



Inventory

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Dr Foster Neville Woodward

National Library of Scotland
Manuscripts Division
George IV Bridge
Edinburgh
EH1 1EW
Tel: 0131-466 2812
Fax: 0131-466 2811
E-mail: manuscripts@nls.uk

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Correspondence and research papers of Dr Foster Neville Woodward, Scientific Consultant, 1919-85. Although there is some personal correspondence, the papers relate mainly to Dr Woodward's scientific career, including his work as a scientific civil servant, 1930-47, at the Chemical Defence Research Establishment, Sutton Oak, on chemical warfare and in particular on mustard gas, at the Ministry of Supply, Leamington Spa, on camouflage research, and at the Ministry of Production, where his work included research into DDT. Post-war papers relate to Dr Woodward's years as Director of the Scottish Seaweed Research Institute/Institute of Seaweed Research, 1946-56, and to its successor at Inveresk Gate, Musselburgh, the Arthur D Little Research Institute, later Inveresk Research International, from which he retired as Director in 1970. Further papers relate to his work on technology and research and development in the United Kingdom. Dr Woodward also had a parallel career in what he termed 'scientific diplomacy'. There are papers relating to his secondment to the British Commonwealth Scientific Office in Washington DC, 1947-8, to the OEEC/OECD, Paris, 1956-67, and to his many assignments for the United Nations and other international organisations, 1967-84. These papers form the basis for Memoirs of a Peripatetic Technologist: The Technical Autobiography of Foster Neville Woodward, 1985, Acc.9010/247.

The papers have been arranged chronologically where possible while respecting Dr Woodward's filing system. However, those relating to 'scientific diplomacy' have been placed together. Printed material has been transferred to the Department of Printed Books.

Presented, 1985, by Foster Woodward.

1-15	EDUCATION
16-47	SCIENTIFIC CIVIL SERVICE
48-139	INVERESK GATE
140-228	SCIENTIFIC DIPLOMACY
229-47	MISCELLANEOUS PAPERS

1-15 EDUCATION

Belle Vue Boys' School, Bradford

1. Notebook, Practical Physics, 1921-3.

Bowling Dye Works, Bradford

2. Notebook, Foule Department, n.d.
3. Pattern Book, n.d.

Bradford Technical College 1923-7 and University College, London, 1928-30

4. Lecture notes, Organic Chemistry, 1923-4, 1928-9.
5. Lecture notes, Organic Chemistry, 1924-5, 1928-9.
6. Lecture notes, Organic Chemistry, 1926-7.
7. Lecture notes, Practical Physical Chemistry, 1926-30.
8. Lecture notes, Physical Chemistry, 1926-30.
9. Lecture notes, Organic Chemistry, 1928-9.
10. Lecture notes, Organic Chemistry, 1929-30.
11. Lecture notes, Organic Chemistry, 1930.
12. Lecture notes, Practical Organic Chemistry, 1929-30.
13. Lecture notes, Practical Inorganic Chemistry, n.d.
- 14-15 '2:2'-DI-(B-Chloroethylthio) Diethyl Ether'. Phd thesis for University College, London, 1941. 2 copies.

16-47 **SCIENTIFIC CIVIL SERVICE**

Chemical Defence Research Establishment, Sutton Oak, 1930-2

16. Correspondence relating to Dr Woodward's work at Sutton Oak, with James Williamson and Son, Lancaster, and to his thesis, 1930-9.
17. Monthly Reports, 1931-2.
18. Reports and papers, 1930-2.

James Williamson and Son, Lancaster

For correspondence see no.16.

Morecambe Hockey Club, 1933-6

- 19-20 Miscellaneous volumes including lists of members, matches, teams and

accounts, 1933-4, 1935-6.

21. Miscellaneous file. Circulars relating to Morecambe Hockey Club, 1935, with personal correspondence and particulars of Dr Woodward's property in Lancaster, 1930-5.

Chemical Defence Research Establishment, Sutton Oak, 1937-43

22. Correspondence, 1937-42.
23. Summaries of research programmes, and processes, 1941.
- 24-5 Volumes of notes on experiments at Sutton Oak, n.d.
26. Papers relating to mission to France, 1941.
27. Reports on the manufacture of H, 1938.
28. Reports on the manufacture of H, 1938-40.
29. Reports on the manufacture of H, 1938-42.
30. Reports on MTG and Sesqui H, 1938-43.
31. Reports on sulphur chlorides, 1938-43.
32. Reports on L and 150 – L, 1939-43.
33. Reports on the stability of HS, HM and HMD, 1940-1.
34. Reports on antiven chloracetophenone etc, 1940-1.
35. Reports on T724 and HT, 1940-2.
36. Reports on DA; DC etc, 1940-3.
37. Reports on sundry vesicants, 1941-4.
38. Reports on S and T773, 1942-3.

Chemical Defence Research Establishment, Leamington Spa, 1943-4

- 39-40 Correspondence, reports, technical and other papers, 1943-5 (2 files).

41. Minutes, correspondence, and reports of the Alginate Fibre Joint Committee, 1943-4.
42. Reports, 1942-4.
43. Miscellaneous notes on fibres, 1943.
44. Alginate serum samples, 1943.

Ministry of Production, 1944-6

45. Correspondence and papers concerning Dr Woodward's work with the Ministry of Production, including DDT, 1944-7.
46. Correspondence, reports and notes, 1944-6.
47. Notebook relating to work with the Ministry of Production, 1944-6.

48-139 **INVERESK GATE**

Scottish Seaweed Research Association (SSRA) 1946-7, 1948-56

In 1951 the name was changed to Institute of Seaweed Research (ISR).

48. Annual Reports, 1945-55.
49. Proof copies of Annual Reports, 1947-68 (23 vols).
50. Memorandum and Articles of Association of the ISR, 1951.
51. SSRA minutes, 1946-50.
52. Minutes of proposed Scottish Seaweeds Limited, 1945, with correspondence and reports of the SSRA on feasibility studies, 1946-9.
53. ISR minutes with some papers, 1951-5.
54. ISR sub-committee minutes, 1952-5.
55. Correspondence, 1947-70, relating to the SSRA, and the ISR, and Dr Woodward's secondment to the British Commonwealth Scientific Office, Washington, 1947-8.
56. Correspondence and papers concerning Treasury grants, 1944-55.

57. Correspondence and papers concerning Treasury grants, 1950-5, with miscellanea concerning the opening of Inveresk Gate, 1946, and of the SSRA, 1950.
58. Correspondence and papers on the winding up of ISR, 1953-6.
59. Research and development programme, 1947-55.
60. Monthly progress reports, 1945-7.
61. Monthly progress reports, 1948-9.
62. Monthly progress reports, 1950-1.
63. Monthly progress reports, 1951-2.
64. Monthly progress reports, 1952-4.
65. ISR Collected Papers, 1946-51.
66. ISR Collected Papers, 1952-4.
67. ISR Collected Papers, 1955-9.
68. ISR Reports 1. Littoral Surveys.
69. ISR Reports 2. Littoral Surveys.
70. ISR Reports 3. Littoral and Cast Surveys.
71. ISR Reports 4. Sublittoral Surveys.
72. ISR Reports 5. Sublittoral Surveys.
73. ISR Reports 6. Chemistry.
74. ISR Reports 7. Manufacture properties and uses.
Physiology.
75. ISR Reports 8. Drying.
76. ISR Reports 9. Harvesting.

- 77. Papers and notes on seaweed, 1914-15.
- 78. Papers, notes, and some correspondence on seaweed, 1942-53.
- 79. Seaweed publications, 1943-5.
- 80. Papers and notes on seaweed, 1945-54.
- 81. Seaweed reports, papers, and notes, 1947-57, including the First International Seaweed Symposium, Edinburgh, 1952.
- 82. Papers by Dr Woodward on seaweed and chemurgy, n.d.

For further papers on seaweed see nos. 119-22.

Scottish Peat Committee, 1949-62

- 83. Correspondence, papers, and reports, 1958-61.
- 84. Reports of the Scottish Peat Committee, 1954, 1962 (2 vols).
- 85. Miscellaneous papers on peat, 1941-59.
- 86. Miscellaneous papers on peat, 1947-81, with OECD file on ammoniated peat, 1963-6.
- 87. Miscellaneous papers on peat, 1958-72.

Scottish Peat Surveys

- 88. 1. South West Scotland, 1964.
- 89. 2. Western Highlands and Islands, 1965.
- 90. 3. Central Scotland, 1965.
- 91. 4. Caithness, Shetland and Orkney, 1968.

1st International Peat Symposium, Dublin, 1954.

- 92. Programme and papers presented at. With some manuscript notes.
- 93. Proceedings.

International Peat Congress, Leningrad, 1963.

94-7 Programme and papers presented (4 vols).

98. Miscellaneous papers concerning.

Arthur D Little Research Institute (ADLRI), and Arthur D Little Limited, (ADL Ltd), 1956-70

99. Director's Progress Report, 1956-7.

100. Working papers for discussion on research programme etc at ADLRI, 1967.

101. Working documents for re-organisation proposals at Inveresk Gate, 1967-8.

102. Literature on ADLRI, ADL Ltd, and Arthur D Little. Incorporated, the American parent institution, 1945-61.

103. ADL Inc Staff Albums and Company Qualifications, 1963, 1966.

104. Correspondence and miscellaneous papers of and relating to Lawrence W Bass of ADL Inc, 1966-72.

ADL Ltd. Reports and Papers.

105-6 Papers relating to work for the National Institute of Management Development, 1962-5.

107. Working papers for project for the Institute for Industrial Research and Standards, Dublin, 1966.

108. Report to Bowater Paper Corporation Ltd on 'The market for PVC bottles in the North of England, 1966.

109-10. Report to the Institute for Industrial Research and Standards, Dublin, 1967 (2 copies).

111. Report on 'New Product Opportunities for Ceimici Teoranta', Phase II, 1968.

ADL Inc Reports and Papers.

112. Miscellaneous papers, 1954-63, n.d.
- 113-14. Report to the Naval Research Advisory Committee of 'Basic Research in the Navy', 1959 (2 vols).
- 115-16. Papers for ADL Inc Conference on Research, Management, and New Product Development, 1963.
117. 'The Management of Technical Programs', Lawrence W Bass, 1964 (2 copies).
118. Report to Jackson Brothers (of Nottingham) Ltd, on Long-Term Planning, 1966.
119. Miscellaneous papers relating to the 5th International Seaweed Symposium, Halifax, Nova Scotia, 1965.
120. Proceedings of the 6th International Seaweed Symposium. Santiago de Compostela, 1968.
121. Correspondence and papers relating to the International Seaweed Symposia, 1969-76.
122. Correspondence, reports, lists of members and other papers relating to the International Seaweed Association, 1976-80.
123. Notebook concerning ADL Ltd, and ADLRI, n.d.
Inveresk Research International (IRI)
124. 'Visit Reports' and miscellaneous papers, 1969-70.
125. Technical Audit papers, 1970.

Joint IRI Overseas Development Administration (ODA), Central Treaty Organisation (CENTO) workshop on 'Management Research, Process and Product Development', Indonesia, 1971.
126. Correspondence and papers, 1971-2.
127. Reports, papers, programmes, notes and related printed books, 1971-2 (3 folders).

128. IRI report on 'Assessment of Opportunities in Malaysia/Singapore', Part I, 1972 (2 copies), with notes.
129. Miscellaneous papers including IRI Information Folder, 1975, n.d.
- Scottish Resources Use Institute
130. Correspondence, notes, reports and papers, 1969-84.
- Scottish Council for Development and Industry (SCDI)
131. Correspondence (some personal), notes and papers relating to the SCDI, 1973-82.
132. SCDI conference papers for the Aviemore International Forums, 1974-7.
- Council for Applied Science in Scotland (CASS)
133. Minutes, correspondence and papers, 1975-7.
134. Minutes, correspondence and papers, 1977-83.
135. Minutes, correspondence and papers, 1984-5.
136. Correspondence and papers, 1979-81.
137. Correspondence and papers, 1979-82.
138. Correspondence and papers, 1981-2.
139. Chief Executive's reports, annual reports and research project proposals, 1977-83.

140-228 **SCIENTIFIC DIPLOMACY**

140. Annual Reports, 1946-9.
141. Miscellaneous correspondence and notes, 1943-56 (for further correspondence see no.55).
142. Papers given by Dr Woodward mainly while at BCSO, 1947-8, and while visiting the USA in 1952.
143. Miscellaneous papers mainly BCSO and UNSCCUR, 1948-9.

144. Miscellaneous notes and papers, 1948-52.
- Organisation for European Economic Co-operation (OEEC) later the Organisation for Economic Co-operation and Development (OECD), 1956-67.
145. Minutes of European Productivity Agency (EPA) committees, 1956-61.
146. Minutes of European Productivity Agency (EPA) committees, 1962-5.
147. Notes for EPA projects, 1956-8.
148. Correspondence, reports and notes for EPA projects, 1956-67.
- 149-50. Correspondence, notes and papers relating to Research Associations in Europe, 1960-4.
151. Miscellaneous papers on OEEC organisation including programmes and bulletins, 1962-8.
152. Correspondence and papers, 1963-75.
153. Correspondence, minutes and inventories relating to the 'winding up' of OECD, 1970-4.
154. Conference papers for meeting on 'Technology Transfer', 1978.
155. Report on 'Research Associations in the UK', 1963.
156. Report on 'Contract Research Institutes in Norway', 1964.
157. Report by Dr Woodward on 'The Organisation, Financing and Management of Co-operative Research Within and Among the OECD Countries', 1974 (2 copies).
158. Report on 'Policies for the Stimulation of Industrial Innovation', 1975.
- United Nations and other international organisations, 1967-84
159. Correspondence, UN contracts and staff regulations and related papers, 1966-84.
160. Correspondence, pamphlets, and newspaper cuttings, 1965-75.

161. UN paper on 'Managerial Practices for Industrial Research Institutes in Developing Countries', 1965.
162. Conference papers for 'Workshop for managers of Industrial Research Institutes in Developing Countries', Athens, 1967.
163. Correspondence, notes, pamphlets and papers relating to the United Nations Development Programme (UNDP), Central Treaty Organisation CENTD, and World Association of Industrial and Technological Research Organisations (WAITRO), assignments in Turkey, Taiwan, China, Thailand, Pakistan and Canada, 1967-76.
164. Miscellaneous papers on science, technology, and industrial development, Vienna, 1968-75.
165. Miscellaneous UN reports and papers on industrial research for developing countries, 1969-78.

Management Centre/Europe Seminars on Contract Research, 1970, 1972.
166. Papers presented, 1970, 1972.

UNDP assignment, Taiwan, 1970.
167. Correspondence and papers, 1969-70.
168. Correspondence, notes and papers, 1969-70.
169. Dr Woodward's report on the Union Industrial Research Institute, Taiwan, 1970 (3 copies).

United Nations Industrial Development Organisation (UNIDO), assignment, Korea, 1971.
170. Correspondence, notes and papers, 1970-2.
171. Dr Woodward's report on a possible establishment of a new technical centre in Korea, 1971 (2 copies).

UNIDO assignment, Indonesia, 1971.

172. Dr Woodward's report on the development of a 'Policy for improving the effectiveness of the Indonesian Department of Industry's Industrial Research Institutes', 1971.
- IRI/DDA/CENTO assignment, Indonesia, 1971. See nos.126-7.
173. Miscellaneous papers and Dr Woodward's report relating to assignment to advise on the Sixth Lebanese National Development Conference, 1972.
- CENTO assignments to Pakistan, Iran and Turkey, 1972, 1974.
174. Miscellaneous papers mainly relating to Pakistan, 1964-75.
- UNIDO assignment, Thailand, 1972.
- 175-6. Correspondence, notes and papers, 1972-81.
177. Dr Woodward's report on management effectiveness of the Applied Scientific Research Corporation of Thailand, 1972 (2 copies).
- International Bank for Reconstruction and Development (World Bank) assignment to Indonesia, 1972-3.
178. Correspondence, notes and papers, 1972-3.
179. Dr Woodward's reports on the problems of industrial technology in Indonesia, 1973 (2 vols).
180. Miscellaneous papers relating to industrial development in Indonesia, 1970-83.
181. UNESCO reports on industrial development in Indonesia, 1973.
- UN Office of Science and Technology (OST) assignment, Europe, 1973.
182. Correspondence, contract, notes and papers on assignment for establishing a clearing house for research proposals, 1972-3.
- UNIDO assignment, Nigeria, 1973.
183. Notes and papers, 1973.
184. Correspondence, notes, papers and Dr Woodward's report on the Gari enrichment project, Nigeria, 1973.

UN Economic Commission for Europe assignment, 1974.

185. Correspondence, contract, papers and Dr Woodward's report on the 'Organisation, Financing and Management of Co-operative Research within and among the OECD countries', 1974-5.

World Association of Industrial and Technological Research Organisations (WAITRO) assignment, Canada/Trinidad, 1975.

186. Correspondence, papers and reports relating to the WAITRO review of the Caribbean Industrial Research Institute (CARIRI) Research Productivity Council (RPC) twinning programme, 1973-5.

United States National Research Council (NRC) assignment, Peru, 1975.

187. Correspondence, notes and papers on Industrial Research Programming in Peru, 1975.

Economic and Social Commission for Asia and the Pacific (ESCAP) assignment to study economic problems and their possible solutions in South East Asia, 1975.

(Material here also relates to papers on research and development in ESCAP countries, 1980-4).

- 188-9. Printed material, India, 1972-84.

190. Printed material, Nepal, 1975.

- 191-2. Printed material, Korea, 1974-84.

193. Printed material, Japan, 1973-84.

194. Printed material, Malaysia, Iran and Russia, 1972-8.

195. Printed material, 1975 ESCAP assignment.

196. UN papers for meeting of Directors of National Councils for Science Policy and Research in Asia and Oceania, Kuala Lumpur, 1975.

197. Country reports, 1975.

International Conference on 'The Survival of Humankind: The Philippine Experiment', Manila, 1976.

- 198-9. Correspondence, conference papers, and printed material, 1976-8.
- UNIDO Conference on Co-operation among universities, Industrial Research Organizations and Industries, and UNIDO's role in this Co-operation, 1976.
200. Conference papers and miscellaneous printed material, 1964-79.
- ESCAP assignment in Bangkok to prepare for the UN Conference on Science and Technology for Developing Countries (UNCSTD), 1977-8.
- 201-2. Correspondence relating to the UNCSTD conference, and to other assignments at home and abroad, with some personal letters, 1977-8.
- 203-4. Reports and papers, 1978.
- British Council assignment, Indonesia, 1978.
205. Dr Woodward's paper on 'Suggestions for increasing the effectiveness of applied research in Indonesia', 1978.
206. Correspondence on the British Council and other assignments at home and abroad, with some personal letters, 1979.
- UNIDO Seminar on University/Industry Co-operation, Turkey, 1979.
207. Correspondence, notes and papers, 1979.
- Joint UNDP/UNIDD evaluation of industrial research and service institutes, Vienna, 1979.
- 208-9. Papers, reports and notes, 1976-80.
- Technology Transfer forums, Stirling University, 1976-80.
210. Correspondence, notes and papers, 1976.
211. Conference papers, 1976.
212. Conference papers, 1977-8.

213. Conference papers, 1980.
- ESCAP assignment for proposed workshop on the Management of Research and Development Institutes, Indonesia, 1982.
214. Correspondence, 1981-4.
215. Correspondence relating to ESCAP and other assignments, with some personal letters, 1981.
- ESCAP Regional Centre for Technology Transfer (RCTT) assignment, 1982.
216. Dr Woodward's paper on Technology Development Institutions in Selected Countries of Asia ...', 1982 (2 copies).
- Foundation for International Training for Third World Countries (FIT) assignment, Singapore, 1982.
217. Correspondence, reports and papers, 1982-4.
218. Reports and papers, 1982-4.
219. Dr Woodward's paper on 'Management of Industrial Research and Science Institutes, 1983 (3 copies).
- Second CASTASIA conference, 1982.
220. Correspondence and papers, 1980-2.
- ESCAP/RCTT workshop on the Management of Research and Development Institutes, Seoul, 1983.
221. Correspondence, notes and papers, 1983-4.
222. Correspondence, notes and papers relating to UN assignments, 1983-5.
- UNIDO/ESCAP workshop on commercialisation of research results of research institutions in the ESCAP region, Bangkok, 1984.
223. Correspondence and miscellaneous papers, 1984-5.
224. Conference papers and Dr Woodward's report, 1984.

Miscellaneous UN papers.

- 225. Miscellaneous UN reports and conference papers, 1971-6.
- 226. Miscellaneous UN reports and conference papers, 1976.
- 227. Miscellaneous UN reports and conference papers, 1977-82.
- 228. Annual reports, newsletters and miscellaneous papers of the International Foundation for Science, 1974-82.

229-47 **MISCELLANEOUS PAPERS**

- 229. Correspondence, manuscript history, programmes, and membership lists of the Edinburgh Research Club, 1964-85.
- 230. Letters of and memoranda concerning the Savage Club, 1970-5.
- 231. Correspondence and applications for the Ramsay Memorial Fellowship Trust, 1972.
- 232. Correspondence regarding Dr Woodward's autobiography 'Memoirs of a Peripatetic Technologist', 1982-5.
- 233. Correspondence concerning Belle Vise Boys' School, Bradford, 1983-5.
- 234. Miscellaneous papers written by Dr Woodward, 1932-49.
- 235. Miscellaneous papers written by Dr Woodward, 1950-67.
- 236. Miscellaneous papers written by Dr Woodward, 1965-70.
- 237. Miscellaneous papers written by Dr Woodward, with lists of publications, 1970-85.
- 238. File of miscellaneous scientific notes, 1947-62.
- 239. Lecture notes, 1960-6.
- 240. Photographs and miscellaneous papers, 1947-67, n.d.
- 241. Miscellaneous conference papers, 1955-7.
- 242. Miscellaneous conference papers, 1958-81.

243. Miscellaneous conference papers, 1969.
- 244-6. Miscellaneous scientific papers, 1940-85.
247. 'Memoirs of a Peripatetic Technologist: The Technical Autobiography of Foster Neville Woodward', 1985.