

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

under the guidance of the Royal Society's

British National Committee for the History of Science, Medicine and Technology

Catalogue of the papers of

FREDERICK ALEXANDER LINDEMANN, C.H., F.R.S.

VISCOUNT CHERWELL OF OXFORD

(1886 - 1957)

Deposited in the Library of Nuffield College, Oxford

VOLUME II

Sections F - H

Compiled by: Jeannine Alton

Julia Latham-Jackson

1981

All rights reserved

<u>SECTION F</u>	<u>SECOND WORLD WAR F.1 - F.419</u>	
	<u>PREPARATIONS AND STATISTICAL SECTION, GENERAL PAPERS</u>	
		<u>Page</u>
	INTRODUCTION	138
F.1 -F.39	PRE-WAR PAPERS ON AIR DEFENCE, 1921-39	141
	With an introductory note	
F.40 -F.87	FORMATION AND ORGANISATION OF THE PRIME MINISTER'S STATISTICAL SECTION ('S BRANCH')	153
	With an introductory note	
F.88 -F.252	MINUTES EXCHANGED BETWEEN CHERWELL AND CHURCHILL, 1939-45	160
	With an introductory note	
F.253-F.257	CABINET PAPERS, 1940-45	172
F.258-F.394	CHARTS PREPARED BY THE STATISTICAL SECTION	173
	With an introductory note	
F.395-F.419	MISCELLANEOUS MINUTES AND CORRESPONDENCE, 1939-51	184

Second World War
Preparations and Statistical Section, general papers

INTRODUCTION

Section F documents Cherwell's growing preoccupation with the inevitability of war and the problem of air defence, and presents a general picture of his service to Churchill during the Second World War. Papers from the same period on more specific topics are in Sections G (military and scientific) and H (economic).

In October 1939 Cherwell was asked by Churchill, then First Lord of the Admiralty, to assemble a group of economists who would collect and co-ordinate Admiralty and other statistics. The group became known as the First Lord's Statistical Branch ('S' Branch) and the first members (in order of recruitment) were G.D.A. (later Sir Donald) MacDougall, H. Makower, G.L.S. Shackle, H.W. Robinson and D.G. Champernowne. R.F. (later Sir Roy) Harrod joined the group on 1 January 1940; other members included D.M.B. Butt, E.J.S. Clarke, W.A.B. Hopkin, C.M. Kennedy, C.J. Martin, W.R. Merton, J.R. Parkinson, F.R.P. Vinter and T. Wilson.

The functions of 'S Branch' are described in F.41 as follows:

- '1. To analyse statistics relating to the Navy and cognate matters and present the results in diagrammatic form both for the information of the First Lord and for his use in discussion.
2. To compile and keep up to date the album of charts and diagrams which the First Lord has circulated to the cabinet ...
3. To answer at short notice questions by the First Lord on any matter involving statistics with which he may have to deal as a member of the War Cabinet and other Committees.
4. To read all cabinet papers on economic matters and draw the attention of the First Lord to points which he might wish to take up.'

When Churchill became Prime Minister in May 1940 he retained 'S Branch' as an independent department outside the normal machinery of government, and it became known as the Prime Minister's Statistical Section, or sometimes, after Cherwell's appointment as Paymaster General in December 1942, as the Office of the Paymaster General. It remained in existence until the change of government in 1945.

Second World War
Preparations and Statistical Section, general papers

Although the scope of the work and the number of staff grew in accordance with the increased importance of the Statistical Section, its essential function remained the collection and distillation of information. Harrod (The Prof, p.221) relates that Churchill wished Cherwell to range over the whole field of the war effort, excluding only military operations and personal appointments and promotions. Much of Cherwell's interest was concentrated on military and scientific problems, and there is a large corpus of material relating to the development, production and use of various weapons and armaments. But he also involved himself in a wide range of economic topics including the efficient use of shipping tonnage, the production of food and raw materials, manpower, negotiations with U.S.A. for military and economic aid and, in the latter stages of the war, in the various problems relating to post-war reconstruction.

Statistics were assembled on all these topics from cabinet papers, departmental minutes and reports, and correspondence with colleagues in government departments and scientific and military establishments. (This background material is now mainly contained in Sections G and H.) In addition, Cherwell and his staff quantified and criticised the available data and assumptions on a wide range of major issues. Some of the famous battles resulting from his questioning of generally accepted views on, for example, the size of the German Air Force, the accuracy of British bombing and the existence and scope of the German V-weapons have been widely discussed in the published literature, and most of them are well documented in Section G (see Introduction to Section G). It is difficult to estimate the effect of Cherwell's quantitative approach to problems that would previously have been considered exclusively the province of the military, but it is interesting to observe that scientists in other fields were using a similar approach, with results such as the recognition of the importance of Operational Research to considerations of military strategy.

The material assembled by the staff of the Statistical Section was conveyed to Churchill in the form of a personal minute from Cherwell, often with a recommendation or a draft minute for Churchill to sign and send to the Minister concerned. Examples of these are to be found passim in Sections G and H, but F.88-F.216 contains a chronological sequence of Cherwell's minutes which appears to have been assembled after the

Second World War
Preparations and Statistical Section, general papers

war for the benefit of historians (see General Introduction). Many of these minutes are duplicated elsewhere, but the sequence as a whole presents an interesting general picture of the working relationship between Churchill and Cherwell during this period.

In addition to the minutes, statistics were often presented to Churchill in the form of coloured graphs or charts. Many examples of these have survived, and some appear passim in Sections G and H, but the majority are at F.258-F.394.

Second World War
Pre-war papers on air defence

F.1-F.39 PRE-WAR PAPERS ON AIR DEFENCE, 1921-39

The material is divided as follows:

F.1 -F.11	Committee papers and correspondence
F.12-F.18	Drafts and notes on air defence
F.19-F.39	Correspondence on air defence and the international situation

The majority of the correspondence in this section was previously kept with Cherwell's 'Personal' papers (see General Introduction) under the general heading of 'Air Defence'. It has been combined with a number of drafts, reports and committee papers from amongst Cherwell's wartime papers, some of which were not previously available to researchers, in order to form a more complete picture of Cherwell's preoccupations and activities during this period.

For letters to the press and articles on related subjects written by Cherwell during this period see Section E.

For material relating to Cherwell's political activities see Section J.

Second World War
Pre-war papers on air defence

F.1-F.11 Committee papers and correspondence, 1921-39

F.1 Aeronautical Research Committee. Meteorology Sub-Committee.

Brief correspondence, 1921

F.2 Aeronautical Research Committee. Kite Balloon Sub-Committee.

Correspondence and drafts, January-February 1926.

Included in the folder is a list of official committee papers which were destroyed during the review of the Cherwell collection in April 1965.

F.3 Aeronautical Research Committee.

Correspondence, 1926, 1929, 1932.

F.4 Committee of Imperial Defence. Anti-Aircraft Research Sub-Committee.

Correspondence, 1924-28

F.5-F.10 Committee for the Scientific Survey of Air Defence
(The 'Tizard Committee')

Correspondence and papers, 1934-36.

F.5 Correspondence, 1934 (F.5/1 - F.5/3)

F.5/1 Correspondence with G.I. Hodsall and R. Brooke-Popham, October-November 1934, re invitation to Cherwell to submit his views on aerial defence to a Committee of which Brooke-Popham was Chairman. Includes copy of a letter from Cherwell to S. Baldwin.

F.5/2 Correspondence with Lord Londonderry, November-December 1934, re the advisability of setting up an independent committee to investigate the possibilities of defence against air attack.

F.5/3 Letter from Cherwell to an unidentified correspondent (? Churchill), 9 December 1934, containing comments on his correspondence with Londonderry.

F.6 Correspondence, 1935 (F.6/1-F.6/5)

In alphabetical order.

F.6/1 Chamberlain, A. January-June

Includes correspondence with Churchill and Ramsay McDonald.

F.6/2 Cunliffe-Lister, P. (later Lord Swinton) June

F.6/3 Hankey, M. P. A. January, March

F.6/4 Londonderry, Lord January

Cherwell's reply to a letter from Londonderry, 20 December 1934 (see F.5/2).

F.6/5 Tizard, H. T. July-September

Includes 9 pp. typescript by Cherwell re air defence,
sent to Tizard 1 July 1935.

Second World War
Pre-war papers on air defence

- F.7 Drafts, 1935 (F.7/1-F.7/2)
- F.7/1 13 pp. typescript draft with corrections in Cherwell's hand and a ms. note (not by Cherwell) 'Address to 1922 Cttee. 18 February 1935'. It is accompanied by carbon copies of letters from Cherwell to R.G. Clarry and T.J. O'Connor, 31 January and 8 March 1935.
- Another copy is included at E.30.
- F.7/2 2 pp. typescript, unsigned, but presumably by Cherwell, advocating the establishment of a committee 'with the full authority of Parliament under a chairman of Cabinet rank' in place of the Tizard Committee. n.d., c.1935.
- F.8 Correspondence, 1936 (F.8/1-F.8/6)
- In alphabetical order.
- | | | |
|-------|--------------------|-------------------|
| F.8/1 | Churchill, W. S. | February-June |
| F.8/2 | Hankey, M. P. A. | February-March |
| F.8/3 | King, E. B. | November |
| F.8/4 | Sinclair, A. H. M. | March |
| F.8/5 | Swinton, Lord | February-November |
- Includes letters from Swinton announcing the dissolution of the Committee after the resignation of 3 of its members (3 September) and its reconstitution under Tizard's Chairmanship but without Cherwell (2 November).
- | | | |
|-------|---------------|---------------|
| F.8/6 | Tizard, H. T. | February-July |
|-------|---------------|---------------|
- F.9 Committee papers and related correspondence (F.9/1-F.9/6)
- F.9/1 July-December 1935
- Mainly correspondence re arrangements for meetings, payment of honoraria, etc.
- F.9/2 January-February 1936
- Papers for the 15th meeting, 3 February 1936.
- A draft of the Committee's Second Interim Report, n.d., is also included in the folder.

Second World War
Pre-war papers on air defence

- F.9/3 March 1936
- F.9/4 June 1936
- F.9/5 July-December 1936
Includes 2 letters from Cherwell to A.P. Rowe, 10 and 11 July 1936 criticising the draft report of the Committee.
- F.9/6 Miscellaneous typescript drafts, some of which may have been prepared for submission to the Committee; others contain comments or criticisms on the work of the Committee. They are all unsigned and undated but the content points to Cherwell's authorship.
- F.10 7 pp. typescript entitled 'Air Defence (1939) Diary. Tizard Com. etc.' containing a résumé of events connected with the Tizard Committee. No author or date. Handwriting on cover note, and typeface, suggest that it was prepared by J. Harvey (Cherwell's personal secretary).
- F.11 Committee of Imperial Defence. Air Defence Research Committee.
Correspondence with Sir Kingsley Wood and others, 1938-39. Includes invitation to join the Committee and Cherwell's letter of acceptance, 1 December 1938.
Folder also includes extract from records of the 255th Meeting of the Committee of Imperial Defence, 22 March 1932, re decision to begin preparations for defence in the light of assumptions that a major war could occur in less than ten years.

Second World War
Pre-war papers on air defence

- F.12-F.18 Drafts and notes on air defence
- Many of these are undated, and not all are signed by Cherwell, but in most cases the subject matter points to his authorship. Most of the undated items probably belong to the 1930s.
- See also C.22ff., F.7, F.9, F.20.
- F.12 6 pp. typescript 'Notes on the principles of A.R.P.', 23 February 1929.
2 pp. typescript re relative dangers of attack by land, sea or air, n.d.
- F.13 'Notes on Air Defence by F.A. Lindemann'.
27 pp. typescript, n.d.
- F.14 'Analysis of Utility of Methods Proposed to Defend England Against Air Attack'.
36 pp. typescript, no author or date, but format is similar to F.13 above.
- F.15 Set of calculations re kite-balloons, n.d., perhaps 1938. (see letter to Churchill at F.20).
- F.16 2 pp. typescript re aerial mines headed 'Professor Lindemann's Memorandum', 1939.
- F.17 2 copies, one with ms. annotations by Cherwell, of 5 pp. typescript beginning 'As you know, I have recently had the opportunity of seeing what has been done by the Air Ministry about floating aerial mines to be distributed by aeroplanes and I think it may be useful to put on record my views on this subject'. n.d., 1939.
- F.18 Shorter typescript drafts re various aspects of air defence, all undated.

Second World War
Pre-war papers on air defence

- F.19-F.39 Correspondence on air defence and the international situation, 1921-39
- F.19-F.21 Letters from Cherwell to Churchill, 1935-39, re various aspects of air defence. Some of the letters convey technical information or statistics for Churchill's use at committee meetings, etc.
See also F.8/1.
- F.19 1935, 1936
- F.20 1938
Includes a 12 pp. draft on air defence, cast in the form of a speech, May 1938, and a note on kite-balloons, November 1938.
- F.21 1939
Includes some notes on aerial mines, March 1939, and 2 letters commenting on the result of experiments with small aerial mines, May 1939.
- F.22 2 pp. typescript headed 'Anxiety about Pre-war International Situation', with ms. annotation 'notes prepared for Lord Birkenhead's biography of Prof'. The typescript refers to a series of letters written between 1933 and 1939, and this sequence, numbered from 1-8, has been retained as F.23 below.
- F.23 Correspondence, 1933-39, originally assembled to illustrate Cherwell's attitude to international affairs during this period (see F.22). Items are numbered from 1-8 as follows:
1. Letter from Lord Lloyd, 22 September 1933, expressing regret that he had been unable to arrange an interview with Hitler.
 2. Letter from Cherwell to Signor Grandi, 20 December 1936, re possibility of arranging an interview with Mussolini.
 3. Letter from Cherwell to Group Captain Maclean, 26 October 1937.
 4. Letter from Cherwell to P. Donner, 15 November 1937.
 5. Letters to Churchill from Halifax and Austen Chamberlain, May 1938, thanking him for sending a report of the interview which he and Cherwell had with Henlein.
 6. Letter from Cherwell to J. Noetzlin, 7 June 1938.
 7. Letter from Cherwell to Lord Tweedsmuir, 14 October 1938.
 8. Letter from Cherwell to J.A. Lauwers, 26 February 1939.

Second World War
Pre-war papers on air defence

- F.24-F.37 Correspondence with colleagues and friends re various aspects of air defence and other preparations for war, views of the political situation, etc. The correspondence has been kept in approximate chronological order; within each year, the material is presented in alphabetical order of correspondent with a brief indication of content where appropriate.
- F.24 1921
Brooke-Popham, H. R. M.
re development of high explosives
- 1924
Thomson, Lord
- 1926
Birch, J. F. N.
Hoare, S.
- F.25 1927
Birch, J. F. N.
Fleming, J.
re visit to Royal Engineer Board's experimental ground, Hythe
Hankey, M. P. A.
re co-ordination of research
Hoare, S.
Trenchard, H. M.
re bomb-sights
- F.26 1930
Brown, O. F.
(Cherwell's carbon only) re organisation of radio research
Eccles, W. H.
(Cherwell's carbon only) re organisation of radio research
Hall, A. H.
re methods for landing aeroplanes in fog
Petavel, J.
Invitation to a meeting at the National Physical Laboratory

Continued

Second World War
Pre-war papers on air defence

F.26 (cont'd.) 1933

Fisher, H. A. L.
(Cherwell's carbon only)

Schlepegrell, A.
re proposed conference in Oxford on political and social
developments in Germany

F.27 n.d.

Forman, J.
re experiments with microwaves

1935

Dill, J. G.

Gilmour, J.

Grigg, E.

Molson, A. H. E.
re possible experiments with kite-balloons over Valetta

Morton, D. J. F.

Paget, J.

Wimperis, H. E.
re measurements of radiation from engine exhaust gases
at Farnborough

The Secretary, Adastral House
(Cherwell's carbon only)

F.28 1936

Johnstone, H.
(includes a letter from H.E. Wimperis) re use of balloons
for air defence

F.29 1936

Lees-Smith, H. B.

MacLean, L.
enclosing a paper on air defence

Morton, D. J. F.
re liquid hydrogen

Pakenham-Walsh, R. P.
re mustard gas

Second World War
Pre-war papers on air defence

F.30

1936

Powis, C. O.

re aircraft production

Pye, D. R.

re liquid hydrogen as fuel

Swinton, Lord

(Cherwell's carbon only)

Tweedsmuir, Lord

Wimperis, H. E.

re liquid hydrogen and potassium-sodium bombs

Wright, C.S.

Superintendent, War Office Experimental Establishment,
Shoeburyness

(Cherwell's carbon only)

F.31

1937

Hawkin, R. C.

(Cherwell's carbon only)

Hill, H. W.

re anti-aircraft artillery

Johnstone, H.

re Tizard Committee

Lennox-Boyd, A. T.

re camouflage

Maclean, L.

re tactics in air warfare

Macmillan, N.

(Cherwell's carbon only)

Nuffield, Lord

(includes a letter from D.R. Pye) re liquid hydrogen
as fuel

(unsigned)

re an article in the Sunday Times, 27 June 1937

F.32 1938
Chatfield, Lord
Coote, C. R.
Crow, A. D.
(Cherwell's carbon only) re U.P. weapons
Henderson, R. G. H.
re aerial mines
Muir, H. J.
re aerial mines
Swinton, E. D.

F.33 1938
Wright, C. S.
re hydrogen-oxygen explosive

F.34 1939
Crow, A. D.
(Cherwell's carbon only) re possible use of aerial mines
in U.P. weapons
Farren, W. S.
(Cherwell's drafts only) re aerial mines
Ferguson,
(Cherwell's carbons only) re aerial mines

F.35 1939
Muir, H. J.
re aerial mines

F.36
Naphen, P. L.
(Cherwell's carbon only)
Pye, D. R.
Includes letters from A. Woodward-Nutt and F. Rossiter

F.37 1939
Rothermere, Lord
Wedderburn, J. S.
(Cherwell's carbon only)
Wood, K.
Wright, E. M.
(Cherwell's carbon only)
(Correspondent unknown - Cherwell's carbon only)
re aerial mines

Second World War
Pre-war papers on air defence

F.38, F.39 Letters from members of the public describing inventions or offering ideas for use in the event of war against Germany. The correspondents have not been indexed. Some of the letters were originally addressed to Churchill, but were forwarded to Cherwell for advice.

For similar letters written after the outbreak of war
see G.472-G.498.

F.38 n.d., 1933, 1935

F.39 1936, 1937, 1939

Second World War
Statistical Section, general papers

F.40-F.87 FORMATION AND ORGANISATION OF THE PRIME MINISTER'S
STATISTICAL SECTION ('S BRANCH')

The material is presented as follows:

- F.40-F.78 Administrative correspondence re staffing,
accommodation, office procedure, etc. Includes
material on Sentry Hill, Marlow (the house used
by the Statistical Section, October 1940-April 1942),
and Cherwell's engagement diaries, 1943-45.
- F.79-F.85 Personal correspondence with and re members of
the Statistical Section. Some of the exchanges
continue into the 1950s. Correspondence with
R.F. Harrod documents his early involvement with
the activities of 'S Branch' before he formally joined
the group in January 1940.
- F.86, F.87 Miscellaneous historical material.

Additional minutes and correspondence from members of the Statistical Section
are to be found in F.395ff. and passim in Sections G and H.

For further information on the work of the Statistical Section see the Introduction
to Section F.

Second World War
Statistical Section, general papers

F.40-F.78 Administrative correspondence

F.40-F.64 Minutes and correspondence re staff establishment, salaries, appointments, allocation of work, etc., 1940-45. The names of known correspondents appear in the general index, but the sequence also includes several unsigned minutes by members of the Statistical Section.

1940

F.40 January-April

F.41 May-August
Includes a brief summary of the functions of the First Lord's Statistical Branch, 7 May 1940.

F.42 November

F.43 December
Includes list of areas of work for which various members of the Statistical Section were responsible, 9 December 1940.

1941

F.44 January-March

F.45 April-May

F.46 June-July

F.47 August-September

F.48 October

F.49 November

F.50 December

1942

F.51 January-March

F.52 April-June

F.53 July

F.54 August

F.55 September

Continued

Second World War
Statistical Section, general papers

1942 (cont'd)

F.56 October-November

F.57 December

1943

F.58 January-April

F.59 May-August

F.60 September-December

1944

F.61 January-June

F.62 July-December

1945

F.63 January-August

F.64 Miscellaneous undated (not indexed)

F.65 Copy of a letter from Churchill to Neville Chamberlain, 4 April 1940, beginning 'My dear P.M., I send you the first copy of the album I have had prepared by the Admiralty Statistical Department under Professor Lindemann. I am sending one to each of our colleagues'.

The folder also contains letters of thanks from Chamberlain and others expressing their appreciation of the charts, and correspondence re arrangements for Cherwell to show an album of charts to the King.

See F.258-F.394 for examples of charts prepared by the Statistical Section on a wide variety of topics.

F.66 Correspondence exchanged between R.F. Harrod and E.E. (later Lord) Bridges, August 1940-March 1941, mainly re the establishment of relations between the Statistical Section and the various government departments from whom statistics had to be acquired.

In his personal memoir of Cherwell (The Prof, pp.189-90), Harrod observes that relations with other departments were not always good to begin with; there were some acrimonious disputes at

Continued

Second World War
Statistical Section, general papers

- F.66 (cont'd.) Cabinet meetings when Churchill put forward figures supplied to him by Cherwell, and these were challenged by the Ministers concerned. Harrod records an interview with Bridges who deplored the amount of time wasted by these disputes, and his own resolution to try to improve the situation. The correspondence documents the establishment of arrangements for the appointment of liaison officers in the various departments, which contributed greatly to a general improvement in relations.
- F.67, F.68 Correspondence re Sentry Hill, Marlow.
At the end of October 1940 the Statistical Section took over a house in Marlow called Sentry Hill, for use both as an office and billeting quarters. The house was retained until April 1942.
- F.67 Correspondence re domestic arrangements, staff, etc.
Included here is a letter from the Earl of Midleton, 19 October 1940, offering accommodation for the Statistical Section at Peper Harow, Godalming.
- F.68 Correspondence re organisation of transport to and from London. Drivers were supplied by the Women's Voluntary Services, and folder includes letters from the Chairman, Lady Reading.
- F.69-F.72 Miscellaneous administrative correspondence, 1939-45.
- F.69 1939-40
- F.70 March-June 1941
- F.71 July-December 1941
- F.72 1942-45, n.d.
Includes an undated summary, possibly by T. Wilson, of selected minutes by Cherwell, Harrod and MacDougall, May 1939-June 1942.
- F.73-F.75 Register of letters received by Cherwell's office, 1943-45.
3 volumes as follows:
- F.73 30 June 1943-29 October 1943
- F.74 29 October 1943-28 July 1944
- F.75 2 August 1944-30 July 1945

Second World War
Statistical Section, general papers

F.76-F.78 Cherwell's engagement diaries, 1943-45.

F.76 1943

F.77 1944

F.78 1945

Second World War
Statistical Section, general papers

F.79-F.85 Personal correspondence with and re members of the Statistical Section, 1939-56

In alphabetical order of correspondent.

See the Index of Correspondents for references to further correspondence elsewhere in the collection.

- | | | |
|---------------|---|------------------|
| F.79 | Butt, D. M. B. | 1942 |
| | Butt left the Statistical Section to join the Navy at the beginning of 1942, but returned again at the end of the year. The folder contains personal letters from Butt to MacDougall, written while he was away from the Section. | |
| F.80 | Clarke, E. J. S. | 1945-47 |
| | Includes brief correspondence <u>re</u> atomic energy. | |
| F.81/1-F.81/3 | Harrod, R. F. | 1939-43 |
| F.81/1 | October-December 1939 | |
| | Includes letters recommending economists for the Statistical Section and negotiating his own appointment. | |
| F.81/2 | 1940 | |
| | Includes 3 pp. ms. draft headed 'Richmond Terrace and S Branch'. | |
| F.81/3 | 1941-43 | |
| | Includes copy of a minute from Harrod to Churchill <u>re</u> livestock policy, 20 March 1941. | |
| F.82 | MacDougall, G. D. A. | 1945, 1947, 1953 |
| | The 1953 correspondence consists of 2 letters from Cherwell to Churchill urging that MacDougall should receive a knighthood. He was, in fact, knighted that year. | |
| F.83 | Martin, C. J. | 1945-48, 1955-56 |
| F.84 | Parkinson, J. R. | 1945 |
| F.85 | Wilson, T. | 1945-46, 1948-51 |
| | Includes some correspondence <u>re</u> sorting and listing of Cherwell's papers. | |

Second World War
Statistical Section, general papers

F.86, F.87 Miscellaneous historical material

F.86 4 pp. typescript, 14 July 1941, on 'English Statistical Experience Since the Outbreak of War', outlining the origins of S Branch and the Central Statistical Office. There is no indication of author.

F.87 1 p. memorandum from 'C.G.' to Churchill, 23 November 1947, beginning 'You wished to be reminded of this:- Make a note to insert about my private statistical department at the Admiralty. There are several minutes on the subject. Lord Cherwell could supply details'.

See F.85 for correspondence with T. Wilson re sorting of Cherwell's papers for Churchill and other historians.

Second World War
Statistical Section, general papers

F.88-F.252 MINUTES EXCHANGED BETWEEN CHERWELL AND CHURCHILL,
1939-45

The minutes are presented in 4 separate sequences:

F.88 -F.216 Minutes from Cherwell to Churchill, 1939-45

These were originally kept in a numbered sequence in very bulky folders, accompanied by a list of contents, and in some cases a subject index. Each folder has been split up into several more manageable units; the indexes and lists of contents have been removed and put together in a single sequence at the beginning of the section (F.88-F.94).

F.217-F.228 Minutes from Cherwell to Churchill, 1939-42

These are typescript copies of the original minutes in F.95-F.168 only, which were made for the benefit of Churchill and other historians (see General Introduction).

F.229-F.240 Another set of minutes from Cherwell to Churchill, 1939-45

The majority of these were originally contained in a single bulky folder, unsorted. They are now presented in chronological order, but have been kept as a separate sequence in order to avoid disturbing the indexes, etc. to the main sequence. Some, but not all, of them are duplicated in the main set; a few may be drafts that were not eventually sent to Churchill.

F.241-F.252 Minutes from Churchill to Cherwell, 1939-45.

Second World War
Statistical Section, general papers

The quantity of material involved has prohibited any attempt at cross-referencing between these minutes and related drafts, etc. in Sections G and H; nevertheless, all the wartime papers are closely interrelated, and material in this Section may sometimes amplify or complement (or even duplicate) material elsewhere in the collection.

For information on the content of the minutes, see Introduction to Section F.

Second World War
Statistical Section, general papers

F.88-F.216	<u>Minutes from Cherwell to Churchill, 1939-45</u>
F.88	List of contents, September-December 1939
F.89	List of contents, January-December 1940
F.90	List of contents, January-December 1941
F.91	List of contents, January-December 1942 Subject index, October-December 1942
F.92	List of contents, January-December 1943 Subject index, January-December 1943
F.93	List of contents, January-December 1944 Subject index, January-December 1944
F.94	List of contents, January-July 1945 Subject index, January-March 1945

Second World War
Statistical Section, general papers

1939

F.95	September-October
F.96	November
F.97	December

1940

F.98	11-30	January
F.99	6-21	February
F.100	22-29	February
F.101	1-11	March
F.102	13-27	March
F.103	1-15	April
F.104	16-29	April
F.105	1-8	May
F.106	19-29	May
F.107	3-17	June
F.108	19-30	June
F.109	1-3	July
F.110	4-11	July
F.111	13-30	July
F.112	1-8	August
F.113	10-15	August
F.114	16-28	August
F.115	2-10	September
F.116	16-22	September
F.117	24-27	September

Continued

Second World War
Statistical Section, general papers

1940 (cont'd.)

F.118	1-9	October
F.119	10-17	October
F.120	18-31	October
F.121	1-15	November
F.122	20-28	November
F.123	2-11	December
F.124	17-30	December

1941

F.125	1-6	January
F.126	8-18	January
F.127	20-31	January
F.128	3-20	February
F.129	21-28	February
F.130	1-12	March
F.131	14-31	March
F.132	1-18	April
F.133	21-30	April
F.134	1-15	May
F.135	20-29	May
F.136	3-19	June
F.137	23-30	June
F.138	1-10	July
F.139	12-22	July
F.140	23-31	July

Continued

Second World War
Statistical Section, general papers

1941 (cont'd.)

F.141	7-17	August
F.142	20-29	August
F.143	1-4	September
F.144	9-16	September
F.145	17-28	September
F.146	7-17	October
F.147	22-31	October
F.148	1-18	November
F.149	19-30	November
F.150	1-10	December
F.151	18-23	December

1942

F.152	6-29	January
F.153	3-27	February
F.154	4-18	March
F.155	19-31	March
F.156	1 April-30 June. The original folder of minutes covering this period was missing from the collection, and a folder of copies has been inserted here by the present compiler to avoid breaking the sequence. See F.217-F.228 for similar folders containing copies of minutes for September-December 1939, May-September 1940, January-December 1941 and the remainder of 1942.	
F.157	1-8	July
F.158	9-17	July
F.159	20-31	July

Continued

Second World War
Statistical Section, general papers

1942 (cont'd.)

F.160	12-28	August
F.161	1-17	September
F.162	19-30	September
F.163	1-25	October
F.164	27-31	October
F.165	3-18	November
F.166	20-28	November
F.167	1-16	December
F.168	17-30	December

1943

F.169	2-9	January
F.170	11-29	January
F.171	5-15	February
F.172	16-26	February
F.173	4-18	March
F.174	19-31	March
F.175	2-9	April
F.176	13-21	April
F.177	22-30	April
F.178	3-24	May
F.179	4-18	June
F.180	23-30	June
F.181	2-20	July
F.182	21-30	July

Continued

Second World War
Statistical Section, general papers

1943 (cont'd.)

F.183	2-27	August
F.184	8-30	September
F.185	4-14	October
F.186	15-30	October
F.187	1-6	November
F.188	8-30	November
F.189	1-9	December

1944

F.190	6-31	January
F.191	1-28	February
F.192	1-9	March
F.193	15-31	March
F.194	1-12	April
F.195	13-25	April
F.196	3-10	May
F.197	11-31	May
F.198	1-30	June
F.199	3-13	July
F.200	14-31	July
F.201	1-31	August
F.202	4-26	September

There are no minutes for October as Cherwell was in America
(see G.231-G.235)

F.203	4-30	November
-------	------	----------

Continued

Second World War
Statistical Section, general papers

1944 (cont'd.)

F.204	4-12	December
F.205	13-29	December

1945

F.206	2-19	January
F.207	22-31	January
F.208	2-27	February
F.209	1-15	March
F.210	16-29	March
F.211	6-30	April
F.212	3-18	May
F.213	24-31	May
F.214	4-8	June
F.215	11-28	June
F.216	4-22	July

Second World War
Statistical Section, general papers

F.217-F.228 Minutes from Cherwell to Churchill, 1939-42

These are not carbons, but typescript copies of the originals, made in 1948 (see correspondence with T. Wilson, F.85). Each folder is prefaced by a list of contents corresponding to those at F.88-F.94.

The set is not complete as it lacks minutes for January-April and October-December 1940. Copies of minutes for April to June 1942 have been moved by the present compiler to F.156 in place of the originals which have not survived.

- | | |
|-------|--|
| F.217 | September-December 1939 |
| F.218 | May-September 1940 |
| F.219 | May-September 1940 (duplicates of F.218) |
| F.220 | January-March 1941 |
| F.221 | January-March 1941 (duplicates of F.220) |
| F.222 | April-June 1941 |
| F.223 | April-June 1941 (duplicates of F.222) |
| F.224 | July-September 1941 |
| F.225 | October-December 1941 |
| F.226 | January-March 1942 |
| F.227 | July-September 1942 |
| F.228 | October-December 1942 |

Second World War
Statistical Section, general papers

F.229-F.240 Another set of minutes from Cherwell to Churchill, 1939-45

Most of these minutes were originally in a bulky, unsorted folder with no index or list of contents. Some, but not all, of them are duplicated in the main set (F.95-F.216); a few may be drafts that were not eventually sent to Churchill. As with the main set, they cover a wide variety of subjects, and it has not been possible to provide cross-references to other parts of the collection.

F.229 October 1939-June 1940

F.230 July-December 1940

F.231 January-December 1941

F.232 January-November 1942

F.233 January-June 1943

F.234 July-December 1943

F.235 January-June 1944

F.236 July-December 1944

F.237 January-April 1945

F.238 May-July 1945

F.239 Miscellaneous undated minutes to Churchill

F.240 Copies of some of the above

Second World War
Statistical Section, general papers

F.241-F.252	<u>Minutes from Churchill to Cherwell, 1939-45</u>
F.241	1939-1942
F.242	1943
F.243	1944
F.244	1945
F.245-F.252	Copies of minutes from Churchill to various ministers, sent to Cherwell for information. Drafts for many of these were originally sent by Cherwell to Churchill.
F.245	1942
F.246	January-June 1943
F.247	September-November 1943
F.248	January-April 1944
F.249	May-August 1944
F.250	September-December 1944
F.251	January-April 1945
F.252	May-July 1945

Second World War
Statistical Section, general papers

F.253-F.257 CABINET PAPERS, 1940-45

Drafts, proofs and printed copies of Cabinet Papers, mostly by Cherwell.

Some of these are annotated, or are accompanied by brief correspondence.

F.253	1940
F.254	1941-42
F.255	1943
F.256	1944
F.257	1945

Second World War
Statistical Section, general papers

F.258-F.394 CHARTS PREPARED BY THE STATISTICAL SECTION

The material is presented as follows:

F.258-F.276	Air warfare
F.277-F.296	Military and munitions
F.297-F.367	Shipping and imports
F.368-F.381	Food and raw materials
F.382-F.394	Miscellaneous

The majority of these charts were prepared for Churchill, or for presentation to various ministers and government departments at Churchill's request. A number were prepared for President Roosevelt, and correspondence in F.65 refers to arrangements for Cherwell to show an album of charts to the King. They were generally either bound in cloth covers (see e.g. F.297-F.325) or presented in loose leaf binders. Some of the latter have survived intact (e.g. F.365, F.386) but many of their contents were dispersed or superseded and remained in loose piles in no particular order.

The loose charts have been sorted into subject groups for ease of reference and are included with the original albums under the headings listed above. Some of the material is no longer identifiable, particularly in the case of unfinished drafts or copies, such as F.292-F.296.

Many of the charts overlap in subject matter with other papers in Sections G and H but it has not been possible to provide specific cross-references. Charts which were originally included with drafts and correspondence in these Sections have been left in position.

Second World War
Statistical Section, general papers

- F.258-F.276 Air warfare
- F.258 Number of aircraft and crew available for operations.
Sets of charts issued monthly (each month in a separate folder), October 1940-February 1942.
- F.259 Royal Air Force strength.
- F.260 Royal Air Force operations.
 'Night Bomber Sorties', 1940-42
 'Enemy Aircraft Destroyed at Night', 1940-41
 'Effort of Bomber Command', 1940-44
 'M.A.F. Night Fighter Successes', 1941-43
- F.261 Aircraft production.
- F.262 U.S.A.A.F. strength.
- F.263 Ring-back binder labelled 'Air', containing miscellaneous charts re R.A.F. strength and operations.
- F.264 Ring-back binder labelled 'Pilots and Operations', but containing miscellaneous unfinished and incomplete charts.
- F.265 Tables of statistics re R.A.F. and U.S.A.A.F.
- F.266 Tonnage of bombs dropped.
- F.267 Miscellaneous re bomb damage.
- F.268 'Diagrammatic Survey of Night Bombing and Weather over Great Britain during the period 1/9/40-18/7/41.'
- F.269-F.271 Weekly summaries of unexploded bomb returns.
- F.269 November 1940-December 1941
- F.270 January-December 1942
- F.271 January-June 1943
- F.272 Periodic summaries of work reports from bomb disposal units, October 1940-June 1944.
- F.273 Notes and drafts for charts illustrating statistics re unexploded bombs on a regional basis.

Second World War
Statistical Section, general papers

- F.274 Folder labelled 'Loss Ratios' containing charts re number of sorties per aircraft (British and American) and some unidentified.
- F.275 'Charts prepared for Field Marshal Smuts, November 1942.'
- F.276 Folder containing charts re various aspects of air warfare, including several unidentified.

Second World War
Statistical Section, general papers

- F.277-F.296 Military and munitions
- F.277 Charts illustrating 'State of Readiness' of British forces in various parts of the world, July-September 1940 and December 1941-September 1942.
- F.278 'Analyses of British Troops by Formations and Arms, November 28th 1942.'
- Set of charts with brief accompanying correspondence. Material on manpower which was also found in the folder has been transferred to F.382.
- F.279 British Army strength and organisation.
- F.280 'Battle Casualties in Normandy and Italy' (in black binder).
- F.281 'Australian Charts 1944' (re strength of U.S. and Allied forces and incidence of malaria).
- F.282 'Field, Medium and Mortar Ammunition.'
- F.283 Stocks, requirements, production, etc. of guns and ammunition.
- F.284 Tanks. Production and stock position.
- F.285 Landing craft, 1944 (in black binder).
- F.286 Munitions production. Comparison with First World War. (Charts are designed to be used up to December 1943, but they are only plotted to August 1940.)
- F.287 'Military Co-ordination Committee. Meeting, 6 Richmond Terrace, Friday, 22nd December' [1939]. Folder contains charts and statistics prepared for the meeting with ms. and typescript notes and drafts and brief correspondence.
- F.288 'Munitions Production of the United Nations' (in black binder). Charts prepared to October 1942.
- F.289 Miscellaneous re munitions production and stocks.
- F.290 Manpower - strength of the armed forces.
- F.291 Demobilisation. Comparison with First World War.
- F.292-F.296 5 bulky folders containing charts re various military topics. Many of these are unfinished or incomplete.

Second World War
Statistical Section, general papers

- F.297-F.367 Shipping and imports
- F.297-F.325 Various shipping charts, all bound in cloth covers, presumably for presentation purposes.
- F.297-F.298 British merchant shipping sunk by cause, daily.
- F.297 3 September 1939-31 August 1940
- F.298 1 September 1940-30 July 1941
- F.299-F.300 Total merchant shipping sunk by U-boat, mine, surface and aircraft, daily.
- F.299 3 September 1939-5 June 1940
- F.300 3 September 1939-31 August 1940
- F.301-F.304 Total merchant shipping sunk by cause, daily.
- F.301 1 September 1940-30 August 1941
- F.302 30 August 1942-28 August 1943
- F.303 29 August 1943-26 August 1944
- F.304 27 August 1944-2 June 1945
- F.305 British, allied, neutral merchant shipping sunk by all types of enemy action, daily.
- 3 September 1939-31 August 1940
- F.306 British, allied, neutral merchant shipping sunk by U-boat, showing U-boats sunk, daily.
- 3 September 1939-31 August 1940
- F.307 British, allied, neutral merchant shipping sunk by U-boat, 21 day moving average.
- 3 September 1939-8 February 1940
- F.308 British, allied, neutral merchant shipping sunk by mine, daily
- 3 September 1939-31 August 1940

Second World War
Statistical Section, general papers

- F.309 Total sinkings by German submarines, showing place and day.
 3 September 1939-16 March 1940.
- F.310-F.319 British merchant shipping. 500 gross tons and over. Gains
 and losses, weekly.
- | | | | |
|-------|------|---------------|------------------------------------|
| F.310 | I | (week-ending) | 10 September 1939- 31 March 1940 |
| F.311 | II | " | 7 April 1940-27 October 1940 |
| F.312 | III | " | 3 November 1940-25 May 1941 |
| F.313 | IV | " | 1 June 1941-21 December 1941 |
| F.314 | V | " | 28 December 1941-19 July 1942 |
| F.315 | VI | " | 26 July 1942-14 February 1943 |
| F.316 | VII | " | 21 February 1943-12 September 1943 |
| F.317 | VIII | " | 19 September 1943-9 April 1944 |
| F.318 | IX | " | 16 April 1944-5 November 1944 |
| F.319 | X | " | 12 November 1944-3 June 1945 |
- F.320 Admiralty oil fuel, four-weekly.
 September 1939-March 1940
- F.321 Cargoes seized and sunk. Cumulative totals weekly.
 September 1939-August 1940
- F.322, F.323 German and Italian losses of merchant vessels, daily.
- | | |
|-------|---------------------------------|
| F.322 | 3 September 1939-31 August 1940 |
| F.323 | 1 September 1940-15 March 1941 |
- F.324 Gains and losses of British merchant ships, cumulative, weekly.
 (week-ending) 10 September 1939-23 March 1941.
- F.325 German ships leaving Narvik, daily.
 1 December 1939-4 April 1940.

Second World War
Statistical Section, general papers

- F.326-F.331 Maps showing positions of merchant ships sunk by enemy action.
- F.326 October-December 1940
- F.327 April-December 1941
- F.328 January-December 1942
- F.329 January-December 1943
- F.330 January-November 1944
- F.331 January-May 1945
- F.332 Maps showing positions of 'non-enemy ships sunk by enemy action'.
- August 1940-March 1941
- F.333 Maps showing position of sinkings in and out of convoy.
- September-December 1940
- Also included here is a map showing 'the furthest points from Europe in the North and Central Atlantic at which merchant ships have been sunk ... up to March 1941'.
- F.334-F.339 Charts re shipping losses.
- F.334 'Times of attack on merchant ships sunk by U-boat.'
- September 1939-December 1942.
- F.335 'Times of attack on merchant ships sunk by aircraft.'
- September 1939-December 1942.
- F.336 'Merchant tonnage sinkings by areas. 3 week moving average.'
- March 1941-June 1945.
- F.337 Attacks on merchant shipping. (Comparison of) convoys and independent ships.
- 1940-43.
- F.338 Enemy merchant shipping losses.
- Various charts, 1939-42.

Second World War
Statistical Section, general papers

- F.339 Miscellaneous charts re sinking of merchant shipping, various dates.
- F.340 Charts illustrating various aspects of anti-U-boat warfare.
- F.341 Black binder containing charts re British and German navies.
- F.342 Miscellaneous naval charts. Mainly statistics re ship building.
- F.343-F.351 Charts re imports and exports, bound in cloth covers.
- F.343-
 F.346 'Imports. Tons per month for each of certain commodities, U.K.'
 1937-40 (4 sets of charts)
- F.347 'Imports. Tons per month, cumulative, for each of certain food-stuffs, U.K.'
 1937-40
- F.348 'Imports into U.K. 1937.'
- F.349 'Value of exports by commodities monthly.'
 1937-40
- F.350,
 F.351 'Entrances and clearances. British and foreign.'
 1939-40. (2 sets of charts)
- F.352 Miscellaneous charts re imports and exports.
- F.353 'Building and losses of ocean going merchant vessels outside enemy control. 1600 gross tons and over.'
 1941-45
- F.354 'Gains and losses of allied vessels since America entered the war.'
 1943
- F.355 Merchant tonnage undergoing or awaiting repair.
- F.356 Merchant tonnage under construction.
- F.357 Miscellaneous charts re ship building and losses.

Second World War
Statistical Section, general papers

- | | |
|-------|---|
| F.358 | Employment and distribution of shipping. |
| F.359 | Entrances and clearances of British and foreign shipping. |
| F.360 | Time spent in port. |
| F.361 | Average tonnage unloaded from a ship in a day. |
| F.362 | Time spent on round voyage. |
| F.363 | Convoys in and out of U.K. |
| F.364 | 'Statistics of Trade and Shipping. 22 Tables Relating to the facts illustrated in the "S Branch" Chart Album'. 2 copies. |
| F.365 | Black binder containing various charts <u>re</u> shipping, imports, exports, etc. There is a list of contents inside the front cover. |
| F.366 | Black binder containing slightly different versions (generally less complete) of the charts in F.365. |
| F.367 | Miscellaneous shipping charts. |

Second World War
Statistical Section, general papers

F.368-F.381	<u>Food and raw materials</u>
F.368	Aluminium.
F.369	Coal.
F.370-F.373	Food.
F.370	Stocks of various foodstuffs, 1939-43.
F.371	Stocks, imports, production and consumption of various foodstuffs, September 1939-March 1943.
F.372	'Civilian consumption of certain foods.' 1940-41.
F.373	Miscellaneous charts <u>re</u> food.
F.374	Iron and Steel.
F.375	Machine tools.
F.376	Oil (bound set of charts).
F.377	Oil.
F.378	Timber.
F.379	Miscellaneous raw materials.
F.380	'Building Programme of Government Departments. Estimated Requirements of [various raw materials]', 1940. Bundle containing several charts.
F.381	Black binder containing charts <u>re</u> stocks of food and raw materials, 1939-45.

Second World War
Statistical Section, general papers

- F.382-F.394 Miscellaneous
- F.382 Miscellaneous charts re employment and distribution of manpower.
- F.383 'Supplementary Labour Album.' Set of charts with similar subject matter to F.382.
- F.384 Railway freight traffic.
- F.385 Infectious diseases (England and Wales).
- F.386 Small black binder containing statistics re shipping and raw materials.
- F.387 Bundle of charts re shipping, imports and exports, stocks of raw materials, etc.
- F.388 Folder labelled 'Old Charts (Miscellaneous)' containing several duplicate (incomplete) sets of charts.
- F.389 Bundle of charts, similar to those at F.388.
- F.390 Black binder containing charts re supplies to Russia, 1941-42.
- F.391 2 bundles of charts re various topics.
- F.392 Folder labelled 'American Embassy Charts - Tables of Statistics'.
- F.393 Lists of indices for various albums of charts (now dispersed).
- F.394 Miscellaneous unidentified material.

Second World War
Statistical Section, general papers

- F.395-F.419 MISCELLANEOUS MINUTES AND CORRESPONDENCE, 1939-51
- F.395-F.397 Minutes from Harrod to Cherwell, 1940-42.
- F.395 March-June 1940.
- F.396 July-October 1940.
Includes draft minutes to Churchill, 22 July, 3 August, 27 August.
- F.397 1941-42.
Includes 3 pp. typescript on food policy, 12 March 1941, with Harrod's annotation 'Statement of F.A.L.'s views' and brief letter from N. Brook, 3 April 1941.
- F.398-F.400 Minutes from MacDougall to Cherwell and others, 1940-45.
A miscellaneous collection, covering a wide variety of topics.
- F.398 1940
- F.399 1941-43
- F.400 1944-45 and n.d.
- F.401-F.407 Miscellaneous minutes to Cherwell from other members of the Statistical Section. Mainly summaries of Cabinet Papers, reports, etc. on a wide variety of topics.
- F.401 April 1940-June 1943
- F.402 July-December 1943
- F.403 January-July 1944
- F.404 August-December 1944
- F.405 January-March 1945
- F.406 April-July 1945
- F.407 n.d.

Second World War
Statistical Section, general papers

F.408-F.410	Miscellaneous correspondence, 1939-45. Mainly Cherwell's carbons.
F.408	1939-43
F.409	1944
F.410	1945 and n.d.
F.411-F.414	Requests for help or advice, applications to work for Cherwell, correspondence <u>re</u> recommendations for posts, requests for an interview, etc., 1941-45. Not indexed.
F.411	A - F
F.412	H - L
F.413	M - R
F.414	S - W
F.415	Invitations to Cherwell to visit laboratories, service establishments, etc., 1940-51.
F.416	Paymaster General's Office. Miscellaneous administrative correspondence, 1944-45. Not indexed.
F.417	Miscellaneous undated ms. notes by Cherwell and others.
F.418	Miscellaneous reports, data, etc. sent to Cherwell for information.
F.419	Miscellaneous ephemera and printed matter.

<u>SECTION G</u>	<u>SECOND WORLD WAR G.1 - G.550</u>	
	<u>STATISTICAL SECTION, MILITARY AND SCIENTIFIC TOPICS</u>	
	INTRODUCTION	<u>Page</u> 187
G.1 -G.100	BRITISH AND GERMAN AIR FORCE STRENGTH	188
	Includes some material <u>re</u> other aspects of air warfare	
	With an introductory note	
G.101-G.141	ANTI-U-BOAT WARFARE	200
G.142-G.151	OTHER NAVAL PAPERS	205
G.152-G.443	WEAPONS, DEFENSIVE DEVICES, MILITARY ORGANISATION AND STRATEGY	206
	With a list of contents and introductory note	
G.444-G.499	INVENTIONS AND IDEAS	250
	With an introductory note	
G.500-G.525	ARMAMENT REQUIREMENTS AND PRODUCTION; STRENGTH AND ORGANISATION OF BRITISH AND GERMAN GROUND FORCES	258
G.526-G.533	ORGANISATION OF SCIENTIFIC AND TECHNICAL RESEARCH	261
G.534-G.550	OTHER MILITARY AND SCIENTIFIC TOPICS	263

Second World War
Statistical Section, military and scientific topics

INTRODUCTION

The papers in Sections G and H document the daily activities of the Prime Minister's Statistical Section during the Second World War. The material is presented in two Sections for ease of reference but the distinction between Sections G (military and scientific papers) and H (economic papers) is a rather artificial one, and does not reflect the original ordering of the papers which could no longer be reconstructed. Similarly, the presentation of the material in Sections G and H is the work of the present compilers although in places it draws on the previous arrangement of the papers made in 1965 (see General Introduction).

The origins and function of the Statistical Section have already been outlined in the Introduction to Section F. The material in Section G provides some of the background to Cherwell's minutes to Churchill in the form of statistics, correspondence, reports and summaries of cabinet and other papers. It is presented under the general headings listed at the head of the Section, but there is inevitably some overlap between various groups of papers, both within this Section and in other parts of the collection, especially F.88 - F.252.

For material relating to wartime projects at the Clarendon Laboratory see B.34 - B.41. Section D also contains some correspondence re wartime scientific work.

Second World War
Statistical Section, military and scientific topics

G.1-G.100 BRITISH AND GERMAN AIR FORCE STRENGTH

The following papers document the dispute between Cherwell, the Air Ministry and the Ministry of Economic Warfare over estimates of the comparative strength of the British and German Air Forces. The course of the disagreement, which arose in the summer of 1940, has been described in the published literature. In December 1940 Churchill appointed Sir John Singleton to make an independent enquiry into the available estimates, but although Singleton presented a report to Churchill in January 1941, many of the differences still remained unresolved. A second report was prepared by Singleton in August 1941, and this essentially marks the end of the dispute, although correspondence and papers on the subject continue until 1945.

A few papers on other aspects of air warfare are included at the end of the Section as follows:

- | | |
|------------|--|
| G.78, G.79 | American Air Force |
| G.80-G.84 | Night air defence |
| G.85-G.88 | Airfields |
| G.89-G.99 | Miscellaneous correspondence and reports |
| G.100 | Photographs |

Second World War
Statistical Section, military and scientific topics

- G.1 Correspondence and papers, October 1939-January 1940.
Mainly minutes from Cherwell to Churchill re British aircraft production and wastage.
- G.2 Correspondence and papers, March-April 1940.
Includes correspondence re R.A.F. losses of flying crew and machines in 1918.
- G.3 Unsigned typescript draft, sent to Cherwell from the Air Ministry on 8 April 1940, headed 'Expansion of the Royal Air Force. April, 1939-March, 1940'.
- G.4 Correspondence and papers, May 1940.
Includes statistics re R.A.F. strength and casualties.
- G.5 Two typescript drafts, 28 May 1940, of paper submitted to Churchill by Sir Archibald Sinclair (later Viscount Thurso) on 'Comparative strengths, 1st line and reserves, of the British, French and German Air Forces on the 24th May 1940'.
Some brief correspondence and Cherwell's draft comments on the paper are also included here.
- G.6 Correspondence and papers, June 1940.
Includes notes and drafts by D.G. Champernowne re training of pilots, statistics re aircraft production, battle losses, etc. for British and German Air Forces.
- G.7 Correspondence and papers, July 1940.
Includes minutes and statistics re shortage and training of pilots, estimates of British casualties and German Air Force strength, correspondence re use of magnesium in the construction of training aircraft.
- G.8 Correspondence and papers, 1-9 August 1940.
Includes statistics re aircraft production and casualties, pilot strength.
- G.9 Correspondence and papers, 13-19 August 1940.
Includes estimates of strength of German and British Air Forces, September 1939-March 1941, minutes and statistics re aircraft production and wastage, pilot casualties.

Second World War
Statistical Section, military and scientific topics

- G.10 Correspondence and papers, 20-31 August 1940.
Includes 5 pp. draft by Cherwell re training of R.A.F. pilots.
- G.11 Undated typescript draft by D.G. Champernowne headed 'Estimate of the Present Size of the G.A.F.' Attempts to forecast the strength of the German Air Force up to 1 September 1940.
- G.12 Correspondence and papers, 2-23 September 1940.
Mainly re aircraft production and casualties, R.A.F. expansion programme.
- G.13 Correspondence and papers, 24-30 September 1940.
Mainly re R.A.F. expansion and wastage (includes some comparisons with German Air Force).
- G.14 Correspondence and papers, 2-23 October 1940.
Mainly re estimates of wastage of R.A.F. pilots and aircraft.
- G.15 'Minutes of a Meeting summoned by the Secretary of State on 28.10.40. to reconsider the programme of Royal Air Force expansion taken by D. of Plans [Air Commodore (later Sir John) Slessor] to the United States.' A copy of Slessor's brief is appended to the Minutes as Annex A.

An undated typescript draft of the brief, headed 'Output and requirements of operational type aircraft and pilots during the period October 1940 to June 1941' is also included in the folder.
- G.16 Drafts by Cherwell of alternative brief for Slessor. Includes 2 pp. background statistics.
- G.17 Correspondence with Air Marshal Sir Christopher Courtney re Slessor's brief.
- G.18 Correspondence and papers, 1-4 November 1940.
- G.19 'Minutes of a Meeting held at the Air Ministry on 5/11/40 to consider the German rate of production and wastage of operational aircraft.'

Folder includes 2 drafts of a paper appended to the minutes as Annex A entitled 'Suggested Revision of German Fighter Production Estimates'.

Second World War
Statistical Section, military and scientific topics

- G.20 Various drafts re comparative strengths of German and British Air Forces prepared by Cherwell after the meeting on 5 November 1940. One of these is erroneously dated 8 November 1941.
- G.21 Correspondence arising from the meeting, 13-20 November 1940.
- G.22 Correspondence and papers not directly arising from the meeting, 7-29 November 1940.

Includes statistics re German pilots, sorties of British and German aircraft, R.A.F. casualties, etc.
- G.23 Two duplicated typescript papers by E. Betts as follows:

'Estimation of the effective size of the German Air Force.'
21 November 1940.

'Assessment of relative effective size of German long-range bomber force operating against the United Kingdom.'
26 November 1940.

2 pp. comments on these papers, 1 December 1940, are also included in the folder.
- G.24 Copy of minute from Churchill to Sinclair and Sir Charles (later Viscount) Portal, 2 December 1940, asking for an estimate of the potential strength of the German Air Force during the first half of 1941.

Sinclair's reply is included in the folder.
- G.25 'Notes on the informal conversation on the comparative strengths of the German and British Air Forces held at Chequers on December 7, 1940.'
- G.26 Correspondence and drafts arising from the discussion on 7 December.
Includes:
Copy of minute from Churchill to Sinclair and Portal, 9 December 1940, beginning 'I spent four hours on Saturday with the Officers of the Air Ministry Intelligence Branch and those of M.E.W. [Ministry of Economic Warfare]. I have not been able to reach a conclusion as to which are right'. He goes on to suggest that an enquiry should be set up, under the chairmanship of Sir John Singleton, to sift the evidence and come to some agreement about the strength of the German Air Force.

5 pp. typescript summarising the results of the discussion, copies of which were sent with the above minute.

An earlier draft, with corrections and additions in Cherwell's hand.

Letters from the Air Ministry and the Ministry of Economic Warfare welcoming Churchill's proposal.

Second World War
Statistical Section, military and scientific topics

- G.27 Correspondence and papers not directly arising from the discussion on 7 December, 2-14 December 1940.
Includes correspondence re numbers of trainer aircraft required by the R.A.F. (see also G.28).
- G.28 Minutes and correspondence, 16-31 December 1940.
Mainly correspondence re arrangements for setting up the enquiry into the size of the German Air Force under Singleton's chairmanship.
- G.29 Typescript drafts re the German Air Force and related problems, as follows:
 'German Aircraft Production. Production and Capacity since July 1939', by O.W. Roskill, 14 December 1940.
 'Effort', by D.M.B. Butt, 17 December 1940 (re comparing number of sorties by British and German aircraft).
 Includes 2 pp. ms. notes.
 'Organisation and Distribution of G.A.F. in Occupied Territories at 19.12.40.' No author, 19 December 1940.
 'Germany. Aircraft Production. Production and Capacity since July 1939.' Second draft, by O.W. Roskill, 20 December 1940.
 'Supply and Communications to German Air Force in Occupied Territory.' No author, 29 December 1940.
 'Operational Aircraft Strength of German Air Force at 1st Sept, 1939.' No author, 30 December 1940.
- G.30 Miscellaneous statistics assembled for the Singleton enquiry, December 1940.
- G.31 Tables illustrating numbers of call-signs intercepted from German aircraft, September-December 1940.
- G.32 Ms. graphs and tables, mainly analyses of call-sign evidence, September-December 1940 (see G.31), n.d., but presumably prepared for the Singleton enquiry.
- G.33 Miscellaneous notes, statistics, calculations, drafts (mostly incomplete), etc. re British and German Air Force strengths, all undated.
Includes 5 pp. typescript headed 'Aircraft Production', no author, with ms. annotation 'Draft discussed at Air Ministry with Air Cdre. Boyle', n.d.

Second World War
Statistical Section, military and scientific topics

- G.34 Copy of Singleton's interim report, submitted to Churchill on 3 January 1941.
- G.35 Correspondence and drafts, 3-19 January 1941, mostly arising from Singleton's report. Includes some undated material.
- G.36 Copy of Singleton's final report, submitted to Churchill on 21 January 1941, with brief accompanying correspondence.
Folder also includes letters re the Singleton report from Churchill and D.M.B. Butt, May 1947, and 3 pp. undated typescript notes on the German Air Force, apparently written for Churchill, with a further page on U-boats.
- G.37 'The fighting value of the German Air Force at June 1st 1941 and January 1st 1942.' Duplicated typescript, 22 January 1941, sent to Cherwell from the Air Ministry.
- G.38 Correspondence and drafts, 24 January-4 February 1941.
- G.39 Draft report of meeting, 6 February 1941, to discuss estimates of average serviceability of British and German fighters.
Folder includes 2 pp. typescript note re number of serviceable aircraft in the R.A.F.
- G.40 'Assessment of the Strength of the German Air Force.' 5 pp. typescript with ms. annotations in two different hands 'Butt's report', 'Given to Mr Hopkins 8.2.41.'

Folder includes two earlier drafts of this paper, one with corrections in Cherwell's hand.
- G.41 3 drafts of paper headed 'Comparative strength of the British and German Air Forces'. n.d. but see G.42.
- G.42 9 pp. typescript headed 'Comparative strength of the British and German Air Forces', with accompanying letter from Cherwell to Portal, 13 February 1941. For earlier drafts of this paper see G.41.

2 pp. typescript comments on Cherwell's paper, dated 18 February 1941, are also included in the folder.
- G.43 Correspondence and papers, 10-20 February 1941.
- G.44 'Minutes of Meeting on 20.2.41. to discuss the first-line establishment of the German Air Force.'

An earlier draft of the minutes is also included in the folder.

Second World War
Statistical Section, military and scientific topics

- G.45 Correspondence and papers, 21-28 February 1941.
- G.46 Correspondence and papers, March 1941.
- G.47 Set of tables produced by the Ministry of Aircraft Production illustrating the strength of the Metropolitan Air Force, 10 May 1940-14 March 1941.
- G.48 Correspondence and papers, April 1941.
Mainly re R.A.F. establishment and expansion. Includes correspondence re aircraft strength in the Middle East.
- G.49 Ms. and typescript drafts re R.A.F. expansion, n.d., April 1941.
- G.50 Correspondence and papers, May 1941.
- G.51 Miscellaneous drafts, notes, statistics re R.A.F. expansion programme, all undated but mostly c. May-June 1941.
- G.52 Correspondence and papers, June 1941.
Includes material re R.A.F. expansion programme, state of the German Air Force, and aircraft strength in the Middle East.
- G.53 Correspondence and papers, 1-25 July 1941.
Mainly re aircraft production programme.
- G.54 Correspondence and papers, 27-31 July 1941.
Mainly material prepared for Singleton for an updated report on German Air Force strength (see G.55). Not all the material is dated.
- G.55 Singleton's report on the comparative strengths of the British and German Air Forces at 1 June 1941, submitted to Churchill, 1 August 1941.
- G.56 Correspondence and papers, August-September 1941.
Includes two undated drafts re R.A.F. expansion and German Air Force strength.
- G.57 Correspondence and papers, October-December 1941.
Mainly re aircraft production. Includes a set of diagrams illustrating the R.A.F. maintenance and supply organisation in the Middle East, November 1941.

Second World War
Statistical Section, military and scientific topics

- G.58 Correspondence and papers, January-February 1942.
Mainly re flying accidents (in British and German Air Forces) and aircraft production.
- G.59 Correspondence and papers, March-April 1942.
Mainly re aircraft losses (in the British, German and Japanese Air Forces) and aircraft production.
- G.60 Correspondence and papers, May-June 1942.
Mainly re aircraft production. Includes 3 pp. typescript, sent to Cherwell by F.F. Inglis, headed 'Notes on the G.A.F. for Lord Cherwell', 10 May 1942.
- G.61 Correspondence and papers, July-August 1942.
Mainly re aircraft production.
- G.62 Correspondence and papers, August-October 1942.
Mainly re aircraft production. Includes a set of graphs illustrating the course of the Battle of Malta, sent to Cherwell from the Air Ministry, September 1942.
- G.63 Correspondence and papers, November-December 1942.
Mainly re aircraft production policy. Includes some material re German Air Force.
- G.64 Miscellaneous statistics, graphs, etc. re German Air Force strength, R.A.F. expansion, aircraft production, n.d., 1942.
- G.65 Correspondence and papers, January-February 1943.
Mainly re aircraft production. Includes some material re German Air Force.
- G.66 Correspondence and papers, March-April 1943.
- G.67 Correspondence and papers, May-June 1943.
Includes minutes and charts re German Air Force strength and organisation.
- G.68 Correspondence and papers, July-August 1943.
Includes material re German Air Force, engine production and aircraft accidents.

Second World War
Statistical Section, military and scientific topics

- G.69 Correspondence and papers, September-December 1943.
- G.70 Miscellaneous statistics, charts, etc. re expansion of R.A.F., aircraft production and wastage, German Air Force strength, 1943.
- G.71 Correspondence and papers, January-April 1944.
Mainly re aircraft production programme and German Air Force strength.
- G.72 Correspondence and papers, May-August 1944.
Mainly re German Air Force.
- G.73 Correspondence and papers, September-December 1944.
Mainly re aircraft production programme.
- G.74 Miscellaneous charts re aircraft production, 1944.
- G.75 Correspondence and papers, January-March 1945
re aircraft production.
- G.76 Correspondence and papers, April-June 1945.
- G.77 Miscellaneous undated notes, charts and statistics re British and German Air Forces, aircraft production, aircraft types, etc.

Second World War
Statistical Section, military and scientific topics

- G.78 Miscellaneous minutes, charts, statistics, etc. re the American Air Force, 1941-44.
- G.79 Correspondence with General Eaker, Commander of the U.S. Army Eighth Air Force, and with his successor, General Anderson, July 1943-March 1945. (Correspondence with General Anderson consists of Cherwell's carbons only.)
- G.80 Correspondence and papers re various aspects of night air defence, 1940, 1942. (Includes some n.d.)
- G.81-G.84 Night Air Defence Committee.
 Briefs for meetings, correspondence and drafts arising, 1941-44.
- G.81 1941
- G.82 1942
- G.83 1943
- G.84 1944
- G.85-G.88 Correspondence and papers re airfields, 1940-44.
 Mainly re construction methods, building programmes, labour allocations, etc. The folder for 1944 contains correspondence with the Air Ministry and I.C.I. re possible use of chemical soil stabilisation to provide temporary runways.
- G.85 1940, 1942
- G.86 January-March 1943
- G.87 April-October 1943
- G.88 1944

Second World War
Statistical Section, military and scientific topics

- G.89-G.95 Correspondence with C. T. Anderson, 1938-44.
- Anderson was an officer in the Royal Air Force and a personal friend of Churchill. The correspondence consists mainly of personal letters to Cherwell, usually enclosing a copy of a recent report, minute, set of statistics, etc. for Cherwell's information. The letters are written from a variety of addresses including R.A.F. Waddington (where Anderson was Station Commander, March-October 1940), the Ministry of Aircraft Production (December 1940-June 1941) and the Ministry of Supply (July-September 1941). Most of the letters from Waddington are concerned with difficulties encountered by pilots on operational flights; some of the later correspondence is addressed to Major (later Sir Desmond) Morton, and much of it is concerned with accidents and other forms of wastage in the R.A.F. (Anderson was appointed as Investigator of Accidents in October 1941.)
- G.89 March 1938-April 1940
- G.90 May-August 1940
- G.91 September-December 1940
- G.92 January-February 1941
- G.93 March-April 1941
- G.94 May-September 1941
- G.95 October-December 1941, 1942, 1944 (Cherwell's carbon only)
- G.96, G.97 Reports on interrogations of prisoners, sent to Cherwell by T.B. Webster, 1940-41. Most of the reports are concerned with German Air Force strength, or German radar, and they are all accompanied by a personal note from Webster.
Some later correspondence (1942-43) is also included.
- G.96 October 1940-April 1941
- G.97 May 1941-June 1943
- G.98 Correspondence with Sir Charles Portal, 1940-45, re R.A.F. equipment, weapons, policy, etc.

Second World War
Statistical Section, military and scientific topics

- G.99 Miscellaneous correspondence and drafts re various matters
connected with air warfare, 1940-45.
- G.100 Miscellaneous photographs of aeroplanes, aerial photographs
of military installations.

Second World War
Statistical Section, military and scientific topics

- G.101-G.141 CORRESPONDENCE AND PAPERS ON ANTI-U-BOAT WARFARE, 1940-45.
- G.101-G.103 'Report of the U-Boat-Investigation Committee', 10 October 1940.
- G.101 33 pp. typescript report submitted by Admiral Sir Frederic Dreyer and Commander G.C. Phillips, with covering letter from Dreyer to The Secretary, The Admiralty.
- G.102 24 pp. typescript report by Sir William Jowitt (Assessor).
- G.103 Various memoranda, labelled A - H.
- G.104 Correspondence, January 1940-April 1941 re various methods for detecting U-boats.
- G.105 'Report on M.D.B.', by E.J. Williams, 30 November 1940. 10 pp. typescript.
- G.106 'Report on Detection of Submerged Submarines from Aircraft', by E.J. Williams, n.d., 5 pp. typescript.
- G.107 1 p. undated typescript sent by R. (later Sir Robert) Watson-Watt to Cherwell beginning 'The development of A.S.V. for the detection by aircraft of submarines on the surface, has now reached the following stage:'
- G.108 Ms. notes (4 pp. + 2 pp.) sent by Watson-Watt to Cherwell, 5 March 1941, re 'What I think possible and desirable in relation to RDF measures against air and U-boat attacks on shipping in the North West Approaches'.
Folder also includes a 3 pp. memorandum from Cherwell to Churchill, 12 March 1941, and a suggested draft (by Cherwell) of a minute from Churchill to the First Lord of the Admiralty, 17 March 1941, both based on Watson-Watt's suggestions.
- G.109 Memoranda and reports re possibility of reducing visibility of ships at night by diffused lighting, February-April 1941.
- G.110 Memoranda re various anti-torpedo devices, March-April 1941. An undated set of diagrams and photographs is included in the folder.

Second World War
Statistical Section, military and scientific topics

- G.111 Memoranda and correspondence, 1941.
Includes 'Summary of Notes by Admiralty Technical Departments on GRAPH', sent to Cherwell by C.S. Wright, 1 November 1941.
- G.112 'Notes on GRAPH Steel', 24 February 1942, with brief correspondence on the specification of the steel used for U-boat hulls.
- G.113 Correspondence with Sir Philip Joubert, February 1942, re use of Radio Altimeters by Coastal Command.
Correspondence with Sir Stanley Vernon and others re possibility of attacking reinforced concrete U-boat pens, April-August 1942.
- G.114 Memoranda addressed to Cherwell, September-December 1942, re various aspects of anti-U-boat warfare. Folder also includes 'Note on Submarine Attack with Clusters of 30-lb A.S. Bombs' and note on 'Probability of Success in Submarine Attacks' (comparing various weapons), both issued by M.D.1.
- G.115-G.125 Committee on Anti-U-Boat Warfare.
Carbon copies of papers for meetings of the Committee, prepared by E.E. Bridges for submission to Churchill, 1942-45. The set is not quite complete, lacking papers for meetings 1, 26, 27 and 28.
- G.115 November 1942
2nd, 3rd, 4th meetings.
- G.116 December 1942
5th, 6th, 7th, 8th, 9th meetings.
- G.117 January 1943
10th, 11th, 12th, 13th meetings.
- G.118 February 1943
14th, 15th, 16th, 17th meetings.
- G.119 March 1943
18th, 19th, 20th, 21st meetings.
See G.130-G.136 for action on Bay Patrol taken after 21st meeting.
- G.120 April 1943
22nd, 23rd, 24th, 25th meetings.

Second World War
Statistical Section, military and scientific topics

- G.121 June, July 1943
 29th, 30th, 31st meetings.
- G.122 August, September 1943
 32nd, 33rd, 34th meetings.
- G.123 October, November 1943
 35th (2 copies), 36th meetings.
- G.124 January, May 1944
 37th, 38th meetings.
- G.125 January 1945
 Meeting on 26 January.
- G.126-G.129 Correspondence and papers re various aspects of anti-U-boat
warfare, January-March 1943.
- G.126 January 1943.
- G.127 February 1943.

 Includes note on 'Sinkings of Unescorted Ships by
 U-boats', sent by Cherwell to Sir Stafford Cripps,
 24 February 1943, and some undated material.
- G.128 March 1943 (see also G.129)

 Includes a letter from Cherwell, 16 March 1943, re
 supply of good quality binoculars to merchant ships.
- G.129 Letter from W.A. Harriman to Cripps, 22 March 1943,
 enclosing 2 memoranda re U.S. developments in anti-
 submarine weapons.

Second World War
Statistical Section, military and scientific topics

G.130-G.136 Bay Patrol, March-April 1943.

At the 21st meeting of the Committee on Anti-U-boat Warfare (see G.119), a paper was presented by Admiral Stark suggesting that if aircraft could be made available they should carry out as soon as possible a concentrated patrol and hunting of U-boats in their greatest areas of concentration, namely, an area of 200 miles wide across the entrance to the Biscay bases.

A special meeting was held on 5 April 1943 at which the Ministry of Aircraft Production was asked, in consultation with Departments, to prepare an agreed note as to the rate of monthly sinkings in the Bay which it might be expected to achieve with a given increase in air strength.

The following papers include several drafts of a telegram to be sent by Churchill to President Roosevelt, asking for additional aircraft to increase the possible effectiveness of the Bay Patrol.

- G.130 Memorandum from D.M.B. Butt to Cherwell, 23 March 1943, summarising Admiral Stark's proposals, and enclosing 3 pp. typescript on 'Value of Biscay Patrols'.
- G.131 Various statistics and memoranda arising from G.130 above, 25 March-2 April 1943.
- G.132 6 pp. typescript by Cherwell headed 'The Bay Patrol'. This was originally written as a memorandum for Churchill, 28 March 1943, but was then converted into a draft paper for the Committee on Anti-U-boat Warfare.
- G.133 'Bay Patrol. Notes for M.A.P.'s Meeting', 5 April 1943. 1 p. typescript.
- G.134 2 pp. typescript note headed 'Value of Aircraft on Bay Patrol', sent by Cherwell to Cripps, 6 April 1943.
Folder includes carbon copy of covering letter from Cherwell to Cripps.
- G.135 Drafts by Cherwell and others of telegram to be sent by Churchill to President Roosevelt, April 1943.
- G.136 Copy of memorandum, 13 April 1943, advising Churchill against asking Roosevelt's support for the Bay Patrol project.

Second World War
Statistical Section, military and scientific topics

- G.137-G.139 Memoranda re various aspects of anti-U-boat warfare from
D.M.B. Butt and others, 1943-45.
- G.137 April-December 1943
- G.138 1944
- G.139 1945
- G.140 Miscellaneous charts re anti-U-boat warfare, n.d.
- G.141 Copy of Coastal Command Review, June 1945, containing
a review of the activities and accomplishments of Coastal
Command in the U-Boat war.

Second World War
Statistical Section, military and scientific topics

- G.142-G.151 OTHER NAVAL PAPERS, 1939-47.
- G.142-G.145 Correspondence and papers re the Fleet Air Arm, 1939-45.
- G.142 1939-40
- G.143 1942
- G.144 January 1943
- Drafts, notes, brief correspondence, press-cuttings
re debate on the Fleet Air Arm in the House of Lords,
27 January 1943.
- G.145 1943
- G.146-G.151 Miscellaneous naval papers.
- G.146 1939
- Typescript of statement by Churchill to House of Commons
(6 December 1939), and notes for address to House of
Lords (13 December 1939), both on progress of the naval
war. With background information by G.D.A. MacDougall.
- G.147 1940
- Includes personal letter from Admiral Sir Roger Keyes
to Churchill, 22 December 1940, re proposed raid on
Pantelleria (Keyes, as Director of Combined Operations,
planned to lead the raid in person, but the proposal was
dropped after the arrival of the German Air Force in
Sicily in February 1941). The letter was sent via Churchill
with a covering note suggesting that it should be seen only
by himself and E.A. (later Sir Eric) Seal.
- G.148 1941-42
- G.149 1942-43
- Correspondence and papers re methods of attacking the
warship Tirpitz, May 1942, February-June 1943.
- Folder also includes a letter from A.P. Rowe, 14 November
1944, re the sinking of the Tirpitz.
- G.150 1943-45
- Includes drafts and correspondence on the subject of
'Battleships versus Aircraft'.
- G.151 1947, n.d.

Second World War
Statistical Section, military and scientific topics

G.152-G.443 WEAPONS, DEFENSIVE DEVICES, MILITARY ORGANISATION
AND STRATEGY

The following papers reflect Cherwell's considerable interest and involvement in the contribution of science to the war effort. His interest in weapons development has sometimes been dismissed as a mere love of 'gadgetry', but this criticism underestimates the value of the support he gave to numerous projects for research and development, even if in some cases his enthusiasm was misguided and the project eventually proved unsuccessful.

The material is arranged by subject and presented in alphabetical order. A list of contents appears overleaf, but it must be stressed that it has not been possible to provide cross-references to other material on the topics listed which may appear elsewhere in Section G or in other parts of the collection (especially Sections D and F). Particular mention should be made here of some of the more substantial sets of papers such as those on Bombs and Bombing (G.117-G.209) M.D.1 (G.246-G.306), U.P.s and Proximity Fuzes (G.376-G.409) and the German V-Weapons (G.410-G.440).

Second World War
Statistical Section, military and scientific topics

LIST OF CONTENTS

AERIAL MINES	G.152
ALUMINISED EXPLOSIVES	G.153, G.154
AMMUNITION (see also SMALL ARMS, SMALL ARMS AMMUNITION)	G.155 - G.159
ANTI-AIRCRAFT WEAPONS (including guns)	G.160 - G.164
ANTI-TANK WEAPONS	G.165, G.166
BALLOONS	G.167 - G.173
BLACKOUT	G.174, G.175
BODY ARMOUR	G.176
BOMBS AND BOMBING	G.177 - G.209
BOMBSIGHTS	G.210 - G.217
CAMOUFLAGE	G.218, G.219
CHEMICAL WARFARE	G.220
DE-ICING (of aircraft)	G.221
FLARES	G.222
FOG DISPERSAL	G.223 - G.225
GAS AND GAS WEAPONS	G.226, G.227
GERMAN WEAPONS	G.228, G.229
GLIDERS	G.230
GUIDED MISSILES	G.231 - G.236
'HABBAKUK'	G.237, G.238
JET PROPULSION	G.239 - G.244
LONG DELAY FUZES	G.245

Second World War
Statistical Section, military and scientific topics

M.D.1 (includes 'Bombard', P.I.A.T., 'Sticky Bomb', etc.)	G.246 - G.306
MINES (MAGNETIC)	G.307
MORTARS	G.308
NOISE MAKERS	G.309
'OVERLORD'	G.310, G.311
P.E. FUZES (see U.P.'s)	
PETROLEUM WARFARE	G.312, G.313
R.D.F. (RADAR) AND RADIO RESEARCH	G.314 - G.334
RADIO COUNTER MEASURES	G.335 - G.348
RHINE MINES	G.349, G.350
ROCKET-ASSISTED BOMBS	G.351
SCATTER BOMB	G.352
SEARCHLIGHTS, SEARCHLIGHT CONTROL	G.353 - G.355
SMALL ARMS, SMALL ARMS AMMUNITION	G.356 - G.360
SMOKE SCREENS	G.361, G.362
SMOKE TARGETS	G.363
TANKS	G.364 - G.373
TORPEDOES	G.374, G.375
U-BOATS (see G.101-G.141)	
U.P.'s (UNRIFLED PROJECTILES) AND PROXIMITY FUZES	G.376 - G.409
V-WEAPONS	G.410 - G.440
WATER CONTAMINATION	G.441
'WINDOW' (see G.345-G.348)	

G.152	AERIAL MINES	1940-45
	Minutes and correspondence <u>re</u> production, development, etc.	
	See also F.1-F.39 <u>passim</u> , G.160, G.161, G.376-G.409.	
G.153, G.154	ALUMINISED EXPLOSIVES	1943-44
G.153	Correspondence with J.E. (later Sir John) Lennard-Jones and others <u>re</u> efficiency of aluminised explosives, October-December 1943.	
G.154	Minutes and correspondence, January-September 1944. Includes copy of Report by Committee of Inquiry into Aluminised Explosives, March 1944.	
G.155-G.159	AMMUNITION	1914-18, 1940-45
	Minutes, correspondence, statistics.	
	See also G.356-G.360.	
G.155	1940	
G.156	1941	
G.157	1942-45	
G.158	Undated drafts and statistics.	
G.159	Charts showing 'Total ammunition filled and total fired in France for each quarter, 1914-18'. Folder also includes other statistics <u>re</u> ammunition in the First World War.	
G.160-G.164	ANTI-AIRCRAFT WEAPONS (including guns)	1939-43
G.160, G.161	Correspondence with W.W. Lumsden and A.J. Grimwood of Imperial Chemical Industries Limited, <u>re</u> development and testing of a small bomb for use against aeroplane propeller blades. Includes reports on experiments.	
G.160	June-August 1939	
G.161	September 1939-May 1941	
G.162	Minutes and statistics <u>re</u> anti-aircraft weapons, 1940-43.	

Second World War
Statistical Section, military and scientific topics

- G.163 Correspondence with F.A. (later Sir Frederick) Pile
re A.A. blinds and prematures, April-May 1943.
- G.164 Miscellaneous undated material, mainly charts and
statistics.
- G.165, G.166 ANTI-TANK WEAPONS (Including guns) 1940-43
Minutes and correspondence.
- G.165 July 1940-June 1942
Includes 8 pp. typescript 'Notes on Anti-Tank Weapons'
sent by Cherwell to D. Sandys, 4 February 1942.
- G.166 July 1942-March 1943 (and n.d.).
Includes correspondence with R.M. (later Lord) Weeks,
August 1942.
- G.167-G.173 BALLOONS 1939-44
See also C.22ff., E.37, F.1-F.39 passim.
- G.167 Correspondence with Sir Kingsley Wood, December 1939,
re safeguarding kite-balloons on the ground against wind.
- G.168- Minutes and correspondence re uses of balloons in aerial
G.170 warfare, 1940-42.
- G.168 May-August 1940
- G.169 September-December 1940
- G.170 January-April 1941, February 1942
- G.171 Progress reports and notes of meetings or demonstrations
re 'T.C.B. Scheme' (Balloon Barrage), July- December 1942.
- G.172 Minutes, notes, photographs re T.C.B. Scheme, mostly 1943.
- G.173 Memorandum to Cherwell on 'Balloon Barrage Schemes',
22 July 1944.
- G.174, G.175 BLACKOUT 1939-42
- G.174 Correspondence with E.K. Rideal and D.R. Pye,
November 1939-August 1940, re use of coal dust
for blacking out water surfaces.
Folder also includes 3 pp. typescript re blackout,
2 October 1939.

Second World War
Statistical Section, military and scientific topics

G.175 Memoranda and reports re use of coal dust for water
 camouflage, 1941-42.

 Includes 2 reports by T.F. Hurley and E.T. Wilkins.

G.176 BODY ARMOUR 1940
 Minutes and correspondence, May-June 1940.

Second World War
Statistical Section, military and scientific topics

G.177-G.209 BOMBS and BOMBING 1939-45

1939

- G.177 Miscellaneous typescript drafts re bombing policy, September-November 1939.
Folder also includes 2 pp. typescript 'Note on the damage likely to be done by enemy day-light bombing', and a 3 pp. typescript arguing against the building of Deep Shelters for protection against German bombing, both undated.
- G.178 Correspondence, October-December 1939.
Mainly re anti-submarine bombs.

1940

- G.179 Minutes and statistics re production and consumption of bombs and bombers, May-September 1940.
- G.180 Reports on accuracy of German bombing sent to Cherwell for information, August 1940.
- G.181 Minutes and statistics re German bombing (number and distribution of bombs, damage caused, casualties, etc.), September-December 1940.

1941

- G.182 Minutes and statistics re production and consumption of bombs, January-December 1941.
- G.183 'Notes on conversation between Professor Zuckerman and Lord Cherwell - 26th March' [1941.] re bombing policy.
- G.184 Minutes and letters to Churchill from Sir Archibald Sinclair, Sir Richard Peirse and Lord Beaverbrook re strength of Bomber Command, April 1941.
- G.185 'Report on a Method of Controlled Fragmentation'. Duplicated typescript with diagrams, c. June 1941. Lacks pp.1-6.
- G.186 'Night Photographs in June-July 1941. A Statistical Analysis'.
9 pp. typescript draft, no author or date, describing the results of an analysis of photographs taken during night bombing operations. See also G.187.
Brief related correspondence, October 1941, is also included.

Second World War
Statistical Section, military and scientific topics

- G.187 13 pp. typescript draft with same title as G.186.
- G.188 Miscellaneous correspondence, minutes and statistics,
January-December 1941.

1942

- G.189 Minutes and statistics re production and consumption
of bombs, January-December 1942.
- G.190 Charts illustrating bomb stocks and expenditure, September 1942.
- G.191 Miscellaneous correspondence, minutes and statistics re
bombs and bombing, January-December 1942.
- G.192 Report on the 'Effects of Air Raids on Dwelling House
Property' in the City of Birmingham, 12 February 1942.

Folder also includes a note about the estimated effects of
bombing on large German towns, sent to Cherwell,
23 February 1942.
- G.193 Correspondence with H.T. Tizard re bombing policy, April 1942.

Folder also includes copy of a minute from Cherwell to
Churchill on bombing policy, 30 March 1942.
- G.194 Correspondence with Pressed Steel Company Limited re
proposals for new methods of bomb manufacture, June-
October 1942.
- G.195 Correspondence, minutes and statistics re Bomber Command
(operational strength, casualties, etc.), September-
December 1942.
- G.196 Notes, correspondence and reports re 6 lb. Oil Incendiary
Bomb, December 1942.

1943

- G.197 Miscellaneous correspondence, notes and minutes, including
some on bombing policy, January-December 1943.

1944

- G.198 Minutes and correspondence re bombing policy, January-
November 1944. Includes material re British Bombing
Research Mission.
- G.199 Miscellaneous minutes and statistics, March-December 1944.

Continued

Second World War
Statistical Section, military and scientific topics

1944 (cont'd.)

- G.200 Minutes from Cherwell to Churchill re 'Transportation Plan' (for bombing of German marshalling yards), April-June 1944.
- G.201 Envelope labelled 'Bombing of Germany - Scatter Diagrams'. Contains diagrams comparing accuracy of British bombing in 1941 and 1944 and various maps of Germany.
- G.202 Summaries of monthly reports on Bomber Command operations, submitted to Cherwell, June 1944-May 1945.

1945

- G.203 Miscellaneous minutes and correspondence, January-July 1945. Includes copy of letter from Cherwell to Sir James Chadwick re bomb damage to German housing, January 1945.
- G.204 Memorandum addressed to Cherwell on 'Bombing Accuracy', 16 February 1945. Folder includes miscellaneous background material.
- G.205 Ms. and typescript notes and tables of statistics re tonnage of bombs dropped at various dates.
- G.206 Duplicated typescript on 'Dive Bombing', no author or date.
- G.207,
G.208 Miscellaneous charts re Bomber Command.
- G.207 Mainly re operational strength.
- G.208 re effort, casualties, tonnage of bombs dropped.
- G.209 Miscellaneous undated material.
Includes 4 pp. undated ms. notes on bombing policy in R.F. Harrod's hand.

Second World War
Statistical Section, military and scientific topics

G.210-G.217	BOMBSIGHTS	1939-43
G.210-G.213	Correspondence, 1939-40, arranged in alphabetical order.	
G.210	Beaverbrook, Lord	June 1940
	Carpenter, L. S.	June-November 1940
	Dean, M. J.	April 1940
	Huskinson, P.	October 1940
G.211	Keeley, T. C.	September 1939-September 1940
G.212	Sinclair, A. H. M.	May 1940
	Tedder, A. W.	December 1939-March 1940
G.213	Wimperis, H. E.	January, August 1940
	Enclosing duplicated typescript memorandum in 2 parts on 'Some Suggestions respecting Bomb Sights for Modern Warfare'.	
G.214	Minutes and drafts, September 1939-August 1940 (and n.d.), mostly by Cherwell.	
G.215	Correspondence, notes, agendas, minutes <u>re</u> various meetings to discuss bombsights, December 1939-August 1940.	
G.216	Miscellaneous notes, drafts, correspondence, 1940.	
G.217	Minutes, notes, correspondence, photographs, 1941-43.	

Second World War
Statistical Section, military and scientific topics

- G.218, G.219 CAMOUFLAGE 1940-44
See also G.174, G.175
- G.218 Correspondence with J.S. Huxley and H.B. Cott,
April-May 1940.
- G.219 Minutes and correspondence, June 1940-August 1944.
- G.220 CHEMICAL WARFARE 1940-45
See also G.226, G.227, G.312, G.313, G.441.
Minutes and correspondence, 1940-42, 1945. 1940
correspondence is re possible methods of contaminating
petrol.
- G.221 DE-ICING (of aircraft) 1940-42
Minutes and correspondence, 1940, 1942. Includes
related printed matter.
- G.222 FLARES 1940-42
Progress reports re development of flare-carrying
aircraft for night interception, September-October 1940.
Folder also includes miscellaneous correspondence and
reports, 1941-42.
- G.223-G.225 FOG DISPERSAL (F.I.D.O.) 1941-45
Minutes, correspondence and reports re development
and testing of apparatus for clearing fog from airfield
runways, known by the code name 'FIDO'. Much of
the correspondence is with G.W. Lloyd.
See J.109, J.143 for later material re FIDO.
- G.223 1941, 1942
- G.224 1943
- G.225 1944-45
Includes some printed matter.

Second World War
Statistical Section, military and scientific topics

G.226, G.227	GAS and GAS WEAPONS	1939-44
	Minutes, correspondence, memoranda.	
G.226	1939-40	
	Includes correspondence with Lord Melchett <u>re</u> German uses of Arsenic.	
G.227	1941-44	
G.228, G.229	GERMAN WEAPONS	1940-45
	See also G.410-G.440	
	Minutes, correspondence, reports <u>re</u> various German weapons and devices.	
G.228	1940-42	
G.229	1943-45	
G.230	GLIDERS	1940-43
	Correspondence, minutes, statistics, June 1940- January 1943.	

Second World War
Statistical Section, military and scientific topics

G.231-G.236 GUIDED MISSILES 1944-45

G.231-G.235 Correspondence and papers re a visit by Cherwell to U.S.A., October 1944, to investigate developments in guided missile research.

G.231 Correspondence with A. King, Director, British Commonwealth Scientific Office in Washington, re travel arrangements, etc. Includes 2 drafts of Cherwell's itinerary, 4-13 October 1944.

G.232 'Notes on Guided Missile Developments in U.S.A.' 5 pp. typescript by W.H. Stephens, 19 September 1944.

'Notes on visits by Lord Cherwell to N.D.R.C. Division 5 (M.I.T.); Polaroid Corporation; Army Air Base Tonopah; Douglas Aircraft Corporation and California Institute of Technology, in connection with guided missiles.' 4 pp. typescript by W.H. Stephens, 12 October 1944. Another copy (not identical) is also included in the folder.

G.233 Typescript notes (2 sets) for discussion with Admiral Furer and his staff at the U.S. Navy department, 19 October 1944; letter from Furer; 2 pp. typescript report on the visit by R.F. Harman, 24 October 1944.

G.234 Reports of Cherwell's visits to N.R.D.C. Division 5 (19 October) and Section T of the O.S.R.D. (18 October) by R.F. Harman and W.B. Mann respectively.

G.235 Copies of letters from Cherwell to various people encountered during his visit, mostly conveying thanks for hospitality, information, etc.

Also included here is a copy of a telegram of thanks from Churchill to President Roosevelt.

G.236 Correspondence, 1945.

Second World War
Statistical Section, military and scientific topics

- G.237, G.238 'HABBAKUK' 1942-43
- Correspondence, minutes, reports re plans for the construction of a floating airfield made of ice or reinforced concrete. The project was referred to under the code name 'Habbakuk'.
- G.237 Minutes and correspondence, October-December 1942.
- Includes correspondence with Lord Mountbatten re possible methods of construction and a minute from Churchill calling for immediate investigation of the idea.
- G.238 Minutes of meetings, notes and reports, December 1942-November 1943.
- G.239-G.244 JET PROPULSION 1940-41
- G.239 'Gloster Proposal for Interceptor Fighter. Whittle Gyrone Engines.'
- Typescript outlining the design of a jet propelled fighter aircraft, August 1940.
- G.240 Correspondence and papers, September-October 1940.
- Includes 3 typescripts by F. Whittle:
- 'Notes for Professor Lindemann.' 2 October 1940.
- 'General Memorandum on the Design and Production of Gyrone Engines.' 22 April 1940.
- 'Memorandum on the Development of the Gyrone Engine.' 9 October 1940.
- The last two items were enclosed with a letter from Whittle to Cherwell, 10 October 1940.
- G.241 'Memorandum on Rocket Projectiles', by I. Lubbock, November 1940, with accompanying letter to Cherwell from J. O'Hea.
- G.242 'Gloster F.9/40 Fighter Aircraft and Whittle Power Unit. A non-Technical and Incomplete Review, mainly based on a conversation with Mr Tobin (R.D.E.I.).' 7 pp. typescript, no author, 31 January 1941.
- G.243 Minutes and correspondence, May-December 1941.
- Includes several Progress Reports on the Whittle engine.
- G.244 'Turbine Aero Engines', 28 pp. typescript with diagrams by T.P. de Paravicini, September 1941.

Second World War
Statistical Section, military and scientific topics

G.245

LONG DELAY FUZES

1940

Minutes and correspondence, June-August 1940.

Second World War
Statistical Section, military and scientific topics

G.246-G.306 M.D.1.

The origins and history of M.D.1 are described in G.246 as follows:

'The Whitchurch experimental establishment grew up from a War Office section known as M.I.R.(c). which was started in 1939 to develop devices for use in irregular warfare by all three Services. In 1940 workshops were requisitioned at 35 Portland Place. When, in the autumn of that year, this building was badly damaged by enemy action, additional premises were found at Whitchurch. In due course fully equipped workshops, factory buildings and ranges were constructed, and Whitchurch became a completely self-contained experimental station.

In view of its production activities, the original War Office section was in 1940 transferred to the Ministry of Supply and renamed M.D.1. In 1942 M.D.1 became a Grade B Directorate under a Brigadier [M.R. (later Sir Millis) Jefferis] who was subsequently promoted to Major General. After the war, in November 1945, the organisation was absorbed by the Armaments Design Department and became one of their Groups, the O.C. [R.S. Macrae] being given the rank of Colonel.'

Cherwell maintained a close involvement with M.D.1 throughout its existence. He visited Whitchurch regularly, kept in constant touch with the work in progress, and endeavoured to draw the attention of Churchill and others to developments that he thought were worth pursuing. Jefferis and, subsequently, Macrae frequently turned to Cherwell for help over various administrative difficulties and always found in him a strong supporter of their cause.

G.246-G.264 document the administrative history of M.D.1 from 1940 until its final demise in March 1947. Personal correspondence with R.S. Macrae continues until 1954; for further correspondence with Jefferis see the Index of Correspondents. G.265-G.306 contain correspondence and papers re a number of weapons developed by M.D.1., including the 'Bombard', P.I.A.T., 'Sticky Bomb', etc. A short list of contents precedes the sequence.

Second World War
Statistical Section, military and scientific topics

G.246-G.306	M.D.1.	1940-54
G.246	'Experimental Station, Whitchurch.'	
	3 pp. typescript by R.S. Macrae containing a full description of the M.D.1 premises at Whitchurch with a brief note on the history of the establishment. Attached to the typescript is a 3 pp. list of weapons developed by M.D.1 which were accepted for service use during the Second World War.	
G.247, G.248	Reports on development and research work in hand, 1941-43. A few reports only:	
G.247	February 1941 June 1941 (2 versions) August 1941	
G.248	October 1942 July 1943	
G.249	'Report on Demonstration given to the Prime Minister by M.D.1 at Princes Risborough Range on Sunday, August 31, 1941.'	
G.250- G.256	Correspondence <u>re</u> administration, status, establishment and organisation of M.D.1, 1940-45.	
G.250	August 1940-April 1941	
G.251	September-December 1941	
G.252	March-May 1942	
G.253	May-June 1942	
G.254	June-December 1942	
G.255	January-December 1943	
G.256	January 1944-July 1945	

Second World War
Statistical Section, military and scientific topics

- | | | |
|-----------------|--|----------|
| G.257-
G.264 | Correspondence with R.S. Macrae (Deputy Director).
Mainly <u>re</u> arrangements for the closure of M.D.I.
Includes correspondence with ministers, etc. concerned
with the arrangements and some personal correspondence. | 1945-54. |
| G.257 | December 1945-April 1946 | |
| G.258 | May-August 1946 | |
| G.259 | September-November 1946 | |
| G.260 | January-March 1947 | |
| G.261 | April-June 1947 | |
| G.262 | July-November 1947 | |
| G.263 | 1948-49 | |
| G.264 | 1950-54 | |

Second World War
Statistical Section, military and scientific topics

G.265-G.306 Correspondence and papers re weapons developed by M.D.1.

The material relates to the following weapons, grouped under the headings used in the official list of weapons developed by M.D.1 during the Second World War (see G.246).

G.265-G.273 Guns and Ammunition

'Bombard'

P.I.A.T.

4.5" gun

G.274-G.286 Aircraft Bombs

'W' Mine

Puff Ball

C.S. Bomb

35lb. A/S Bomb

'J.W.' Oscillating Mine

Incendiary Bombs (including 'J' Bomb)

'K' Fragmentation Bomb

Anti-Capital Ship Homing Bomb

G.287-G.295 Grenades and Mines

'Sticky Bomb'

'M' Mine

G.296, G.297 Demolition Devices

'L' Delay Switch

Pull Pressure Release Switch

G.298-G.306 Miscellaneous

Second World War
Statistical Section, military and scientific topics

G.265-G.273 Guns and Ammunition

G.265-G.269 29 mm. Spigot Mortar ('Bombard')

The idea of firing an anti-tank projectile from a spigot was originated by L.V.S. Blacker who directed the initial experimental work. When M.D.1 moved to Whitchurch, Blacker ceased to be involved with the development and the eventual weapon as produced by M.D.1 bore little relation to the original design.

The following correspondence and papers include several reports of trials of the Bombard. 1940-41 correspondence is mainly with Blacker.

G.265 September-December 1940

G.266 January-April 1941

G.267 May-December 1941

G.268 January-June 1942

G.269 August 1942-August 1944

G.270-G.272 P.I.A.T. [Projector Infantry Anti-Tank]

Also known as the Jefferis shoulder gun. The final design incorporated some features from a similar, less powerful, weapon designed by L.V.S. Blacker. The gun was made by I.C.I. and much of the correspondence is with Lord Melchett re development and production problems.

See also D.110.

G.270 1941-42

G.271 1943

G.272 1944-45

G.273 4.5" gun

Correspondence, March 1945.

Second World War
Statistical Section, military and scientific topics

G.274-G.286 Aircraft Bombs

G.274 'W' Mine

Correspondence, March 1940, August 1944.

See also G.349, G.350, 'Rhine Mines'.

G.275, G.276 Puff Ball

9lb. soft-nosed bomb for the attack of tanks by low-flying fighter aircraft. Correspondence re development and operational use.

G.275 June 1941-January 1942

G.276 February 1942-September 1943

G.277-G.279 C.S. Bomb

Bomb using the shaped charge principle for use against capital ships.

G.277 'Second Interim Report on the Attack of Capital Ships by Shaped Charges.' Typescript with several diagrams, produced by M.D.1, 11 March 1942.

G.278 Minutes and correspondence, 1942. Includes some photographs.

G.279 Minutes and correspondence, 1943.

G.280, G.281 35lb A/S Bomb

A shaped charge bomb designed for use against submarines. Minutes, correspondence and reports.

G.280 February-June 1943

G.281 July-September 1943

G.282 'J.W.' Oscillating Mine

Reports and correspondence, July 1942-March 1943

Second World War
Statistical Section, military and scientific topics

- G.283, G.284 Incendiary Bombs (including 'J' Bomb)
- The 'J' Bomb was a new type of incendiary using a solid filling (naphthalene) instead of petrol. Much of the 1944 correspondence is re availability of naphthalene.
- G.283 October 1943-February 1944
- G.284 February 1944-July 1945
- G.285 'K' Fragmentation Bomb
- An anti-personnel bomb combining delayed action and a jumping charge to give an air burst.
- Correspondence, March-April 1944 also refers to the 'F' bomb.
- G.286 Anti-Capital Ship Homing Bomb
- Minutes, correspondence and reports, June 1944-June 1945.
- G.287-G.295 Grenades and Mines
- G.287-G.291 Grenade No.74 (S.T.) Mks.I and II ('Sticky Bomb')
- An anti-tank weapon, designed to stick to the tank when thrown so as to increase the effectiveness of the explosive.
- Minutes, correspondence and reports, 1940-43.
- G.287 1940
- Includes a memorandum from R.S. Macrae to Cherwell, 5 December 1940, enclosing reports and correspondence re the safety of the S.T. Grenade.
- G.288 February-March 1941
- Includes memorandum from R.S. Macrae, 7 March 1941, enclosing further reports and correspondence re safety.
- G.289 April-June 1941
- G.290 June-November 1941
- G.291 1942-43
- Mainly re S.T. Grenade Mk.II.

Second World War
Statistical Section, military and scientific topics

- G.292-G.295 Mine A.P. No.5 ('M')
- A small high explosive charge which detonated when trodden on.
- Minutes, correspondence and reports, 1942-44.
Includes material re 'K' or 'Kangaroo' Mine.
- G.292 November-December 1942
- G.293 January-September 1943
- G.294 January-May 1944
- G.295 June-July 1944 and n.d.
- G.296, G.297 Demolition Devices
- G.296 Switch No.9 ('L' Delay)
- Correspondence 1941, 1945
- G.297 Switch Nos.1, 2 and 3 (Pull, Pressure, Release)
- Correspondence 1941, 1942
- G.298-G.306 Miscellaneous
- Correspondence and papers re various weapons, etc., 1940-45.
- G.298 July 1940-July 1941
- G.299 July-October 1941
- Includes notes of experiments re Munroe Effect.
- G.300 January-April 1942
- G.301 May-July 1942
- G.302 August-November 1942
- G.303 November 1942
- Typescript headed 'Ground Strafing - with Vertical Fire', by J. L. Tuck, 24 November. Folder also includes a bundle of unidentified diagrams, n.d.
- G.304 1943
- Includes correspondence re Munroe Effect and typescript headed 'A Study of the Mechanism of Hollow Coned Charges', by H. Kolsky, A.C. Shearman and C.I. Snow of I.C.I.

Second World War
Statistical Section, military and scientific topics

G.305 1944-45

G.306 n.d.

Includes typescript on 'Density of Prime Numbers' sent to Cherwell by Jefferis and typescript with diagrams and photographs on 'Use of Soft Nosed Bombs for Attack of Capital Ships', no author.

Second World War
Statistical Section, military and scientific topics

- | | | |
|--------------|---|------------|
| G.307 | MINES (MAGNETIC) | 1939-41 |
| | Correspondence, minutes, drafts, notes of meetings. | |
| G.308 | MORTARS | 1941, 1944 |
| | Minutes and statistics <u>re</u> stocks of mortars and ammunition. | |
| G.309 | NOISE MAKERS | 1945 |
| | Minutes and correspondence, January 1945, <u>re</u> relative efficiency of different designs. | |
| G.310, G.311 | 'OVERLORD' (Invasion of Europe) | 1943-44 |
| G.310 | Minutes and correspondence <u>re</u> various landing devices including ship to cliff bridge (proposed by M. Jefferis) and 'Swiss Roll' (floating mat), 1943-44. | |
| G.311 | Papers for meetings of 'Overlord' Preparations Committee, 9 February-30 March 1944.

Folder also includes miscellaneous notes <u>re</u> availability of transport, labour, etc. | |
| G.312, G.313 | PETROLEUM WARFARE | 1940-41 |
| G.312 | Reports or notices of tests and demonstrations 'in connection with the use of petroleum products for fighting purposes', July-August 1940.

Folder also includes note of a Conference on 'Use of Oil for Defensive and Offensive Purposes', 4 July 1940, and draft minute from Cherwell to Churchill, 20 August 1940. | |
| G.313 | Progress reports issued by the Petroleum (Warfare) Department, September 1940, February, September 1941.

Includes correspondence from G.W. Lloyd. | |

Second World War
Statistical Section, military and scientific topics

- G.314-G.334 R.D.F. (RADAR) AND RADIO RESEARCH 1939-45
 See also G.335-G.348
- G.314 'Material Basis for Information of the Public on Radio-
 location'. Fifth Edition, 9 August 1945.
 Duplicated typescript describing the development of
 radar during the Second World War.
- G.315 Undated typescript, with corrections in Cherwell's hand,
 describing the development of radar during the Second
 World War.
 Some printed matter is also included in the folder.
- G.316 'Code Names and Frequencies of R.A.F. and G.A.F.
 Radio Systems'. 3 pp. typescript, n.d.
- G.317 Undated ms. and typescript drafts by Cherwell re the role
 of the British Broadcasting Corporation in wartime.
- G.318-G.325 Correspondence and papers re various aspects of radio and
 radar research and development, 1939-45.
- G.318 October 1939-June 1940
- G.319 June-July 1940
 Includes correspondence with A.V. Hill re
 proposal for exchange of information on radar with
 U.S.A. and Canada.
- G.320 July-December 1940
- G.321 February-April 1941
- G.322 May-November 1941
- G.323 April-August 1942
 Includes drafts and correspondence re proposals
 for new Radio Board.
- G.324 January-September 1943
 Includes several drafts re priorities in radio research.
- G.325 January 1944-February 1945
 Includes correspondence with Sir Robert Renwick
 and Lord Woolton re the future of Radio Luxembourg,
 and recommendations for Radar Honours List.

Second World War
Statistical Section, military and scientific topics

- G.326, G.327 Correspondence and papers re G.L.III, 1943-44
G.L. was a type of radar equipment which enabled A.A. guns to fire blind at night bombers. Correspondence is mainly re desirability of replacing G.L.II with G.L.III (Cherwell was against it).
- G.326 March-July 1943
Includes letter from Lord Beaverbrook re G.L.III, October 1940.
- G.327 August 1943-January 1944
Includes undated typescript draft with ms. heading 'American G.L.III - SCR 584'.
- G.328, G.329 Correspondence, minutes, notes of meetings re production of radio valves, 1943-45.
- G.328 February-June 1943
- G.329 March 1944-February 1945
- G.330, G.331 Summaries of references to radar in T.R.E. Progress Reports, April 1943-April 1945, compiled for Cherwell by G.D.A. MacDougall.
- G.330 April 1943-April 1944
- G.331 April 1944-April 1945
- G.332, G.333 Committee papers, 1945
- G.332 August-December 1945 (OPTEC)
- G.333 September 1945 (RADIO)
- G.334 Miscellaneous undated material.

Second World War
Statistical Section, military and scientific topics

G.335-G.348 RADIO COUNTER MEASURES 1940-44, 1950

See also G.96, G.97, G.550.

G.335 Minutes, correspondence, notes of meetings re German uses of radio for navigation, etc. and possible counter measures, June-December 1940.

G.336 Two duplicated typescript reports by L.F. Blandy:
 'Report on German Pulse Stations', 5 August 1940
 'Headache Investigation', 25 October 1940

G.337 'Radio Counter Measures - No.80 Wing - Periodical Report' Nos. 8, 9 and 12, October-November 1940. Duplicated typescript.

G.338 'Report on German Radio Activity, especially with regard to air navigation and impulse transmission', 7 pp. typescript, no author or date, c. summer 1940.

G.339 'Comments on A.S.I. Report No.10 - "The X. Gerat"'. Duplicated typescript, n.d., c.December 1940.

G.340 'Report on V.H.F. Equipment Recovered from Heinkel III P at West Bay, Bridport, Dorset.' Duplicated typescript with photographs and diagrams, 16 December 1940.

G.341-G.344 Minutes, correspondence, notes of meetings, etc., 1941-44.

G.341 January-October 1941

G.342 August-December 1942

Includes correspondence re 'Window' (see also G.345-G.348 below).

G.343 January-September 1944

G.344 June-December 1944

Includes report on radio counter measures used in 'Overlord'.

Second World War
Statistical Section, military and scientific topics

G.345-G.348 'Window'. Correspondence and papers, c.1940-1950

Window was the code name for an arrangement of narrow strips of metallised paper which were designed to reflect as aircraft on German radar systems. Although this scheme was developed in 1942 it was not used until July 1943 because of fears that the Germans might copy the device and use it against British radar.

G.345 1940, 1942

Includes:

2 pp. typescript, probably by Cherwell, re difficulties which may be encountered in the use of R.D.F. (radar), with particular reference to the possible use by the Germans of oscillators to blind British radar. n.d., c.1940.

Correspondence with E. V. Appleton and O.G. Lywood, October-November 1940, re possible experiments to try the effect of an array of dipoles which could be suspended from kite balloons in order to scatter radio signals and confuse enemy beam navigation.

G.346 1943-1944

G.347 2 research reports on Window issued by the Radio Research Laboratory, Harvard University, 1942, 1943. Duplicated typescripts.

G.348 6 pp. typescript draft, written for Churchill in 1950, describing the development of Window and the background to the decision as to when to use it against German radar. The draft is headed 'Insertion B (on page 5 of The Offensive in the Aether)' and is accompanied by a slip of paper dated 27 April 1950.

See also D.117.

Second World War
Statistical Section, military and scientific topics

- G.349, G.350 RHINE MINES 1939-40
- Correspondence, drafts, minutes of meetings re plans for the disruption of traffic on the river Rhine by floating small mines downstream.
- See also G.274.
- G.349 November-December 1939
- G.350 January-April 1940
-
- G.351 ROCKET-ASSISTED BOMBS 1941-44
- Minutes, drafts and correspondence re various types of rocket-assisted bombs, including the Retro Bombing Device and a Concrete-Piercing Bomb for use against U-boat shelters.
-
- G.352 SCATTER BOMB (S. Bomb) 1940
- Memorandum and correspondence from G.P. Thomson, June 1940.
-
- G.353-G.355 SEARCHLIGHTS (including SEARCHLIGHT CONTROL) 1940-44
- G.353 Correspondence and papers, June-October 1940.
Mainly re:
- Proposal by A.V. Mitzakis to use two searchlight beams of complementary colour for dazzling and illuminating enemy aeroplanes.
- New system for searchlight control using radar (YAGI).
See also G.354.
- G.354 Progress reports on YAGI system for searchlight control, August 1940-May 1941 (incomplete set).
- G.355 Correspondence and papers, 1941-42, 1944. Re :
- Development and production of Turbinlite, February 1941-November 1942. (Invented by W. Helmore. For correspondence re further inventions by Helmore see G.453).
- Production of S. L. C. Mk.9X, August-October 1944.

G.365 Correspondence and drafts, April-August 1940, re possible designs for an amphibious tank. Includes brief notes and correspondence re use of searchlights on tanks to dazzle troops.

Second World War
Statistical Section, military and scientific topics

- G.366-G.370 Correspondence and papers re tank requirements, design, production policy, etc., 1941-45.
- G.366 1941
- G.367 1942
- G.368 January-May 1943
Includes 17 pp. typescript on 'Tank Policy', 24 March 1943 (no author).
- G.369 June-October 1943
Includes undated typescript on 'The case for the wheeled tank in desert warfare', by F. Gaye.
- G.370 1944-45
Mainly re tank policy. Includes a report on Russian tanks, July 1944.
- G.371 Minutes, correspondence, reports re design and production of German tanks, 1940-45. Includes miscellaneous undated statistics.
- G.372 Miscellaneous statistics re tanks (charts, diagrams, tables).
- G.373 Set of photographs illustrating various types of tanks.
- G.374, G.375 TORPEDOES 1940-44
- G.374 Minutes and correspondence, 1940-42. Includes:
Correspondence with C.S. Wright re design of homing torpedoes, February 1940.
Miscellaneous minutes re torpedo production, 1941-42.
Correspondence with Sir Archibald Sinclair re British and German torpedo design, April 1942.
- G.375 Correspondence and papers, 1943-44.
Mainly correspondence with B.N. (later Sir Barnes) Wallis and others re spherical torpedo for use in air attacks on dams. Includes some photographs.
Includes a letter re Wallis, May 1943.

Second World War
Statistical Section, military and scientific topics

G.376-G.409

U.P.'s (UNROTATED PROJECTILES) AND PROXIMITY
FUZES

1939-43

The summer of 1939 saw the setting up of the Projectile Development Establishment to work on the development of 'Unrotated Projectiles' (rockets). The research was directed by A.D. (later Sir Alwyn) Crow and a wide variety of weapons was investigated.

In September-October 1939, at Cherwell's instigation, research was being carried out by the Admiralty into the possibility of filling anti-aircraft shells with small aerial mines attached to a parachute by a long wire. It was then suggested that the mines might be packed with the parachute and wire into a cylindrical container and attached as the head of a U.P. and the resulting apparatus (known as a P.A.C. weapon) was used as a defence against dive bombers from ships.

See also G.550.

Another early investigation was into the possibility of making some form of guidance system for a U.P. This project was called the 'Spaniel' (see G.385-G.387).

The early U.P. weapons used delayed action fuzes but these were unsatisfactory for several reasons, so efforts were made to design a fuze that would cause an explosion only when an enemy aircraft was in range. This was known as a proximity or 'P.E.' fuze and it used a photoelectric cell which would activate a detonator when the shadow of an aircraft fell across it. The design was not entirely satisfactory as the fuze was apt to react to clouds and birds and even to varying intensities of daylight.

The following papers contain minutes, drafts, correspondence, progress reports, etc. re the design and development of various U.P. weapons, and of the proximity fuze,

See also D.136.

G.376

Minutes and correspondence, September-November 1939, re development of 'wire filled projectiles' (a shell or U.P. fitted with an aerial mine attached to a parachute by a long wire).

Folder also includes copy of circular issued by the Committee of Imperial Defence re the setting up of the Projectile Development Establishment, May 1939.

Second World War
Statistical Section, military and scientific topics

- G.377 Progress reports on development of 'A.A. Shell filled parachute, wire and bomb', October-November 1939.
- G.378 Notes and memoranda on use of U.P. weapons as follows:
 'Close Range A.A. Protection of Convoys', by G.N. Oliver, 1 November 1939.
 'Naval Wire Barrage Investigation of U.P. Aspect', by A.D. Crow, 10 November 1939.
 'A.A. Armament for Open Sea Minelayers. Consideration of use of Rockets', by G.N. Oliver, 18 November 1939.
 'Close Range A.A. Protection of Convoys', by G.N. Oliver, 20 November 1939.
 'Requirements for U.P. Outfits for Close Range Defence', by J.C. Leach, 22 November 1939.
- G.379 Progress reports on development of '6-inch A.A. shell filled parachute wire and bomb and U.P. with aerial mine', November 1939-January 1940.
- G.380 Memoranda re U.P. weapons, as follows:
 'Description of the rocket scheme of defence against low flying aircraft', no author, 4 December 1939.
 'The U.P. Weapon', no author, 26 January 1940.
 'Parachute, Wire and Bomb. Chances of hitting wires of various lengths with Naval Star Shell', no author or date, c. January 1940.
- G.381 Progress reports on design and development of U.P. with aerial mine, February 1940.
- G.382 Minutes, notes, correspondence, January-April 1940, re development of the U.P. with aerial mine. Includes minute from Churchill, 24 March, re necessity of developing method of dropping aerial mines from aircraft ('Egg-Laying'), in addition to firing them with a U.P.
- G.383 2 typescripts describing a system of firing a series of rockets to form a curtain in the path of enemy dive bombers. Both were forwarded to Cherwell with a brief accompanying letter by A.D. Crow, 21 March 1940:
 'The defence of merchant ships and fishing vessels against low-flying aircraft', 2 pp.
 'Note on the probability of a direct hit with the 2" U.P. on aircraft flying very low over small merchant ships or fishing vessels', 5 pp. + diagrams.

Second World War
Statistical Section, military and scientific topics

- G.384 4 pp. typescript, no author or date, c. December 1939, investigating the possibility of a photoelectrically guided U.P.
- G.385 Minutes re the Spaniel guided rocket, January and March 1940. Folder also includes copy of the first monthly technical report on the Spaniel U.P. (29 February 1940) with a letter from A.D. Crow, 1 March, and 3 undated drawings.
- G.386-G.387 Spaniel U.P. Monthly Technical Reports.
- G.386 Nos. 2-4 (March-May 1940)
- G.387 Nos. 5-7 (June-August 1940).
- Report No. 7 is accompanied by a letter from W.R. Cook, 18 November 1940, explaining the decision to discontinue the investigation.
- G.388-G.391 Correspondence and papers re various aspects of U.P. development, April-December 1940.
- G.388 May-June 1940
- Includes: correspondence re administrative organisation of U.P. research; progress reports, May and June 1940 (+ undated drafts); notes of meetings on 18, 20, 21 May 1940.
- G.389 July-August 1940
- Includes: reports on operational use of Naval Wire Barrage; correspondence and statistics re U.P. production and delivery; correspondence re administrative organisation; report on meeting re U.P. and U.P. Projectors, 29 August 1940.
- G.390 September-October 1940
- Includes: correspondence re administrative organisation; correspondence re manufacture and testing of Land Service Projectors; 4 pp. typescript note on 'Predicted Concentration of 3-inch U.P. against High-Flying Aircraft', by W.R. Cook, 23 October 1940.
- G.391 November-December 1940
- Mainly re U.P. production programme.

Second World War
Statistical Section, military and scientific topics

- G.392 'Report and Recommendations by O.C. 101st A.A. "Z" Battery, R.A. on use of 3" U.P. and Land Service Projector for the Engagement of Dive Bombers.' Duplicated typescript, 22 December 1940.
- G.393, G.394 Correspondence and papers re development of P.E. (proximity) fuze for U.P. weapons, March-November 1940.
See also D.136, G.404.
- G.393 March-July 1940
Includes copy of 'general specification of the properties to be aimed at in the design of the proximity fuze for the 3" U.P. A.A.', forwarded to Cherwell 19 March 1940.
- G.394 August-December 1940.
- G.395 'Report on the Proximity Fuze in a 3" U.P.'
Weekly progress reports Nos.1-29, June-December 1940 (lacks nos. 4, 7, 9, 10, 14, 19, 22).
See also G.406.
- G.396 Papers re design of a predictor for U.P. weapons. Folder includes:
'Note on the type of predictor required for use with U.P. weapon proximity-fuze against high level aircraft attack.' 3 pp. typescript sent to Crow by Cherwell, 27 July 1940.
Notes of meeting re predictor design, 31 July 1940.
'Suggestion for a simple predictor for use with U.P. on ships.' 1 p. typescript sent to Cherwell by G.P. Thomson with brief accompanying letter, 20 September 1940.
'Prediction for 3-inch U.P. twin mountings for close range defence.' 6 pp. duplicated typescript sent to Cherwell by W.R. Cook, 28 September 1940.
- G.397 Correspondence and papers, December 1940-March 1941.
Mainly re Naval Wire Barrage. Includes correspondence re operational uses of U.P. weapons by the R.A.F. and photographs showing damage caused by P.A.C. (Parachute and Cable - see introductory note to G.376-G.409) weapons at Watton.

Second World War
Statistical Section, military and scientific topics

- G.398 'Defence of ships against dive-bombing attacks by means of the 3-inch U.P. fitted with a proximity fuze.'
Duplicated typescript, no author, 8 January 1941.
- G.399 'Handbook for the Projector, 3-inch, Mark I. Provisional.'
February 1941.
- G.400 Correspondence and papers, April-May 1941.
Mainly re meetings and demonstrations of U.P. weapons.
Includes 1 p. typescript 'Note on use of the U.P. as a
Weapon for Bomber Defence', by A.D. Crow,
21 April 1941.
- G.401 Correspondence with Viscount Duncannon and General Pile,
May-June 1941, re use of U.P.s as anti-aircraft weapons.
- G.402 U.P. Propellant Sub-Committee Reports. Nos.4-6,
April-July 1941.
- G.403 Correspondence and papers, June-August 1941.
- G.404 Correspondence and papers, September-October 1941. Includes:
Notes and correspondence re administrative organisation.
Minutes, correspondence and reports re progress in
development and production of U.P. weapons and fuzes.
- G.405 Correspondence and papers, November-December 1941.
- G.406 'Report on the Proximity Fuze in a 3" U.P.'
Weekly progress reports Nos.30-58, January-August 1941
(lacks nos.35, 46).
See also G.395.
- G.407 Correspondence and papers, 1942.
- G.408 Correspondence and papers, 1943-44.
- G.409 Miscellaneous undated notes, drafts and statistics re U.P.
weapons and P.E. fuzes.

Second World War
Statistical Section, military and scientific topics

G.410-G.440 V-WEAPONS

1939-56

The following papers document one of the most famous of the controversies in which Cherwell became involved during the Second World War. In addition to contemporary minutes, drafts, correspondence, statistics, etc. there are some post-war drafts and correspondence arising from histories of the period by Churchill and others.

- G.410 Correspondence and papers, April-June 1943. Includes:
- Minutes and correspondence re bombing of recent German constructions in the Calais region.
 - Report of Meeting of Defence Committee (Operations), 29 June 1943.
 - 'Note on Casualties to be expected from a Bomb Containing 10 tons of Explosive', issued by the Ministry of Home Security, 30 June 1943.
- G.411 Correspondence and papers, July-August 1943. Includes:
- 'Long Range Rockets. Estimation of Two Incidents.' Typescript by R.E. (later Sir Reginald) Stradling, 20 July 1943.
 - 'Classification of Agents' Reports on Enemy Long Range Rockets.' 3 pp. typescript with 2 pp. Addendum, August 1943.
 - 'Summary of Agents' Report on Long Range Rocket', 12 August 1943.
 - Report of Meeting of Chiefs of Staff Committee, 31 August 1943.
- G.412 'Interpretation Report No. D.S.27. Bodyline. Locality: Peenemünde.' Duplicated typescript with accompanying photographs, 16 August 1943.
- This was forwarded to Cherwell in November 1943, and is accompanied by brief correspondence.
- Folder also includes miscellaneous plans and drawings re Peenemünde rocket.
- G.413 Minutes and correspondence, September 1943.

Second World War
Statistical Section, military and scientific topics

- G.414 2 drafts of questionnaire, to be put to a few selected scientists, designed to establish 'the practicability, or otherwise, of the German long range rocket', September 1943. The second draft is accompanied by photographs of small German rockets in Africa.
- Folder also includes brief related correspondence, October 1943.
- G.415 'Reconsideration of estimates of damage likely to be caused by L.R.R. [Long Range Rockets]', by W.N. Thomas, 20 September 1943. Typescript, with accompanying letter from H. Morrison to Cherwell, 24 September.
- Folder also includes brief related drafts and correspondence.
- G.416 Memoranda and reports, October 1943.
- 'Bodyline Scientific Co-ordinating Committee. Fuel Panel. Interim Report. 2nd draft.' Circulated 6 October 1943.
- 'Peenemünde Rocket. Tentative Survey of Possible Design', sent to Cherwell 12 October 1943.
- 'Notes in reply to Lord Cherwell's comments of 1.10.1943', by W.N. Thomas, sent to Cherwell 20 October 1943.
- G.417 Defence Committee (Operations). Reports of meetings, October 1943.
- '10th Meeting', 25 October.
- 'Meeting held in Lord Cherwell's Room', 28 October.
- '11th Meeting', 28 October.
- G.418 Minutes, drafts, correspondence, reports, 1-18 November 1943. Includes:
- Draft Report to the Prime Minister by the Minister of Aircraft Production on the evidence for the German Long Range Rocket.
- Cherwell's detailed criticism of the report, sent to Churchill 9 November 1943.
- Agenda and minutes of Meeting of Defence Committee (Operations), 18 November 1943.
- G.419 Correspondence with R.E. Stradling and H. Morrison re casualties to be expected from the German Long Range Rocket.
- Folder includes a typescript 'Estimation of Vulnerable Areas in London Region', no author, 16 October 1939, and 2 pp. notes and calculations on the subject by F.N. David.

Second World War
Statistical Section, military and scientific topics

- G.420 Minutes from Cherwell to Churchill, November-December 1943.
Includes comments on the Minister of Aircraft Production's Second Report on the Long Range Rocket, sent to Churchill 24 November 1943 and a long minute re pilotless aircraft, sent 23 December 1943. The latter contains marginal annotations (not in Cherwell's hand) commenting on Cherwell's estimates of performance, firing frequency, potential damage, etc. in the light of later events. See also G.427.
Copies of 2 telegrams from Churchill to Cherwell are also included in the folder.
- G.421 2 typescript drafts with extensive alterations in Cherwell's hand. The first page of each is annotated (not by Cherwell) as follows:
'Draft of Cabinet paper not circulated Nov. 44 (sic, = 43).'
'Further draft of uncompleted Cabinet paper. This was being written Nov.-Dec. 43.'
Cherwell's intention of submitting a paper is mentioned in a draft minute to Churchill, 19 November 1943 (see G.420).
Folder also includes a further typescript draft on a similar theme, also with alterations in Cherwell's hand.
- G.422 Minutes, reports and correspondence, December 1943.
Includes report of Meeting of Defence Committee (Operations), 22 December 1943.
- G.423 Miscellaneous notes and drafts re long range rockets and flying bombs, n.d., c.1943.
- G.424 Correspondence and papers re probable scale of attack by pilotless aircraft, January-February 1944. Includes:
Draft note by Cherwell on 'Probable Scale and Effect of Attack on London by Pilotless Aircraft'. 4 pp. typescript, 10 January 1944.
Reports of meetings of Chiefs of Staff Committee, 11 and 18 January 1944.
Draft and final version of report of Chiefs of Staff Committee on probable scale of attack with copies of various comments and amendments.
Report of Meeting of Defence Committee (Operations), 3 February 1944.

Second World War
Statistical Section, military and scientific topics

- G.425 Further correspondence and papers, January-February 1944. Includes:
- Note on 'Magnetic Control of Crossbow', 11 January 1944.
 - Several drafts for a pamphlet to be dropped on Germany exposing the 'secret weapon'.
 - Correspondence and drafts re American complaints of lack of liaison over counter measures to new German weapon developments.
- G.426 Correspondence and papers, March-May 1944. Includes:
- Correspondence with Minister of Economic Warfare re German importation of caesium chloride.
 - Duplicated typescript re 'Suggested Purpose of Certain Factory Installations at Peenemünde and Kluftern/Ober Raderach', 7 April 1944.
 - Report on meeting of Chiefs of Staff Committee, 18 April 1944.
 - Typescript 'Appreciation of the Sound Ranging Method of Locating Large Cross-Channel Explosions' and 'Notes on Cross-Channel Explosions' by C. J. Birkett Clews, 5 and 9 May 1944, with accompanying minute from Cherwell to Churchill.
- G.427 Correspondence and papers, June 1944.
- Includes 2 copies of a comparison of Cherwell's forecasts re flying bombs in his minute to Churchill of 18 December 1943 (see G.420) with the events of June 1944. This was prepared at Churchill's own request and sent with a covering minute by Cherwell, 30 June 1944.
- G.428 Correspondence and papers, July 1944. Includes:
- Minutes and correspondence re flying bombs (casualties and counter measures).
 - Report of Chiefs of Staff meeting, 18 July 1944.
 - Draft of minute from Cherwell to Churchill (not sent) written in answer to 'complaints which you have recently voiced to the effect that you had not been promptly and fully informed concerning the German long-range rocket by Jones, Crow, the Air Ministry and myself'.
- G.429 Suggestions from colleagues and members of the public for countermeasures to the flying bomb, June-July 1944.

Second World War
Statistical Section, military and scientific topics

- G.430 Miscellaneous charts, maps, diagrams, statistics, etc.
 re flying bombs, June-July 1944.
- G.431 Correspondence and papers, August-September 1944
 re flying bombs and rockets including accounts of
 arrival of first rockets in England, 8 September onwards.
- G.432 Correspondence and papers, November-December 1944.
 Includes:
 Duplicated typescript re 'The Economic Balance
 of the Fly-Bomb Campaign', 4 November 1944.
 Correspondence with N.H. Bottomley re plans for
 employing A.A. guns against the V.2 rockets.
 Minutes and reports re potential danger from the V.2
 to the under-river tunnels of the London underground
 railway system.
- G.433 Miscellaneous charts, maps, diagrams, etc. re rockets, 1944.
- G.434 Correspondence and papers, January-June 1945. Includes:
 Continuation of December 1944 correspondence re
 danger to London underground railways and possibility
 of countering V.2 rockets with A.A. guns.
 Report of Meeting of Defence Committee (Operations),
 26 January 1945.
 Correspondence, March-April 1945 re rôle of the R.A.F.
 in the campaign against the V weapons.
- G.435 Miscellaneous notes, statistics, maps, diagrams, etc., some
 unfinished.
- G.436 9 pp. ms. headed 'Crossbow' containing a chronology of
 events relating to the V weapons, 4 November 1939-6 April
 1945. Not in Cherwell's hand.
- G.437 15 pp. typescript account of events relating to the V weapons
 prepared by Cherwell for Churchill and sent to him with a
 covering letter, 29 January 1951.
 Folder also includes 3 typescript drafts of the account, one of
 which has extensive alterations in Cherwell's hand.
 For further correspondence with Churchill re V weapons,
 April-May 1951, see G.550.

Second World War
Statistical Section, military and scientific topics

- G.438 Copy of letter from Cherwell to Churchill, 20 February 1953, re alterations by Duncan Sandys to draft Chapter on 'Pilotless Bombardment' in Churchill's history of the Second World War.
- G.439 Correspondence with J.R.M. Butler, January-February 1956, re draft of Chapters 22-25 of the Defence of the United Kingdom by B. Collier.
- Folder includes a duplicated typescript copy of the draft (paginated 509-647) and a letter from Cherwell containing his comments on it, 30 January 1956.
- G.440 Notes, drafts and press-cutting arising from the publication of T.H. O'Brien's book Civil Defence (History of the Second World War, U.K. civil service), 1955.
- 2 pp. typescript list of 7 questions to be put to Cherwell in view of various statements made by O'Brien.
- 3 pp. typescript answers to 6 of the questions.
- 2 typescript drafts re V weapons, heavily annotated by Cherwell.
- Draft letter from Cherwell to 'The Editor of the Times (Telegraph)'.
- Press-cutting from the Oxford Mail, 19 September (no year)
- None of the above material is dated.

Second World War
Statistical Section, military and scientific topics

G.441 WATER CONTAMINATION 1940

Correspondence, notes, reports re methods of rendering
water undrinkable, August-November 1940.

G.442-G.443 MISCELLANEOUS

G.442 Notes, drafts, correspondence, reports re various weapons,
etc., 1939-44 (and some undated).

G.443/1 Weekly reports on bombsights and radar devices, issued
by the Ministry of Aircraft Production, July 1940-January
1941.

G.443/2 List of projects in hand for the development of weapons and
defensive devices, with a note of progress, people con-
cerned, and department responsible, compiled July 1941.

Second World War
Statistical Section, military and scientific topics

G.444-G.499 INVENTIONS AND IDEAS

In the course of the war Cherwell received many ideas for offensive or defensive weapons, devices, methods for improving various aspects of the war effort or conditions of life. Some of these he answered himself; many were passed to J. L. Tuck for evaluation and thence sometimes to other departments for further investigation, giving rise in some cases to a substantial exchange of views.

The material is presented in four alphabetical sequences, as follows:

G.444-G.456 Correspondence with inventors of weapons, defensive devices, etc.

G.457-G.471 Shorter correspondence with friends and colleagues who forwarded letters or proffered suggestions to Cherwell or Churchill.

G.472-G.498 Letters from the general public; mainly less serious material, of an impractical or eccentric nature which was not taken up. Not indexed.

G.499 Post-war correspondence. Not indexed.

Second World War
Statistical Section, military and scientific topics

G.444-G.456 Correspondence with inventors of weapons, defensive devices, etc.

- | | | |
|-----------------|--|---------------|
| G.444,
G.445 | Beatty, A. C. | 1940-41 |
| | Mainly <u>re</u> development and production of Northover projector, but containing numerous other ideas and information. | |
| G.444 | June-October 1940 | |
| G.445 | February-December 1941 | |
| G.446-
G.451 | Burney, C. D. | 1939-40, 1942 |
| G.446 | Correspondence, memoranda and reports <u>re</u> development of Toraplane (gliding torpedo) and Doravane (gliding bomb), October 1939-March 1940.

A letter from R.S. Sorley, enclosing a typescript <u>re</u> 'Development of Tora', September 1942, is also included here. | |
| G.447 | Typescript, with accompanying diagrams and drawings describing proposals for the construction in U.S.A. of 'a large Amphibian Flying Boat, capable of carrying four "Satellite" planes, each capable of carrying its own 18" torpedo or one 1500 lb. "Diving Bomb"'. The typescript was originally contained in a plastic folder labelled 'Burney Amphibian and Satellites', n.d., c.early 1940. | |
| G.448 | Typescript introduction to G.447 annotated by Burney 'Statement of present position', with accompanying letter from J. Courtauld, April 1940. | |
| G.449 | Typescript with drawings headed 'The "Propelled Bomb" Fired from the Recoiless Gun', n.d., c.May 1942. | |
| G.450 | Correspondence <u>re</u> 'Propelled Bomb' and Recoiless Gun, June-August 1942. | |
| G.451 | Brief correspondence with C.S. Wright, November 1942, <u>re</u> patent application by Burney for 'Improvements in or relating to marine torpedoes launched from aircraft'. Includes a copy of the patent specification. | |

Second World War
Statistical Section, military and scientific topics

- | | | |
|-------|---|---------------|
| G.452 | Cotton, F. S. | 1940-41 |
| | Includes an account of the history of the Royal Air Force Photographic Development Unit, Heston, and brief correspondence <u>re</u> Dufaycolor. | |
| G.453 | Helmores, W. | 1942-45 |
| | Memoranda and correspondence mainly <u>re</u> dirigible torpedo (Helmores Projectile).
See also G.355 (<u>re</u> Turbinlite). | |
| G.454 | Muir, H. J. | 1940-46 |
| | <u>re</u> aerial mines.
See also F.32, F.35. | |
| G.455 | Newton, H. | 1939-40, 1944 |
| | Correspondence <u>re</u> various proposals. | |
| G.456 | Varley, C. H. | 1942-44 |
| | <u>re</u> midget submarines. | |

Second World War
Statistical Section, military and scientific topics

G.457-G.471 Shorter correspondence with friends and colleagues

G.457	Abel, E. (Cherwell's carbon only)	1942
	Amery, L. S.	1940
	Andrade, E. N. da C.	1940
	Arkell, W. J.	1940
	Attlee, C. R. (Cherwell's carbon only)	1940
G.458	Balfour, H. H.	1940
	Barnby, Lord	1942
	Barrington-Ward, B. W. (Cherwell's carbon only)	1940
	Bevir, A.	1940, 1942
	Bracken, B.	1939-40
G.459	Cadogan, A. G. M.	1944
	Cavan, Earl of	1940
	Chapman, S.	1940
	Churchill, C.	1940, 1942
	Churchill, R.	1940
	Colville, J. R. (Cherwell's carbon only)	1941
	Comyns-Carr, A. S.	1939
	Cripps, R. S.	1942-43
G.460	Deedes, W. H.	1940
	Denman, R. P. G.	1940
	Donner, P.	1939
	Freeth, F. A.	1939-40
	Fry, C. B.	1940, 1942
G.461	Gill, E. W. B.	1941
	Goodeve, C. F.	1943
	Grand, L.	1940
	Harvie-Watt, G. S.	1942
	Herbert, A. P.	1941
	Holden, N.	1940, 1941
	Hope, Lord	1940
	Hudson, A.	1941
	Hudson, G. F.	1940

Second World War
Statistical Section, military and scientific topics

G.462	Ince, G. H.	1941
	Johnstone, H.	1942
	Jowitt, W. A.	1942
	Keyes, R. (and Lady Keyes)	1940-43
	Larke, W. (Cherwell's carbon only)	1939
G.463	Leathers, Lord	1943
	Leslie, S.	1939-42
	Lindsay, A. D.	n.d.
	Lloyd, Lord	1940
	Locker-Lampson, O. S.	1942
G.464	Maclean, L.	1939
	Masterman, J. C.	1942
	May, P.	1940
	Melchett, Lord	1940
	Milner, J.	1941
G.465	Monckton, W. (Cherwell's carbon only)	1940
	Moore-Brabazon, J. T. C. (later Lord Brabazon of Tara)	1939-40
	Morton, D. J. K.	1940-42
	Moyne, Lord	1941
	Murray, J.	1942-43
	Nuffield, Lord	1942
	Peck, J. H.	1940, n.d.
G.466	Percival, H.	1940
	Plaskett, H. H.	1941
G.467	Portal, C. F. A.	1941
	Puckle, G. B.	1940
	Purbrick, R.	1943

Second World War
Statistical Section, military and scientific topics

G.468	Roger, A.	1941
	Rothschild, Lord	1941
	Rowse, A. L.	1940
	Salter, A.	1940
	Sandys, Mrs D. (Cherwell's carbon only)	1941
G.469	Seal, E. A.	1940
	Silberrad,	n.d.
	Simon, J.	1940
	Spears, E. L.	1940, 1942, 1943
	Strabolgi, Lord	1942
	Swinton, Lord	1941
G.470	Thompson, J. H. C.	1940
	Thorpe, J. H.	1940
	Watson-Watt, R. (Cherwell's carbon only)	1942
G.471	Wells, H. G.	1940
	Westminster, Duke of	1940, 1942
	Williams, H.	1940
	Wolmer, Viscount (later Lord Selbourne)	1940, 1941

Second World War
Statistical Section, military and scientific topics

G.472-G.498 Letters from the general public

G.472	A
G.473	Ba - Bl
G.474	Bo - Bu
G.475	C
G.476	D
G.477	E
G.478	F
G.479	G
G.480	Ha - He
G.481	Hi - Hu
G.482	I - J
G.483	K
G.484	L
G.485	Ma
G.486	Me - Mu
G.487	N
G.488	O
G.489	P, Q
G.490	R
G.491	Sa - Sk
G.492	Sm - Sw
G.493	Ta - Th
G.494	To - Tu
G.495	U - V
G.496	W

Second World War
Statistical Section, military and scientific topics

G.497 Unsigned letters and drafts. Includes some photographs
and printed matter.

G.498 Minutes and letters to and re unidentified inventors.
Mainly Cherwell's carbons. In chronological order,
1940-42 and n.d.

G.499 Post-war correspondence

Correspondence with and re inventors concerning patents,
awards, etc., 1947-50.

Second World War
Statistical Section, military and scientific topics

- G.500-G.525 ARMAMENT REQUIREMENTS AND PRODUCTION; STRENGTH
AND ORGANISATION OF BRITISH AND GERMAN GROUND
FORCES
- G.500-G.509 Minutes, correspondence, reports, statistics re armament
production and requirements, 1939-45.
- See also H.158ff. re negotiations for supply of armaments
from U.S.A.
- G.500 1939-July 1940
See also G.501
- G.501 Letters, memoranda, reports, etc. sent to Cherwell by
H. Ward, Secretary, Management Research Group
No.1, re organisation of armament production, June 1940.
Includes accounts by R.F. Harrod of two discussions with
Ward, 21 June and 31 July 1940.
- G.502 August-December 1940
Mainly re priorities and organisation of production.
Includes copy of memorandum by Churchill,
2 September 1940, re future strategy and the need
to build up reserves of strength in readiness for a
large expenditure of munitions in Spring 1941.
- G.503 January-July 1941
re stocks, requirements, production priorities,
etc. Includes 5 pp. typescript headed 'Raw
Materials Department of the Ministry of Supply',
n.d., 1941.
- G.504 August-November 1941
Includes 9 pp. typescript re long term production
plans, 11 September 1941.
- G.505 January-June 1942
Includes 14 pp. typescript 'Note on War Production'
with 3 pp. summary, 3 March 1942.
- G.506 July-December 1942
Includes 7 pp. typescript memorandum from Churchill
to Cherwell, 24 October 1942, requesting a survey of
the current position re armaments, manpower,
supplies, etc. as a basis for a general directive by
Churchill re policy in 1943.

Second World War
Statistical Section, military and scientific topics

G.507	1943	Includes several minutes <u>re</u> British Army requirements in the Middle East.
G.508	1944-45	
G.509	Miscellaneous undated material.	
G.510-G.517	Minutes, drafts, correspondence, statistics <u>re</u> British Army strength and casualties, 1939-45.	
G.510	1939-40	
G.511	'Computation of the number of divisions which can be kept in the field.' 4 pp. typescript by D.G. Champernowne, n.d., c.1940.	
G.512	1941	
G.513	1942	
G.514	1943	
G.515	1944	Mainly <u>re</u> statistics of casualties in battle and through sickness, especially malaria. Includes brief correspondence with I.M. Heilbron <u>re</u> insecticides.
G.516	1945	
G.517	n.d.	
G.518-G.520	Intelligence reports and summaries <u>re</u> strength and organisation of the German army, with related comments or criticisms and some correspondence arising. Some estimates of the general manpower situation in Germany, for the armed forces and war production, are also included in the sequence.	
G.518	1940-42	
G.519	1943	
G.520	1944 (and n.d.)	

Second World War
Statistical Section, military and scientific topics

- G.521 Minutes and correspondence re rates of pay, promotion, pensions and allowances in the British armed forces, 1940-44.
- G.522-G.525 Minutes, correspondence, statistics, etc. re plans for demobilisation, 1943-45. Most of the papers consist of comments by members of Cherwell's staff on memoranda, reports, statements, etc. issued by the Ministries concerned.
- G.522 June-November 1943
- G.523 January-December 1944
Includes correspondence with J.M. Keynes, February 1944.
- G.524 January-July 1945
- G.525 Miscellaneous undated material.

Second World War
Statistical Section, military and scientific topics

G.526-G.533 ORGANISATION OF SCIENTIFIC AND TECHNICAL RESEARCH

Mainly re problem of liaison between individual scientists, industrial firms and government departments and research establishments. Includes some material re salaries and status of scientists in government service.

See Section E for drafts and speeches by Cherwell on the subject of scientific and technological education.

See also H.236-H.253.

G.526 1939-40

Includes correspondence from M. L. Oliphant, N.M.V. Rothschild and R. Stokes.

G.527 1941

Includes draft notes for speech by Lord Hankey on the Scientific Advisory Committee, with related correspondence, March-April 1941.

G.528 1942

Includes text of speech delivered by the President of the Association of Scientific Workers at the Twenty-Fifth Council Meeting, May 1942, and correspondence with Lord Selbourne and Lord Melchett, July-August 1942.

G.529-G.532 Correspondence and papers re salaries of scientists in government service, 1941-45.

G.529 1941-42

Includes correspondence with D.R. Pye, J.T.C. Moore-Brabazon, A.V. Hill, Lord Hankey and Lord Melchett.

G.530 1943

Includes report of the Committee on Scientific Staff, 23 April 1943, and correspondence with Sir Kingsley Wood, Sir Stafford Cripps, C.R. Attlee and Sir Archibald Sinclair.

Second World War
Statistical Section, military and scientific topics

- G.531 1944-45
- Includes duplicated typescript 'Memorandum by the Treasury', 28 November 1944, and drafts for Cabinet paper on 'Conditions of Work in the Government Scientific Service', May 1945, with a letter from Sir Edward Bridges advising against circulation of the paper, 17 May 1945.
- G.532 Miscellaneous undated memoranda and printed matter.
- G.533 Correspondence re salaries of scientists at the Clarendon Laboratory, October 1942-January 1944.

Second World War
Statistical Section, military and scientific topics

G.534-G.550 OTHER MILITARY AND SCIENTIFIC TOPICS

The papers are presented in approximate chronological order.

G.534 Copies of British propaganda leaflets dropped over Germany, Austria and Prague, February 1940.

G.535,
G.536 Copies of two reports by R.V. Jones, sent to Cherwell with a covering letter, 8 March 1940.

G.535 'The Hitler "Waffe".' 9 pp. typescript, 11 November 1939, suggesting that the weapon referred to by Hitler in his speech at Danzig on 19 September was the German Air Force.

G.536 'A Scientific Intelligence Service.' 14 pp. typescript with 3 Appendices, 7 December 1939.

G.537,
G.538 Minutes, correspondence, reports of meetings, etc. re arrangements for defence in the event of German invasion, May-July 1940.

G.537 May 1940 (and n.d.)

G.538 June-August 1940

G.539 'The Underground Counter Offensive.' 28 pp. duplicated typescript, 10 June 1940, suggesting lines of approach for Fifth Column activities against Germany.

G.540 2 typescript notes on the Russian Air Force, 2 pp. and 1 p., n.d. and 9 December 1942.

G.541 Minutes and correspondence re Japanese aircraft production, Air Force strength, etc., 1942-43.

Folder also includes miscellaneous other papers re Japan, 1944.

G.542 Minutes and statistics re arrangements for supply of military equipment to Turkey, 1942-43.

G.543 Minutes and drafts re Palestine, June-July 1943. Mainly comments on plans for the future of Palestine and the position of the Jews in the Middle East.

For further material on Palestine see J.52, J.54.

Second World War
Statistical Section, military and scientific topics

- G.544 Minutes and drafts re the Home Guard, 1943-44.
- G.545, Correspondence and papers re exchange of scientific
G.546 information with Russia, 1943-45.
- G.545 1943-44
- Includes:
- Copy of letter from the Secretary of State for Foreign Affairs (A. Eden) to O. Lyttelton, 12 February 1943, re proposed Mission to Moscow to be headed by H.T. Tizard.
- Correspondence re proposals for further exchanges of technical information, April-May 1944.
- Minute to Cherwell re proposed agreement between I.C.I. and the Russian Government, 25 November 1944.
- G.546 1945
- Mainly re proposed visit of British scientists to Russia, June-July 1945.
- G.547, Correspondence re arrangements for exchange of scientific
G.548 information with France, 1944-45.
- G.547 1944-45 (mainly Cherwell's carbons only)
- Some of the contents of this folder are duplicated in G.548 below.
- G.548 1945
- G.549 'Military Power and Foreign Policy.' 18 pp. typescript draft, no author or date.
- G.550 Correspondence, 1947-51 and n.d., re various draft chapters of Churchill's history of the Second World War. Subjects covered include P.A.C. rockets, radio counter measures to German bombing, Lend Lease and V weapons. For further correspondence re Churchill's treatment of the V weapons story see G.437, G.438.
- A letter from P. Fleming, 24 October 1955, re events in the summer of 1940, is also included in the folder.

Second World War
Statistical Section, economic topics

<u>SECTION H</u>	<u>SECOND WORLD WAR H.1 - H.321</u>	
	<u>STATISTICAL SECTION, ECONOMIC TOPICS</u>	
		<u>Page</u>
	INTRODUCTION	266
H.1 -H.66	FOOD AND RAW MATERIALS	267
	With a list of contents	
H.67 -H.94	ALLOCATION OF MANPOWER	275
H.95 -H.100	SHIPPING	278
H.101-H.113	DISTRIBUTION OF RESOURCES	279
H.114-H.144	FOREIGN ECONOMIC POLICY	281
H.145-H.157	HOME ECONOMIC POLICY	286
H.158-H.207	LEND-LEASE	288
H.208-H.267	POST-WAR RECONSTRUCTION	295
	With a list of contents	
H.268-H.289	POST-WAR TREATMENT OF GERMANY	305
H.290-H.321	WORLD FOOD SUPPLIES AND RELIEF	309

Second World War
Statistical Section, economic topics

INTRODUCTION

The background and general content of the material in Section H has already been outlined in the Introduction to Section G. Many of the papers in this Section deal with the allocation of scarce supplies of raw materials, manpower, shipping, etc. on which the Statistical Section was detailed to keep a close watch and to notify any desperate shortages. There is also a considerable body of papers relating to the negotiations with U.S.A. for supply of armaments, etc. on Lend-Lease, in some of which Cherwell played a major part; the majority of these papers have not previously been available to researchers. The latter part of the Section deals with reconstruction and relief, both topics on which Cherwell had strong views.

Inevitably there is some overlap between this Section and Sections F and G. See especially F.88 - F.252 and F.297 - F.381.

Second World War
Statistical Section, economic topics

H.1-H.66 FOOD AND RAW MATERIALS

Correspondence and papers, 1939-45, re stocks, production, rationing, etc.
of the following raw materials:

CEMENT	H.1
CLOTHING	H.2 - H.7
COAL	H.8 - H.21
COTTON	H.22
FOOD AND DRINK	H.23 - H.38
IRON AND STEEL	H.39
LEATHER	H.40
MACHINE TOOLS	H.41
MAGNESIUM	H.42
OIL AND PETROL	H.43 - H.58
RUBBER	H.59
TIMBER	H.60 - H.64
TUNGSTEN	H.65
MISCELLANEOUS	H.66

N.B. Material relating to these topics is not confined to this sub-section.

Second World War
Statistical Section, economic topics

H.1 CEMENT 1940, 1945

Letter from A. Greenwood to Churchill enclosing a report on stocks and requirements of cement, 5 August 1940.

Minute to Churchill from the Home Secretary re shortage of cement for shelters, 6 August 1940.

Minute to Cherwell re proposal to increase price of cement, February 1945.

H.2-H.7 CLOTHING 1941-45

Correspondence and papers re stocks, requirements and production of service and civilian clothing, and supplies of raw materials, especially wool and cotton.

H.2 January-March 1941

H.3 April-May 1941

H.4 June-August 1941

H.5 Undated notes, drafts, reports, c.1941

H.6 Undated statistics and calculations, c.1941

H.7 1942-1945

H.8-H.21 COAL 1940-45

Minutes, correspondence, notes, drafts, statistics re coal stocks, consumption and requirements, problems of production and transport, labour relations in the coal industry, etc.

H.8 1940

Includes minutes re French demands for coal, and the effect on the coal industry of the fall of France.

H.9 January-November 1941

H.10 n.d., 1941

Second World War
Statistical Section, economic topics

H.11	February-April 1942	
H.12	May-November 1942	
H.13	n.d., 1942	
H.14	July-October 1943	
	Includes minutes and drafts <u>re</u> government control of the coal industry.	
H.15	November-December 1943	
H.16	January-April 1944	
	Includes minutes and drafts <u>re</u> wage negotiations in the coal industry.	
H.17	May-December 1944	
	Includes minutes and correspondence <u>re</u> supply of coal to S.H.A.E.F. [Supreme Headquarters, Allied Expeditionary Force].	
H.18	January-March 1945	
	Includes further papers <u>re</u> supply of coal to S.H.A.E.F.	
H.19	April-May 1945	
H.20	June-July 1945	
H.21	Miscellaneous undated diagrams and statistics	
H.22	COTTON	1944
	Minutes and drafts <u>re</u> proposals to increase the price of raw cotton and <u>discontinue</u> government subsidies of cotton for the export market, January-March 1944.	
	See also H.2-H.7	

Second World War
Statistical Section, economic topics

H.23-H.38	FOOD AND DRINK	1939-45
H.23	Minutes and correspondence, October-December 1939, mainly <u>re</u> proposals for the introduction of rationing for sugar, meat, bacon, butter, margarine and cooking fats.	
H.24	Undated memoranda, drafts and statistics <u>re</u> various foods, mainly background material to minutes in H.23 above, c.1939.	
H.25, H.26	Correspondence and papers, 1940, <u>re</u> availability of various foodstuffs, rationing proposals, shipping tonnage available for imports, general food and agricultural policy, etc.	
H.25	January-June 1940	
H.26	July-November 1940 (including n.d.)	
H.27	Correspondence and papers, January-March 1941, mainly <u>re</u> livestock policy, but including a 2 pp. typescript by the Minister of Food on jam and marmalade supplies, and general notes <u>re</u> imports, diet of the civilian population, etc.	
H.28	Correspondence and papers, March-May 1941. Mainly <u>re</u> meat policy and imports, but including minutes, etc. <u>re</u> use of potato flour in bread-making, availability of sugar for home-made jam and government attitude to back-yard hens.	
H.29	Correspondence and papers, June-December 1941 <u>re</u> meat and other imports, control of egg prices and distribution, extension of food rationing. Includes some undated material, c.1941.	
H.30	Minutes and drafts, September-December 1941, <u>re</u> negotiations for an International Wheat Agreement, conducted by the International Wheat Advisory Committee in Washington. Various observations on the progress of negotiations with some suggestions as to policy. Includes copy of telegram from Sir Arthur Salter, 20 December 1941.	

Second World War
Statistical Section, economic topics

- H.31 Correspondence and papers, 1942. Mainly re live-stock policy, but includes 3 pp. typescript on agricultural prices, sent to Cherwell by N. Brook, 3 February 1942, correspondence re manufacture of theobromine, and notes on proposal to ration bread.
- H.32 Miscellaneous notes, drafts and statistics re food policy, n.d., c.1942.
- H.33 Correspondence and papers, January-April 1943. Mainly re egg production policy. Includes several exchanges with the Minister of Agriculture and Fisheries (R.S. Hudson).
- H.34 Correspondence and papers, May-December 1943, re various aspects of food policy. Includes a memorandum by R.H. Brand on the Combined Food Board, minutes and statistics re milk (pasteurisation, production and distribution), poultry, bread, wheat (International Wheat Agreement), beer, butter, and a 2 pp. typescript re financial position of farmers, 23 November 1943.
- H.35 Minutes, drafts, statistics, etc., February 1944-January 1945, re negotiations with U.S.A. over quantities of meat and butter from Australia and New Zealand to be supplied to American forces in the Pacific. Includes copies of several telegrams exchanged between the Minister of Food and the British Food Mission.
- H.36 Miscellaneous minutes, etc. re various aspects of food policy, March-December 1944.
- H.37 Minutes, drafts, copies of telegrams, etc., October-December 1944, re negotiations with U.S.A. over supply of meat from Argentina. Includes some undated material.
- H.38 Minutes, drafts, statistics, January-June 1945, re various aspects of food policy and the general food situation.

Second World War
Statistical Section, economic topics

- | | | |
|-----------|--|---------------|
| H.39 | IRON AND STEEL | 1940-41 |
| | Minutes, drafts, correspondence, statistics re stocks, production and requirements of iron and steel. Includes correspondence with R. Assheton re possible ways of reducing the amount of steel used by the building industry, May-June 1940. | |
| H.40 | LEATHER | 1943, 1945 |
| | Minutes and drafts re imports, stocks and requirements of leather for civilian and military purposes. | |
| H.41 | MACHINE TOOLS | 1940, 1941 |
| | Minutes and correspondence re problems involved in ensuring the most efficient employment of available machine tools, May-August 1940, April 1941. | |
| H.42 | MAGNESIUM | 1941, 1942 |
| | Minutes, drafts, statistics re stocks and requirements of magnesium, November 1941, August 1942. Includes some undated material. | |
| H.43-H.58 | OIL AND PETROL | 1939, 1941-45 |
| H.43 | Minutes, drafts, statistics, etc., 1939, January-November 1941, re oil imports and consumption, employment of tankers, etc. Includes copy of minute from G.W. Lloyd to Churchill, 24 November, re arrangements to ensure supplies of 100 octane aviation spirit. | |
| H.44 | Miscellaneous undated notes, drafts, statistics, charts, etc., mainly background material to H.43 above. Includes copy of a satirical poem by Sir Cecil Kisch (Director-General, Petroleum Department 1939-42) entitled 'The Tankers' Pub Crawl'. | |
| H.45 | Minutes and drafts, January-April 1942. Mainly re estimates of production and consumption of 100 octane aviation spirit. | |

Second World War
Statistical Section, economic topics

- H.46 Minutes, drafts, correspondence, statistics, May-December 1942, mainly re oil imports and stocks. Includes correspondence re drafts of a proposed telegram from Churchill to President Roosevelt re the oil position.
- H.47 Minutes and statistics re oil imports, stocks and requirements, all undated, c.1942.
- H.48 Weekly statistics of (a) tanker building and losses, and (b) oil stocks in U.K., August-December 1942.
- H.49 Minutes, drafts, statistics re 100 octane aviation spirit, October 1942 and n.d.
- H.50 Minutes, correspondence, drafts, statistics re oil imports, stocks and consumption, 1943.
- H.51 Weekly statistics of (a) tanker building and losses, and (b) oil stocks in U.K., January-December 1943.
- H.52 Minutes, correspondence, statistics, etc., January-August 1944, re stocks and consumption of 100 octane aviation spirit. Includes comments on estimates of the oil position made by Lord Beaverbrook in January 1942.
- H.53 Minutes, drafts, statistics, etc. re negotiations with U.S.A. re Middle East oil, February-July 1944.
See also H.54, H.55.
- H.54 8 pp. typescript on 'Oil Interests in the Near and Middle East', sent by Beaverbrook to Cherwell, 17 February 1944.
- H.55 Undated typescript re British and American interests in Middle East oil, n.d., c.1944.
- H.56 Weekly statistics of (a) tanker building and losses, and (b) oil stocks in U.K., January-December 1944.
- H.57 Miscellaneous minutes and statistics re oil stocks, etc., January-April 1945.
- H.58 Miscellaneous undated charts.

Second World War
Statistical Section, economic topics

H.59 RUBBER 1942-45

Minutes and statistics re supply and consumption of crude and synthetic rubber.

See also OIL AND PETROL.

H.60-H.64 TIMBER 1940-45

H.60 Minutes and statistics, February-April 1940, re supply (both home-grown and imported) and requirements of timber. Includes minutes re possibility of substituting other materials for timber in the manufacture of pit-props.

H.61 Correspondence with V.H. Boyse and J. Burt Davy, March-April 1940, re timber supplies from West Africa and tropical America.

H.62 Minutes and statistics, May-November and n.d., 1940. Includes further material on pit-props.

H.63 Correspondence, minutes, statistics, April-December and n.d., 1941, re stocks, requirements and imports of timber.

H.64 Minutes, correspondence, statistics, 1943, 1945, mainly re supplies of timber for mining.

H.65 TUNGSTEN 1941

Minutes and correspondence re stocks and requirements of tungsten, November 1941.

H.66 MISCELLANEOUS 1940-45

Includes:

5 pp. typescript re economic effects of the German invasion of Scandinavia, 19 April 1940.

Minutes to Cherwell re Italian requirements of food and raw materials, and supplies to be had from Italy in return, July-September 1943. See also H.310.

Summaries of reports on 'Stocks of Food and Animal Feeding Stuffs, Raw Materials and Petroleum Products', February 1944-March 1945.

Second World War
Statistical Section, economic topics

H.67-H.94 ALLOCATION OF MANPOWER

Correspondence and papers, 1939-45, re allocation of manpower between the armed forces, Ministry of Aircraft Production, Admiralty and Ministry of Supply.

For material on demobilisation, see G.522-G.525.

- H.67 3 pp. typescript, 28 December 1939, commenting on the 'Memorandum Submitted by the Interdepartmental Conference on the Labour Requirements of the Proposed War Programme (13th December 1939)' (no author).
- Folder also includes copies of some of the Appendices to the Memorandum, and 2 pp. typescript on the manpower programme for the armed forces, 22 December 1939.
- H.68 'Notes on Man Power.' 4 pp. typescript, 2 copies, one dated 1 February 1940. The other copy has some minor ms. annotations.
- 1 p. typescript note re estimates of figures for total occupied male population in 1939, 1 February 1940.
- 'Summary of Jewkes Paper on Man Power.' 2 pp. typescript, 2 February 1940.
- 3 typescript drafts (2 incomplete) of undated note on manpower.
- H.69 Minutes, drafts, correspondence, January-July 1940, re distribution of labour between exports and munitions. Includes 2 letters from J.M. Keynes, June 1940.
- H.70 Minutes, drafts, reports, etc., May-June 1940, re organisation and expansion of the labour force for armaments production.
- Includes 2 sets undated typescript notes re manpower for the ship-building industry.
- H.71 Minutes, drafts, correspondence re organisation of manpower for industry, July-December 1940.
- H.72 Minutes, drafts, statistics, etc., March-December 1941. Includes several exchanges re number of workers leaving the Royal Ordnance factories every week and plans for distribution of manpower in 1942.

Second World War
Statistical Section, economic topics

- H.73 Minutes, drafts, statistics re manpower distribution, January-June 1942.
- H.74 Advance copy of 'Man Power - mid 1942. Survey by the Ministry of Labour and National Service', with a covering note from G.H. Ince, 13 October 1942.
- H.75 Copies of various memoranda, as follows:
- 'Demands for Forces and Estimated Requirements for Industry. Memorandum by the Ministry of Labour and National Service.' 7 pp. typescript, 9 October 1942.
- 'Report for the Lord President's Committee on the Proposed Reduction of the Labour Force in the Building Materials Industries.' 5 pp. typescript, n.d., November 1942.
- 'Memorandum by the Ministry of Food. Man Power in the Food Industries and Trades.' 5 pp. typescript, n.d., November 1942.
- 'Lord President's Man Power Enquiry.' 19 pp. typescript by the Board of Trade, n.d., November 1942.
- 'Lord President's Manpower Enquiry.' Duplicated typescript, no author, 14 November 1942.
- H.76 Minutes, drafts and correspondence, October-December 1942, arising from a paper by the Minister of Economic Warfare (Lord Selbourne) comparing the distribution and degree of mobilisation of British and German manpower.
- H.77-H.82 Correspondence and papers, January-December 1943, re allocation of manpower between the armed forces, the Ministries of Supply and Aircraft Production and the essential industries.
- H.77 January-April 1943
- H.78 May-June 1943
- H.79 July-August 1943
- Includes 5 pp. typescript by G.D.A. MacDougall on 'Man Power in the first year, after the Armistice with Germany', 25 August 1943.

Second World War
Statistical Section, economic topics

- | | |
|------|------------------------|
| H.80 | September-October 1943 |
| H.81 | November-December 1943 |
| H.82 | n.d., 1943 |
-
- | | |
|------------|---|
| H.83 | Minutes and drafts <u>re</u> distribution of doctors and nurses between the armed forces and the civilian population, 1943-45. |
| H.84 | Correspondence and papers, January-March 1944, mainly <u>re</u> manpower allocations for 1944. Includes a letter from Sir John Anderson to Cherwell, 24 January 1944, enclosing copies of correspondence with various Ministers <u>re</u> draft report of the Committee on Man Power. |
| H.85 | Correspondence and papers, February-April 1944, <u>re</u> estimates of manpower requirements after the end of the war with Germany. |
| H.86 | 'Man Power Requirements and Supply.' Duplicated typescript, reviewing the manpower position for 1944 in the light of statistics for the first quarter, n.d., c.May 1944. |
| H.87 | Minutes, drafts, correspondence, May-June 1944. Includes several papers <u>re</u> revision of manpower allocations for the second half of 1944. |
| H.88 | Minutes and drafts, July-August 1944. Mainly <u>re</u> manpower requirements for the second half of 1944. |
| H.89 | Correspondence and papers, September-December 1944. Mainly <u>re</u> manpower allocations for 1945. |
| H.90 | Miscellaneous notes and statistics, n.d., c.1944. |
| H.91, H.92 | Minutes, drafts, correspondence, statistics <u>re</u> manpower allocations and various aspects of the manpower position, January-July 1945. |
| H.91 | January-March 1945 |
| H.92 | April-July 1945

Includes minutes <u>re</u> the effect of releases from the services on the manpower situation. |
| H.93 | Statistical comparisons of manpower distribution in the First and Second World Wars. |
| H.94 | Miscellaneous undated notes, drafts, statistics, etc. |

Second World War
Statistical Section, economic topics

H.95-H.100 SHIPPING

Correspondence and papers, 1939-45, re the shipping situation and its effect on the import trade.

H.95 1939-40

Includes several minutes re war risk insurance, September-October 1939.

H.96 1941

H.97 1942

Includes drafts of telegram to President Roosevelt asking for help with the shipping situation, and various minutes and statistics re shipping losses.

H.98 1943-44

H.99 1945

H.100 Miscellaneous undated material

Second World War
Statistical Section, economic topics

H.101-H.113 DISTRIBUTION OF RESOURCES

Correspondence and papers, 1940-45, on the organisation and distribution of resources (labour, raw materials, money) for the war effort.

- H.101 Minutes and drafts, 1-12 February 1940, commenting on memoranda by Lord Stamp and Sir John Simon re balance of payments, financing of the war, mobilisation of labour, etc.
- H.102 Further notes, drafts, minutes re financing of war and organisation of labour and resources, February 1940-February 1941.
- H.103 Miscellaneous undated material, similar subject-matter to H.102, c.1940.
- H.104 Memoranda and correspondence, by R.F. Kahn, re organisation of labour and restrictions on home trade for increased war production (including the question of rationing), sent to R.F. Harrod for information, May-December 1940. 2 draft minutes from Harrod to Cherwell, 21 and 23 May 1940, are also included in the folder.
- H.105-H.109 Correspondence and papers, February-November 1941, re possibility of releasing manpower and raw materials for war production by curtailing government building programmes.
- H.105 Statistics re government building sent to R.F. Harrod for information by the Ministry of Works and Buildings, February-October 1941.
- H.106 Minutes and correspondence, May-December 1941. Includes copy of 3 pp. letter from Sir John Anderson to Ernest Bevin, 28 October 1941, re possible plans for releasing manpower from the building industry for the Ministry of Aircraft Production and the armed forces.
- H.107 'Report to the Lord President on the Possibilities of Releasing Labour by the Curtailment of the Building of War Factories.' Typescript by E.A.G. Robinson, D.N. Chester, G.D.A. MacDougall, P. Gilbert, I. Bowen and A.K. Cairncross, 11 October 1941.
- H.108 Report by Sir John Anderson on the building programmes of various government departments, submitted to the Prime Minister with a covering letter, 14 November 1941.
- H.109 Miscellaneous undated minutes and statistics.

Second World War
Statistical Section, economic topics

- H.110 5 pp. unsigned typescript headed 'Concentration of Industries',
March 1941.
- H.111 Minutes from G.D.A. MacDougall to Cherwell re the effect
on the war effort of various restrictions on private consumption,
n.d., c.1942.
- H.112 Exchange of minutes between Cherwell and Churchill, March
1942, re suggestions for the introduction of legislation to further
reduce private consumption. (Cherwell and Churchill were
both opposed to imposing restrictions which would not make an
appreciable difference to the manpower or shipping situations.)
- A further minute from Cherwell on the subject of 'Austerity',
7 May 1942, is also included in the folder.
- H.113 Minutes and statistics re estimates of the British war effort in
terms of manpower and resources used, 1943-45. Includes
5 pp. draft 'Note on statement in letter from Mr John Knight
to Lord Beaverbrook, published in the Daily Express of July
21, 1945 that the United States has played the "major" role in
crushing Italy and Germany'.

Second World War
Statistical Section, economic topics

H.114-H.144 FOREIGN ECONOMIC POLICY

Correspondence and papers, 1939-45, re the economic situation in various countries, as follows:

GERMANY	H.114 - H.121
INDIA	H.122 - H.139
RUSSIA	H.140 - H.143
JAPAN	H.144

H.114-H.121 GERMANY

For material on post-war treatment of Germany see H.268-H.289.

H.114

'Chartering of German Shipping. Note by the First Lord of the Admiralty.'

5 pp. ms. and typescript draft for circulation to the Cabinet, 16 November 1939.

Folder includes several drafts and background information and a note to Cherwell, 30 November 1939, re recent orders placed by Germany for several large barges.

H.115

Minutes, drafts, statistics, etc. re possible effects of preventing Germany from importing iron ore from Narvik and Luleå, November 1939-April 1940. Includes various undated charts and diagrams.

H.116

Duplicated typescript on 'Legal Considerations Regarding the Rationing of Italy', by G.G. Fitzmaurice, 16 April 1940.

Folder also includes 1 p. typescript on the general question of rationing neutrals, 18 April 1940.

H.117

Notes on Beryllium sent to Cherwell at his request by Lord Melchett and A. Chester Beatty, July 1941.

H.118

Minutes and drafts, May-June 1941, re plans for destruction of oil installations in the Middle East to prevent them falling into German hands.

Second World War
Statistical Section, economic topics

- H.119 Minutes and correspondence, July 1941-December 1944, re German oil supplies. Includes comments on plans for the destruction of Russian oil installations in the event of a German advance, and reports on German oil stocks and consumption.
- H.120 Miscellaneous charts and tables of statistics re German oil supplies, n.d.
- H.121 Minutes, correspondence, statistics re various aspects of the economic war against Germany, 1940-43.
- H.122-H.139 INDIA
- For material on Indian food requirements see H.290-H.297.
- H.122 2 pp. typescript by R.F. Harrod, 25 January 1943, suggesting that the U.S. should be asked to lease/lend gold to finance the remainder of the war in Egypt, Iraq, Persia and India.
- H.123-H.126 Correspondence and papers, 1943-45, re Indian financial situation.
- H.123 August-September 1943
- H.124 October-November 1943
- Includes ms. and typescript drafts of minute by T. Wilson on International Economic Policy, commenting on British policy in the Middle East and Europe as well as India.
- H.125 Miscellaneous notes and statistics, mainly n.d., c.1943.
- H.126 January 1944-January 1945
- Includes papers re preparation of India as a base for the Japanese war.
- H.127 Correspondence and papers, November 1943-January 1945, re price of oil and petrol in India.

Second World War
Statistical Section, economic topics

- H.128-
H.138 Committee on Indian Financial Questions
- H.128 Typescript draft of paper prepared for the Committee on Indian Financial Questions, January 1944. The paper is in two parts with headings as follows:
- 'Indian Financial Problems. Memorandum by the Paymaster General.'
- 'Measures to Relieve the Strain on India's Economy.'
- The drafts appear to have been prepared by T. Wilson, and are accompanied by explanatory notes to Cherwell in his (Wilson's) hand.
- H.129 Final version of Cherwell's paper for the Committee on Indian Financial Questions, 18 January 1944.
- H.130 Minutes and correspondence, January-May 1944. Includes comments on the Draft Report of the Committee on Indian Financial Questions, the first draft of which was circulated in March.
- H.131 Correspondence with Sir John Anderson and L.S. Amery, May-July 1944, re amendments proposed by Cherwell to the Draft Report of the Committee on Indian Financial Questions. Includes drafts of Cherwell's proposed amendments and notes of modifications suggested by Anderson and Amery.
- H.132 Further minutes and correspondence re the Report of the Committee on Indian Financial Questions, July-August 1944.
- H.133-
H.137 Official Committee to report on I.F. (44) 10.
- I.F. (44) 10 was a statement issued by the Government of India in reply to a request by Cherwell and Sir John Anderson for a fuller statement of 'what we (i.e. Great Britain) have had in return for our expenditure in India and the manner in which the control of this expenditure, including the placing of contracts, has been carried out'. A small committee was set up at the suggestion of Sir John Anderson (see H.133) to examine this document under the Chairmanship of A.F.B. Forde, with representatives of the India Office, the Ministry of Supply and the Prime Minister's Statistical Section (T. Wilson).
- H.133 Letter from Sir John Anderson, 5 July 1944, suggesting the formation of the Committee. A copy of Cherwell's reply, nominating T. Wilson as his representative, is also included in the folder.

Second World War
Statistical Section, economic topics

- H.134 Committee papers, notes of meetings, etc., July-September 1944.
- H.135 5 pp. typescript draft by T. Wilson of Part II of the Committee's Report, sent to Cherwell 'off the record', with an explanatory note by Wilson, 23 October 1944.
An earlier draft with ms. corrections is also included in the folder.
- H.136 Various drafts and amendments of the Committee's Report, as follows:
First draft, circulated 13 October 1944
Second draft, circulated 20 November 1944
Third draft, circulated 4 December 1944
Note of amendments suggested by T. Wilson 6 December 1944
Appendix to the Report, circulated 6 December 1944
- H.137 Miscellaneous correspondence, minutes, notes, statistics, etc. related to or arising from the Report of the Committee, December 1944-March 1945, and n.d.
- H.138 Miscellaneous other minutes and correspondence re Indian financial situation, January-April 1945.
- H.139 Miscellaneous minutes and correspondence re Indian industrial conditions and labour problems, political situation, Indian army, etc., 1940, 1943-45.
- H.140-H.143 RUSSIA
Minutes, correspondence, drafts, statistics re supplies of raw materials and armaments to Russia, 1941-45. Includes tables of Russian requirements and British stocks, accounts of negotiations (in particular the Moscow Conference, 1941), shipping arrangements, etc.
- H.140 August-September 1941
- H.141 October-December 1941
- H.142 n.d., c. 1941
- H.143 1942-45 (and n.d.)

See also G.545, G.546 re exchange of scientific information with Russia.

Second World War
Statistical Section, economic topics

H.144

JAPAN

Two papers re Japan's economic position, as follows:

'Summary of conclusions of various studies by the Board of Economic Warfare on the Japanese war potential in the next twelve months', by L. Currie, 15 May 1943.

'Japan'. 9 pp. typescript analysis of contemporary Japanese economy, no author or date, c.1945.

Second World War
Statistical Section, economic topics

H.145-H.157 HOME ECONOMIC POLICY

Correspondence and papers, 1939-45.

- H.145 5 pp. ms. by R.F. Harrod on 'The means of conserving and enlarging our powers of buying abroad', with accompanying letter to Cherwell, n.d., c.1939.
- H.146 'Economic Stagnation.' 11 pp. typescript, no author or date (probably by Harrod).
- H.147 'Memorandum for Professor Lindemann. No.4.' 3 pp. typescript, no author, 22 January 1940, re economic warfare, exports, and depreciation of sterling.
- H.148 'Exchange Control and Exchange Policy.' 10 pp. typescript draft by J.M. Keynes, 22 May 1940, forwarded to Cherwell with a covering letter from Keynes, 24 May 1940.

Folder also includes 1 p. addition to the draft, accompanied by a further letter from Keynes, 26 May, and 1 p. comments on the draft by R.F. Harrod.
- H.149 'Revised Forecast of the British Balance of Payments during the First Year of the War.' 14 pp. typescript, no author or date, c.1940 (second half).
- H.150 'Preliminary estimates of the national income of the United Kingdom.' 10 pp. duplicated typescript, no author or date, c.1940.
- H.151 'Notes on the Taxation of Income.' 11 pp. typescript, no author or date, probably by D.G. Champernowne, c.1940.

Another copy of the typescript and miscellaneous notes, statistics, diagrams and calculations are also included in the folder.
- H.152 'Taxation of Incomes.' 11 pp. duplicated typescript with 4 pp. diagrams, no author or date, c.1941.

Folder also includes charts and diagrams re income distribution and disposal of personal incomes.
- H.153 'Wages and Inflation.' 7 pp. typescript, 8 December 1941, by 'L.C.R.'

Second World War
Statistical Section, economic topics

- H.154 2 memoranda on agricultural prices, sent to R.F. Harrod for information, 6 and 14 January 1942.
- H.155 'Theory of Excessive Saving.' 4 pp. typescript by R.F. Harrod, November 1943, with a brief note from Harrod to Cherwell.
- H.156 Correspondence with B.M. Baruch re Britain's economic outlook, December 1944-January 1945.
- H.157 Minutes and correspondence, March 1945, re proposals to establish the manufacture of Ferguson tractors in U.K. and the implications for the British export trade.

Second World War
Statistical Section, economic topics

H.158-H.207 LEND-LEASE

Correspondence and papers, 1940-45, re Lend-Lease negotiations with U.S.A.

See also G.550.

H.158 Duplicated typescript, no author or date, headed 'Forthcoming conversation with the United States on Economic Questions'.

H.159 9 pp. typescript by Sir Arthur Salter headed 'North American Supplies', re recent changes in the American national defence programme and their effect on British prospects of obtaining armaments from the U.S.A., 31 July 1940.

Comments on the memorandum by members of the Statistical Section are also included in the folder.

H.160 Minutes, drafts, correspondence, etc. re negotiations for munitions from U.S.A., November 1940-April 1941.

H.161 Schedules of requirements from the U.S.A., including memoranda submitted by the Ministry of Shipping, the Ministry of Supply and the Air Ministry, January 1941.

H.162 Further submissions re requirements from U.S.A., June and July 1941:

'Memorandum for the Minister of Defence. Army Requirements of Gun and Mortar Ammunition.'
4 pp. typescript, 4 June 1941.

'Notes on some of the Major Requirements in Middle East.' 4 pp. typescript, 29 July 1941.

Miscellaneous undated notes of requirements, 1941-42.

H.163 Black binder labelled 'War Cabinet' containing various papers, as follows:

'Note prepared jointly by Sir Walter Layton and Mr. Stacey May on the Anglo-American Consolidated Statement [of stock and expected output of war equipment]'. 3 September 1941.

A series of graphs illustrating stocks and production schedules for various items of war equipment.

'Estimate of enemy strength.' n.d.

Second World War
Statistical Section, economic topics

- H.164 Copies of telegrams exchanged between Britain and U.S.A. re Lend-Lease negotiations, with particular reference to Article Seven of the Mutual Aid Agreement, December 1941-February 1942.
- H.165 'British Requirements from America in 1942.' 5 pp. typescript issued by the Ministry of Supply, 16 May 1942.
- Folder also includes 4 pp. typescript draft by Cherwell, 29 October 1942, commenting on forthcoming visit of the Minister of Production to America, and another typescript note with similar subject-matter, n.d.
- H.166 'Reciprocal aid. Note by the Treasury for Mr. Stettinius.' 7 pp. duplicated typescript, 20 July 1942.
- H.167 Letter from O. Lyttelton to Churchill, 9 April 1943, re relationship between debtor and creditor countries in international trade, with special reference to the position of America vis à vis Great Britain. Comments on the letter by R.F. Harrod (15 April 1943) and Cherwell (22 April 1943) are also included in the folder.
- H.168 Copy of a letter to O. Lyttelton re Lend-Lease negotiations, 16 November 1943.
- Report of a meeting to discuss draft of General Introduction to account of recent Article Seven talks in Washington for submission to the War Cabinet, 22 November 1943.
- H.169 'Anglo-American Discussions Under Article VII. Memorandum by the Paymaster General.' 6 pp. duplicated typescript, 10 February 1944.
- Another copy (carbon typescript) is also included in the folder.
- H.170 Copies of memoranda by J.E. Meade in connection with Article Seven and other aspects of international economics, February 1944.
- H.171 Copies of 2 telegrams from Churchill to President Roosevelt re dollar balances, 9 March 1944.
- H.172 'Economic Report on U.S.A.' 14 pp. duplicated typescript prepared by members of the British Embassy in Washington, March 1944. The report was forwarded to Cherwell by his brother (C.L. Lindemann) with a brief covering note in April 1944.

Second World War
Statistical Section, economic topics

- H.173 Series of notes on Article Seven prepared for Sir Edward Bridges as a basis for a memorandum to the Dominion Prime Ministers, 27 April 1944.
- H.174 'Draft Memorandum by the Chancellor of the Exchequer. Our Overseas Resources and Liabilities.'
- Duplicated typescript, n.d., containing comments on a memorandum by Lord Keynes on Britain's financial position. Keynes's memorandum was sent to Cherwell with a covering letter from Sir John Anderson, 12 June 1944. Anderson's letter is included in the folder but it bears a later annotation to the effect that Keynes's memorandum was withdrawn from the Cherwell papers in 1958.
- Folder also includes 2 minutes to Cherwell from C.J. Martin and G.D.A. MacDougall, 14 and 19 June 1944.
- H.175 Memorandum from G.D.A. MacDougall to Cherwell, 18 July 1944, re progress of the Monetary Conference at Bretton Woods.
- H.176 Draft telegram to Washington re the relationship between Lend-Lease and British exports, July 1944.
- Folder also includes 2 copies of a letter from Cherwell to C.R. Attlee, one with annotations by G.D.A. MacDougall.
- H.177 'Statistics Bearing on the Dimensions of the United Kingdom's Problem of External Finance in the Transition.' Duplicated typescript issued by the U.K. High Commissioner's Office in Ottawa, 6 August 1944.
- H.178 Minutes and drafts re forthcoming Lend-Lease negotiations, 30 August and n.d. (? early September) 1944. Mainly by G.D.A. MacDougall.
- H.179 'Supplies from Canada in Stage II.' 6 pp. typescript, 1 September 1944.
- Folder also includes 2 pp. typescript 'Note on Canada', by H.T. Weeks.
- H.180 'Lend-Lease Supplies for Britain in Stage II. Note for President of U.S.A.' 5 pp. typescript, 4 September 1944.
- Folder also includes 2 earlier versions of the Note dated 30 August and 1 September. The latter is accompanied by brief related correspondence and drafts.

Second World War
Statistical Section, economic topics

- H.181 Copies of a series of minutes to Churchill re forthcoming Lend-Lease negotiations, dated 6, 7, 11, 12 September 1944.
- H.182 Minutes from G.D.A. MacDougall to Cherwell, September 1944, containing comments on the forthcoming Lend-Lease negotiations with suggestions of points to be raised, followed by a report of proceedings during Cherwell's absence from Washington at the end of September. Some undated notes and drafts are also included in the folder.
- H.183 'Second Draft. Record of Conversation between the President and Prime Minister at Quebec on September 14th 1944.' 2 pp. typescript annotated by MacDougall 'Given to Morgenthau'.

Folder also includes copy of a letter from Cherwell to Morgenthau, 16 September 1944, re the meaning of the phrase 'or sold for profit' in the draft.
- H.184 Various versions of H.183, with 2 drafts of the text of the Agreement between Churchill and President Roosevelt relating to the setting up of a Joint Committee to discuss the question of Lend-Lease.

Folder also includes 2 pp. typescript entitled '1st Draft of Directive for President', n.d.
- H.185 'Agreed Record of Conversation between Prime Minister and President on 14th September, 1944.' Text as circulated, 19th September 1944, with the text of the Agreement between the Prime Minister and the President and a copy of Cherwell's note about the meaning of the phrase 'sold for profit'.
- H.186 'Conference with the British - Lend-Lease.' Transcript of discussion on 20 September 1944. 2 copies.

Folder also includes list of people to whom the transcript was circulated, and brief correspondence.
- H.187 Papers relating to the discussion on 20 September, as follows:

Bundle of ms. and typescript notes labelled by MacDougall 'Prof's brief for meeting on Wed. 20 Sept. at 3 p.m. with Americans'.

1 p. duplicated typescript 'Note on the Objectives for the Meeting at 3 o'clock on Wednesday', by H.T. Weeks, 19 September 1944.

1 p. duplicated typescript 'Points of Interpretation and Doubt in the Directive and the Conversation', by H.T. Weeks, same date (2 copies).

Continued

Second World War
Statistical Section, economic topics

- H.187 (cont'd.) 'Note for Lord Cherwell for conversation with Mr. Morgenthau.' 1 p. typescript by H.T. Weeks, 24 September 1944 (on matters arising from the discussion on 20 September).
- H.188 1 p. summary of conclusions reached at a meeting held on 23 September 1944 'to consider the presentation of the British case for lend-lease in Stage II to the United States authorities'.

The note, which is headed 'Lord Cherwell's Draft' by MacDougall, is accompanied by comments by H.T. Weeks, R.H. Brand and Sir Henry Self.
- H.189 'Note of a meeting held in the Resident Minister's Room on Wednesday, September 27th at 10.45 a.m.' 8 pp. duplicated typescript.

The meeting was held to discuss suggested British procedure for the Stage II discussions.

Folder also includes copies of a letter from Cherwell to Morgenthau written early on the same day.
- H.190 'Points of Interpretation on the Quebec Conversation Relating to Exports.' 6 pp. typescript with 1 p. covering note by J.R.C. Helmore. n.d., but annotated by MacDougall 'Received 28 Sept.' [1944].
- H.191 Miscellaneous minutes, notes, correspondence, September 1944. Includes:

Letter from H.L. Ismay to Cherwell re duration of the war after the collapse of Germany, 14 September 1944.

1 p. typescript on 'Reciprocal Aid in Stage II', annotated by MacDougall 'Note by Brand', 20 September 1944.

Copy of letter from C. Hambro to R.H. Brand, 21 September 1944.

Advance copy of an address by the Director of War Mobilization to be delivered at a National Press Club Luncheon, 27 September 1944.

2 drafts of chronological list of 'Cables and Papers dealing with the Agreement up to September 22', one covering 15-22 September, the other 7-28 September 1944.

Second World War
Statistical Section, economic topics

- H.192 Minutes from G.D.A. MacDougall to Cherwell, October-November 1944. Includes notes re the draft statement of British requirements (see H.196) with reports and comments on the progress of the negotiations.
- H.193 'Stage II Discussions. Note of two meetings held in the Resident Minister's room on the 3rd October 1944.'
3 pp. typescript.
Folder also includes 1 p. typescript annotated by MacDougall 'My proposed Amendment'.
- H.194 'Memorandum of a conversation at the White House between Lord Cherwell and Harry Hopkins, 3 Oct. 44.' re Lend-Lease negotiations and plans for the treatment of Germany.
- H.195 Correspondence and papers, 11-16 October 1944, re revision of British munitions requirements.
- H.196 'British Requirements for the First Year of Stage II.'
Statement prepared by the British Members of the Combined Committee as a starting point for the negotiations over Lend-Lease assistance for the duration of the Japanese war. The statement was submitted to Mr. Morgenthau on 17 October 1944 (see H.197).
- H.197 Brief correspondence re H.196 above. Includes a suggested draft of the General Introduction submitted by MacDougall, 10 October 1944, and draft final version of letter from Cherwell to Morgenthau introducing the document, 16 October 1944. (It was actually submitted on 17 October.)
- H.198 Further correspondence and papers, 18-31 October 1944, re munitions.
Includes brief report of meeting, 18 October 1944, to discuss 3 pp. typescript note by Sir Robert Sinclair (annexed to the report) and 1 p. typescript annotated by MacDougall 'Draft directive from main committee to Munitions expert - handed to Morgenthau at dinner 19.10.44'.
- H.199 Notes, drafts, correspondence re various aspects of Lend-Lease negotiations, October 1944.
- H.200 'Extracts from Gen. 43/126 which bear on Reconversion and Easement in Stage II.' Duplicated typescript containing quotations from various documents relating to Lend-Lease negotiations, 14 September-30 November 1944.

Second World War
Statistical Section, economic topics

- H.201 'The Washington Negotiations for Lend-Lease in Stage II.'
Carbon copy of 30 pp. typescript report prepared by
Keynes for the Chancellor of the Exchequer (Sir John Anderson),
12 December 1944, and forwarded to Cherwell with a covering
letter from Anderson, 20 December 1944.
- H.202 Minute from T. Wilson to Cherwell re international cartels,
27 January 1945.
- H.203 5 pp. typescript, 15 February 1945, commenting on paper
by J.E. Meade on 'The Balance of Gain and Loss' (not
included in the folder).

Folder includes a letter re points arising from Meade's paper,
21 June 1945.
- H.204 Summary of events relating to Article Seven negotiations,
March 1941-February 1945.
- H.205 Several drafts of telegram from Churchill to the Canadian
Prime Minister, March 1945, in reply to financial proposals
made by the Canadian Government.

Folder also includes draft minute to Churchill, n.d.,
February 1945, and other comments on the Canadian
proposals, 1-23 March 1945.
- H.206, H.207 Minutes, drafts, statistics re Lend-Lease negotiations with
U.S.A., 1945.
- H.206 March-June 1945
- H.207 July 1945 (and n.d.)

Second World War
Statistical Section, economic topics

H.208-H.267 POST-WAR RECONSTRUCTION

Correspondence and papers, 1940-45, re plans for post-war development in various fields. Most of the material is concerned with plans for Britain, but there are references to Europe, U.S.A., etc.

The topics considered are:

AGRICULTURE	H.208-H.214
CIVIL AVIATION	H.215-H.219
ECONOMIC POLICY	H.220-H.228
EDUCATION	H.229, H.230
EMPLOYMENT	H.231
HEALTH	H.232
HOUSING	H.233-H.235
SCIENTIFIC RESEARCH AND DEVELOPMENT	H.236-H.253
SOCIAL SECURITY	H.254-H.257
TOWN AND COUNTRY PLANNING	H.258-H.261
MISCELLANEOUS	H.262-H.267

Second World War
Statistical Section, economic topics

H.208-H.214 AGRICULTURE

- H.208 Miscellaneous minutes re post-war agricultural policy, October 1942-January 1943. Includes copy of minute from Churchill, 3 December 1942, re need for discretion as to internal policy to avoid any interference with current negotiations with U.S.A., and a note from R.F. Harrod to Cherwell commenting on the repercussions of Churchill's minute.
- H.209 'Cost of the Agricultural Policy under a Scheme of Price Stabilisation.' Duplicated typescript issued by the Ministry of Agriculture, 22 December 1942. 2 copies, one with extensive annotations.

1 p. undated ms. note headed 'The Proposed Post War Agricultural Policy' is also included in the folder.
- H.210 'The Financial Position of Post-War Agriculture.' 5 pp. duplicated typescript, no author or date, 1942/43. 2 copies (both annotated).
- H.211 Minutes and drafts, March 1943, mainly summaries or criticisms of various plans for post-war agricultural policy.
- H.212 'Post-War Agriculture.' 2 typescript drafts of paper by T. Wilson, 9 and 10 April 1943, the second of which is annotated 'Draft for paper which Prof once thought he might circulate'.
- H.213, H.214 Minutes, drafts, statistics, etc. re various aspects of agricultural policy, April 1943-June 1945.
- H.213 April-October 1943
- H.214 January 1944-June 1945

H.215-H.219 CIVIL AVIATION

- H.215 Minutes exchanged between Cherwell and Churchill, June 1943, re plans for the organisation of post-war civil aviation.

Second World War
Statistical Section, economic topics

- H.216 'Lord Londonderry's Motion on Civil Aviation, House of Lords, Thursday 8th July. Reply for H.M.G. by the Paymaster General.' 24 pp. typescript.
- Folder includes a brief letter from Londonderry, 9 June 1943.
- H.217 Notes and briefs re future of civil aviation sent to Cherwell by various individuals and government departments, June-July 1943.
- H.218 Correspondence with Sir Stafford Cripps and others, August 1943-March 1944, re proposal to establish a Post-Graduate School of Aeronautical Science.
- H.219 Minutes and correspondence re various aspects of civil aviation, October 1943-February 1945.
- H.220-H.228 ECONOMIC POLICY
- H.220 'A European Budget (The Great Share-Out and Prosperity Bringer).' 2 pp. typescript by G.D.A. MacDougall, 22 July 1940.
- H.221 Paper on post-war national income in two parts, by T. Wilson:
- 'Section I. The National Income in the Immediate Post-War Years.' 5 pp. typescript, n.d., 1943.
- 'Section II. The National Income and its Utilisation in the Post-War Period.' 6 pp. typescript, 16 March 1943 (2 copies).
- H.222 'Notes on Post-War Fiscal Policy.' 12 pp. duplicated typescript by L. Rostas, 3 March 1943, with covering letter from Rostas to T. Wilson, 26 March.
- H.223 Bundle of typescript notes prepared by Keynes for Churchill as the basis for a speech on the post-war economic situation, March 1943.
- Folder also includes a draft of Churchill's projected speech, 15 March 1943, and a minute from Cherwell commenting on the draft, 18 March 1943.
- H.224 Minutes and drafts on post-war economic policy, 1943-45, re national debt, budgetary prospects, taxation, expenditure, etc.

Second World War
Statistical Section, economic topics

- H.225 Minutes and correspondence re motor vehicle taxation policy and its effect on the post-war prospects of the British Motor Industry, 1944-45.
See also H.266.
- H.226 Miscellaneous undated material re post-war budget, as follows:
 'The Post-War Budgetary Position.' 7 pp. typescript, no author.
 'Claims on the 1948 Budget.' 5 pp. typescript by D.N. Chester.
 'Post-War National Expenditure.' 4 pp. typescript by R.C. Tress.
 'New Expenditure (apart from war expenditure) Incurred Since March 1st 1943 or in Prospect Under New Legislation.' 6 pp. typescript, no author.
 2 draft minutes to Churchill re post-war budgetary prospects.
- H.227 Miscellaneous charts and statistics re average earnings, taxation, national debt, etc., n.d.
- H.228 'Wars, Impact on Civilian Economies of U.K., U.S.A. and Canada.' 7 pp. typescript addressed to (or possibly by) 'Mr Weeks' [H.T. Weeks], n.d., c.1945.

'Financial Policy in W. Europe.' 3 pp. typescript by H. Ellis-Rees, 6 September 1945, with brief accompanying notes and correspondence.
- H.229, H.230 EDUCATION
- H.229 Minutes and correspondence re various aspects of post-war education policy, 1943, 1945.
- H.230 2 pp. typescript on 'University Courses' re necessity of increasing the number of university graduates as soon as possible.

Folder also includes correspondence with the University Grants Committee, May-June 1945, with statistics re numbers of wartime graduates in various subject groups.

Second World War
Statistical Section, economic topics

H.231 EMPLOYMENT

Minutes and correspondence re employment policy,
February–November 1944 (and n.d.)

H.232 HEALTH

Miscellaneous minutes and correspondence re the
National Health Service, February 1944–March 1945.

H.233–H.235 HOUSING

H.233 'The Long Term Post-War Building Programme.'
Memorandum prepared by Cherwell for the War Cabinet
Reconstruction Committee, 2 June 1944. 2 copies.

H.234, H.235 Minutes, correspondence, drafts, statistics re post-war
housing, 1944–45. Topics covered include building
programmes for temporary and permanent housing, repair
of bomb-damaged houses, rent control, etc.

H.234 May–December 1944

H.235 January–May 1945 (and n.d.)

H.236–H.253 SCIENTIFIC RESEARCH AND DEVELOPMENT

H.236 Miscellaneous minutes and correspondence, January 1943–
December 1944, re planning and organisation of post-war
scientific research.

H.237 Draft for speech by Cherwell to the House of Lords,
6 July 1943, re need for expansion of scientific research
particularly in relation to fuel development.

Folder also includes copy of brief sent to Cherwell from
the Department of Scientific and Industrial Research,
1 July 1943, and a letter from Lord McGowan congratulating
Cherwell on his speech.

H.238 'Admiralty Post-War Problems Concerned with Research
and Development.' Duplicated typescript by C.F. Goodeve,
29 October 1943.

Second World War
Statistical Section, economic topics

- H.239, H.240 Memoranda and correspondence re planning of post-war research sent to Cherwell by various individuals and industrial firms, 1944-45.
- H.239 Henry Hughes and Son (A.J. Hughes) January 1944
- Hutchinson, G. January 1944
- Hydraulic Coupling and Engineering Company January 1944-
 Limited (A.R. Vickers, H. Sinclair) March 1945
- H.240 Imperial Chemical Industries (Lord Melchett) January 1944
- Sheldon, N. January 1944
- H.241 Memoranda re post-war armaments research, 1944,
 as follows:
- 'Armaments Development. A Peace-Time Plan
 for Making Progress', by R.S. Macrae, 5 February 1944.
- 2 brief memoranda by L.G. Carpenter, sent to Cherwell
 11 May 1944.
- 'Letter from Brigadier Jefferis to Lord Melchett'
 (commenting on draft by Melchett), 15 September
 1944, sent to Cherwell on 24 September.
- 'Memorandum on Post War Armaments Research.'
 Duplicated typescript by Lord Melchett, 23 November
 1944.
- 'Administration of the Armament Development Organisa-
 tion - Assignment of Responsibility for', by Vice-
 Admiral Pridham, 30 November 1944 (with covering
 letter from M.R. Jefferis).
- H.242 'The Control and Management of a National Experimental
 Establishment for Aircraft and their Engines.' Duplicated
 typescript issued by the Aeronautical Research Committee,
 13 June 1944, with brief related correspondence from Sir
 Stafford Cripps.
- H.243 Minutes exchanged between Cherwell and Churchill,
 3 December 1944.
- Cherwell's minute expresses concern at the lack of
 coordination between the various panels and sub-
 committees involved in discussions on post-war research
 and development. Churchill's reply instructs Cherwell
 to investigate the situation and present a report with
 comments or suggestions for future policy.

Second World War
Statistical Section, economic topics

- H.244 'Notes on Proposals for the Encouragement of Industrial Research.' 2 pp. typescript, sent to Cherwell by N. Brook, 7 December 1944.
- 'Proposed Fundamental Principles applying to the Organisation of inter-Departmental Research and Development.' 3 pp. typescript by C.F. Goodeve, sent to Cherwell, 21 December 1944.
- H.245 Drafts of letters from Cherwell to D.S.I.R., Ministry of Aircraft Production, Admiralty and Ministry of Supply, 18-20 December 1944, asking for various statistics re state of scientific research and development. The replies to Cherwell's letters are also included in the folder.
- H.246 'Post-War Scientific Research and Development.' Summary of general views and comments expressed to Cherwell in the course of various discussions during December 1944. The typescript is dated 22 December 1944.
- H.247 2 undated reports, as follows:
- 'Reorganisation of Government Scientific Research and Development.' 4 pp. typescript summary of current position, c.1944/45.
- Final report of Committee on Post-War Radio Research submitted to the Minister of Aircraft Production by T.R. Merton.
- H.248 Further minutes and correspondence re planning of post-war research and development, January-May 1945.
- H.249 Correspondence with D.S. Veale and others, March-June 1945, re uses of aerial photography in many branches of post-war scientific research. Folder also includes duplicated typescript on 'Post-Hostilities and Peace-Time Uses of Air Reconnaissance', 17 November 1944.
- H.250 Correspondence with the Ministry of Supply, June-July 1945, re possibility of increasing the allocation of paper for scientific periodicals in order to speed up the dissemination of scientific knowledge gained during the war.
- H.251 Committee on Defence Research. Papers for 1st Meeting, 2 July 1945.

Second World War
Statistical Section, economic topics

H.252 Committee on Defence Research. Papers for 2nd Meeting, 12 July 1945. Includes a letter from W.S. Douglas re future of German research establishments.

H.253 Committee on Defence Research. Research Establishments Panel.

The Panel was established under Cherwell's Chairmanship in July 1945 'to prepare a list ... of the optimum number of Service Research Establishments which will be required after the war ... [and] to consider the best organisation for basic research'.

Folder contains various minutes and drafts relating to the work of the panel, July 1945.

H.254-H.257 SOCIAL SECURITY

H.254 'The Social Security Plan. Memorandum prepared in the Treasury.' Duplicated typescript re the financial aspects of the social security plan, n.d., November/December 1942.

H.255 'Finance of the Proposals in the Beveridge Report.' 4 pp. typescript with 2 diagrams by D.N. Chester, 18 November 1942.

A second copy (without diagrams) is also included in the folder.

H.256 'The Financial Aspects of the Social Security Plan.' 2 pp. typescript draft, no author or date, commenting on the Treasury Memorandum (H.254).

'Economic Effects of the Beveridge Plan.' 6 pp. typescript by T. Wilson, 22 January 1943, sent to Cherwell with a covering note on 25 January.

H.257 Minutes from Cherwell to Churchill re Beveridge proposals, November 1942-November 1943. Includes some undated drafts and an unsigned minute to Cherwell summarising the proposals, 28 November 1942.

Second World War
Statistical Section, economic topics

H.258-H.261 TOWN AND COUNTRY PLANNING

H.258 Minutes and correspondence, 1943, as follows:

'The Uthwatt Report.' 3 pp. minute to Cherwell
from G.L.S. Shackle, 15 January 1943.

Letter from R. Hart-Synott to Cherwell, 8 November
1943, headed 'The P.M. and Planners'.

'Draft Ministerial Statement on the Scott Report on
Land Utilisation in Rural Areas.' 2 pp. minute to
Cherwell from G.L.S. Shackle, November 1943.

H.259 Minutes and correspondence, January-April 1944, com-
menting on various revisions of the Uthwatt proposals.

H.260 2 typescripts by D.N. Chester, as follows:

'Town and Country Planning (Compensation and
Betterment)', 21 April 1944.

'New Approach to the Land Problem', 31 May 1944.

H.261 Miscellaneous undated material and printed matter, 1944.

H.262-H.267 MISCELLANEOUS

H.262 Minutes to Cherwell re various aspects of post-war reconstruction,
October 1943-January 1945.

H.263 Comments on Cabinet Paper by Cherwell on Reconstruction
Plans, from:

J.H. Peck (19 October 1943)

Board of Trade (22 October 1943)

J.M. Fleming (28 October 1943)

H.264 4 pp. typescript summary of post-war reconstruction plans
in 19 different fields (Land, Employment, Housing, Education,
Social Security, Health, etc.), n.d., c.Spring 1944.

Second World War
Statistical Section, economic topics

- H.265 Transcripts of or comments on various speeches on post-war reconstruction plans, as follows:
- Sir Stafford Cripps
(typescript of speech, Bristol, 30 January 1944)
- Lord McGowan
(typescript of speech, Cardiff, 28 March 1944, with 1 p. comments)
- Lord Beaverbrook
(notes on 'Lord Beaverbrook's Public Statements', 5 June 1945, and n.d.)
- H.266 'Motor Car Industry.' Memorandum prepared by Cherwell for the War Cabinet Reconstruction Committee, 3 April 1945.
- An earlier draft of this paper with 1 p. comments by T. Wilson, 24 March 1945, is also included in the folder.
- See also H.225.
- H.267 6 pp. typescript by G.D.A. MacDougall, 27 April 1945, commenting on a report prepared for the Reconstruction Committee on the future of the iron and steel industry, accompanied by 1 p. summary of suggested points for Cherwell to raise with the Committee.

Second World War
Statistical Section, economic topics

H.268-H.289 POST-WAR TREATMENT OF GERMANY

Correspondence and papers, 1943-45, 1953.

H.268-H.272 Interdepartmental Committee on Reparations and Economic Security (The Malkin Committee)

This Committee was set up as the result of a memorandum by the President of the Board of Trade (H. Dalton) which recommended that a committee of officials from the Treasury, Foreign Office, Board of Trade, Paymaster General's Office and Cabinet Economic Secretariat should be asked to examine the question of reparations and other closely related matters. The Chairman was Sir William Malkin.

H.268 Memoranda associated with the establishment of the Malkin Committee, sent to Cherwell by J.E. Coulson, 30 September 1943, as follows:

'Compensation to be Required from the Enemy.'
Memorandum by the Treasury, 5 December 1941.

'Germany's Control over Europe's Economic, Industrial and Commercial Organisation. The Question of Restitution and Release.' Memorandum by the Department of Overseas Trade, 11 July 1942.

'Reparations.' Memorandum by the President of the Board of Trade recommending the establishment of the committee, 28 August 1942.

H.269 'The Economic Consequences of Reparations. A Technical Note.' Duplicated typescript, n.d., c.1942.

H.270 Minutes from T. Wilson to Cherwell, April-October 1943, commenting on various papers re the future of Germany including drafts of the Malkin Committee's proposals.

H.271 Minutes of an ad hoc meeting of Ministers to discuss the Report of the Malkin Committee, 29 September 1943.

H.272 2 drafts of minute from Cherwell to the Foreign Secretary, 29 September and 5 October 1943, criticising the proposals of the Malkin Committee.

Second World War
Statistical Section, economic topics

- H.273 Minutes to Cherwell re post-war treatment of Germany from T. Wilson, F.R.P. Vinter and others, June 1943-December 1944.
- H.274 'The Need for High-Level Decisions on Principle on the Future of Germany.' 3 pp. typescript by G.D.A. MacDougall, n.d.
- H.275-H.278 E.I.P.S. (Economic and Industrial Planning Staff)
- This body was set up in April 1944 under the responsibility of the Foreign Secretary to correlate the views of government departments on economic policy towards Germany and to formulate issues for the decision of Ministers. Subsequently its scope was extended by the inclusion of Italy, the Balkans, etc. and the consideration of various other related questions.
- In October 1944 Cherwell was asked if he was willing to allow one of his staff to become a part-time member of E.I.P.S. and he nominated F.R.P. Vinter (see H.275).
- H.275 Correspondence re appointment of F.R.P. Vinter as a member of E.I.P.S., October 1944.
- H.276 Copies of drafts and correspondence exchanged between members of E.I.P.S., August 1944-May 1945. A letter from D. Morton, 23 April 1945, commenting on an E.I.P.S. paper is also included in the folder.
- H.277 Miscellaneous unsigned and (with one exception) undated drafts re Germany, with titles as follows:
- 'British Exports and Reparations from Germany.'
- 'The Treatment of German "Concerns".'
- 'The Destruction or Removal of Heavy Industry in the Rhineland, Westphalia and Saar Areas.'
- 'Employment in German Agriculture.'
- 'A Forecast of the Population of Germany.'
- 'Control and Ownership by the United Nations of German Industrial Concerns', 22 March 1945.
- H.278 Comments on papers produced by E.I.P.S., January 1945 and n.d.

Second World War
Statistical Section, economic topics

- H.279 2 reports of discussions with President Roosevelt re proposals for the de-industrialisation of Germany:
- 2 pp. typescript recording discussion between Morgenthau, Cherwell, Churchill and Roosevelt, 14 September 1944.
- 3 drafts of agreed record of conversation between Churchill and Roosevelt, 15 September 1944.
- H.280 'Program to Prevent Germany from starting a World War III.'
Typescript sent to Cherwell by H. Morgenthau with a covering letter, 26 September 1944.
- H.281 Post-war correspondence with H. Morgenthau, and re the 'Morgenthau Plan', 1945-53.
- H.282 'Curtailement of German (and Japanese) Industry and British Exports.' 5 pp. typescript re the 'Morgenthau Plan', 26 January 1945.
- Folder also includes 2 undated drafts with the same title, and 1 p. typescript on 'British and American Directives on Treatment of Germany', n.d.
- H.283 Miscellaneous memoranda and drafts, January-March 1945 and n.d., putting forward the view that decisions re the post-war treatment of Germany should consider Britain's essential need to re-establish the export trade lost during the war.
- H.284 Drafts of Cabinet Paper by Cherwell on 'British Exports, German Industry and Reparations'.
- The drafts are undated but the folder also contains 2 letters from D. Morton, 12 and 17 April 1945, commenting on Cherwell's Cabinet Paper.
- H.285 Minutes to Cherwell from T. Wilson and F.R.P. Vinter, January-July 1945.
- H.286 Miscellaneous correspondence re Germany, February-July 1945.
- H.287 Minutes to Churchill re German reparations, etc., March-July 1945.

Second World War
Statistical Section, economic topics

H.288

3 memoranda by M.R. Jefferis, as follows:

'Note on the Future of War Development and Production Facilities in Germany', 7 July 1945.

'Note on the Organization of Development Work in Germany,' 8 July 1945.

'Note on Position with regard to Machine Tools in Germany', n.d.

Folder also includes copy of a typescript on 'Physicists and the War Effort in Germany', by E.C. Kemble, 2 June 1945.

H.289

Statistics re German industry, imports, exports, balance of payments, population, etc., n.d.

Second World War
Statistical Section, economic topics

H.290-H.321 WORLD FOOD SUPPLIES AND RELIEF

Correspondence and papers, 1942-45, re available food supplies in various countries and arrangements for relief. Includes material on the World Food Conference, May 1943 (H.299-H.301), the United Nations Relief and Rehabilitation Administration (H.304-H.306 and passim) and the British Food Mission (H.319, H.320).

H.290-H.297 Indian Food Requirements

For material on the Indian financial situation, see H.122-H.139.

H.290-
H.292 Minutes, correspondence, statistics re Indian grain requirements and the general food situation in India.

H.290 August-December 1943

H.291 February-March 1944

H.292 April-August 1944

H.293 Minutes and correspondence, October-November 1944, arising from a report by Sir Henry French on a recent visit to India.

H.294 Draft Report of the Indian Foodgrains Committee on Sir Henry French's report. Several drafts as follows:

1 p. typescript, n.d.

Another version 'November 1944', accompanied by 'Annex I' (1 p.) and 'Annex II. Statement proposed to be circulated in the Official Report'.

4 drafts of Annex II, all dated 21 November 1944, with brief accompanying correspondence.

H.295 Further correspondence re Indian Foodgrains Committee report, November-December 1944, including revised draft sent to Cherwell 8 December 1944.

H.296 Minutes and correspondence re Indian Foodgrain requirements, February-June 1945.

H.297 Miscellaneous undated material.

Second World War
Statistical Section, economic topics

- H.298 Minutes, drafts and correspondence re negotiations with U.S.A. over plans for post-war relief, June 1942-January 1943 (including some n.d.).
- H.299-H.301 World Food Conference
- In February 1943 President Roosevelt summoned an international Conference to discuss the post-war food problem. The meeting opened at Hot Springs, Virginia, on 18 May 1943, and among its recommendations was the setting up of a Permanent Organisation on Food and Agriculture, to be preceded by an Interim Commission which would carry out some of the functions of the Permanent Organisation while determining its constitution and structure.
- H.299 4 letters from R.F. Harrod to Cherwell re the forthcoming food conference, 21-30 March 1943.
- Folder also includes 2 (different) undated memoranda by Harrod, both headed 'The American Initiative'.
- H.300 Memorandum by Sir Hubert Henderson on 'The Industrialisation of Backward Countries', 13 April 1943, with 3 pp. comments, addressed to Cherwell, comparing Henderson's proposals with those put forward by Harrod (see H.299 above).
- H.301 Minutes to Cherwell re the Food Conference, June 1943.
- Folder also includes 2 later minutes re draft reports of the Interim Commission (18 March 1944) and the draft constitution of the Food and Agriculture Organisation (20 November 1944).
- H.302 Minutes and drafts re financial and administrative arrangements for relief, February-June 1943.
- H.303 Minutes, drafts and correspondence re estimates of food and other items needed for relief, September-December 1943.
- H.304 Minutes, drafts and correspondence re the constitution, scope and financing of the United Nations Relief and Rehabilitation Administration (UNRRA), October 1943.
- H.305 Further minutes and correspondence re UNRRA, December 1943-January 1944, mainly re estimates of requirements for relief and scale of the U.K. contribution.
- H.306 'U.N.R.R.A. and Relief. Memorandum by the Paymaster General.' Undated typescript draft.

Second World War
Statistical Section, economic topics

- H.307-H.309 Minutes, drafts and correspondence re estimates of relief requirements and available supplies, January-September 1944.
- H.307 January-March 1944
Includes correspondence with the Minister of Production (O. Lyttleton) re draft directive on relief from the Prime Minister to the Secretary of State for War.
- H.308 March-April 1944
Includes 5 pp. typescript on 'World Food Prospects, 1944 and 1945', 13 April 1944.
- H.309 May-September 1944
Includes 2 drafts of minute to Churchill re British influence in UNRRA, July 1944.
- H.310 Minutes and drafts re Italian food requirements and arrangements for relief supplies, January-December 1944.
See also H.66.
- H.311 Correspondence from D. Morton re food situation in Yugoslavia, January and May 1944.
- H.312 Minutes and correspondence re relief for France and the Low Countries, October 1944-July 1945.
- H.313 Minutes, drafts and reports on German relief requirements and general food position, January-July 1945.
- H.314 Minutes and correspondence re Greece, Poland and Norway, January-July 1945.
- H.315 Minutes, drafts, statistics re various aspects of relief and world food supplies, December 1944-July 1945 (including some n.d.).
- H.316 Correspondence and statistics from the Ministry of Food, mainly re world food situation, February-May 1945.

Second World War
Statistical Section, economic topics

- H.317 Various papers on world food supplies, as follows:
- 'World Food Supplies 1945.' 3 pp. typescript by
 T. Wilson, 6 March 1945.
- 'Brief for Minister's Paper to War Cabinet on World
 Food Supplies.' 8 pp. typescript, n.d., March 1945.
- 'Food Supplies, Etc.' Duplicated typescript 'For
 Cabinet on Wednesday 14th March, 1945', sent to
 Cherwell by Sir Edward Bridges. An earlier draft of
 this is also included in the folder.
- H.318 Draft of telegram from Churchill to President Roosevelt
 about the world food problem, and Britain's contribution
 to relief, 14 March 1945.
- Folder also includes a note of points to be covered
 in the telegram, dated 15 March 1945.
- H.319 Several drafts of Directive to the Minister of Production
 for his visit to U.S.A. with the Minister of Food to discuss
 with the American authorities the problems of world food
 supplies and relief to devastated areas, March 1945.
- H.320 Minutes and drafts re British Food Mission to the U.S.A.,
 April-June 1945.
- H.321 'A statement of the United Nations Relief and Rehabilitation
 Administration's forward financial position up to 31st
 December 1945, projected, on certain assumptions till
 31st December, 1946.' Duplicated typescript, sent to
 Cherwell by Keynes, 5 July 1945.