savings effected on the Field Force as a result of the new conspectus, and on the provision of war equipment and reserves for the Territorial Army.

Air Force.

21. The Secretary of State for Air has submitted a modified programme, entitled "Scheme K," on the basis of the general recommendations made in my Interim Report. The main features of this modified programme may be summarised as follows:—

22. The increases in Overseas Squadrons proposed in Scheme J are omitted, the Overseas strength remaining at the figures in the existing authorised programme.

23. As regards the Metropolitan Air Force, the increases proposed in Scheme J for Fighter Squadrons are retained, with full war reserves. Likewise, the additional squadrons proposed in Scheme J for trade protection in Home Waters are retained. In regard to bombers, the first line strength of the air striking force now proposed is 1,350, as compared with the figure of 1,442 proposed in Scheme J. The comparison between the numbers proposed in Schemes F, J and K for the Metropolitan Air Force is as follows:—

Metropolitan Air Force—First Line Strength.

	Scheme F.*	Scheme J.*	Scheme K.*
Fighters	420	532	532
Bombers	1,022	1,442	1,350
General Reconnaissance	126	189	189
Army Co-operation	132	132	132
Flying Boats	36	36	36
Additional for Trade Protection ... ..	...	56	56

24. As regards the proposed strength of the air striking force, it is stated in the Air Ministry Memorandum that the German striking force already in being numbers 1,080 long range bombers, and that the next stage of expansion which involves raising the strength of each squadron from 12 to 15 aircraft,

* *Scheme F* represents broadly the existing approved programme and corresponds with Hypothesis A of the October forecasts.

Scheme J is the scheme for the further expansion of the Air Force proposed by the Secretary of State in Paper D.P. (P.) 12 circulated to the Cabinet with my Interim Report. This scheme corresponds with Hypothesis B of the October forecasts.

Scheme K is the modified expansion scheme now proposed, details of which are given in Appendix IV.

thereby increasing Germany's first-line strength in bombers to 1,350 will probably be attained by the summer of 1938. A first-line Metropolitan bomber strength of 1,350 is therefore proposed by the Air Ministry as the minimum which would bear a definite relation to the German air striking force of the immediate future. Our air striking force will not, however, under the Air Ministry proposal attain the figure of 1,350 with complete personnel and reserves until 1941, by which date Germany will probably have reached a first-line strength considerably greater. Such a development is well within their capacity, and would be in accordance with the policy they have hitherto followed.

25. Another important feature of the Air Ministry proposals is that, in order to frame a programme within the limits of available resources, they have imposed an arbitrary cut on war reserves, other than fighter squadrons for which the full scale of war reserves has been retained; the reduction being from a 16 weeks to approximately a 9 weeks basis.

26. This reduction is offset by the inclusion of provision for the expenditure of £10 millions in the period up to March 1942 on the creation of further war potential, while a further £6 millions—making £16 millions in all—would be held in reserve for expenditure, either on the creation of further war potential, or in restoring part of the cut made on reserves. The decision on this point would be taken in the light of further experience of the possibilities of the shadow organisation.

27. On the basis of the scheme now proposed (Scheme K) the total expenditure from Air Votes over the five years 1937–41 is put at £567·5 millions. This compares with the figures of £467·5 millions under Scheme F (Hypothesis A) and of £650 millions under Scheme J (Hypothesis B), given in the October forecast. The forecast for Scheme K assumes, however, that re-equipment, after expansion is completed, is based on a 7-year period, instead of the 5-year period assumed in the case of Schemes F and J. The forecast of the stabilised cost of Scheme K is £96·5 millions a year as compared with £80 millions and £110 millions respectively for Schemes F and J.

III.—COST OF THE REVISED FORECASTS.

28. The cost of the revised forecasts, as submitted by the three Defence Departments is shown in the ensuing table:—

(£ millions.)

Year.	1937.	1938.	1939.	1940.	1941.	Total for 5 years.
1. Navy—						
(a) "D.R.C. Fleet"	105·0	130·6	151·5	128·0	110·0	625·1
(b) "New Standard Fleet"	105·0	130·6	152·0	141·5	138·0	667·1
2. War Office and R.O.F.	90·7	118·6	137·5	124·5	105·1	576·4
3. Air	82·5	110·5	128·0	129·5	117·0	567·5
4. Total of 1 (a), 2, 3	278·2	359·7	417·0	382·0	332·1	1,769·0
5. Total of 1 (b), 2, 3	278·2	359·7	417·5	395·5	360·1	1,811·0

29. The above figures exclude provision for various items for which the Departments have not allowed in their forecasts, but which cannot altogether be excluded.

The cost of such items is given by the Admiralty as £28 millions.

As explained in paragraphs 11 and 12, the War Office have now included in their revised forecasts the £100 millions which was tentatively given as covering the cost of possible additional items. A margin of £20 millions for contingencies is, however, now proposed.

The Air Ministry state that their forecast excludes one item (Silhouette Lighting) which might cost £12 millions if adopted, and also excludes the cost of reinforced surfacing of aerodromes or the extension of balloon barrages beyond

the barrage already approved for London. No figures are given for these two items, but it is stated that the cost of the former, if adopted, would undoubtedly amount to several million pounds. A tentative figure of £25 millions has been taken in this report for all the Air Ministry additional items.

If the War Office margin of contingencies is included, the total for "additional items" for all three Defence Departments is thus £73 millions.

30. Provision must also be made for the payment of interest on advances under the Defence Loans Act, which amounts to £24 millions over the period to March 1942. It is also necessary to take into account expenditure on Air Raid Precautions and on other defence measures borne on Civil Votes. £40 millions and £20 millions respectively are taken for these purposes, but it must be recognised that these figures may well prove to be under-estimates.

31. The following table shows the total defence liabilities over the five years 1937-41 on the basis of the revised forecasts:—

	<i>£M.</i>	<i>£M.</i>
(1) Expenditure shown in the revised forecasts of the Defence Departments	1,769	or 1,811
(2) Additional items listed by the Defence Departments (including War Office margin for contingencies)	73	73
Total of (1) and (2)	1,842	1,884
(3) Interest on advance under the Defence Loans Act, 1937	<i>£M.</i> 24	
(4) Air Raid Precautions, say	40	
(5) Other civil defence measures, including Food Reserves, say... ..	20	
Total of (3), (4) and (5)	84	84
Grand total	1,926	1,968

32. The experience hitherto has been that Departments constantly find it necessary to seek authority to add new items to their programmes. In effect, therefore, if Departments were now to be authorised to proceed forthwith with the full execution of the programmes here outlined, we should be faced with defence expenditure over the quinquennium not of £1,500 millions, but little, if at all, short of £2,000 millions.

33. It will be remembered that the aggregate total defence expenditure over the five years 1937-41 on a comparable basis was estimated in October last as £1,605 millions on Hypothesis A and £1,884 millions on Hypothesis B (paragraph 36 of C.P. 257 (37)).

34. In comparing the total of the revised forecast with the total of the October forecast, it must be remembered that the Hypothesis B total included provision for the Air Ministry Scheme J, the estimated cost of which exceeded the estimated cost of the new Air Ministry scheme (Scheme K) by £82 millions. This fact must be taken into account in ascertaining the real measure of the increased expenditure contemplated under the revised forecast. This increase is attributable, not to any extension in the scale of our defence programmes, but to the continuous growth of defence expenditure, from a number of causes.

IV.—GENERAL OBSERVATIONS.

35. The intention underlying the Cabinet decision of the 22nd December last, namely, that the Defence Departments should be invited to submit revised forecasts with a view to bringing the total defence expenditure over the five years 1937-41 within a total of £1,500 millions, has thus not been achieved. Although certain reductions have resulted from the revisions made by Departments on the basis of the policy outlined in my Interim Report, these reductions are far more than counter-balanced by the substantial increases now asked for on other grounds. In consequence of these increases, I am faced with a formidable problem.

36. The Treasury view, recorded in paragraph 24 of my Interim Report, is that, if it is necessary to spend substantially more than £1,500 millions over the five years 1937-41, it would probably be found necessary that the excess should be found by an increase in the level of taxation, rather than by increased borrowing powers. It is obvious that to find out of revenue in the next four years anything approaching the excess cost over £1,500 millions of the revised programmes would involve the most drastic measures. The Cabinet's general approval of my Report embraced paragraph 101 (i) and the related paragraph 31, which included the statement that "Every effort must be made to bring the total defence expenditure over the five years 1937-41 within the total of £1,500 millions."

37. The effects of greatly increased taxation upon public confidence, and upon the attitude of the people of this country to the defence programmes, are matters which deserve the most serious consideration. On this aspect of the problem, reference may be made to paragraphs 6-14 of my Interim Report which deal with "the Defence Programmes and our available resources." So far as can be foreseen, expenditure on defence of the order of £1,900-£2,000 millions over five years would definitely impair that economic stability which is an essential part of our defensive armour. Further, as I pointed out in my Interim Report, nothing operates more strongly to deter a potential aggressor from attacking this country than our stability, but if other countries were to detect in us signs of strain, this deterrent would at once be lost.

38. As explained in the opening paragraphs of the Memorandum by the Chancellor of the Exchequer (C.P. 165 (37)) this Review had its origin in a study of the defence programme as a whole, present and prospective, in terms of our resources, undertaken by the Prime Minister in the concluding weeks of his Chancellorship.

In paragraph 18 of that Paper the Chancellor pointed out that the presentation of an indefinite series of new and very costly demands for defence purposes entailed more than a risk that the normal measures of Treasury and Cabinet control would be stultified. He suggested that, in order to ensure the due relation between defence needs and our available resources it might be necessary to adopt certain special measures. The demands now made by the Defence Departments are, of course, vastly greater than those envisaged at the time when the Chancellor of the Exchequer submitted this Paper to the Cabinet.

39. Further, in my Interim Report I pointed out that, serious as the position then appeared to be in respect of the borrowing period up to March, 1942, the problem of subsequent maintenance thereafter appeared more difficult still. The cost of the programmes up to March, 1942, is now substantially in excess of the higher of the two hypotheses dealt with in my Interim Report. Revised forecasts of maintenance after 1942 are not available, but it is a reasonable assumption that maintenance costs, on the basis of the full programme now asked for, would substantially exceed the figure of £301 millions a year given in the October forecast on the basis of hypothesis B.

40. It is necessary to take into account the international situation. The view has been expressed in my Interim Report that, in the long run, the provision of adequate defences within the means at our disposal will only be achieved when our long-term foreign policy has succeeded in changing the present assumptions as to our potential enemies. The figures in the revised forecasts add force to this view.

41. Our immediate task, however, is to deal with the situation as it exists to-day, and as it is likely to develop. In the judgment of our advisers on foreign affairs, the present year is likely to be of critical importance. It is to be hoped that during this period the plans which are now maturing for an improvement in European international relations may have made progress. But it is necessary that no action on our part during these months should imply, or should seem to imply, any weakening in our resolve to press forward with our defence programmes resolutely by all practicable means. The effect on the whole international situation of our decisions in this sphere may well have an incalculable effect on the course of events in 1938.

42. This presentation of the position might seem to lead to the conclusion that unless, in disregard of the Cabinet decision of the 22nd December, 1937, we accept defence programmes costing nearly £2,000 millions over the 5 years 1937-41, we shall be failing, at this critical moment, to press forward determinedly with our defence programmes; in other words, that we are faced with an inexorable and immediate choice between two courses. The first involves heavily increased taxation, and a straining of our economic system, leading perhaps to another crisis, or a long and painful period of bad trade. The second course, in so far as it might be interpreted as a decision to restrict the defence programmes, might react upon the prospect of successful negotiations and might, therefore, be fraught with the danger of war.

43. If there were indeed no other possible course, the decision to be taken would be one of the utmost gravity. But further analysis of the position shows that there is another course open to us, by which we can avoid this dilemma, for the time being.

44. In the first place, the rate of progress of the defence programmes is subject to limitations imposed by the industrial conditions of the country, and in particular by the amount of skilled labour which can be made available without disrupting our peace-time industrial system, and by the capacity for the output of important articles which condition the progress of the programmes as a whole (*e.g.*, armour plate and the whole range of optical instruments).

45. The rate of defence expenditure rose from £136 millions in 1935 to £187 millions in 1936. The estimates for 1937 were £278 millions, but it is believed that expenditure will fall short of this figure. The burden thrown on industry by the large increase in expenditure in 1937 has been borne with reasonable success. Contributing factors to this have been the steps taken to enlist the help of industries through central bodies, as in the case of machine tools or optical glass, and the special arrangements made for continuous liaison between the Defence Departments and industry, as in the case of the steel industry and the building trade. There has also been a steady process of what is called "de-skilling" in the engineering trade, the practical result of which is to reduce the demand for skilled labour. The Defence Estimates for 1938 as presented will total about £345 millions and it would seem reasonable to forecast that the limit of effective expenditure on present lines will be found at a figure somewhat but not much in excess of this. If heavy excess expenditure over such a figure were contemplated, it would appear that we must envisage war measures of compulsion on industry and labour, measures not only most difficult politically, but threatening the maintenance of that stability which it is an essential defence interest to preserve.

46. Secondly, although it is necessary for the Defence Departments to be able to plan relatively far ahead, this need not be carried to the extent of Departments being authorised at the beginning of 1938 to incur the full commitments involved in programmes the execution of which would extend up to March 1942. At the outset of the programme, the need for flexibility was emphasised; and experience has shown how necessary it is to retain the utmost flexibility consistent with efficient production. The results of recent experiment and research add force to this view.

47. These considerations lead to the conclusion that it is feasible to give Departments an authority which, on the one hand, will enable them to press forward resolutely in 1938 and 1939 (thus conforming to the needs of the international situation), and to spend, on a rising scale, substantially more in each of these two years than in 1937, but on the other hand will not involve commitments in excess of the aggregate total which, without imposing a breaking strain on our resources, can be found up to 1942.

48. It may be said that this course involves postponement of a decision on the defence programmes now presented. But it is surely right to postpone as long as possible a choice between the alternatives set out in paragraph 42. The course proposed has also the advantage that the further review of the defence

programmes which I recommend should take place before the expiration of two years, would be undertaken in the light of improvements in the international situation which it is the object of our foreign policy to bring about.

49. At the same time, it is obvious that if no improvements take place, we shall be faced within two years with a choice between defence programmes which we cannot afford, and a failure to make defence preparations on an adequate scale. The course proposed is explained in detail in the ensuing section.

V.—CONCLUSIONS.

50. In working out the proposals outlined in the preceding paragraphs, the first essential is to determine the maximum expenditure on defence which we can contemplate over the five years 1937–41 without imposing a breaking strain on our resources.

51. In paragraph 24 of my Interim Report, I stated that in the Treasury view, on present information, no reason was seen to alter the view that on the average £220 millions a year could be found from revenues for defence over the five years 1937–41. If, however, it were decided to spend substantially more than £1,500 millions on defence over this period of years, it would probably be found necessary that the excess should be found by an increase in the level of taxation rather than by increasing the total sum made available for defence from borrowed monies.

52. The immediate position of revenues is, I understand, relatively favourable, but in forecasting the position from 1939 onwards, a great deal must necessarily depend on the future course of trade. I am informed, however, that in the Treasury view, if conditions should continue to be favourable (on which point no assurance can, of course, be given), it may be found possible to finance a five-years' programme of defence of the order of £1,600–£1,650 millions (*i.e.*, an average of £320–£330 millions a year), on the basis of existing taxation and £400 millions of borrowed money.

53. The October forecasts show that a defence programme costing £1,600–£1,650 millions over the five years 1937–41 would be likely to involve maintenance costs on the conclusion of the programme of no less than £255 millions a year. The Treasury cannot see any prospect of any sum approaching this figure being made available for defence on the basis of existing taxation. The average sum likely to be available is put at about £200 millions.

54. It follows, therefore, that if, with the aid of the borrowing powers conferred by the Defence Loans Act, we succeed in carrying out a Defence programme costing £1,600–£1,650 millions over the five years 1937–41, we shall be faced with a formidable problem at the conclusion of the borrowing period, and we shall find ourselves forced to make drastic reductions in the Defence Services, or in other Services including the Social Services, almost as soon as the defence programmes have been completed.

55. But before this point is reached the position may have changed, and the need for great armaments disappeared. Accordingly, I propose that the figure of £1,650 millions should be taken as the maximum sum which can be regarded as available for all defence purposes over the five years 1937–41. Out of this sum it is necessary to provide for expenditure on certain items given in the table in paragraph 31, *i.e.*, Air Raid Precaution measures, say, £40 millions, other civil defence measures, say, £20 millions, and interest on sums borrowed under the Defence Loans Act, 1937, £24 millions. Deducting a total provision of £84 millions for these items, the total available for the three Defence Departments is therefore, say, £1,570 millions.

56. My first proposal is therefore that this total of £1,570 millions should be prescribed as the limit up to which the Defence Departments may work for the period 1937–41.

57. The next stage would be for this sum to be allotted between the three Defence Services. As regards the procedure to be adopted in deciding the allocation of this total between the Defence Departments, the time available would, in any case, have made it impossible for me to include any specific recommendations as regards amounts in the present Report. As will be seen from the dates appended to the forecasts, they have only been in my hands for a few days, and, for the reasons explained in (e) of the Cabinet conclusions of the 22nd December last on my Interim Report, it is necessary that I should submit the present Report for discussion by the Cabinet on the 16th February.

58. Further, I think it would be desirable that the Defence Ministers and their advisers should have an opportunity of discussing the matter with me before any definite allocation is recommended. If, therefore, my present recommendations are approved, I should be glad of an opportunity to discuss this matter with the Defence Ministers and with the Chancellor of the Exchequer, a further report being made to the Cabinet.

59. This figure of £1,570 millions (and the proportion thereof allotted to each Defence Department) should likewise be distributed between the years up to 1941. By way merely of illustration, the annual distribution of the total sum might be as follows:—

	<i>£M.</i>
1937 (estimated actual out-turn)	265
1938	355
1939	370
1940	310
1941	270

60. It will then be the duty of each Defence Department to draw up programmes which can be carried to effective completion, within the sum allotted, by March 1942. It is important to emphasise that these programmes must be complete in themselves, and that no undertaking can be given that additions thereto will be sanctioned. The allotment of annual expenditure made to each Department for the years 1938–1941 should govern (i) the expenditure which may be incurred by each Department in 1938 and 1939, and (ii) the commitments to be entered into by the Defence Departments during 1938 and 1939 in respect of the remaining years of the quinquennium.

61. Variations of expenditure between individual years would be permitted provided that the variations were related to the new programmes referred to in paragraph 60, and not to extensions of those programmes, and that any additional sums asked for in a particular year could be found by the Exchequer.

62. A further enquiry should be undertaken in the year 1939 in order to consider whether, in the light of the international situation as it then exists, it is on balance regarded as necessary and possible to authorise defence programmes of a wider scope and involving greater expenditure than the defence programmes which can be compassed within the proposed limit of £1,570 millions. This does not, of course, preclude review of the authorised programmes at any time if the international situation should undergo such changes as to render possible reductions in those programmes.

63. In making these proposals I am anxious to avoid giving the impression that they will be easy to carry out. So far as the next two years are concerned, I am satisfied that plans can be drawn up by the three Departments on the basis of this scheme, which will represent as much as can be carried out in the years in question. It is in respect of the two years following, namely, 1940 and 1941, that the position will be difficult.

64. It will, in the first place, not be easy so to plan the expenditure in those years as to satisfy the conditions laid down in paragraph 60. In the case of the Admiralty Shipbuilding Programme, for example, the expenditure in each year is indissolubly linked to further expenditure in the ensuing year. Further, in the years 1940 and 1941 the figure representing the highest possible apportionment in favour of any one of the Departments is certain, unless our international

relations improve, to fall short of what is necessary to procure the measure of protection recommended by the expert advisers of the Department in question. The figures suggested by way of illustration in paragraph 59 reveal this gap. I can find no solution of the problem thus presented. The forecasts of necessary expenditure tabulated in paragraph 28, however they may be manipulated, cannot be made to fit our financial circumstances. The plain fact which cannot be obscured is that it is beyond the resources of this country to make proper provision in peace for defence of the British Empire against three major Powers in three different theatres of war. If the test should come, I have confidence in the power and inherent capacity of our race to prevail in the end. But the burden in peacetime of taking the steps which we are advised—I believe rightly—are prudent and indeed necessary in present circumstances, is too great for us. I therefore repeat with fresh emphasis the opinion which I have already expressed as to the importance of reducing the scale of our commitments and the number of our potential enemies.

T. W. H. I.

2 *Whitehall Gardens, S.W. 1,*
February 8, 1938.



APPENDIX I.

CABINET CONCLUSIONS ON THE INTERIM REPORT BY THE MINISTER FOR CO-ORDINATION OF DEFENCE. DECEMBER 22, 1937 (CABINET 49 (37)).

THE Cabinet agreed :—

- (a) To approve the Report of the Minister for Co-Ordination of Defence (C.P. 316 (37)) subject to the following :—
- (b) To take note, with approval, of the propositions in paragraphs 6–14 of the Report, which state the relation between the factors of economic resources and stability on the one hand, and the fulfilment of adequate Defence Programmes on the other.
- (c) In response to the Minister's request in paragraph 101, to adopt the statement of policy on which our Defence Programmes should be based, as set forth in Part IV of the Report and as applied in Part V, subject to the following :—
- (i) That, as stated in paragraph 59, the Minister for Co-Ordination of Defence will deal, in his next Report, with any modified proposals involving a departure from the D.R.C. standard which the Admiralty may wish to suggest, but that the final decision as to an increased standard of Naval strength need not necessarily be taken until next year :
- (ii) That the primary rôle of the Regular Army should be as stated in the Minister's Report, viz., that of Imperial commitments, including anti-aircraft Defence at home. The rôle of the Territorial Army should be as set forth in paragraph 79 of C.P. 316 (37), omitting sub-paragraph (ii) for which the following should be substituted :—
- “(ii) The scale of air attack now envisaged on this country might well result in the dislocation of essential services, or in some loss of morale in crowded areas. There is also the problem of evacuation to be considered. Some part of both the Regular Army and the Territorial Army may be used for internal security duties, but no part of the Territorial Army should be especially allocated for this task.”
- (iii) That as regards the policy for the expansion of the Air Force, no final decision was reached on paragraph 98 (iii) of the Report, but that the Minister for Co-Ordination of Defence should, in his future investigations, proceed on the basis of that paragraph, and in consultation with the Secretary of State for Air. In particular, further examination should be made of the linked questions of the provision of war reserves and war potential.
- (d) To take note that the Estimates of the Defence Departments for the Financial Year 1938–39 should be completed on the basis of the drafts now under preparation.
- (e) To take note that the above Estimates must include as appropriations-in-aid the total sum to be issued in the year under the Defence Loans Act. In order to enable the Chancellor of the Exchequer to reach a decision as to the total sums to be so issued, he will require a forecast of the anticipated expenditure on the Defence Programmes up to March 1942. In order that this forecast may be available in time for the publication of the Defence Estimates at the beginning of March, the

Departments concerned should submit revised forecasts of the cost of their Programmes over the next five years in accordance with the above decision to the Minister for Co-Ordination of Defence at the latest by Friday, the 21st January, so that he may circulate his further Report to the Cabinet not later than Thursday, the 10th February, with a view to consideration and decision by the Cabinet on Wednesday, the 16th February.

- (f) To take note that, inasmuch as the total of the revised forecasts is not at present known, the conclusions reached as the result of the above steps must be subject to consideration at a later stage of the ability of the country to bear the total burden involved.
- (g) To take note—
- (i) That the limitations which finance imposes on National Defence place a heavy burden on diplomacy which renders it desirable as soon as may be to follow up the conversations between the Lord President of the Council and Herr Hitler; and
 - (ii) That, with this in view, the Prime Minister has instructed the Minister for Co-Ordination of Defence to take up with the Service Departments the possibility of some limitation of bomber aircraft as well as other forms of qualitative disarmament.

APPENDIX II.

NAVY.

EXPLANATORY MEMORANDUM.

IN accordance with Conclusion 1 (e) of the Cabinet at their meeting on the 22nd December (Cabinet 49 (37)), a forecast is enclosed of the financial provision expected to be required for the Navy in the financial years 1939, 1940 and 1941.

2. The provision is shown under the five broad headings used for the purposes of the Sketch Estimates, which were used also for the forecast prepared last March and sent to the Chancellor in the summer. As in the case of the previous forecast, the provision for 1937 and the Sketch Estimates for 1938 are given for purposes of ready comparison, and Votes 1 and 10 are shown individually.

3. The forecast has again been prepared on two separate and distinct bases, *i.e.* (1) that of the proposed New Standard of Naval Strength, and (2) that of the so-called D.R.C. Fleet. It is desired to emphasise, however, that though this has been done, the D.R.C. Fleet is now a purely paper conception which is in no way related to the present international situation, or to the barest necessities of Imperial Defence; in other words, it should not be regarded as in any sense an alternative which the Government could be advised to accept as an alternative to the New Standard.

4. With a view to reducing the requirements for Vote A of the New Standard Fleet, consideration has been given to the possibility of making greater use of reserves, and in the three years 1939-41, savings of 2,000, 6,000 and 10,000 respectively on Vote A, as it would normally be computed have been assumed to be possible.

5. The new Vote A of the D.R.C. Fleet differs from the previous forecast owing to the provision of additional personnel for the Fleet Air Arm. For the New Standard Vote A is last year's forecast increased by Fleet Air Arm provision, but reduced by the economies mentioned in paragraph 4.

6. As regards Vote 10, it should be explained that no allowance has been made in either forecast for certain Works of Magnitude which have not yet received Government approval, and which in some instances are dependent on decisions to be given on major policy. The following are important examples:—

	Total Cost.	1939.	Probable Spread.	
			1940.	1941.
	£	£	£	£
Fleet Air Arm	7,000,000	} 1,760,000	3,250,000	6,500,000
Mine Depots at Home	2,260,000			
Underground Oil Storage (balance)	10,500,000			
Aden Harbour and Defence	1,500,000			
Underground Storage of Explosives	7,000,000			

7. The Sketch Estimates for 1938 include (under Maintenance-Personnel) provision for the payment of interest on issues from the Consolidated Fund in 1937, but the forecasts include no provision for interest on such issues in the succeeding years.

8. The forecasts have in general been prepared on the basis of the wage rates and prices taken for the purposes of the Sketch Estimates for 1938.

9. The forecasts have been prepared on the basis of the 1938 Sketch Estimates and the 1938 New Construction Programme which were put forward before Christmas.

10. In preparing this revision of forecasts of expenditure for which figures had already been given in the summer, the experience derived in compiling the 1938 Sketch Estimates has been of benefit. The increase in the figures above those previously submitted is substantial. While detailed analysis of the differences between the forecasts rendered in the summer and the present figures will not, perhaps, be expected in this note, the following observations may be of some interest.

11. Looking at the expenditure on the New Standard Fleet (apart from Fleet Air Arm expenditure) over the three financial years taken together, the figure is now 403 millions, as against 350 millions previously estimated. Of this increase of 53 millions (or about 15 per cent.) very roughly two-fifths is due to increases in prices and wages, two-fifths to major "new items" and one-fifth to minor increases which appear likely as a result of the examination of the position during the preparation of the 1938 Sketch Estimates. By "new items" is meant projects of magnitude not previously taken into account in the previous forecast, but now either approved or, it is hoped, on the point of approval. Important examples are: underground oil storage (first instalment); protection of oil fuel; Class II re-armament; new cordite factory.

12. It will be appreciated that forecasts of this nature, even with all the reservations mentioned when the previous figures were submitted, are of doubtful value. This is particularly true when large programmes are in hand. As an instance, it may be mentioned that difficulties with regard to the production of armour have recently arisen. If they can be overcome, and no other similar troubles arise, the new construction figures may be assumed to be correct. But it may well be that the incidence of expenditure in 1939 and later years on new construction may require revision. Indeed, the Admiralty suggest that it would be prudent to have regard to the total expenditure given for new construction in the three years in question rather than to the figures shown for individual years, and they understand that for the purpose for which the forecast is required this total may suffice.

Admiralty, February 3, 1938.

TABLE I.—FORECAST OF REQUIREMENTS (NUMBERS AND CASH) FOR THE FINANCIAL YEARS 1939, 1940, AND 1941.

D.R.C. Fleet.

	1937.	1938 (proposed).	1939.	1940.	1941.
Vote A	112,000	119,000	127,500	129,000	130,500
	£	£	£	£	£
A. Maintenance, Personnel	21,422,800	23,839,100	24,631,000	25,074,000	25,525,000
B. Maintenance, Material...	36,244,730	45,208,535	44,633,000	37,879,000	34,451,000
C. Non-Effective Services	9,869,000	9,927,000	10,149,000	10,302,000	10,448,000
D. Fleet Air Arm	3,921,500	4,901,500	10,311,000	8,035,000	8,102,000
E. New Construction	33,606,970	46,779,252	61,850,000	46,900,000	31,650,000
Total	105,065,000	130,655,387*	151,574,000†	128,190,000†	110,176,000†
Say ... ..	...	...	151,500,000	128,000,000	110,000,000
Included in A for Vote 1 is	14,181,000	15,038,000	15,950,000	16,440,000	16,790,000
Included in B for Vote 10 is	5,093,000	5,637,450	6,745,000	5,870,000	4,950,000

New Standard Fleet.

	1937.	1938 (proposed).	1939.	1940.	1941.
Vote A	112,000	119,000	130,500	135,000	139,500
	£	£	£	£	£
A. Maintenance, Personnel	21,422,800	23,839,100	24,890,000	25,693,000	26,628,000
B. Maintenance, Material...	36,244,730	45,208,535	44,697,000	38,273,000	35,713,000
C. Non-Effective Services	9,869,000	9,927,000	10,149,000	10,302,000	10,448,000
D. Fleet Air Arm	3,921,500	4,901,500	10,311,000	9,137,000	9,232,000
E. New Construction	33,606,970	46,779,252	62,000,000	58,300,000	56,060,000
Total	105,065,000	130,655,387*	152,047,000†	141,705,000†	138,081,000†
Say ... ..	...	...	152,000,000	141,500,000	138,000,000
Included in A for Vote 1 is	14,181,000	15,038,000	16,080,000	16,755,000	17,500,000
Included in B for Vote 10 is	5,093,000	5,637,450	6,745,000	5,970,000	5,450,000

* Includes £810,000 for interest on issues from Consolidated Fund in 1937.

† Excluding provision for interest on issues from Consolidated Fund.

NOTE.

- A. Maintenance, Personnel: Votes 1, 2, 3, 5, 7, 11 and 12.
 B. Maintenance, Material: Votes 6, 8-I, 8-II, 8-III, 9 and 10, excluding New Construction (E).
 C. Non-Effective Services: Votes 13, 14 and 15.
 D. Fleet Air Arm: Vote 4, excluding capital cost of aircraft for new ships other than Carriers (included under E).
 E. New Construction, including aircraft for new ships other than Carriers.

TABLE II.—COMPARISON BETWEEN FORECAST MADE FOR 1939, 1940 AND 1941 IN MARCH 1937 AND THAT NOW SUBMITTED (AS FINALLY REVISED), ANALYSED OVER THE USUAL HEADINGS OF EXPENDITURE.

D.R.C. Fleet.

		1939	1940.	1941.
Vote A	As previously forecast	123,000	124,000	125,000
	As now forecast	127,500	129,000	130,500
		£	£	£
A	As previously forecast	22,948,000	23,516,600	23,722,900
	As now forecast	24,631,000	25,074,000	25,525,000
B	As previously forecast	34,114,400	29,706,600	25,889,400
	As now forecast	44,633,000	37,879,000	34,451,000
C	As previously forecast	10,185,000	10,315,000	10,430,000
	As now forecast	10,149,000	10,302,000	10,448,000
D	As previously forecast	6,218,900	5,407,900	3,477,500
	As now forecast	10,311,000	8,035,000	8,102,000
E	As previously forecast	49,533,700	34,553,900	17,480,200
	As now forecast	61,850,000	46,900,000	31,650,000
Total	As previously forecast	123,000,000	103,500,000	81,000,000
	As now forecast	151,574,000	128,190,000	110,176,000
	(say)	151,500,000	128,000,000	110,000,000

New Standard Fleet.

		1939.	1940.	1941.
Vote A	As previously forecast	128,000	136,000	144,000
	As now forecast	130,500	135,000	139,500
		£	£	£
A	As previously forecast	23,222,000	24,436,000	25,685,000
	As now forecast	24,890,000	25,693,000	26,628,000
B	As previously forecast	34,086,800	30,035,600	26,950,300
	As now forecast	44,697,000	38,273,000	35,713,000
C	As previously forecast	10,185,000	10,315,000	10,430,000
	As now forecast	10,149,000	10,302,000	10,448,000
D	As previously forecast	6,107,500	6,116,500	7,297,500
	As now forecast	10,311,000	9,137,000	9,232,000
E	As previously forecast	57,398,700	52,596,900	45,137,200
	As now forecast	62,000,000	58,300,000	56,060,000
Total	As previously forecast	131,000,000	123,500,000	115,500,000
	As now forecast	152,047,000	141,705,000	138,081,000
	(say)	152,000,000	141,500,000	138,000,000

For explanation of headings A to E, see note on preceding page.

APPENDIX III.

ARMY (including Royal Ordnance Factories).**REVISED ESTIMATE OF COST OF DEFENCE REQUIREMENTS PROGRAMME AND REVISED FORECASTS OF ARMY AND R.O.F. ESTIMATES, 1939, 1940, 1941 AND 1942.**

IN October 1937 the War Office gave forecasts of expenditure covering the years 1938-1942 in the form of:—

- I.—(i) A summary of Army Votes divided between normal and D.R.C. expenditure.
- (ii) Royal Ordnance Factories expenditure in so far as it is not covered by receipts from customers.
- II.—Normal Expenditure under the various Votes.
- III.—D.R.C. Expenditure under the various objective headings under which it has been customary to classify it.

In addition to the figures contained in the tables, the Secretary of State, pressed to give an estimate of possible additions to the programme already approved, gave with all reservation as “as good a round sum as any other” £100 millions.

2. The approved programme covered by the tables in the October 1937 forecast included, *inter alia*, provision for:—

- (i) A field force of 4 divisions, a mobile division, 3 A.A. Groups (including one on a Supplementary Reserve basis), capable of disembarking on the Continent within approximately 15 days of mobilization.
- (ii) A programme for defences of Ports at Home and Abroad over a period of years.
- (iii) Air Defence of Great Britain on the plan authorized at that date, *i.e.*, exclusive of the extension northwards and the “Ideal” Scheme.
- (iv) Improved accommodation for the Regular Army.

3. In his interim report of the 15th December, 1937 (C.P. 316 (37)) the Minister for Co-ordination of Defence stated that “our main effort must be directed to the protection of this country against attack and the preservation of our trade routes,” and that “the primary rôle of the Army” should be “the defence of Imperial Commitments, including anti-aircraft defence at home rather than the Continental rôle,” and, the Secretary of State agreeing in principle with this thesis, the War Office were instructed to submit a fresh estimate on that basis.

4. In order to submit such an Estimate it was necessary in the first place to formulate the military premises, based on the altered policy, and then to calculate their financial effects on the capital programme. To do this, even on the broadest lines, required consideration of much detail. For example, the change in the theatre of operations affects the provision of almost every type of store and equipment; and by no means in the same way. Reserves of gun ammunition and tanks are reduced; but reserves of mechanical transport are increased. So, too, the provision for workshops, hospitals and depots has all required detailed examination. And the illustrations could be carried further. Moreover, had there been time, it would have been desirable to re-calculate all establishments in the light of the new policy, but this was clearly outside the bounds of possibility.

5. In the submission of the attached tables, therefore, it must be made clear that, while every endeavour has been made to produce a reasonable forecast, the figures can only be rough approximations given on the best data available. The tables follow the general lines of those containing the October 1937 forecast of expenditure. It has not, however, in the time available been possible to divide the Normal Expenditure by Votes. In order to give as fair a comparison as possible with the position in October 1937, the round total of £100 millions given for “additional commitments” has been allocated between the various objective headings of D.R.C. expenditure in Table III (p. 8) of C.P. 256 (37). So far as

possible prices have been taken on the basis applicable to 1938 Estimates, and any future variations would of course affect the figures. The main differences between the present tables and those submitted in October 1937 resulting from the new policy are touched upon in the following paragraphs.

6. *The composition of the Field Force* is assumed to be 1 corps of 2 divisions plus a mobile division and 2 A.A. Groups maintained with a full scale of war reserves on the basis of an Eastern Campaign and ready to complete its embarkation in 21 days. In addition two divisions and the 3rd A.A. Group are to be ready to begin embarkation in 40 days with war equipment and, broadly speaking, $\frac{1}{2}$ scales of reserves. Provision for the remaining field units of the Regular Army at home and abroad (except Egypt and Palestine) is of full unit equipment and peace maintenance reserves. For Egypt special provision is made in accordance with the decision of the Committee of Imperial Defence of the 29th July, 1937.

7. The effect of the modifications in the rôle and composition of the Field Force is to reduce the capital cost by some £14,000,000, compared with the October forecast, including its appropriate proportion of additional commitments. Economies of over £7,000,000 have been made in the tanks of the force partly by reductions in numbers, partly by cheaper types, partly by decreased reserves; gun ammunition of all types has been reduced by over £4,000,000. On the other hand, the assumption of an Eastern theatre of war necessitates heavy increases of various stores owing to the distance from the source of supply and in the reserves of mechanical transport both for this reason and because of the heavy wear and tear in desert country. Provision has also been necessary for new air-cooled tank guns, for increased Signals and Engineer Stores and for various works services for which an amended provision has now been made.

8. The Army has an additional commitment not shewn in this forecast, *i.e.*, to supply and maintain the Advanced Air Striking Force on the Continent, should the need arise. In the October forecast this commitment was largely covered since the Field Force and Advanced Air Striking Force were regarded as operating in the same theatre. Under the new hypothesis extra provision will be required for this commitment. The Army troops would number about 5,000, mainly Supplementary Reserve.

9. *Regular Army other than Field Force.*—The increase is mainly due to provision for a tank battalion in Egypt.

10. *Defended Ports.*—Provision has been made for the longer period which it has been assumed will elapse before these ports are relieved in war, and for additional schemes for Malta and Aden. The Committee of Imperial Defence at the 292nd meeting on the 15th April, 1937, instructed the Overseas Defence Committee to cost this figure. Provision has been included, although the Overseas Defence Committee have not submitted their report.

11. *Air Defence of Great Britain.*—Provision has now been made for the full "Ideal" Scheme, for increased scales of ammunition and for 150 Light A.A. Sections.

12. *Improved Accommodation for the Regular Army.*—Under the original programme £7½ millions were approved for the modernization and improvement of barracks. This sum will not bring up to reasonable modern conditions all the barracks and accommodation in this country. There will still remain many barracks completely unsuitable for the proper housing of troops, and it is urgently necessary in the interests of recruitment and for the contentment of the Army, unless a definitely sub-civilian standard is to be continued, to put right the present intolerable conditions.

13. *Training Equipment for Territorial Army Divisions.*—On the assumption that two divisions will be converted into A.A. Divisions in connection with the "Ideal" Scheme, a reduction has been made in the £9 millions approved for this purpose. A further reduction has been made by calculating the artillery on a 4-gun instead of a 6-gun basis for training purposes.

14. *War Equipment and Reserves for the Territorial Army.*—Proposals had been made for the provision of war equipment and reserves for four

Territorial Army Divisions, with a full proportion of Corps troops, at a cost of £43 millions. It is now proposed to provide a pool of equipment at a cost of £15 millions, which could be used to enable either two Territorial or Regular divisions or their equivalent to take the field after the 4th month.

The remainder of the Regular and Territorial Army could not take the field until the 8th or 10th month of war.

15. *Improved Accommodation for the Territorial Army.*—The accommodation of Territorial units (other than those Anti-Aircraft units for whom new Headquarters are being built) in many cases falls far short of what is necessary for training or from a recruiting point of view. It is necessary to face a programme of replacement or modernization of many headquarters.

16. *Passive Air Defence.*—Provision is made for fire-fighting equipments and equipment for decontamination squads in Army units and in War Department civil establishments, in accordance with the recent report of the Passive Air Defence Committee.

17. It will be seen from the above paragraphs that the re-orientation of policy from the Continent to the Near East has enabled the War Office to make very substantial economies so far as concerns the Field Force (over £14 millions compared with the adjusted October forecast), and to reduce from £43 millions to £15 millions the equipment of re-inforcing Territorial Divisions, which was an essential corollary to the despatch of that force to a Continental theatre of operations. Unfortunately, new demands continue to be made upon the Army to meet new developments. The requirements of Air Defence of Great Britain, for example, have gone up by no less than £40 millions since the adjusted October forecast, and the necessities of passive Air Defence will involve an expenditure of £5 millions. Should the Committee of Imperial Defence decide on the increase in Coast Defence referred to in paragraph 10, a further commitment will be imposed upon the Army, and it has been included by anticipation in this Estimate. It does not rest with the War Office to control those developments. It can, however, be fairly claimed that the "new conspectus" has resulted in a notable contribution towards their cost.

18. It should be pointed out that the minimum requirements for the defence of Imperial commitments have been shown, and that should the Government be forced to send a force to the Continent, the force would be dangerously small in numbers and reserves of ammunition, &c., and could not be reinforced for several months.

19. The forecasts for normal expenditure during the five-year period have been calculated, so far as time has permitted such calculation, on the new programme. No allowance has been made for large changes, such, *e.g.*, as an alteration in the relation between the British and Indian Establishments.

20. In accordance with the arrangement made with the Minister for Co-ordination of Defence, the cost of certain measures designed to put recruiting on a satisfactory basis and to improve the conditions under which soldiers live has been shown separately. It is perhaps unnecessary to emphasize the fact that unless there is a sufficiency of recruits (and at present the shortage is serious) the heavy expenditure on the re-equipment of the Army will be stultified.

The War Office, January 27, 1938.

TABLE I.—TOTALS OF ARMY AND ROYAL ORDNANCE FACTORIES ESTIMATES.

(Exclusive of receipts from Issues from the Consolidated Fund and Interest and Sinking Fund payments on such issues.)

—	Estimates, 1938 (approx.).	Forecast of Estimates.			
		1939.	1940.	1941.	1942.
<i>Army.</i>	£	£	£	£	£
1. Normal Services (net) ...	52,830,000	55,000,000	56,500,000	58,500,000	61,000,000
2. Defence Requirements...	53,100,000	70,000,000	60,500,000	41,500,000	29,000,000
3. Recruiting and Amenities Programme* ...	3,400,000	4,400,000	4,500,000	4,500,000	4,500,000
4. Total of Army Estimates ...	109,330,000	129,400,000	121,500,000	104,500,000	94,500,000
<i>Royal Ordnance Factories.</i>					
5. Substantive Vote ...	445,000	200,000	...	...	...
6. Defence Requirements: Expenditure on New Factories ...	8,857,000	7,864,000	2,966,000	606,000	...
7. Total R.O.F. Estimates ...	9,302,000	8,064,000	2,966,000	606,000	...
8. Grand total, Army and R.O.F. Estimates ...	118,632,000	137,464,000	124,466,000	105,106,000	94,500,000

* These figures cover certain proposals at present under discussion with the Treasury, for which the Chancellor has decided that provision, if approved, shall be made by Supplementary Estimate in 1938. The figures in the succeeding years include provision for these and other services.

TABLE II.—CAPITAL EXPENDITURE ON THE DEFENCE REQUIREMENTS PROGRAMME—REVISED ESTIMATE, JANUARY 1938. APPROXIMATE DISTRIBUTION BY YEARS.

—	1936 & 1937 (probable expendi- ture).	1938.	1939.	1940.	1941.	1942.	Remaining to com- plete.	Total.
	£	£	£	£	£	£	£	£
Army	36,324,000	53,100,000	70,000,000	60,500,000	41,500,000	29,000,000	10,510,000	300,934,000
R.O.F.	5,773,000	8,857,000	7,864,000	2,966,000	606,000	—	—	26,066,000
Total	42,097,000	61,957,000	77,864,000	63,466,000	42,106,000	29,000,000	10,510,000	327,000,000
								Add margin for Contingencies ...
								20,000,000
								Grand total ...
								347,000,000

TABLE III.—CAPITAL EXPENDITURE ON THE DEFENCE REQUIREMENTS PROGRAMME.

Statement showing—

- (1) Estimate as at October, 1937, shown in C.P. 256 (37), Table III (p. 8).
- (2) Estimate as at October, 1937, adjusted to allow for lapses on the provision made in 1936 and 1937 Estimates.
- (3) Estimate as at October, 1937, adjusted to include "Additional Commitments," totalling some £100,000,000.
- (4) Revised estimate, January, 1938.

	October 1937 Estimate.			January 1938 Estimate.
	As in C.P. 256 (37), Table III.	Adjusted for lapses.	Including Additional Commitments.	
	(1)	(2)	(3)	(4)
	£	£	£	£
A. <i>Regular Field Force</i> —				
Material and ammunition ...	84,333,000	82,203,000	94,868,000	80,142,000*
Works and land ...	13,326,000	13,326,000	18,077,000	18,028,000
B. <i>Regular Army other than the Field Force</i> —				
Material, ammunition and works ...	5,825,000	5,825,000	6,856,000	9,462,000
C. <i>Defended Ports</i> —				
Singapore ...	6,208,000	6,208,000	6,692,000	6,952,000
East of Suez ...	5,815,000	5,815,000	17,011,000	7,634,000
Mediterranean and Cape Route ...	3,454,000	3,454,000	13,126,000	6,260,000
Home Ports ...	4,105,000	4,105,000	4,345,000	4,463,000
D. <i>Air Defence of Great Britain (including A.A. Defence of Ports)</i> —				
General charges and ammunition ...	41,525,000	39,275,000	57,318,000	97,790,000
E. <i>Industrial Mobilization</i> —				
Army ...	19,179,000	18,881,000	19,031,000	17,611,000†
R.O.F. ...	25,705,000	23,218,000	23,218,000	26,066,000‡
F. <i>Improved accommodation for the Regular Army</i> ...	10,118,000	9,420,000	9,420,000	20,878,000
G. <i>Barrack accommodation for additional Infantry Battalions</i> ...	248,000	248,000	270,000	219,000
H. <i>Training equipment for T.A. Divisions, other than Anti-Aircraft</i> ...	9,001,000	9,001,000	9,376,000	7,458,000
I. <i>War equipment and reserves for the T.A.</i> ...	...	...	43,381,000	15,000,000
K. <i>Improved accommodation for the T.A.</i> ...	...	...	...	4,000,000
L. <i>Passive Air Defence</i> ...	...	...	500,000	5,037,000
Total ...	228,842,000	220,979,000	323,489,000	327,000,000
Add margin for Contingencies	...	...	...	20,000,000
Grand total	...	...	...	347,000,000

* As in C.P. 256 (37), all inspection charges, other than for War equipment and reserves for the Territorial Army, are included in the figure for Regular Field Force material and ammunition.

† The Admiralty and the Air Ministry will contribute part of this cost.

‡ Excluding substantive R.O.F. Votes of some £1,560,000, the bulk of which could fairly be regarded as attributable to the Defence Requirements Programme.

APPENDIX IV.

ROYAL AIR FORCE.

REVISED PROPOSALS BASED ON THE RECOMMENDATIONS OF THE MINISTER FOR
CO-ORDINATION OF DEFENCE IN C.P. 316 (37).

Introductory.

1. IN D.P. (P) 12, the Air Ministry put forward a programme of expansion which has since been known as "Scheme J." That programme, the total cost of which over the five-year period 1937-41 would have been about £650 millions, still represents the considered opinion of the Air Ministry as to the minimum strength required to provide a reasonable standard of security in the present international situation, and an air force which would form "an effective deterrent and insurance of peace, and which, in the unhappy event of war, would be able to meet a potential enemy on equal terms." In the Interim Report of the Minister for Co-ordination of Defence (C.P. 316 (37)) it was, however, made clear that for financial reasons, the full requirements of "Scheme J" could not be met. Certain recommendations were accordingly put forward by the Minister, and subsequently considered by the Cabinet, on the basis of which it was suggested a modified programme should be prepared. These recommendations were that the overseas increases proposed in "Scheme J" should be omitted; that, at Home, the fighter increases should be retained at the "Scheme J" figure, with full war reserves; and that there should be an increase in bomber strength above the previously approved ("Scheme F") standard, with a reduced scale of war reserves and an increased productive potential. It was also intended that the Air Ministry should retain in the new programme the increases proposed in Scheme "J" for trade protection in Home waters, including the four squadrons shown in Appendix B to D.P. (P) 12. A new programme has accordingly been prepared, details of which are set out below.

Bomber First-Line Strength.

2. The recommendation of the Minister for Co-ordination of Defence that there should be an increase over "Scheme F" in the first-line strength of our Metropolitan Air Striking Force has been interpreted by the Air Ministry as a recommendation that they should, in the new scheme, propose such increases as would correspond to that proportion of the expansion of the German Air Force which they are morally sure is already in course of being effected, leaving out of account for the present the anticipated German long-term programme.

3. The German Air Ministry have recently explicitly stated that their scheme of expansion to 180 Squadrons, which General Milch informed Air Vice-Marshal Courtney would be completed by the Autumn of 1938, and which included 90 squadrons of long-range bombers, has in fact already been achieved. In addition, the strength of the German squadrons has been raised from 9 to 12 first-line aircraft. We are thus already confronted with a German striking force in being of 1,080 long-range bombers, and with the next stage of expansion, which involves raising the strength of each squadron from 12 aircraft to 15 aircraft probably by the summer of 1938, the first-line strength in long-range bombers will rise to 1,350. In their interpretation of the recommendation of the Ministry for Co-ordination of Defence, the Air Ministry have therefore proposed a first-line Metropolitan bomber strength of 1,350 aircraft as the minimum which would bear a definite relation to the German air striking force of the immediate future. The German bomber force, however, will probably attain a first-line strength of 1,350 by the summer of 1938, while this strength will not be attained by our Air Striking Force with complete personnel and reserves until 1941, by which date the Germans may well have reached a first-line strength considerably greater.

War Reserves and War Potential.

4. The Minister's recommendation under this head was for the provision of a reduced scale of war reserves coupled with "greatly improved" arrangements for war potential.

To describe the basis upon which, in accordance with the Minister's recommendation, revised proposals under this heading have been prepared, it is necessary to explain the basis upon which the original proposals for war reserves of aircraft were calculated by the Air Staff.

5. It was estimated that, assuming the existence of an industry adequately organised and equipped to enable it to turn over to manufacture aircraft and engines in war, the war output of aircraft and engines could be raised to the point at which it equalled war wastage in the space of about six months. It was further estimated that in this first six months of war the total output of aircraft and engines would be sufficient to meet two months' war wastage, and it was proposed that the consequent gap between output and requirements should be bridged by the provision of a four months' (actually 16 weeks) war reserve of aircraft and engines. In this argument it will be observed that a balance is struck between the output of industry and the scale of war reserves, and, if the output of material in the early months of war could be increased, the scale of war reserves could safely and economically be reduced. It might be thought that from this statement it follows that war reserves can safely be reduced in proportion as war potential is increased. This, however, is not the case for two principal reasons:—

- (a) that however greatly war potential is increased it is not possible, unless a wholly uneconomical structure is imposed on industry in peace, to reduce below a certain minimum the time taken for this war potential to produce the full output required. As to the nature of this minimum, reliable data are gradually becoming available as our experience of the shadow industry develops. It will be appreciated, therefore, that the "six months" which figured in the calculations was no more than the best estimate which could be made at the time. On the evidence now available it does not seem likely that, even assuming the most efficient arrangements for war potential, the output of industry will rise to equal war wastage in less than six months, even if we accept the most optimistic of the forecasts which have been made.
- (b) The attempted balance between war output and war reserves in the early stages of a war assumes that the conditions of the war will leave the war potential free to develop in accordance with the paper calculations. In other words, it takes no account of the inevitable dislocation and restriction of output which would result from enemy air attack.

6. It follows, therefore, that even if war potential is developed to a degree which will enable war output to equal war wastage in the space of 6 months, and a 16 weeks' stored reserve of aircraft is held, there is bound to be a more or less serious gap during which our air effort in offence and defence will be curtailed.

7. It is upon these facts that the Minister's recommendation has to be imposed. At the same time it is realised that every possible effort must be made to frame a programme which is not beyond financial possibilities. To meet this situation nothing but an arbitrary cut on war reserves of aircraft will suffice. The arbitrary cut imposed in the present revised programme is a general scaling down of war reserves which, in the case of operational squadrons (other than fighter squadrons, for which the full scale of reserves has been retained), involves a reduction of a 16 weeks' reserve to a reserve of approximately 9 weeks, and in the case of war training units must react adversely on our capacity to produce trained pilots and crews in war. This, of course, is a most drastic step, and it is clear unfortunately that it cannot be offset in the early months of war by any degree of development of war potential. It is therefore most desirable to leave open the possibility of restoring some proportion of this cut.

8. The provision which it is desirable to make for War Potential in the revised scheme has been the subject of careful examination, and it has been decided to recommend a sum of £16 millions spread over the period up to March 1942. An addition to War Potential on this scale will certainly constitute a most valuable contribution to our resources, and on the evidence available it seems likely that this sum approaches the limit of what can usefully be expended on the erection of further shadow factories, filling factories for bombs and the creation of additional war potential in civil industry. A fundamental doubt must still, however, persist, in the present state of our knowledge and experience, as

to how far, if at all, this expenditure can be made to offset the drastic cut in war reserves referred to above. It is proposed, therefore, that of the £16 millions to be included in the estimate, £10 millions should be definitely allocated to war potential, leaving £6 millions in suspense for expenditure on war potential, or in restoring a proportion of the cut in war reserves, in the light of further experience of the possibilities of the shadow organisation.

9. It is suggested that the holding in suspense of the final allocation of the £6 million is a reasonable compromise between two conflicting views. The Minister for Co-ordination is understood to attach greater importance to the war potential, but it would not be possible rapidly and soundly to improvise large-scale plans to spend this sum in addition to the firm extra £10 millions. The Air Staff, on the other hand, while attaching great importance to the war potential, feel that if they have to decide between a cut in reserves and the war potential, they would be bound at present to advise that the £6 millions should go to reserves. It is accordingly suggested that the most practical course is to allot this sum on an alternative basis, the detailed allocation to be settled later.

10. An expenditure of £16 millions on war potential would provide a number of additional shadow factories and also other improvements in productive potential. It is not possible at present to give an accurate forecast of the apportionment of this sum to the various requirements since it will be necessary to give careful consideration to the balancing of potential in airframes, engines, bombs, &c. But it must not be assumed that the provision of potential on this scale would provide either in full or at the time required the output necessary to replace wastage at the rate which we anticipate may be incurred.

11. The Air Staff are bound to emphasise that in preparing the revised programme set out above they have proceeded on the assumption that having regard to the state of the national finances it is not possible to find a sum of money for the Air Force in excess of that which the revised programme requires. They have therefore collaborated to the best of their ability to prepare a scheme which, within the financial limits laid down, creates the most effective deterrent possible, provides an effective close defence, and contains the maximum provision of striking force which the money will provide. They must, however, emphasise that the scheme now submitted would not enable a counter-offensive to be maintained on the scale which they as an Air Staff regard as an adequate response to probable enemy attack. While it is impossible to predicate with certainty the scale of casualties in a future war, the Air Staff have made the most careful calculation possible as to the rate of casualties they expect would be sustained, based on intensity of operation, &c. The scale of reserve now contemplated is inadequate to maintain an offensive which they believe would be comparable with that of the enemy. It would therefore be necessary, in the event of war, to decide at a very early stage whether the scale of offensive operations should be limited so as to preserve an offensive force in being until war output overtook wastage, or maintain a high rate of offensive for a limited period with the certain knowledge that there would ensue, should the war last more than a few months, a break during which the offensive power of this country would be comparatively negligible. Faced with such an alternative, there can be little doubt that the decision would have to be taken to limit the offensive and to hold a proportion of first-line strength in reserve so that a limited scale of offensive could be maintained for a longer period, with the consequent risk that "potential" may never become "production" in the face of heavy enemy air attack. They feel as a Staff that this position must be plainly stated and fully appreciated.

Overseas.

12. The strength of the Air Force overseas in the modified programme is, apart from a minor modification, the same as in "Scheme F." The most important of the omissions from the increases overseas proposed in "Scheme J" is the deletion of six squadrons in the Middle East, including Aden and Kenya. These squadrons were included as additions in "Scheme J" in order to provide an Imperial air reserve overseas and also partly in connection with mandatory and colonial responsibilities. The Air Ministry also considered that, although the augmented air forces in the Middle East would obviously bear no specific relation

to the threat represented by Italian air forces, they would nevertheless constitute a greater deterrent to Italian attack and would provide a valuable addition to our defensive strength in the Middle East.

Finance.

13. Finally it should be mentioned that in the course of re-considering the Scheme as a whole it has been necessary to effect certain savings, notably in Personnel and Works, with a view to reducing its cost as far as possible. As thus revised the cost of the Scheme over the five-year period 1937-41 amounts to £567,000,000, or about £100,000,000 more than Scheme F. A table comparing the detailed cost of Scheme F and the new Scheme is included in the Financial note.

Air Ministry, January 21, 1938.

SCHEME K.

Financial Note.

1. *General.*

The attached table gives a forecast of Air Estimates for the financial years 1937 to 1941 on the basis of Scheme K as set out in the foregoing Memorandum.

The estimated expenditure under Scheme F (the present approved scheme), given in C.P. 256 (37), is also shown for purposes of comparison.

These forecasts (which make no allowance for the financial effects of the Defence Loans Act) have been based upon a rapid survey of the field of expenditure as a whole, and not upon a detailed calculation of the liabilities likely to accrue under the several votes in each year. Indeed, with so many elements of uncertainty, estimating with any real precision is impossible, and the forecasts cannot be regarded as more than rough approximations.

2. *Price Level.*

Generally speaking, both forecasts have been based on current wages and prices. It is assumed that there will be no very marked rise in wage rates, and no material increase in the present scales of emoluments of the Royal Air Force, but that there will be some further small increase in the cost of building materials.

3. *Certain Assumptions in these Forecasts.*

Scheme F.—The forecast for Scheme F made no provision for certain services sanctioned subsequent to the approval of the Scheme. Provision for these services is, however, included in the forecast for Scheme K. The extra cost under Scheme K is thus carrying financial liabilities which had arisen on the policy previously approved.

Scheme K.—The forecast for the new scheme—

(a) has been based on the following assumptions:—

- (i) that re-equipment after expansion is completed is based on a seven-year period;
- (ii) that overseas squadrons are re-equipped, so far as types permit, from aircraft displaced from the Metropolitan Air Force;
- (iii) that no provision is required within the period to meet the liability for compensation assumed under the capital clause; and
- (iv) that the cost of the training requirements of the Fleet Air Arm, as well as all expenditure connected with the embarkable units, is borne on Navy Votes from 1938 onwards. (For 1937 the forecast is based on existing arrangements.)

(b) includes no provision for—

- (i) Radio directional finding schemes beyond those already authorised.

- (ii) Silhouette lighting, apart from expenditure on the experimental scheme recently sanctioned, estimated at £400,000. If the scheme is extended to cover the London area, another £2 millions would be necessary, and for the searchlight belt, yet a further £10 millions; but these estimates are highly conjectural.
- (iii) Reinforced surfacing of aerodromes, the cost of which cannot be estimated, but would undoubtedly amount to several million pounds.
- (iv) Extension of balloon barrages beyond the barrage already approved for the London Area.
- (v) Effect on Air Votes if certain further proposals for improving the emoluments and conditions of service of Army personnel, now under consideration, are approved.

4. Civil Aviation.

The forecast for Scheme F contained a token figure of £2 millions a year for the whole period. In order to make the picture more complete in the case of Scheme K, an attempt has been made to indicate the probable course of expenditure in quite a rough way, on the basis of existing policy, so far as it can at present be foreseen.

TABLE.—ROUGHLY ESTIMATED COST OF SCHEME K.

(With corresponding totals under Scheme F (in brackets) for comparison.)

	1937.	1938.	1939.	1940.	1941.	Total, 1937-41.	Balance of Liabilities on Works Services falling beyond 1941.	Stabilised after 1943.
<i>Vote 1.</i> Pay, &c., of the Royal Air Force	£ 8,466,000 (8,466,000)	£ 10,300,000 (9,600,000)	£ 12,500,000 (11,300,000)	£ 14,500,000 (11,750,000)	£ 16,000,000 (12,000,000)	£ 61,766,000 (53,116,000)	...	£ 17,000,000 (12,000,000)
<i>Vote 3.</i> Technical and war-like stores and research	43,542,000 (43,542,000)	63,000,000 (65,000,000)	74,000,000 (65,000,000)	72,000,000 (55,000,000)	64,000,000 (55,000,000)	316,542,000 (283,542,000)	...	55,000,000 (50,000,000)
<i>Vote 4.</i> Works, Buildings and Lands	18,000,000 (18,000,000)	20,000,000 (14,100,000)	23,000,000 (12,600,000)	23,000,000 (12,400,000)	16,000,000 (7,300,000)	100,000,000 (64,400,000)	15,000,000 (6,000,000)	3,000,000 (2,200,000)
<i>Vote 11.</i> Non-effective Services...	482,000 (482,000)	550,000 (550,000)	650,000 (650,000)	750,000 (700,000)	900,000 (800,000)	3,332,000 (3,182,000)	...	1,000,000 (1,000,000)
<i>Votes 2, 5, 6, 7, 9 and 10.</i> Maintenance of Person- nel, Medical Services, Technical Training and Education, Aux- iliary and Reserve Forces, Meteorology, Miscellaneous and Air Ministry	9,695,000 (9,695,000)	13,650,000 (10,750,000)	15,100,000 (12,000,000)	16,500,000 (11,750,000)	17,600,000 (11,250,000)	72,545,000 (55,445,000)	...	18,000,000 (11,250,000)
Total, Royal Air Force...	80,185,000 (80,185,000)	107,500,000 (100,000,000)	125,250,000 (101,550,000)	126,750,000 (91,600,000)	114,500,000 (86,350,000)	554,185,000 (459,685,000)	...	94,000,000 (76,450,000)
<i>Vote 8.</i> Civil Aviation ...	2,315,000 (2,315,000)	3,000,000 (2,000,000)	2,750,000 (2,000,000)	2,750,000 (2,000,000)	2,500,000 (2,000,000)	13,315,000 (10,315,000)	...	2,500,000 (2,000,000)
Total, Air Estimates ...	82,500,000 (82,500,000)	110,500,000 (100,000,000)	128,000,000 (105,000,000)	129,500,000 (95,000,000)	117,000,000 (85,000,000)	567,500,000 (467,500,000)	...	96,500,000 (80,000,000)

NOTE.—The Scheme F figures (in brackets) have been rounded to the totals shown.