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

Catalogue of the papers and correspondence of

SIR GORDON BRIMS BLACK MCIVOR SUTHERLAND, FRS

(1907 - 1980)

Deposited in Cambridge University Library

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Julia Latham-Jackson

1982

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GENERAL INTRODUCTION

PROVENANCE

The material was received from Lady Sutherland and from Professor N. Sheppard FRS who contributed some additional material, mainly correspondence received in connection with his Memoir of Sutherland for the Royal Society.

SUMMARY OF THE CAREER OF SIR GORDON SUTHERLAND

Gordon Brims Black McIvor Sutherland was born in Caithness, Scotland, in 1907. He was educated at Morgan Academy, Dundee, and St. Andrews University from which he graduated with an M.A. in mathematics and B.Sc. in physics in 1929. The following two years were spent in Cambridge where he decided to abandon theoretical physics in favour of experimental work on infrared spectra, an interest which continued throughout his research career.

During his second year at Cambridge Sutherland met D.M. Dennison and this prompted him to apply for a Commonwealth Fund Fellowship to work under Dennison at the University of Michigan which was then the most advanced centre in the world for the study of infrared spectroscopy. He spent two years at Michigan, returning to Cambridge in autumn 1933.

After obtaining his Ph.D. degree in 1934 Sutherland remained in Cambridge working first with W.G. Penney on the problem of the structure of the hydrogen peroxide molecule, and then with various research students including G.K.T. Conn, M.M. Davies, E. Lee and C.K. Wu. During the Second World War he began by working for the Ministry of Supply on unexploded bombs but in 1941 he returned to Cambridge to develop the use of infrared spectroscopy in the analysis of 'enemy' fuels which his team undertook in collaboration with H.W. Thompson at Oxford.

In 1949 Sutherland returned to the University of Michigan as Professor of
Physics where he built up a successful infrared research group with a strong emphasis
on biophysical studies. In 1956 he was appointed as Director of the National Physical
Laboratory in succession to Sir Edward Bullard, where he remained until 1964 when he
became Master of Emmanuel College, Cambridge. The pressures of administrative

work at the NPL allowed little time for Sutherland to pursue his personal research interests, but his position as head of a large government laboratory and then of a Cambridge College encouraged a growing interest in the wider issues of science policy and education on which he wrote, lectured and chaired committees throughout the 1960s. He died in 1980, three years after his retirement from Emmanuel.

DESCRIPTION OF THE COLLECTION

The surviving papers provide some documentation for most aspects of Sutherland's career, apart from his two periods at the University of Michigan for which there is virtually nothing. For the 1930s there is extensive correspondence but no laboratory records, and the wartime period is enriched by a very full sequence of letters exchanged with H.W. Thompson, 1937 - 47. Section C contains some interesting papers relating to the NPL, and Section D, which documents Sutherland's involvement with various societies and organisations, has considerable material on the formation of the International Organisation for Pure and Applied Biophysics in which Sutherland played a major part.

Section E contains correspondence on issues of science policy as well as Sutherland's own drafts and reports. The correspondence in Section H dates mainly from Sutherland's period at the NPL, all earlier letters being in Section B.

Some of Sutherland's ms. and typescript drafts are identified with a reference in the form <u>Bibliog</u> This refers to the list of publications included in the <u>Memoir</u> of Sutherland by N. Sheppard (<u>Biographical Memoirs of Fellows of the Royal Society</u>, 28, 1982).

LOCATIONS OF FURTHER MATERIAL

Specimens and correspondence relating to Sutherland's work on diamond are held at the Institute of Geological Sciences (Geological Museum), South Kensington, London.

Material relating to Sutherland's service on two Cambridge University

Committees (Joint Committee on Student Numbers and Committee of the General

Board on Long-Term Development) has been deposited in the University Archives,

Cambridge.

A little personal material is held by Lady Sutherland.

ACKNOWLEDGEMENTS

We are grateful to Lady Sutherland for making the papers available, and to Professor N. Sheppard FRS and Professor D.E. Blackwell for help and advice.

SECTION A BIO GRAPHICAL AND PERSONAL A.1 - A.53

A.1 - A.6 BIO GRAPHICAL AND AUTOBIO GRAPHICAL

A.7 - A.41 CAREER AND APPOINTMENTS

A.42 - A.53 MATERIAL RELATING TO ROYAL SOCIETY

MEMOIR OF SUTHERLAND

A.1-A.6 BIO GRAPHICAL AND AUTOBIO GRAPHICAL

A.1-A.2 Obituaries and tributes.

A.1 Obituary published in The Times, 28 June 1980.

Copy of Emmanuel College Magazine containing tributes to Sutherland by 'D.G.T.W[illiams]' and 'B.A.T[hrush]'.

Article by N. Kurti published in CODATA Newsletter, <u>22</u>, June 1981.

Notice of Memorial Service, 11 October 1980.

A.2 8 pp. typescript draft of obituary by N. Sheppard for publication in European Spectroscopy News, with brief correspondence.

Uncorrected proof of Royal Society Memoir by N. Sheppard (Biographical Memoirs of Fellows of the Royal Society, 28, 1982). Correspondence assembled by Sheppard during the preparation of the Memoir is at A.42-A.53.

A.3 'Notes for Autobiography for Royal Society'.

Sutherland's own ms. notes (16 pp.) describing his family background, education and research up to his move to the University of Michigan in 1949. The ms. is in pencil and bears notes and annotations in pencil and red ink by N. Sheppard who quotes extensively from this account in his Memoir of Sutherland.

A.4 Sutherland's Royal Society 'Green Book' containing biographical entries up to 1924 only.

A.17 Correspondence re award of Leverhulme Research Fellowship for visit to American laboratories specialising in infrared research, April-September 1939.

For Sutherland's report on his tenure of the Leverhulme Fellowship see B.2.

See also B.47.

A.18 Correspondence with the Department of Scientific and Industrial Research, mainly regrant for the employment of an assistant to enable Sutherland to continue researches on molecular structure by infrared spectra after his return from U.S.A. in October 1939.

A.19 Correspondence re offers of various wartime posts.

A.20-A.27 Election to Fellowship of the Royal Society, 1949.

Letters of congratulation, in alphabetical order.

A.20 A-B

A.21 C-D

A.22 E-G

A.23 H-K

A.24 L-O

A.25 P-S

A.26 T-W

A.27 Illegible and first name signatures; menu for celebration dinner, 22 March 1949.

A.28 2 letters (both Sutherland's carbons) written in July 1956 on the eve of Sutherland's departure from the University of Michigan to become Director of the National Physical Laboratory.

For material relating to his appointment and resignation at the NPL see Section C.

A.29 Award of honorary degree by the University of St. Andrews, 1958.

Correspondence re arrangements, letters of congratulation.

- A.30 Knighthood, 1960.

 Brief correspondence re ceremony, grant of arms, etc.
- A.31, A.32 Miscellaneous awards and appointments, 1957-79.
 - A.31 Governor of the London School of Economics, 1957-65.

 Corresponding Member of the Société Royale des Sciences de Liège, 1960.

Trustee of University College (later Wolfson College), Cambridge, 1965.

Member of Lawes Agricultural Trust Committee, 1965-79 (see A.47, A.48).

Fellow of the Royal Society for the Encouragement of Arts, Manufactures and Commerce, 1968.

Foreign Honorary Member, American Academy of Arts and Sciences, 1968.

A.32 Trustee of the National Gallery, 1971.

Member of the Advisory Committee for the Wolfson Cambridge Industrial Unit (letter of thanks on retirement, 1977).

Honorary Fellow, Wolfson College, Cambridge, 1977.

Foreign Member, American Philosophical Society, 1977.

President, Cambridge Philosophical Society, 1980.

- A.33 Correspondence with the Director of the Center for Advanced Study in the Behavioral Sciences, Stanford, California,

 re possibility of Sutherland spending a further period of study there. (He was a Fellow for 6 months in 1972 see Introduction to Section E).
- A.34-A.39 Reunion in Honour of Sir Gordon and Lady Sutherland, held at Emmanuel College, 30 June 1977.

The occasion was organised by D.M. Agar and N. Sheppard and much of the correspondence is conducted with them.

- A.34 Correspondence with D.A. Ramsay, November 1975-November 1976. Ramsay suggested the idea of a reunion but in the event he was unable to attend.
- A.35 Correspondence with N. Sheppard and D.M. Agar, January-July 1977.

- A.36 Correspondence with former students and colleagues rearrangements for the Reunion, May 1976-May 1977.
- A. 37 Similar correspondence including letters of thanks, June-December 1977.
- A.38 Guest lists, table plans, circulars, etc.
- A.39 Drafts for speeches by Sutherland and N. Sheppard, photographs, signed menu.
- A.40 Letters received during illness, January-February 1979.
- A.41 Miscellaneous press-cuttings and memorabilia.
- A . 42-A . 53 MATERIAL RELATING TO ROYAL SOCIETY MEMOIR OF SUTHERLAND

Correspondence assembled by N. Sheppard during the preparation of his <u>Memoir</u> of Sutherland for the Royal Society. There is a copy of Sheppard's Memoir at A.2.

- A.42 Early typescript draft of part of the <u>Memoir</u> with a note by Sheppard 'contains some passages later deleted for lack of space'.
- A.43 Correspondence with Lady Sutherland and with Sutherland's sister, Marjorie.
- A.44-A.53 Correspondence with friends and colleagues in response to requests for reminiscences and information. In alphabetical order.
 - A.44 Agar, D. M.

 Reminiscences of wartime work on hydrocarbons.
 - A.45 Booth, G. H.

Campion, P. J. re NPL.

A.45 Cass, G. A.

re Sutherland's membership of the Cambridge University
Press Syndicate, 1965-78.

Crane, H. R.

A.46 Dainton, F. S.

Includes reminiscences of several periods of Sutherland's life.

Darmon, S. E. re wartime work on penicillin.

A.47 Davies, M. M.

Includes extensive reminiscences.

Dennison, H. J.

(Widow of D.M. Dennison).

De Ramsay, Lord

re Sutherland's membership of the Lawes Agricultural Trust Committee.

Ditchburn, R. W.

re Sutherland's work on diamond.

A.48 Fellgett, P. B.

re multiplex spectroscopy.

Fowden, L.

<u>re</u> Sutherland's associations with Rothamsted Experimental Station.

Freeman, R.

Gebbie, H. A.

re work at NPL.

A.49 Hurst, R.

re Sutherland's work at the Ministry of Supply, 1939-42.

Krimm, S.

<u>re</u> Sutherland's second period at the University of Michigan.

Kurti, N.

A.50 Lee, E.

Includes photocopies of 1939 letters and telegram from Sutherland to Lee; also of letters from G. MacFarlane and C.K. Wu written after Sutherland's death.

A.51 Murray, R.

<u>re</u> Sutherland's involvement with Cambridge University planning of student numbers.

Pankhurst, R. C.

Mainly re NPL.

Pople, J. A.

re NPL.

Price, W. C.

Mainly re wartime work on hydrocarbons.

A.52 Simpson, O.

re University of Michigan and NPL.

Thrush, B. A.

re Mastership of Emmanuel College.

Thomson, G.

re Sutherland's activities as Trustee of the National Gallery.

Uhlenbeck, G. E.

A.53 West, A. R.

 $\underline{\text{re}}$ wartime work on hydrocarbons. Includes copies of wartime reports.

Whiffen, D. H.

Includes extensive notes on Sutherland's career, 1944–49, and at the NPL.

SECTION B	EARLY INFRARED RESEARCH B.1 - B.92		
	B.1 - B.3	INFRARED RESEARCH IN THE 1930s	
	B.4 - B.13	WARTIME WORK ON HYDROCARBONS	
	B.14 - B.29	WARTIME WORK ON PENICILLIN	
	B.30 - B.72	CORRESPONDENCE WITH FRIENDS AND COLLEAGUES, 1933 - 47	
	B.73 - B.91	CORRESPONDENCE WITH INDUSTRIAL FIRMS, 1932 - 42	
	B.92	POSTWAR WORK AT THE UNIVERSITY OF MICHIGAN	

This Section consists chiefly of correspondence and research material c.1931 - 48. Most of the correspondence was originally kept by Sutherland in 4 alphabetical box files and although it is not all 'scientific correspondence' in the strictest sense, it provides an interesting overall picture of Sutherland's career and research during this period.

With the exception of Sutherland's Ph.D. thesis (B.1) there are no working papers or laboratory notes until the war time period. B.4 - B.29 contain working papers and reports by Sutherland and others documenting infrared investigations of hydrocarbons and penicillin.

Item B.92 is almost the only surviving material from Sutherland's second period at the University of Michigan after the Second World War. cf. A.28 which contains carbon copies of 2 letters written immediately before his departure in 1956.

Correspondence documenting Sutherland's research grant and job applications during this period has been transferred to Section A.

B.1-B.3 INFRARED RESEARCH IN THE 1930s

- B.1 'The structure of simple polyatomic molecules from a study of their infra-red absorption and Raman spectra'.

 Sutherland's Cambridge Ph.D. thesis, 1934.
- B.2 Ms. and typescript drafts of research reports as follows:

 'Carnegie Report 1930-31'

'Final Report to Carnegie Trust October 1934'

'Report on Tenure of Leverhulme Fellowship ... from 1st April 1939 to 30th September 1939'

2 pp. ms. 'Notes on Heitler's Lecture May 18th' (n.d. but originally kept with 1934-35 correspondence) is also included in the folder.

For correspondence <u>re</u> award of Carnegie and Leverhulme Fellowships see A.13, A.17.

B.3 Correspondence <u>re</u> research grants for the purchase of materials and apparatus from the Chemical Society (1937) and the Van T'Hoff Fund (1938-39).

B4 - B.13 WARTIME WORK ON HYDROCARBONS

- B.4-B.7 Contents of a very delapidated folder labelled by
 N. Sheppard 'Wartime Enemy-Fuel Analysis by IR

 Linfrared I. The original drawn-out hydrocarbon spectra
 measured by point by point recording'. The original
 folder is at B.7.
 - B.4 Envelope containing 'Card Index of Runs on Substances for Report I'.
 - B.5 Bundle of records of hydrocarbon spectra with ms. note 'Curves corresponding to some of those in Report no.X. M.A. [D.M. Agar] 15.8.77.'. See B.9 below.

- B.6 Bundle of similar material with note in the same hand 'This lot is a misc. collection of curves I found later'.

 Some printed matter is also included here.
- B.7 Further records of hydrocarbon spectra, many dated c.1941-43 in original folder.
- B.8 Spring-back binder with ms. note by N. Sheppard 'Wartime Enemy-Fuel Analysis by Infrared. Some drawn out point-by-point spectra and early single beam continuously recorded spectra'.
- B.9 'Infra-red spectra of some pure hydrocarbons' by G.B.B.M. Sutherland and H.W. Thompson.

Institute of Petroleum Research Committee, Hydrocarbon Research Group, Report No.X, January 1945.

B.10 'Infra-red spectra of some pure hydrocarbons' by Sutherland and others.

Report No. II, February 1946.

- B.11 'Report on a Mission to the United States carried out for Ministry of Aircraft Production during August and September 1943 by G.B.B.M. Sutherland ... and H.W. Thompson ...'.
- B.12 'Tabulation of the Physical Properties of Nineteen Classes of Hydrocarbons', by D.H. Peel.

I.C.I. Research Report, 18 March 1939.

Copy no.92, allocated to D.M. Simpson (later D.M. Agar), one of Sutherland's main collaborators in the work on hydrocarbons.

B.13 'Pure Hydrocarbons for Spectrographic Problems', by D.H. Peel.

Technical Advisory Committee, Spectrographic Sub-Committee, Report VII.

B.14-B.29	WARTIME WORK ON PENICILLIN
B.14	Bundle of notes, diagrams, records of meetings and discussions, all relating to work on penicillin, a few dated 1944, 1945.
B.15	Similar bundle of papers relating to collaborative work with A.R. Todd, 1944-45.
B.16	Miscellaneous smaller bundles and loose pages of similar material.
B.17	3 reports on penicillin work by A.R. Todd and others, 1945.
	The reports are numbered C.P.S. [Committee for Penicillin Synthesis] 389, 526, 544.
B.18	Notes on reports on penicillin work from other laboratories, 1944.
B.19	'Spectroscopic Measurements on the Structure of Penicillin carried out in Great Britain 1944-45', by H.W. Thompson.
	35 pp. typescript.
B.20	'Infra-red studies on penicillin and related compounds', by G.B.B.M. Sutherland and S.E. Darmon.
	10 pp. duplicated typescript with 8 figures, 4 July 1945. 2 copies.
	C.P.S. 551.
B.21	Earlier typescript drafts of C.P.S. 551.
B.22	Correspondence with firms and colleagues <u>re</u> supplies of penicillin and related compounds, June-August 1945, some conducted during Sutherland's visit to U.S.A.
	Some of the letters have ms. notes clipped to them and these have been left in place.
B.23	'Meeting on Penicillin at Cornell Instit. 30th July 1945'.
	7 pp. ms. notes of discussions.

	Early intrared research	
B.24	'Infra-red studies on penicillin and related compound Final report', by G.B.B.M. Sutherland and S.E. Da	
	40 pp. typescript with 10 figures, 27 April 1946.	
	C.P.S. 694.	
B.25	'Infra-red studies on penicillin and related compound Appendix to final report', by G.B.B.M. Sutherland and S.E. Darmon.	ds.
	Typescript draft and duplicated typescript final vers 24 June 1946.	sion,
	C.P.S. 697.	
B.26	Contents of an envelope labelled 'Penicillin. Notes and Jottings'.	
	Ms. notes, data and diagrams, not all in Sutherland' hand.	s
	See also B.27.	
B.27	Ms. draft of C.P.S. 694, originally kept in the enve at B.26	elope
B.28	Miscellaneous material <u>re</u> penicillin including 1 p. r notes labelled 'Cook's Talk' and brief correspondence	
B.29	Reports and press-cuttings on penicillin, c.1945-46.	
B.30-B.72	CORRESPONDENCE WITH FRIENDS AND COLLEAG 1933-47	GUES,
B.30	Allen, H. S.	1934-37
	Personal and scientific correspondence including news of other St. Andrews graduates and common the progress of Sutherland's career.	
B.31	Angus, W. R.	1933-34, 1939

1939 correspondence is on mandelic acid.

Astbury, W. T.

1941

B.32	Barnes, R. B.	1944
	Barnes, W. H.	1933
	Comments on paper by Sutherland on Raman eff at very low temperatures.	fect
	Bartholome, E.	1934
	Bauer, E.	1938
	Invitation to collaborate in the preparation of a definitive table of vibration frequencies.	
	Bennett, G. M.	1938
B.33	Bowen, E. J.	1940
	re proposed book on molecular spectroscopy.	
	Bragg, W. H.	1938
	Includes letter from W.H.J. Childs.	
	Bragg, W. L.	1942
	Brockway, L. O.	1938
B.34	Cartwright, E. H.	1934-39
	Personal and scientific correspondence.	
B.35	Cassie, A. B. D.	1934-40
	1940 correspondence is on experiments to investigate the ultra-violet absorption of wool and in a note by W.C. Price.	
	Chapman, F.	1942
B.36	Conn, G. K. T.	1940, 1942
	Personal and scientific correspondence.	

B.37, B.38	Corin, C.	1936-38
B.37	1936-37	
	Mainly arrangements for Corin to work with Sutherland in Cambridge, 1937. Includes deta discussion of experiments to be conducted.	ailed
B.38	1938	
B.39	Curtis, W. E.	1938
	Davies, M. M. On research planned and in progress, joint	Mostly undated, c.1937-39
	publications, etc.	
	De Hemptinne, M.	1937, 1938
B.40	Dennison, D. M.	1933-34
	On research in progress, drafts for publication etc.	s,
B.41	Emeleus, H. J.	1938
	Emeleus, K. G.	1933-34
B.42	Eucken, A.	1938
	Fowler, R. H.	1936, 1940
B.43	Fox, J. J.	1937-44
	On experimental methods and results, meeting publications, etc. Sutherland's letter of 21 / 1944 is re proposed work on diamond.	
B.44	Fraser, R.	1936, 1940, 1944
	Hardy, J. D.	1938, 1940-41
	Herzberg, G.	1935

B.45	Hettner, G.	1934
	Sutherland's ms. draft only.	
	Inglis, C. E. (Sutherland's carbon only).	1941
	(Some rand's carbon only).	
	Jacquer, F. M.	1936
B.46	Jahn, H. A.	1939
	Jones, R. V.	1934-35
	Jungers, J. C.	1938
	Lederer, E. L.	1937
B.47	Lee, E.	1939-40
	Mainly letters to Sutherland during his visit to U.S.A. in 1939 with extensive news of research and colleagues in Cambridge and comments on the international situation. There are a few replies from Sutherland with news of his American.	rch n
B.48	Linnett, J. W.	1938
	Lowery, H.	1936
	Lowry, T. M.	1933
	Comments on draft papers by Sutherland and a cussion of future research plans.	dis-
	Mannebach, C. W.	n.d., 1938
	Menzies, A. C.	1934
B.49	Migeotte, M. V.	1937-38
	Arrangements to work with Sutherland – event curtailed to a brief visit to his laboratory and others in U.K.	,

B.57

1934

	Early infrared research	
B.50	Millikan, G.	1934
	Mullikan, R. S.	n.d., 1933
	Nielsen,	1939
	(Sutherland's carbon only).	
	Partington, J. R.	1942, 1943
B.51, B.52	Penney, W. G.	1934, 1937-38 n.d.
B.51	1934	n.u.
	Extensive correspondence arising from paper by C.R. Bailey, published in the Transactions of Faraday Society. Includes letter from Bailey and arrangements with the Editor of the Transaction publish a reply to Bailey's paper.	the ,
B.52	1937, 1938, n.d.	
B.53	Philpot, A. J.	1939
	Letter to W.L. Bragg <u>re</u> process of depositing reflecting films on glass.	non-
	Pirenne, M. H.	1938
	Price, W. C.	n.d. c.1944
B.54	Randall, J. T.	1936-37
	On fluorescence spectra. Includes 5 pp. ms. r by Sutherland on points raised by Randall.	notes
B.55	Rao, I. R.	1933
	Rawlins, F. I. G.	1934-35
	Rees, A. L. G.	1944
B.56, B.57	Roy, A.	1933-34
	Letters from Roy only, written from the Univer- Michigan following Sutherland's return to Cam- with news of friends and colleagues, research progress, etc.	bridge,
B.56	1933	

	Edity Illiared research	
B.58	Semmens, E. G.	1944
B.59	Snow, C. P.	1931, n.d., 1943
	Letters from Snow (Sutherland's replies have survived) with detailed comments on his own Sutherland's research. Includes Snow's draft letter to be sent by Sutherland for publication Nature on 'Raman Lines of Simple Polyatomic cules'.	and for n in
B.60	Taylor, M.	1937
	Teller, E.	n.d.
B.61-B.66	Thompson, H. W.	1937-47
	Extensive correspondence mainly documenting wartime collaboration between Thompson at C and Sutherland at Cambridge in the use of in spectroscopy to investigate the structure of 'e fuels. The exchanges include comments on reports, arrangements for meetings, comparise experimental results, etc.	Oxford frared enemy' draft
	The wartime correspondence was originally coin a single folder in reverse chronological or has now been split into several smaller units of reference but the original folder with a suby N. Sheppard of the main points of most of letters is at B.61.	der. It for ease mmary
B.61	1937-39, 1941	
B.62	1942	
B.63	1943	
B.64	1944	
B.65	1945	
B.66	1946-47	
B.67	Tolansky, S.	1937-42
	Trivedi, S. A.	1942
	Urey, H. C.	1937
	Vegard, L.	1934

	Early Infrared research	
B.68	West, W.	1939
	(Sutherland's carbon only).	
	Williams, G.	1942
	Wu, C. K.	1939
	Long letter written on his return to China and describing conditions at Tsinghua University.	
B.69	Wu, T-Y	1933, n.d., 1936
	Includes draft typescript for submission to the Physical Review and 3 pp. ms. calculations.	
B.70	Shorter correspondence, mainly re exchanges of rep but including some brief personal letters.	rints
B.71	Letters from research students and others seeking ad- and information on careers, jobs, research grants, e	
	Not indexed.	
B.72	Illegible and first-name signatures.	
D 70 D 01	CORRESPONIDENCE WITH INDUSTRIAL FIRMS 10	22.42
B.73-B.91	CORRESPONDENCE WITH INDUSTRIAL FIRMS, 19	
	re equipment and materials for Sutherland's in work. Many of the sequences include brochu detailed quotations for items to be supplied.	
	In alphabetical order, not indexed.	
B.73	Aldis Bros., Birmingham	1934
	Edgar Allen & Co. Ltd., Sheffield	1934
	Automatic Coil Winder & Electrical Equipment Co. Ltd.	n.d.
	(brochure only)	
B.74	Baird & Tatlock (London) Ltd.	1934
	R. & J. Beck Ltd., London	1934, 1937
	F.E. Becker & Co., London	1933-34

B.75	Bellingham & Stanley Ltd., London	1933-37
	British Oxygen Co. Ltd., Wembley	1937
	British Resistor Co. Ltd., Manchester	1938
	British Thomson-Houston Co. Ltd., Rugby	1936
B.76	Corning Glass Works, New York	1939
	Cambridge Instrument Co. Ltd., London	1938
	Chance Brothers and Co. Ltd., Birmingham	1936
B.77	Continental Express Ltd., London	1936-37
	Coulson & Son Ltd., Cambridge	1934
	Electric Wiring & Repair Co., Cambridge	1937
B.78	Ferranti Ltd., Hollinwood	1936
	Thos. Firth & John Brown Ltd., Sheffield	1934
	W.G. Flaig & Sons Ltd., London	1936, 1937
B.79	General Electric Co. Ltd., Wembley	1936-38
B.80	Glasco-Lampen-Gesellschaft, Berlin	1937-38
	Gowllands Ltd., Croydon	1938
	Gregory, Bottley & Co., London	1938
B.81	Bernhard Halle Nachfl., Berlin	1937
	Hanovia Chemical & Manufacturing Co., New Jersey	1932
	Adam Hilger Ltd., London	1939-42
B.82	George Ibberson & Co., Sheffield	1934, 1937
	Igranic Electric Co. Ltd., Bedford	1936
	Imperial Chemical Industries Ltd., London	1935, 1937

B.83	Import Duties Advisory Committee (includes correspondence with Customs and Excise)	1936-39
	On importing of apparatus, etc. from abroad.	
B.84	India Rubber, Gutta Percha and Telegraph Works Co. Ltd., London	1936
	James A. Jobling Ltd.	1937
	Johnson & Phillips Ltd.	1936
B.85	A. Charles King Ltd., London	1940
	P.J. Kipp & Zonen, Delft	1934
	Kodak Ltd.	1934
B.86	G. Mainzer, London	1936-37
	Metropolitan-Vickers Electrical Co. Ltd., Manchester	1935, 1937
	National Glass Industry, London	1936
B.87	W.G. Pye & Co., Cambridge	1934
	Quickfit & Quartz Ltd., Birmingham	1935
	Rich & Bundy Ltd.	1936-37
B.88	H.H. Sharland, H. Kemp, London	1937
	Solus Electrical Co. Ltd., London	1942
	James Swift & Son Ltd., London	1937
B.89	Thermal Syndicate Ltd., London	1937
	Townson & Mercer Ltd., London	1936
	Unicam Instrument Co. Ltd., Cambridge	1942
	United Kingdom Optical Co. Ltd., London	1935
B.90	Vereinigung Göttinger Werke, Göttingen	1936
	Carl Zeiss (London) Ltd.	1934

B.91 Miscellaneous ms. notes found with 1934-35 correspondence. Mainly notes of references, addresses of firms, etc.

B.92 POSTWAR WORK AT THE UNIVERSITY OF MICHIGAN

List of classified reports from Willow Run Research Center received by Sutherland, October 1953.

In original folder.

C.1 - C.10 APPOINTMENT AND RESIGNATION C.11 - C.35 INTERNAL ADMINISTRATION C.36 - C.52 RELATIONS WITH THE ROYAL SOCIETY AND DSIR

Sutherland was appointed as Director of the National Physical Laboratory (NPL) in succession to E.C. Bullard in January 1956. He took up his appointment in September of that year and remained in office until 1964 when he resigned in order to become Master of Emmanuel College, Cambridge.

During Sutherland's Directorship the NPL underwent a period of growth and change. An increase in both staff and facilities was accompanied by the reorganisation of the Electricity, Metrology and Physics Divisions of the laboratory into Standards, Applied Physics and Basic Physics, by which he hoped to raise the calibre of fundamental research work at the NPL and attract staff of a higher quality than had previously been possible.

The following papers illustrate some aspects of these administrative changes and of the daily life of the NPL during this period.

C.1-C.10	APPOINTMENT AND RESIGNATION
C.1	Correspondence with the Secretary, Royal Society (D. Brunt), November-December 1955. The correspondence opens with a letter from Brunt, 11 November, enquiring whether Sutherland would like to be considered as a possible successor to E.C. Bullard as Director of the NPL.
C.2	Letters from Bullard and his wife, November-December 1955.
C.3	Correspondence with B. Lockspeiser (Secretary) and other members of the Department of Scientific and Industrial Research (DSIR), November-December 1955. Includes arrangements for Sutherland to make a brief visit to England to discuss the appointment.

- C.4 Further correspondence with DSIR, January-March 1956, re salary, conditions of appointment, etc. Includes official letter of appointment, 27 January 1956.
- C.5 Correspondence with H.W. Melville (Lockspeiser's successor as Secretary, DSIR), February-August 1956.
- C.6 Correspondence with Secretary, Royal Society, and others, February-October 1956, mainly re arrangements for furnishings, maintenance, etc. of the Director's house (Bushy House) and garden at NPL.
- C.7 Correspondence with DSIR and Ministry of Works re Bushy House (rent, maintenance, etc.), 1957-64.
- C.8 Official letter of resignation in order to take up appointment as Master of Emmanuel College, Cambridge, 20 May 1964.

Brief correspondence arising, mainly re arrangements for various farewell parties, but including letter from B.F.J. Schonland re arrangements for appointment of Sutherland's successor.

- C.9 Special supplement of NPL News, November 1964, issued as a 'Salute to Sir Gordon Sutherland' on his departure from NPL.
- C.10 Correspondence with the Royal Society, DSIR and Ministry of Works, June 1964–May 1965, re arrangements for leaving Bushy House, etc.

C.11-C.35 INTERNAL ADMINISTRATION

The following papers consist mainly of memoranda and correspondence from the Secretary and Superintendents of Divisions on various aspects of internal policy. C.23-C.28 contains material re conferences and symposia held at NPL during Sutherland's directorship, and this is followed by some more general administrative material.

C.11 Correspondence with E.S. Hiscocks (Secretary, NPL),
February-August 1956. Includes discussion of arrangements
for forthcoming symposium on 'The Direction of Research
Establishments' (see also C.23).

C.12	Ms. and typescript drafts for Report of the NPL Executive Committee for 1956, some in hand of E.S. Hiscocks.
C.13	Sutherland's ms. notes for 'Superintendents Meeting Sept. 19th'[1956] with some additional notes and jottings on research, staff, etc.
C.14	Memoranda sent to Sutherland by Superintendents of Division and the Secretary (E.S. Hiscocks), October-November 1956, outlining their problems and frustrations and setting out views on the future development of the NPL.
C.15'	Correspondence and ms. drafts <u>re</u> staff, grading of posts, etc., 1956-57 and n.d. Includes copies of correspondence of previous Directors <u>re</u> grading of senior posts in NPL.
C.16	Further memoranda on staff complements, grading, etc., c.1957-58, 1963.
C.17	Memoranda from Superintendents of Divisions, July- August 1957, commenting on proposal to create new post of Deputy Director of NPL.
C.18	Memorandum by L.A. Sayce on the relationship of NRDC to research development in Light Division NPL, and brief correspondence on same subject with P.M.S. Blackett.
C.19	'The Second Five Year Plan of the National Physical Laboratory (1959–64). The Director's Proposals'.
	Duplicated typescript, 4 November 1957, with 2 pp. background information.
C.20	Memoranda from Superintendents of Divisions and the Secretary (H.J. Hadow), December 1959, updating comments on problems and frustrations made in October 1956.
C.21	Contents of folder labelled 'Two Phase Filamentary Materials' with note by N. Sheppard 'A significant historical file'.
	Contains correspondence with DSIR, NRDC and others, July-November 1961, re proposal to move a research team from Hinxton Hall (Tube Investments Research Laboratories) to NPL.
C.22	8 pp. letter from J. Pople, September 1962, beginning 'You invited me to write about the conditions at NPL which I find unsatisfactory when compared with some of the American laboratories I have visited recently'.

The National Physical Laboratory C.23-C.28 Conferences and symposia held at NPL, 1956-64. C.23 Symposium on 'The Direction of Research Eastablishments', 26-29 September 1956. Drafts and final version of programme, lists of participants, typescript of Sutherland's Opening Address, brief correspondence. Correspondence with E.S. Hiscocks on the organisation of the symposium is at C.11. C. 23a Symposium on Vision, 23 September 1957. Typescript of Sutherland's opening remarks. C.24 Conference on 'The Control of Noise', 26 June 1961. Typescript of opening speeches by Sutherland and the Parliamentary Secretary to the Minister for Science (D. Freeth). C.25 Machine Translation Conference, 5 September 1961. Ms. and typescript of Sutherland's opening remarks. C.26 Conference on 'The Accuracy of Industrial Measurements of Length and Diameter', 17 and 18 April 1962. Typescript of opening remarks by Sutherland and D. Freeth. C.27 International Conference on 'Wind Effects on Building and Structures', 26 June 1963. Typescript draft of opening speech by D. Freeth. C.28 Conference on 'Fundamental Problems of Low Pressure Measurements', 23-25 September 1964. Provisional programme, typescript of Sutherland's opening remarks. C.29 General administrative correspondence, 1957-61. In chronological order. C.30 Correspondence with colleagues re arrangements to visit NPL, 1957-61. Not indexed. C.31 Invitations to attend lectures, dinners, meetings, cere-

monial and social occasions, 1957-61.

Not indexed.

C.32 Correspondence arising from requests by various scientific societies for Sutherland to lecture on the work of the NPL, 1957-58. C.33 Miscellaneous reports and circulars including report on visit by Sutherland to Post Office Engineering Research Station, Dollis Hill, 27 September 1957, and NPL Training Committee report to Director for year ending December 1959. Assorted issues of NPL News, 1958-64 and 1970, com-C.34 memorating various important events (Sutherland's knighthood, award of FRS to J.A. Pople, etc.) C.35 Reports and memoranda by Superintendents and Secretary on various administrative matters, March-July 1964, and letter from J.V. Dunworth with news of the laboratory since Sutherland's departure, November 1964.

C.36-C.52 RELATIONS WITH THE ROYAL SOCIETY AND DSIR

The question of the division of responsibility for the NPL between the Royal Society and DSIR was current throughout Sutherland's Directorship following the passing of the DSIR Act in August 1956 which eventually resulted in changes in the organisational structure of the NPL. Negotiations between DSIR and the Royal Society continued until 1963 when the report of the Committee of Enquiry into the Organisation of Civil Science (the Trend Committee) suggested more far-reaching changes stemming from the proposed abolition of DSIR (see C.45 ff.).

The following material includes reports, committee papers and correspondence documenting negotiations between the Royal Society, DSIR and others, 1956-64.

C.36-C.42 Correspondence and papers on the relationship between DSIR, the Royal Society and the NPL, 1956-63.

C.36 1956

Duplicated typescript and printed version of report of Committee of Enquiry into the organisation and functioning of the Department of Scientific and Industrial Research.

Brief correspondence and 1 p. ms. notes by Sutherland, probably made during the negotiations leading to his appointment as Director, NPL, are also included in the folder.

C.37 1957

Includes discussion of proposal made at Special Meeting of DSIR Research Council, January 1957, to set up an ad hoc Committee to review the organisation and programme of work of the NPL, draft 'Note on the relation between the Royal Society and the National Physical Laboratory and D.S.I.R.' with additional comments by E.S. Hiscocks, and correspondence with H.W. Melville and W.G. Penney.

C.38 1958

Mainly papers for or arising from meeting held at the Royal Society, 30 October 1958. Includes further drafts of Sutherland's 'Note on the relation between the Royal Society, the National Physical Laboratory, and D.S.I.R.'

C.39 1959

Includes draft by Sutherland on 'The Scheme of Organisation of the National Physical Laboratory' with comments and revisions by others.

C.40	1960-61
C.41	1962
C.42	January-July 1963
C.43	'The Future Development of the National Physical Laboratory by the Director'.
	14 pp. typescript draft with 2 appendices, 20 August 1963.
C.44	Notes, drafts and correspondence assembled as background material to C.43.
C.45-C.52	Correspondence and papers arising from the report of the Committee of Enquiry into the Organisation of Civil Science (the Trend report).
	Among other things the Trend Committee recommended the establishment of an Industrial Research and Development Authority to assume responsibility for research stations managed by DSIR, including the NPL.
C.45	Correspondence and comments on the Trend report exchanged with colleagues outside NPL. Includes 2 memoranda from Sutherland, one for H.W. Melville (13 November 1963) and the other for the Secretary, Royal Society (sent 3 December 1963).
	A copy of the Trend report with a few ms. notes and under- linings by Sutherland is also included in the folder.
C.46	Comments on the Trend report from the Secretary, Superintendents and others within NPL.
C.47	Papers for meetings of committee set up to prepare Royal Society's written evidence to the Trend Committee, November 1963-January 1964.
C.48	Memorandum by the Council for Scientific and Industrial Research on the Trend report, sent to Sutherland, 16 December 1963.
C.49	Further correspondence and papers on the implications of the Trend report, January-August 1964.

- C.50-C.52 Correspondence and papers relating to Royal Society Panel appointed to draft a paper on the future of the NPL, July-October 1964.
 - C.50 July

Includes drafts of government statements on the Trend report, papers for meeting at the Royal Society on 29 July, and ms. notes by Sutherland on conversations with M. Dean (Under-Secretary of State, Department of Education and Science).

C.51 August-September

Includes minutes and Sutherland's ms. notes of the meeting at the Royal Society on 29 July and a further meeting on 20 August.

C.52 October

Includes drafts and final version of paper on the future of the NPL sent to M. Dean by the President of the Royal Society on 22 October 1964.

COMMITTEES, SOCIETIES, ORGANISATIONS D.1 - D.58 SECTION D

The material is presented in alphabetical order and ranges from one or two letters about membership, meetings, etc. to correspondence and papers ranging over several years such as those relating to the foundation of the International Organisation for Pure and Applied Biophysics (IOPAB) in which Sutherland played an active part. He was also involved in the early days of the British Biophysical Society as a member of the steering committee and chaired the Royal Society exploratory committee leading to the formation of the British Acoustical Society.

For material on work done by Sutherland for UNESCO, see F.36 - F.38, F.39 - F.43, F.44.

ADVISORY BOARD ON RELATIONS WITH D.1 UNIVERSITIES

1966

2 letters only re suitable dates for meetings.

AMERICAN PHYSICAL SOCIETY

1934

BRITISH ACOUSTICAL SOCIETY see D.50-D.54

D.2, D.3 BRITISH BIOPHYSICAL SOCIETY

1959-62

The first moves towards the formation of a Biophysical Society in Great Britain were made following an informal meeting convened by J.T. Randall in J.C. Kendrew's rooms in Peterhouse, Cambridge, 8 July 1959. Sutherland attended this initial meeting and took an active part in the foundation of the society, first as a member of a small Working Party set up by the Faraday Society and then as a member of the Steering Committee of the British Biophysical Society.

The material consists mainly of committee papers documenting the formation of the Society, with some correspondence.

D.2 1959-60

> Includes report of Faraday Society Working Party on Biophysics and Biophysical Chemistry and papers for meetings of the Steering Committee to December 1960.

D.3

D.4

D.5, D.6

D.5

D.6

Committees, societies, organisations 1961-62 Includes papers for meetings of the Steering Committee to 12 December 1961 (13th and last meeting) and letter of thanks to Sutherland for his service on the committee. CAMBRIDGE PHILOSOPHICAL SOCIETY 1934 Announcement of Sutherland's election as a Fellow. 1936, 1937, 1941 CHEMICAL SOCIETY Mainly re membership. COUNCIL FOR SCIENTIFIC POLICY 1964-68 See also G.31, H.3. Letters of appointment to membership of the Council for Scientific Policy from January 1965; press notice with list of members; letter of thanks on termination of membership in December 1967; circulars re dates of meetings.

D.7, D.8 THE FARADAY SOCIETY

1934-45

Correspondence with the Secretary and Editor of the <u>Transactions</u> (G.S.W. Marlow), <u>re</u> papers submitted for publication by Sutherland and others, arrangements for meetings, etc.

Correspondence with members of CSP and other

D.7 1934, 1937-39

D.8 1940-45

Includes letter from H.W. Thompson <u>re</u> proposed meeting on Optical Methods of determining Molecular Structure, 1941.

D.9 INSTITUTE OF PHYSICS 1934

colleagues, 1966-68.

Committees, societies, organisations

D.10-D.12 INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS.

Committee on Data for Science and Technology [CODATA].

Memoranda and correspondence exchanged between members of CODATA, 1968-80.

Sutherland was a member of the Bureau 1968–72 and U.K. Delegate 1978–80.

D.10 1968-70

D.11 1972-76

Includes ms. by Sutherland on the future of CODATA prepared for a discussion at Boulder, Colorado, 1 July 1976.

D.12 1978-80.

Committees, societies, organisations

D.13-D.48 INTERNATIONAL ORGANIZATION FOR PURE AND
APPLIED BIOPHYSICS (IOPAB). 1959-62, 1964

At a meeting of the International Union of Pure and Applied Physics (IUPAP) in Rome in September 1957 an ad hoc committee consisting of Sutherland, R.H. Bolt and A. Joffe was appointed to look into the desirability of setting up a Commission on Biophysics. The committee recommended the holding of a small international conference on biophysics in order to bring together a representative selection of physicists and biologists and so allow a wider discussion of the necessity for an international organisation in biophysics and the form it might take. Sutherland was Chairman of the Organising Committee of this conference which was held in Cambridge, July 1959.

As a result of the Cambridge conference it was decided to hold an open international congress in Stockholm in 1961, to be preceded by a planning meeting attended by representatives of interested countries and international organisations. The planning meeting was held in Amsterdam in July 1960, and it was decided to set up a small committee, with Sutherland as convenor, whose task would be to draw up a proposed constitution for an international organisation for biophysics and investigate the relationship it should have with other international organisations.

IOPAB was formed at the Stockholm conference on 2 August 1961 and Sutherland was elected Honorary Vice-President. The following papers document the events described above from the Cambridge conference to the end of 1962.

D.13-D.26

International Biophysics Conference on 'Recent Contributions of Physics to Biology', Cambridge, 6-9 July 1959.

D.13

'Interim Conclusions on the Proposal to form a Biophysics Commission'. 2 pp. typescript by Sutherland and R.H. Bolt, 19 May 1958, with letter from Sutherland to A.V. Hill.

Typescript copy of report of the Ad hoc Committee on Biophysics (Sutherland, Bolt and A. Joffe) to the Executive Committee of IUPAP, June 1958. Among other recommendations the report calls for IUPAP to sponsor an international conference on biophysics in 1959 or 1960.

Correspondence with A. Engstrom, August-October 1958, re arrangements for conference and formation of international organisation for biophysics.

	Committees, societies, organisations
D.14	Minutes of meetings of the Organising Committee for the conference, November 1958-April 1959. (Sutherland was Chairman.)
D.15	Correspondence re preliminary arrangements for the conference, November 1958-June 1959.
D.16	Correspondence with the National Science Foundation re finance.
D.17-D.20	Correspondence with participants, mainly <u>re</u> administrative arrangements, but including some scientific exchanges. In alphabetical order.
D.17	A - B
D.18	C - G
D.19	H - K
D.20	L - W
D.21	Correspondence with other international organisations, May-July 1959.
D.22	Ms. notes <u>re</u> financial and other arrangements, drafts of conference programme, lists of possible participants, etc.
D.23	Ms. notes for Sutherland's address on 8 July, opening the 'General Discussion on whether there is need for an international organisation in Biophysics and, if so, what form it should take.'
	Duplicated typescript of Sutherland's report on the conference to the Executive Committee of IUPAP, August 1959.
	Final version of programme and list of participants is also included in the folder.
D.24	Correspondence with the Editors of <u>Nature</u> and <u>Science</u> . Includes 2 drafts of report on the conference for publication in both journals.

SAC 89/1/82	
	Committees, societies, organisations
D.25	Correspondence <u>re</u> possible arrangements for publishing papers given at the conference. (The idea was abandoned as impractical.)
D.26	Requests from journals, information services, etc. for reports of proceedings or reprints of papers given. Not indexed.
D.27-D.31	International Planning Meeting of Biophysicists at Amsterdam, 14–17 July 1960.
D.27	Correspondence with A.K. Solomon, July 1959-July 1960, mainly re arrangements for the meeting in Amsterdam.
D.28	Correspondence with J.A.V. Butler, J.C. Kendrew and J.T. Randall, re attendance at the Amsterdam meeting. Includes some correspondence with the Royal Society re travel grants.
D.29	Correspondence with A.J.H. Vendrick (Secretary, Amsterdam Meeting), January-June 1960.
D.30	Programme and list of participants; notes and drafts made during the meeting; photograph of delegates.
D.31	Drafts of the Secretary's Report on the Meeting with correspondence arising.
D.32-D.34	Correspondence, August 1960-July 1961, with members of committee appointed at the Amsterdam Meeting to draw up a constitution for an International Organisation in Biophysics. (Sutherland was Convenor of the committee.)
D.32	Herčík, F.
	Lamerton, L. F.
	Circulars from Sutherland to all members of the committee and 2 drafts of the committee's 'Terms of Reference' are also included here.
D.33	Rajewsky, B.
D.34	Rosenblith, W. A.

Solomon, A. K.

CSAC 89/7/82	43
	Committees, societies, organisations
D.35	Several drafts of 'Proposed Statutes of an International Organisation for Pure and Applied Biophysics'.
D.36	Several drafts of 'Enabling Resolutions for International Organization for Pure and Applied Biophysics'.
D.37	Correspondence from colleagues (non-committee members) commenting on the draft 'Statutes' and 'Enabling Resolutions' (in alphabetical order).
D.38	Correspondence with representatives of the following international scientific unions, committees, etc. re the possibility of forming an international organisation for biophysics, August 1960-September 1961:
	International Council of Scientific Unions
	International Liaison Committee of Medical Physics
	International Union of Biochemistry
	International Union of Crystallography
	International Union of History and Philosophy of the Sciences
	International Union of Physiological Sciences
D.39-D.44	International Biophysics Congress, Stockholm, 31 July-4 August 1961.
D.39	Correspondence <u>re</u> arrangements for Sutherland to attend a meeting of the Steering Committee for the Congress held in Stockholm, 28 October 1960.
	Folder also includes material <u>re</u> a visit by Sutherland to the ASEA Laboratories in Stockholm the day before the meeting.
D.40, D.41	Correspondence with authors and others <u>re</u> papers to be presented at the Congress during the session chaired by Sutherland (on 'Emerging Techniques in Biology'). In alphabetical order.
D.40	C - K
D.41	L-T
D.42	Further correspondence <u>re</u> arrangements for the Congress, October 1960-June 1961.

	Committees, societies, organisations	
D.43	Conference programmes, circulars, ms. notes taken by Sutherland during the meeting.	
D.44	Correspondence re arrangements for publication of papers presented at the Congress.	
D.45-D.48	Correspondence with A.K. Solomon, Secretary-General of the International Organisation for Pure and Applied Biophysics, September 1961-October 1962 and 1964, documenting the final stages in the founding of IOPAB.	
	Copies of correspondence exchanged between Solomon and others, sent to Sutherland for information, are also included in the sequence.	
D.45	September-December 1961	
	Includes correspondence with J.A.V. Butler on the formation of a (British) National Committee on Biophysics.	
D.46	January-February 1962	
	Includes draft article for <u>Nature</u> on the !OPAB and proofs of Sutherland's introduction to the published proceedings of the Swedish conference.	
D.47	March-May 1962	
	Mainly re meeting of the Council of IOPAB in Vienna, 13 and 14 April 1962. Includes Sutherland's ms. notes taken at the meeting and draft report to the Royal Society.	
D.48	June-October 1962, 1964	
	Mainly re IOPAB's relationship with other international organisations including the International Council of Scientific Unions (ICSU). 1964 correspondence is a letter of thanks from Solomon to Sutherland on Sutherland's retirement as Hon. Vice-President of IOPAB.	
	Also included here is typescript of President's report to IOPAB council, June 1964.	
D.49	JUNIOR MOUNTAINEERING CLUB OF SCOTLAND 1933-34	
	Notices of meetings. A letter and application form from the Scottish Ski Club is also included here.	
	NATIONAL COUNCIL FOR CIVIL LIBERTIES 1938	
	OPTICAL SOCIETY OF AMERICA 1959	
	Announcement of election as Fellow.	

Committees, societies, organisations

D.50-D.57	ROYAL SOCIETY
D.30 D.3/	NO IAL JOCILII

See also C.1-C.10 passim, C.36-C.52 passim, E.1, E.23.

D.50-D.54

Ad hoc exploratory committee on the formation of a British Acoustical Society.

Sutherland was Chairman.

- D.50 Correspondence with A.J. King, E.J. Richards and others, August-December 1963, re preliminary moves towards the formation of a British Acoustical Society.
- D.51 Meeting to consider the formation of an acoustical society in the U.K. held in the Royal Society, 26 February 1964, with Sutherland in the Chair.

Correspondence, Sutherland's ms. notes, draft minutes of meeting.

- Correspondence and papers, March 1964-January 1965. Includes arrangements for meeting at the Royal Society, 20 April 1964, and report of the steering committee set up to draft a constitution and By-Laws for the proposed new society.
- D.53

 Correspondence and papers, December 1964-March 1965.
 Includes arrangements for 2 meetings of the <u>ad hoc</u> committee and letter of thanks to Sutherland from the Chairman of the newly-formed British Acoustical Society, 26 March 1965.
- D. 54 Correspondence and papers, April-November 1965, 1966.
- D.55

 Ad hoc working group to consider the Royal Society's future contributions to the Jungfraujoch and Gornergrat High Alpine Research Stations.

Sutherland was a member.

Brief correspondence and committee papers, typescript report by Sutherland on visit to Jungfraujoch and Gornergrat to attend Board Meeting on 14 and 15 September 1979. D.57

Committees, societies, organisations

D.56

British National Committee on Data for Science and Technology

1966-78

This committee was set up in 1966 to liaise with the ICSU Committee on Data for Science and Technology (CODATA) (q.v.). Sutherland was the first Chairman and also served as the official U.K. delegate to CODATA.

The material consists of brief correspondence and committee papers with ms. notes by Sutherland.

Arrangements for visit to Cambridge of Chinese delegation visiting U.K. at the invitation of the Royal Society, October 1972.

D.58 ROYAL SOCIETY CLUB

1958

Brief correspondence re election to membership.

SECTION E	EDUCATION	AND SCIENCE POLICY E.1 - E.47
	E.1 - E.16	THE BRAIN DRAIN
	E.17 - E.34	ROYAL SOCIETY FOR TECHNOLOGISTS
	E.35 - E.42	UNIVERSITY EXPANSION AND RELATED TOPICS
	E.43 - E.47	GENERAL CORRESPONDENCE

In 1962 Sutherland was appointed as Chairman of an <u>ad hoc</u> Committee of the Royal Society to collect information on the emigration of scientists from the United Kingdom. The Committee published its report in 1963 (see E.1) but Sutherland retained a keen interest in the problem throughout the 1960s, lecturing, publishing (e.g. <u>Bibliog. 149</u>) and corresponding with colleagues (see E.12 - E.16).

In 1963 a letter from Sutherland to <u>The Guardian</u> advocating the foundation of 'A Royal Society for Technologists' provoked a considerable correspondence and contributed to the Royal Society's decision to increase the number of Fellows elected each year in an attempt to broaden the basis of the Fellowship.

Sutherland's preoccupation with the status of the engineer or 'technologist' was shared by many colleagues, notably Sir Harold Hartley and M.W. Thring with whom he corresponded extensively on the subject for several years. (See E.25, E.29, E.30).

After his move to Cambridge Sutherland became directly involved in problems of university expansion with particular reference to university science departments. He served on two major Cambridge University committees (Joint Committee on Student Numbers and Committee of the General Board on Long-Term development) the papers for which have been passed to Cambridge University Archives (but see G.45). He also wrote a review of the Deer report on Cambridge University science (E.35) and in 1972 he spent six months at the Center for Advanced Study in the Behavioral Sciences, Stanford, conducting an investigation into the optimum size for a university. The results of this investigation were published in Minerva (Bibliog. 160) and the related correspondence is preserved at E.39 – E.42.

	Education and science policy
E.1-E.16	THE BRAIN DRAIN
E.1	'Emigration of Scientists from the United Kingdom. Report of a Committee appointed by the Council of the Royal Society', February 1963.
	Printed copy (Bibliog. 137).
	Sutherland was Chairman of the Committee.
	See also H.33.
E.2	'The Brain Drain'. Report of the Working Group on Migration of the Committee on Manpower Resources for Science and Technology, October 1967.
	Printed copy.
	Sutherland was a Member of the Working Group.
E.3	'The Brain Drain'. Article published in <u>Political Quarterly</u> , 1967 (<u>Bibliog</u> . 149).
	Ms. notes, typescript draft, correspondence with the Editor and others.
E.4	'Some Aspects of the U.S.A. Today'. Cantor Lecture to the Royal Society of Arts, 30 January 1967 (Bibliog. 150).
	Correspondence re arrangements, press-cuttings.
E.5	'The Brain Drain. Magnitude and Causes'. Contribution to Symposium on 'Aspects of the Brain Drain' organised by the Association of Scientific Workers, Birkbeck College, 10 May 1967.
	Programme, list of participants, correspondence with organisers, ms. notes and typescript summary of Sutherland's paper, notes taken during the Symposium, printed report.
E.6	Script of B.B.C. interview on the Brain Drain, 10 May 1967.
E.7	'The Brain Drain Problem. Causes, Magnitude and Possible Counter-measures'. Paper presented at 17th Pugwash Conference (see F.34, F.35) and scheduled for publication in Bulletin of the Atomic Scientists but in the event they were

Correspondence with J. Rotblat and editorial staff of <u>Bulletin</u> of the Atomic Scientists; typescript of paper.

unable to find space for it.

E.8	Conference on the International Migration of Talent, Ditchley Park, Oxon., 16–19 February 1968.	
	List of participants, reports of Discussion Groups, prinaccount of the conference.	nted
E.9	'The Migration of Scientists'. Paper given at British Association Meeting, Dundee, August 1968 (Bibliog. Offprint of Sutherland's paper, press reports of the M	
E.10	Miscellaneous reports and printed matter, mostly with annotations by Sutherland.	
E.11	Miscellaneous press-cuttings on the brain drain assemby Sutherland.	bled
E.12-E.16	Correspondence, in alphabetical order.	
E.12	Bowden, B. V.	1967
	Enclosing information on brain drain problem in countries other than Britain.	
E.13	Edwards, A.	1970
	re proposed B.B.C. 'Horizon' programme.	
	Lonsdale, K.	1968
	re ways of reducing the brain drain.	
	Nierenberg, W. A.	1968
E.14	Payne, G. L.	1965
	Enclosing OECD reports on the international manner of scientific and technical manpower.	ove-
E.15	Ward, W. H.	1964
	Williams, S.	1968
	Includes proposal for establishment of a Science and Technology Register to encourage liaison between industry and Ph.D. students.	e
E.16	Letters from members of the public, 1967-68. Not indexed.	

E.17-E.34	ROYAL SOCIETY FOR TECHNOLOGISTS	
E.17	Drafts and offprint of letter from Sutherland publin The Guardian, 30 November 1963, advocatin foundation of a 'Royal Society for Technologists'	ng the
	Brief correspondence with the Science Correspon of The Guardian is also included in the folder.	ndent
E.18	Press-cuttings of reactions to Sutherland's sugges	stions.
E.19	'Memorandum on a Proposal to form the Duke of Society'.	Edinburgh
	Drafts dated 9 and 14 December 1963 with a 'Fu dated 16 December, and suggestions for possible membership of the Society.	
E.20	Miscellaneous background material to E.19.	
	Includes 4 pp. typescript by Sutherland on the 'Gincreasing the number of Fellows elected annual Royal Society', 7 December 1960.	
E.21-E.32	Correspondence, in alphabetical order.	
E.21	Aldersley, G. N.	1963
	Allen, F.	1963
	Allibone, T. E.	1964
	Bowden, B. V.	1963-64
	Calder, N. D. R. (Sutherland's ms. (photocopy) only).	1963
E.22	Clausen, H.	1963
	Cockburn, R.	1963-64
	Cole, J. B.	1963
	Collar, A. R.	1963-64
	Collins, H. E.	1963
	Feilden, G. B. R.	1964

E.23	Fleck, A.	1963-64
	Includes papers for meeting of Royal Society ad hoc Committee on Technology, 14 February	1964.
E.24	Florey, H. W.	1963-64
	Gabor, D.	1963
	Green, P. S.	1964
	Hague, K.	1963
	Hall, A. A.	1963
E.25	Hartley, H. B.	1963-66
	Includes 5 pp. typescript by Hartley on the future of the Council of Engineering Institution 13 July 1966.	ns,
E.26	Hinton, C.	1963
	Hogg, Q.	1963
	(Sutherland's carbon only).	
	Holder, D. W.	1963
	Howorth, M.	1963
	Hutton, R. S.	1963
	Jackson, W.	1963
E.27	Lighthill, M. J.	1963
	Ljungberg, G.	1963-64
	Menzies, A. C.	1963
	Miller, A. B.	1963
	Ratcliffe, J. A.	1964
	Rüdberg, E.	1963
	Includes letter from Rüdberg, 13 November 19 describing relationship between the Swedish IV and KVA.	

	the state of the s	
E.28	Safier, A. S.	1963
	Enclosing draft of letter to <u>The Guardian</u> in reto Sutherland's.	oly
	Semper, E.	1963
	Also enclosing draft letter to The Guardian.	
	Short, A.	1963
	(Sutherland's carbon only).	
	Stobart, A. F.	1963
	Enclosing typescript of talk given in Birmingha	m.
	Stratton, J. A.	1964
	re proposed National Academy of Engineering in U.S.A.	
	Tait, J. S.	1963
	Copy of draft letter to The Guardian.	
E.29, E.30	Thring, M. W.	1963-66
	Extensive correspondence and memoranda conte proposals for the establishment of a Royal Socie for technologists and engineers.	
E.29	1963-64	
E.30	1965-66	
	Includes copies of comments from colleagues of draft proposals circulated by Thring.	n
E.31	Todd, A. R.	1964
	Tompsett, D. H.	1963
	Enclosing draft letter to The Guardian.	
	Tydeman, G. C. S.	1963
	Wallis, B. N.	1963
	Wright, W. D.	1963
	Zuckerman, S.	1963

E.32 Letters from secretaries of societies and editors of journals. Not indexed. 1963-64 Folder also includes miscellaneous press-cuttings and other printed matter. E.33 Copies of speeches by the Duke of Edinburgh sent to Sutherland at H.B. Hartley's suggestion, 31 December 1963. E.34 Correspondence, 1976-77, arising from the foundation of the Fellowship of Engineering. E.35-E.42 UNIVERSITY EXPANSION AND RELATED TOPICS E.35 'Some reflections on the Deer report'. Article published in the Cambridge Review, 1966 (Bibliog. 148). Correspondence, drafts, Sutherland's annotated copy of the Deer report (on the long-term needs of scientific departments). E.36 Correspondence and background material re arrangements by the Cambridge University Development Policy Committee for a visitation of the University Grants Committee, 7 and 8 May 1969. E.37 Conference on Problems Facing University Science, Manchester, 4-6 January 1971. Programme, list of participants, Sutherland's ms. notes taken during the conference, copy of published report. E.38 'University Expansion in the next Decade'. Article written for The Felstedian (Felsted School Magazine), 23 July 1971. 3 pp. typescript draft, brief correspondence.

E.39	Correspondence assembled in connection with Suther paper 'Is there an optimum size for a University?', published in Minerva, 1973 (Bibliog. 160).	land's
E.39	April-May 1973	
E.40	June 1973	
E.41	July-August 1973	
E.42	September-November 1973,	
	miscellaneous related printed matter. See also	E.47.
E.43-E.47	GENERAL CORRESPONDENCE	
	In alphabetical order.	
E.43	Bragg, S. L.	1974
	Enclosing paper on size of Brunel University.	
	Burroughs, A. E.	1964
	re activities of the Maudslay Society.	
	Cottrell, A. H.	1971
	Enclosing draft on the formulation of national scientific policy.	
	Dainton, F. S.	1968
	re student wastage rates.	
E.44	French, A.	1975
	Enclosing humorous paper by M.V. Wilkes 'On the Optimum Size for an Establishment'.	
	Himsworth, H. P.	1971-72
	re organisation of scientific research.	
	Keynes, R. D.	1972
	re organisation of scientific research.	

E.45, E.46 Ritterbush, P. C.

1967-68

Correspondence on relationships between university and government research establishments. Includes comparison of the report of the Working Party on Liaison between University and Government Research Establishments (chaired by Sutherland) and a similar investigation into the situation in America.

E.45 1967

E.46 1968

E.47 Miscellaneous press-cuttings, ms. notes and printed matter on various aspects of science and education; some of this was probably assembled as background to Sutherland's Minerva paper (see E.39-E.42).

1 box.

SECTION F	VISITS AND CONFERENCES F.1 - F.48
	For NPL conferences and symposia see C.23 - C.28.
	See also Section D, especially D.13 - D.31, D.39 - D.44.
F.1	British Association for the Advancement of Science. Aberdeen Meeting, 1934.
	1 letter only, from the Secretary, <u>re</u> paper read at meeting.
F.2	Réunion Internationale de Physique, Chimie et Biologie, Paris, 30 September-9 October 1937.
	Programme, letters from the Secretary of the Congress.
F.3-F.5	Visit to Sweden, 5-9 May 1958, at the invitation of the Royal Swedish Academy of Engineering Sciences.
	Sutherland visited institutions and laboratories in Stockholm and Uppsala and gave a lecture on 'The Position of the National Physical Laboratory in British Applied Research'.
F.3	Correspondence with the Royal Swedish Academy of Engineering Sciences, British Embassy in Stockholm and others rearrangements for Sutherland's visit.
F.4	Draft itineraries and ms. notes made during visit.
	Letters of thanks and other correspondence arising.
F.5	Arrangements for publication of Sutherland's lecture in the journal of the Royal Swedish Academy of Engineering Sciences.
F.6	Visit to U.S.S.R. to attend meetings of the Joint Commission for Spectroscopy in Moscow, August 1958.
	Brief correspondence only.
F.7	7th International Colloquium on Spectroscopy, Liège, 1958.
	Sutherland gave a paper on 'New Trends in Infra-red Spectroscopy'.
	Brief correspondence only.
F.8	Symposium on Macromolecules, Wiesbaden, 1960(?).
	Brief correspondence only, <u>re</u> text of Sutherland's contribution to the discussions.

F.9	11th Annual Symposium on Spectroscopy, Chicago, 20–23 June 1960.
	Sutherland attended and gave a paper on 'Molecular Spectra of Polymer Molecules'.
	Correspondence with organisers, programme, abstracts of papers, Sutherland's ms. and typescript notes for talk.
F.10	Conference on Physics of Polymers, Bristol, 10-12 January 1961.
	Sutherland attended and gave a paper on 'Potentialities of Infra-red Analysis in Polymer Research'.
	Correspondence with organisers, programme, list of participants, abstract of Sutherland's paper.
F.11	Visit to Copenhagen, 18 September 1961.
	Sutherland went to the Hydro-og Aerodynamisk Laboratorium and the DASK Organisation.
	Correspondence re arrangements, Sutherland's notes on both visits and related printed matter.
F.12-F.14	75th Anniversary Celebrations of the Physikalisch-Technische Reichsanstalt/Bundensanstalt (PTR/PTB), Braunschweig, 10–12 April 1962.
	Sutherland attended both as Director, NPL, and as the representative of IUPAP. He gave a lecture on 'Units of Time and Frequency' and a short address on behalf of IUPAP.
F.12	Correspondence with organisers and with P. Fleury (Secretary-General, IUPAP) re arrangements for the meeting.
F.13	Programme, list of participants, text of various addresses including Sutherland's.
F.14	Correspondence following the meeting, including arrangements to translate Sutherland's conference paper into German for publication.

F.15-F.25 Visit to Japan and China, 31 August-8 October 1962. Sutherland's visit to Japan coincided with an International Symposium on Molecular Structure and Spectroscopy and enabled him to inspect various laboratories and scientific institutions. The visit to China was as a member of a Royal Society delegation to the Academia Sinica. F.15 Spiral-bound notebook containing Sutherland's ms. diary of visit. F.16 22 pp. typescript transcript of above with letters written by Sutherland to his family during the visit. F.17 Draft itineraries; folder of press-cuttings. F.18 Correspondence arranging details of visit to Japan, including programme of the International Symposium on Molecular Structure and Spectroscopy at which Sutherland gave a paper on Interference Spectroscopy and Some of its Applications in the Far Infrared and in the Near Infrared'. F.19 Correspondence with Japanese and other colleagues arising from Sutherland's visit. See also H.25. F.20 Correspondence with Royal Society and others arranging details of visit to China. F.21 Notes, reports and printed matter assembled in connection with Chinese visit. F.22 Typescript draft and final version of Sutherland's report to the Royal Society on his experiences in China. Folder also includes a photograph of Sutherland with the other 4 members of the Royal Society Delegation. F.23 Correspondence with Chinese colleagues and with Sir George Taylor, mainly re arrangements for the preparation of cuttings from Newton's apple tree for presentation to the Academia Sinica and the Japan Academy. See also H.25. F.24, F.25 Miscellaneous other correspondence arising from Chinese visit, 1962-70. In 2 folders. F.24 1962-63 F.25 1964-70

F.26, F.27	Visit to Egypt, 6–12 January 1964.
	Sutherland was invited to visit the newly-created National Physical Laboratory for Metrology in Cairo.
F.26	Correspondence re arrangements for the visit.
F.27	Sutherland's ms. diary of the visit (partly in the form of a letter to his wife).
F.28	12th Pugwash Conference on Science and World Affairs, Udaipur, 27 January-1 February 1964.
	Sutherland's ms. notes on papers given at the conference; 2 pp. typescript 'Proposed Resolution' by Sutherland on 'Participation of Chinese Scientists in Pugwash Conferences'
F.29	Visit to U.S.A., 29 February-19 March 1964.
	Sutherland attended a conference at Pittsburgh on Analytical Chemistry and Applied Spectroscopy where he gave the Coblentz Memorial Lecture (see G.26).
	He also visited several other universities and institutions many of whom asked him to lecture on his experiences in China.
	Correspondence with colleagues <u>re</u> arrangements, draft itinerary, printed notices of lectures given by Sutherland during his visit.
F.30	15th Pugwash Conference on Science and World Affairs, Addis Ababa, 29 December 1965–3 January 1966.
	Official conference folder containing list of participants, pre-prints of papers and draft reports of working groups.
F.31-F.33	Visit to China, 30 May-11 June 1966.
F.31	Correspondence re arrangements; itineraries.
F.32	Ms. and typescript of Sutherland's diary of visit.
F.33	Ms. diary by Lady Sutherland; miscellaneous memorabilia.

F.34, F.35	17th Pugwash Conference on Science and World Affairs,
	Ronneby, Sweden, 3-8 September 1967.

Sutherland attended and presented a paper on 'The Brain-Drain Problem: Causes, Magnitude and Possible Countermeasures'. He also chaired the 'Standing Committee on Future Activities' which was set up to discuss guide-lines for the future activities of Pugwash and produce a report during the Ronneby Conference.

See also E.7.

- F.34 Letters from J. Rotblat about arrangements for the conference, programme, list of participants and papers submitted, draft and final version of report of the 'Standing Committee on Future Activities'.
- F.35 Pre-prints of papers, including Sutherland's.
- F.36-F.38 UNESCO Meeting of Science Policy Experts, Bucharest, 23-30 April 1968.

Sutherland attended at the request of the Department of Education and Science.

- F.36 Correspondence with DES and with the organisers rearrangements for the meeting.
- F.37 Sutherland's ms. notes of the progress of the discussions.

 Miscellaneous other notes, photographs, etc. connected with the visit are also included here.
- F.38 UNESCO reports and other background material; final report on the meeting at Bucharest produced by UNESCO for limited distribution, 12 June 1968.
- F.39-F.43 Mission to Ethiopia as Science Policy Consultant to UNESCO, 28 December 1968-11 January 1969.
 - F.39 Correspondence with the Ministry of Overseas Development and with UNESCO re arrangements for the visit. Includes notes taken by Sutherland during briefing session in Paris, 11 and 12 December 1968.
 - F.40 Sutherland's ms. diary of visit; notes for meeting with Dean of Faculty of Science, Haile Selassie I University; miscellaneous papers collected during visit.

F.41	Correspondence with Chief of UNESCO Mission in Ethiopia (A. J.A. Elliott) and others, January-February 1969, with ms. and typescript drafts of Sutherland's Report to UNESCO.
F.42	Correspondence with Director of UNESCO Science Policy Division (Y. de Hemptinne) and others, February-June 1969, with later drafts of Sutherland's report.
F.43	Miscellaneous background material, including draft proposals for the establishment of a National Scientific and Technical Research Council of Ethiopia with ms. comments by Sutherland.
F.44	Mission to Monrovia, Liberia, as Science Policy Consultant to UNESCO, 29 December 1969-7 January 1970.
	Typescript draft of report to UNESCO only.
	See also G.42.
F.45	Weekend conference at Kiddington Hall, Oxford, 18-20 April 1975.
	This was a private conference arranged by Baroness Robson for Liberal Party members and others.
	Correspondence re arrangements, list of people attending conference.
F.46	Visit to Sweden to attend celebrations of 500th Anniversary of Uppsala University, 28–30 September 1977.
	Programme, brief correspondence.
F.47	Published reports of meetings and conferences attended by Sutherland, 1958–77.
F.48	Miscellaneous correspondence <u>re</u> meetings and conferences which Sutherland was unable to attend, 1956-80. Not indexed.

SECTION G DRAFTS, LECTURES, PUBLICATIONS G.1 - G.65 See also Sections E and F. There is an (almost complete) set of Sutherland's publications at G.65. G.1 'Interatomic Distances'. Article for Thorpe's Dictionary of Applied Chemistry, 1942. (Bibliog. 43). 5 pp. typescript draft, correspondence. See also G.58. G.2 'Infra-red spectra as a tool in investigating molecular structure'. Lecture to joint meeting of the Tees-Side Section of the Institute of Chemistry and the Newcastle Section of the Society of Chemical Industry, Stockton-on-Tees, 20 February 1943. 2 pp. typescript summary; correspondence re arrangements. G.3 'Some comments on present and future opportunities for original work at the University of Michigan as compared with those at the University of Cambridge'. 14 pp. duplicated typescript, 3 December 1952. G.4 'The growing importance of infra-red studies in physics, chemistry and biology'. 3 pp. duplicated typescript notes and 5 pp. text for lecture, undated but with ms. annotations by N. Sheppard 'ca. 1955?'. G.5 'Infra-red radiation'. 48th Kelvin Lecture to the Institution of Electrical Engineers, 4 April 1957. (Bibliog. 120). Correspondence only. G.6 Script of B.B.C. radio programme 'Do we use our scientists properly?' to which Sutherland contributed as a panel member. The programme was broadcast on 9 August 1957.

'The Position of the National Physical Laboratory in British Applied Science'. Lecture delivered to the Ingeniors Vetenskaps Akadamien, Stockholm, 8 May 1958. (Bibliog. 127).

42 pp. typescript.

For correspondence re Sutherland's visit to Sweden in 1958 see F.3-F.5.

	Didns, rectures, publications
G.8	'A Toast to Science'.
	Speech at dinner to celebrate the 50th Anniversary of the Illuminating Engineering Society, 9 February 1959.
	Ms. and typescript drafts of speech, correspondence.
G.9	'Speech at British Lampblown Scientific Glassware Manufacturers' Association Dinner', 2 October 1959.
	15 pp. typescript.
G.10	Speech at Dinner of the Measurement and Control Section of the Institution of Electrical Engineers, London, 10 November 1959.
	12 pp. typescript, press-cutting.
G.11	Script of Sutherland's contribution to programme on Measurement in B.B.C. radio 'Thinking in Numbers' series, broadcast 11 November 1959.
G.12	'Standards of Measurement'. Talk published in <u>The Listener</u> , 10 December 1959.
	Brief correspondence.
G.13	'Infra Red Studies on the Structure of Synthetic Polypeptides, Proteins and Nucleic Acids. Lecture in Liège 27th April 1960'.
	3 pp. typescript list of slides.
G.14	'Some comments on frustrations encountered in running a scientific research establishment within the civil service'. Paper prepared by Sutherland for the Committee on the Management of Research, 5 October 1960.
	10 pp. duplicated typescript.
G.15	Speech at the opening of Glazebrook Hall, 24 February 1961.
	Ms. notes and heavily corrected verbatim transcript.
G.16	'Non-nuclear Physics and Biophysics'. Talk to University College London Physics Society, 9 March 1961.
	4 pp. typescript notes with annotation by N. Sheppard on first page 'Distinguished visitors address'; brief correspondence.
G.17	'Five Year Planning in DSIR', 30 March 1961.

2 pp. typescript.

	Dians, leateres, positeditons
G.18	'Notes for Speech at Columbia Ohio, June 1961'.
	10 pp. ms. notes for after-dinner speech.
G.19	'Work on Diamond at the National Physical Laboratory'. Talk at Reading University, 18 July 1961.
	2 pp. typescript summary, apparently prepared for publication
G. 20	Speech at presentation of Imperial Service Medal to J.C. Frith, 21 September 1961.
G.21	4 pp. typescript notes, perhaps for speech on NPL, dated 2 October 1961.
G.22	Speech at Thames Valley Grammar School Prize-giving, 3 November 1961.
	6 pp. ms. notes, programme.
G.23	'Physics in the Chemical Industry'. Lecture to the Society of Chemical Industry, Newcastle, 11 July 1962.
	17 pp. typescript.
G.24	Review of 'Sciences in Communist China', published in The China Quarterly, 1963. (Bibliog. 141).
	Correspondence with Editor, typescript draft.
G.25	'Mechanical Translation of Language. Lecture to be given to the Summer School of English', 2 August 1963.
	6 pp. typescript with a ms. note on the front page 'Rest of Lecture taken out for Lecture at Pittsburgh, March 1964'.
	Also included in the folder is 2 pp. typescript labelled 'File in Lecture to Northampton Physical Society on Machine Translation'.
G.26	Coblentz Memorial Lecture, delivered during the Pittsburgh Conference on Analytical Chemistry and Applied Spectro- scopy, Pittsburgh, 5 March 1964.
	27 pp. typescript with extensive ms. corrections.
	For correspondence re Sutherland's 1964 visit to U.S.A. see F.29.
G.27	'A Scientist's Journey to Communist China. Talk at Ann Arbor 3/3/64'.
	6 pp. ms. notes.

	to the second se
G.28	'Talk to MIT 17/3/64'.
	4 pp. ms., on China.
G.29	'Speech at Farnborough Technical College Prizegiving, 15.4.64.'
	12 pp. typescript with ms. additions.
G.30	After-dinner speech at XII International Spectroscopy Colloquium, University of Exeter, 15 July 1965.
	5 pp. ms. and typescript.
G.31	'The Organisation and Financing of Research - National and International. Some notes for a forthcoming paper to the Council for Scientific Policy', 20 January 1966.
	2 pp. duplicated typescript.
G.32	'Notes for a lecture on Women in Science given to the National Council of Women of Great-Britain, November 1966'.
	5 pp. ms. notes, brief correspondence.
G.33	Speech at Lowestoft Grammar School prizegiving, 28 September 1967.
	3 pp. ms., programme, brief correspondence.
G.34	'Reply to Toast of Guests Glasgow University Dinner London 2nd November 1967'.
	2 pp. typescript notes, menu, correspondence with Secretary.
G.35	'Draft Report of the [Cambridge University] Joint Committee of the Council of the Senate and the Colleges Committee on Future Number of Students', 1 October 1968.
	9 pp. duplicated typescript with a note by N. Sheppard 'Drafted by Sir Gordon Sutherland'.
G.36	'Is there a National Plan for Science? Talk to C.U.Physics Society 24/10/68'.
	Ms. notes, brief correspondence with Secretary of the Society.
G.37	'Speech at Dinner of the British Acoustical Society Loughborough 29.11.68'.
	5 pp. typescript.

G.38	'Science Policy and Scientific Research in the Haile Selassie I University'. UNESCO report, arising from visit 29 December 1968–11 January 1969.
	See also F.39-F.43.
G.39	'Reply to Toast of the Guests. Imported Fibre Building Board Federation 24/3/69'.
	5 pp. typescript, brief correspondence.
G.40	'Toast to Technological Innovation. Science of Science Foundation Conference. Churchill College 12/4/69'.
	Ms. notes, correspondence with the Director of the Foundation.
G.41	Speech at Chislehurst and Sidcup Grammar School prize- giving, 8 December 1969.
	3 pp. ms. notes, programme, brief correspondence.
G.42	'Liberia. Proposal for a National Council for Science and Technology'. UNESCO report arising from visit 26 December 1969–7 January 1970.
	See also F.44.
G.43	'Talk at Fison Dinner 16/2/70'.
	Ms. notes, brief correspondence. (The dinner was held during a symposium on 'The Degradation and Fate of Chemicals'.)
G.44	'Some problems in planning a national policy for science'. Public Lecture at the University of Dundee, 28 February 1970.
	5 pp. typescript notes.
G.45	'[Cambridge University] Standing Joint Committee on Student Numbers. Note by Chairman on possible procedures to be followed by the Committee', 13 March 1970.
	'Draft letter to Colleges' on 'Student Numbers in the 1970/80 Decade', June 1970.
G.46	Speech at Felsted School prizegiving, 5 June 1971.
	2 pp. ms. notes, brief correspondence.
G.47	Speech at St. Peter's School, York prizegiving, 11 July 1971.
	Ms. notes, programme, correspondence re arrangements.

G.48	'Is there an Optimum Size for a University? Cambri Society of York 2/2/72'.	dge
	Ms. notes (3 pp. and 2 pp.).	
G.49	'Inflation in University Education'.	
	Ms. notes for unidentified talk, dated 1972.	
G.50	'Rothschild - a principle in search of a framework'.	
	2 typescript drafts for article published in Physics Bul 1972 (Bibliog. 156).	letin,
G.51	'Points in talk to Royal Society 1972'.	
	1 p. ms. notes for talk on science policy with an add page summarising points made by others, headed 'Roy Discussion 11/1/72'.	
G.52	'How green was my paper?'	
	Typescript drafts for article published in Nature, 1972 (Bibliog. 159).	2
G.53	4 pp. ms. for undated after-dinner speech.	
	1 p. ms. notes headed 'China Talk A[nn] A [rbor] 18	3 Aug.'
G.54	Miscellaneous book reviews and reports on papers sub to journals by others, mostly undated.	mitted
G.55-G.61	Correspondence with publishers and editors. In alphabetical order.	na-
G.55	Endeavour	1956-57, 1960
	Far East Trade & Development	1965
	Glasstone, S.	1935-37
	re contributions to the <u>Annual Reports of the Chemical Society</u> .	
	International Science and Technology	1964

G.56	Journal of the Iron and Steel Institute	1958
	Journal of Molecular Biology	1961
	Correspondence with editor (J.C. Kendrew) refereeing-grapers .	
	Journal of Molecular Spectroscopy	1960
	Correspondence with editor (H.H. Nielsen) re refereeing of papers.	
	Journal of Physical Chemistry	1956, 1957
	Correspondence with editor (W.A. Noyes) re refereeing of papers.	
G.57-G59	Methuen & Co. Ltd.	1934-44
	Mainly re Sutherland's book 'Infra-red and Ra Spectra' (<u>Bibliog</u> . 13).	man
G.57	1934	
G.58	1935, 1944	
G.59	Agreement with publishers, royalty statements	
G.60	Nature	1935-42, 1958
	Mainly <u>re</u> refereeing of papers.	
G.61	New Scientist	1959
	re review of book by E.N.da C. Andrade.	
	Thorpe's Dictionary of Applied Chemistry	1943
	Correspondence <u>re</u> articles contributed by Sut (<u>Bibliog</u> . 43, 45).	herland
	See also G.1.	
G.62	Shorter publications correspondence 1935-63. No indexed.	

G.63	Shorter requests to give talks and lectures, show films of China, 1938-65. Not indexed.
	See also C.32.
G.64	Correspondence <u>re</u> exchanges of reprints or reports, requests for permission to quote or reproduce figures, 1935-61. Not indexed.
G.65	Red box file containing an almost complete set of Sutherland's publications, with a bibliography and List of the few missing items

SECTION H	GENERAL CORRESPONDENCE H.1 - H.45	
<u> </u>	OLIVER OF STREET OF THE THEFT	
H.1	Associated Electrical Industries Ltd.	1961
	On supplies of silicon and germanium for infra- red absorption experiments.	
	Astbury, W. T.	1956, 1961
	On feather keratin.	
	Astin, A. V.	1956, 1962
	(Sutherland's carbons only).	
	Includes note of visit by Astin to NPL, 6 Octob	per 1958.
H.2	Bates, L. F.	1957-58
	Mainly <u>re</u> arrangements for Sutherland to visit Nottingham University.	
	Bawn, C. E. H.	1957
	On computer for Liverpool University.	
	Bell, R. P.	1957
	(Sutherland's carbon only).	
	Bosanquet, C. I. C.	1961
H.3, H.4	Bowden, B. V.	1964-75
H.3	1964-67	
	Includes several letters <u>re</u> the Council for Scie Policy.	ntific
H.4	1968-75	
H.5	British Council	1959
	Coales, J. F.	1958-59
	Danckwerts, P. V.	1958
	On diamond.	
	Daniel, G. E.	1958
	On Carbon-14 dating.	

General correspondence

H.6	Darwin, C. G.	1957
	Daunt, J. G.	1956, 1959, 1961
	Davies, M. M.	1957, 1959-61
H.7	Dupree, A. H.	1968
	Edwards, J.	1959
	Mainly personal correspondence.	
	Eliel, E. L.	1956
	Essen, L.	1957-63
	Includes correspondence from K.D. Froome and H.W. Melville.	nd
H.8	Re Frazer, R. A.	1959-60
	Glanville, W. H.	1957
	Goody, R. M.	1956-57
	Mainly personal correspondence.	
H.9	Goodeve, C. F.	1958, 1961
	Mainly correspondence arising from Goodeve's William Menelaus Memorial Lecture on 'The Development of Britain's Physical and Geogra Advantages'.	
H.10	Hartley, H. B.	1958-71
H.11	Haskins, C. P.	1963
	On science in China.	
	Hayes, W.	1966-67
	re statement on the Vietnam war for publication in The Times (with press-cutting of statement)	
	See also H.15, H.23.	

General correspondence

H.12	Holder, D. W. Includes some personal correspondence.	1958, 1960, 1961
	Holliman, F. G. (Sutherland's carbon only).	1958
	Imperial Chemical Industries Ltd. Arrangements for exchanges of visits. See also H.34.	1957
H.13	Jackson, W.	1959
	Jenkins, I. On Gadiolinium Selenide.	1961
	Johnston, A.	1958
	Jones, F. E. Mainly personal correspondence.	1956-58
H.14	Jones, G. O. On diffraction gratings.	1961
	Jones, R. V. Includes some personal correspondence.	1959-61
	Jones, W. D. (Suther land's carbon only).	1957
H.15	Kahn, R. F. re letter to The Times on the Vietnam war. Includes letters from other colleagues in resport to request to sign the letter. See also H.11, H.23.	1965 nse
	Keller, A.	1958
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	re establishment of the Biophysical Society of Japan.	
H.17	Krimm, S.	1956, 1959-61
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H.18	Liang, C. Y.	1958-59
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H.19	McGavin, S.	1956
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	Menzies, A. C.	1956-60
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H.20	Mills, I. M.	1957
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H.22	Preston, G. D.	1958
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H.23	Redgrave, V.	1965
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	Includes some personal correspondence.	
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	Includes long letter on high voltage research.	
H.24	Rothschild, N. M. V.	1957-58
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	re Newton's apple tree. Includes reports on professedlings grown from apple presented by Sut to the Japan Academy in 1962 (see F.15 ff, es F.23) and of young tree sent from England in 1	herland pecially
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H.29	Uttley, A. M.	19 5 6
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	There is a copy of the report at E.1.		
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