

IN CONFIDENCE

R.R. 1 (65/66)
November, 1965

SCIENCE RESEARCH COUNCIL

RESEARCH REACTOR COMMITTEE

Terms of Reference and Future Role
of the Committee with respect to the S.R.C.

Note by the Secretary

1. Following the recent reorganisation affecting Government bodies responsible for the support of civil science, the Research Reactor Committee, previously responsible to the ex-NIRNS, has of necessity been reconstituted, and as announced at the last meeting will continue at least for an interim period of a year as a Joint S.R.C./A.E.A. Committee. It will advise the S.R.C. on the universities' needs for research reactors generally and on the provision of funds for the use by the universities of A.E.A. reactors. It will also advise the Authority on experimental requirements of university users of reactors and other A.E.A. facilities.

2. The implications of these new terms of reference on the way the Committee functions, particularly with regard to financial matters raise several points which the Committee will wish to discuss. Previously the Committee has been concerned with essentially three activities:

| | <u>Financial Responsibility</u> |
|--|---------------------------------|
| a) Advising D.S.I.R. on provision of low power University reactors | D.S.I.R. |
| b) Supporting particular University experiments on A.E.A. reactors | N.I.R.N.S. |
| c) Sponsoring package deals with the A.E.A. for the provision of reactor facilities, e.g. on HERALD. | N.I.R.N.S. |

The cost of b) and c) was met from the Committee's annual financial allocation provided from the NIRNS Rutherford Laboratory budget, and at the transfer date was running at approximately £140,000 per annum. This financial link between the Committee and the Rutherford Laboratory has ceased as from 1st April 1965, and the financial commitments taken over by the UST Board of the S.R.C.

3. No change is needed in the way the Committee deals with matters concerning the university reactor centres. Thus proposals for new reactor centres or extensions to existing ones (e.g. see Item 3 on Agenda) will continue to be considered by the Committee, their recommendations going direct to the University Science and Technology Board of the S.R.C. (replacing the Research Grants Committee of the ex-D.S.I.R.) If the recommendations are accepted it will be for the Board to finance such schemes from their central reserves of funds. Major proposals involving the hiring of A.E.A. facilities on behalf of the universities can be dealt with in a similar way.

4. Turning to the question of how proposals for specific experiments on reactors are to be dealt with, it is here that the major changes in procedure are proposed. The change is suggested by the need to resolve

the inconsistency in the arrangements which previously existed. Thus whereas proposals for experiments on the A.E.A. reactors generally came to the NIRNS Research Reactor Committee, proposals for experiments on the University reactors came to D.S.I.R. and were considered by the appropriate subject committee (e.g. Physics, Chemistry, etc.) of the R.G.C. It is the view of the S.R.C. that the new system should conform to the latter arrangement. That is that applications for grants to support particular experiments on reactors, whether owned by the Universities or the A.E.A., should be considered by the appropriate subject committees of the S.R.C. rather than the Research Reactor Committee, and if approved, financed from the yearly allocations delegated to each Committee from the central U.S.T. Board. The main reason why S.R.C. wish to proceed in this way is that experiments on reactors, although involving a common technique, nevertheless are essentially experiments in solid state physics, radiation chemistry, etc., and therefore should be considered on the criteria of timeliness and promise by the various specialist Committees of S.R.C. in competition with other proposals in the same fields but which do not involve reactor techniques. Thus a proposal to solve a particular crystallographic problem by neutron diffraction should be considered by the same Committee, i.e. the Chemistry Committee, which would consider similar proposals for crystallographic research using more conventional techniques. The membership of the U.S.T. Board and the various Committees of the Board are attached (Papers GP 1(65/66) and GP 2(65/66)).

5. An important consequence of this change in procedure is that it will no longer be necessary for the Committee to have its own allocation of funds from which individual experiments can be financed. It will become therefore, purely an advisory Committee, making recommendations direct to the U.S.T. Board on major schemes for providing reactor facilities for universities either in the universities themselves, or through the A.E.A. Although the Committee will no longer have the responsibility for supporting individual research projects it is nevertheless considered important that Members should have the opportunity of commenting on the applications and therefore it is proposed periodically to circulate copies of the various applications which have been received for the information of the Committee (see Item 7 of Agenda). It is expected that in this way the Committee will frequently be able to give helpful advice as to which reactor facilities would be most appropriate for the various experiments proposed. Additionally it will also indicate to the Committee the overall scale of University research on reactors and suggest the directions in which the national facilities should be extended or modified.
6. It may be necessary to reconsider the financial responsibilities of the Committee if or when a Joint S.R.C./A.E.A. Users' Panel is set up along the lines indicated in Professor Mitchell's report. (See Item 4 on Agenda).

IN CONFIDENCE

GP 1(65/66)
(USTB-1)
November 1965
All Committees

SCIENCE RESEARCH COUNCIL

UNIVERSITY SCIENCE AND TECHNOLOGY BOARD

Membership and Terms of Reference of the Board

| | | |
|------------------|--|--|
| <u>Chairman:</u> | Professor Sir Ewart Jones, F.R.S. | |
| <u>Members:</u> | Professor B. Bleaney, F.R.S. (Physics) | Dr. Lee's Professor of Physics, Oxford. |
| | Professor R. Brown, F.R.S. (Biology) | Regius Professor of Botany, Edinburgh. |
| | Dr. A. Caress | I.C.I. |
| | Dr. H.M. Finniston | International Research and Development Co. Ltd. |
| | Professor H. Ford (Mechanical and Production Engineering) | Professor of Applied Mechanics, I.C.S.T. |
| | Professor M.R. Gavin (Electrical and Systems Engineering) | Professor of Electronic Engineering, University College of North Wales, Bangor. |
| | Lord Halsbury (Computing Science) | |
| | Dr. J.W. Menter (Metallurgy and Materials) | Tube Investments Limited. |
| | Professor R.S. Nyholm, F.R.S. (Chemistry) | Professor of Chemistry, University College, London. |
| | Professor G. Porter, F.R.S. | Firth Professor of Chemistry Sheffield. |
| | Professor E.J. Richards (Aeronautical and Civil Engineering) | Professor of Applied Acoustics, Director of the Institute of Sound and Vibration Research, Southampton. |
| | Professor A.L. Roberts (Chemical Engineering) | Livesey Professor of Fuel Technology, Leeds. |
| | Dr. J.E. Smith, F.R.S. | Director of the Marine Biological Laboratory, Plymouth. |
| | Professor I.N. Sneddon (Mathematics) | Simson Professor of Mathematics, University of Glasgow. |
| | Sir Peter Venables | Vice-Chancellor, University of Aston in Birmingham. |
| | Professor G.C. Drew (Human Sciences Training Awards) | Professor of Psychology, University College, London. |
| <u>Assessors</u> | University Grants Committee | Mr. R.C. Griffiths |
| | Ministry of Technology | Miss P.K. Piercy |

NOTE: The Committee of the Board of which a member is Chairman is shown in brackets after his name.

TERMS OF REFERENCE

To advise the Science Research Council on the award of research grants and training awards, and on the operation of the Atlas Computing Laboratory.

SCIENCE RESEARCH COUNCIL

UNIVERSITY SCIENCE AND TECHNOLOGY BOARD

Membership and Terms of Reference of the Committees of the Board

Biology Committee

| | |
|-------------------------------|----------------------------------|
| Professor R. Brown (Chairman) | Edinburgh U. |
| Professor Bryn-Jones | Aberystwyth |
| Dr. D.J. Elsdon | Food Research Institute (A.R.C.) |
| Professor J. Heslop-Harrison | Birmingham U. |
| Professor H. Key | Sheffield U. |
| Professor H.L. Kornberg | Leicester U. |
| Dr. T.F. McCrea | Glaxo Ltd. |
| Professor R.A. Morton | Liverpool U. |
| Dr. J.M. Shewan | Torry Research Station |
| Professor J.Z. Young | University College, London |

Assessors

Agricultural Research Council
Medical Research Council
Natural Environment Research Council
(Social Sciences Research Council)

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in biology and fundamental psychology.

Chemistry Committee

| | |
|----------------------------------|---------------------------------|
| Professor R.S. Nyholm (Chairman) | University College, London |
| Professor D.H.R. Barton | I.C.S.T. |
| Professor T.L. Cottrell | Edinburgh U. |
| Dr. D. Davies | I.C.I. Ltd. |
| Professor C. Eaborn | Sussex U. |
| Dr. B.A. Hems | Glaxo Ltd. |
| Professor G.W. Kenner | Liverpool U. |
| Professor G. Porter | Sheffield U. |
| Professor J.E. Salmon | Battersea College of Technology |
| Professor N. Sheppard | East Anglia U. |
| Professor K.W. Sykes | Queen Mary College |

Assessors

Ministry of Technology - Mr. D. Neville-Jones

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in Chemistry.

Computing Science Committee

| | |
|--------------------------|---------------------------|
| Lord Halsbury (Chairman) | |
| Professor S. Gill | I.C.S.T. |
| Dr. J. Howlett | Atlas Computer Laboratory |
| Dr. D. Michie | Edinburgh U. |
| Dr. R.M. Needham | Cambridge U. |
| Professor I.N. Sneddon | Glasgow U. |
| Mr. C. Strachey | Oxford U. |
| Professor N. Sutherland | Sussex U. |
| Dr. A.M. Uttley | N.P.L. |

Assessors

Ministry of Technology - Mr. F.J.M. Laver

Terms of reference

To advise the U.S.T Board of the Science Research Council on the award of Research Grants and, when required, Training Awards in computing science.

Mathematics Committee

| | |
|-----------------------------------|----------------|
| Professor I.N. Sneddon (Chairman) | Glasgow U. |
| Professor R.G.D. Allen | L.S.E. |
| Professor W.H. Cockcroft | Hull U. |
| Professor J.N. Hunt | Reading U. |
| Dr. J.G. Laski | Esso Ltd. |
| Professor D.V. Lindley | Aberystwyth |
| Professor D.G. Northcott | Sheffield U. |
| Professor C.A. Rogers | Reading U. |
| Dr. H. Robertson | I.C.I. Ltd. |
| Professor B. Thwaites | Southampton U. |

Assessors

Ministry of Technology - Miss P.K. Piercy

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in mathematics.

NOTE: In dealing with Training Awards for mathematics departments, collaboration with the Astronomy Board will be necessary.

Metallurgy and Materials Committee

| | |
|----------------------------|-----------------------|
| Dr. J.W. Menter (Chairman) | Tube Investments Ltd. |
| Dr. N.P. Allen | N.P.L. |
| Dr. G.L. Bailey | B.N.F.M.R.A. |
| Professor J.G. Ball | I.C.S.T. |
| Dr. F.P. Bowden | Cambridge U. |
| Professor F.C. Frank | Bristol U. |
| Mr. L. Holliday | Shell Chemicals Ltd. |
| Professor F.D. Richardson | I.C.S.T. |
| Professor A.G. Quarrell | Sheffield U. |
| Professor I.G. Slater | Aston U. |
| Dr. A.H. Sully | English Steel Ltd. |
| Professor A.A. Wells | Belfast U. |
| Professor D.A. Wright | Durham U. |

Assessors

Ministry of Technology - Dr. M.G. Church
Ministry of Defence - Dr. Cottrell

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in metallurgy and materials science.

Physics Committee

| | |
|---------------------------------|--------------|
| Professor B. Bleaney (Chairman) | Oxford U. |
| Professor G.F.J. Garlick | Hull U. |
| Professor A.F. Gibson | Essex U. |
| Dr. K. Hoselitz | Mullard Ltd. |
| Professor H. Lipson | M.C.S.T. |
| Dr. Lomer | A.E.R.E. |
| Professor E.W.J. Mitchell | Reading U. |
| Professor A.B. Pippard | Cambridge U. |
| Dr. O. Simpson | N.P.L. |

Assessors

Ministry of Technology - Mr. D. Neville-Jones

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in physics.

NOTE: In dealing with Training Awards to physics departments, special collaboration with the Nuclear Physics and the Astronomy, Space and Radio Boards will be necessary.

Aeronautical and Civil Engineering Committee

| | |
|------------------------------------|---------------------------------------|
| Professor E.J. Richards (Chairman) | Southampton U. |
| Dr. F. Gifford | Concrete Ltd. |
| Professor M.R. Horne | Manchester U. |
| Dr. D.J. Lyons | Road Research Laboratory |
| Professor J.B.B. Owen | Liverpool U. |
| Mr. W.J. Reiners | Ministry of Public Building and Works |
| Dr. F.G. Thomas | Building Research Station |
| Mr. C.T. Wyatt | Costain (Civil Engineers) Ltd. |
| Professor A.D. Young | Queen Mary College |

Assessors

Ministry of Technology - Mr. D. Neville-Jones

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in aeronautical and civil engineering.

Chemical Engineering Committee

| | |
|-----------------------------------|--------------------------------------|
| Professor A.L. Roberts (Chairman) | Leeds U. |
| Dr. J. Barrett | Monsanto Ltd. |
| Mr. R.L. Brown | B.C.U.R.A. |
| Professor K.G. Denbigh | I.C.S.T. |
| Dr. C.C. Hall | Warren Spring Laboratory |
| Professor F. Morton | M.C.S.T. |
| Professor A.W. Scott | Strathclyde U. |
| Professor T.M. Sugden | Warwick U./Thornston Research Centre |
| Dr. W. Watson | Rubber and Plastics R.A. |
| Mr. M. Zvegintzov | N.R.D.C. |

Assessors

Ministry of Technology - Mr. D. Neville-Jones

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in chemical engineering and technology.

Electrical and Systems Engineering Committee

| | |
|---------------------------------|-------------------------|
| Professor M.R. Gavin (Chairman) | U.C. Bangor. |
| Dr. S. Carlisle | S.I.R.A. |
| Dr. J.S. Forrest | C.E.G.B. |
| Professor R.T.A. Howell | Brunel College |
| Professor Sir Willis Jackson | I.C.S.T. |
| Professor E.R. Laithwaite | I.C.S.T. |
| Mr. C.A. Laws | Elliott Automation Ltd. |
| Mr. W. Makinson | N.R.D.C. |
| Professor C.W. Oatley | Cambridge U. |
| Mr. J.A. Stokes | A.E.I. Ltd. |
| Professor J.C. West | Sussex U. |

Assessors

Ministry of Technology - Mr. J.R. Mills
Ministry of Defence

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in electrical and systems engineering.

Mechanical and Production Engineering Committee

| | |
|------------------------------|----------------------|
| Professor H. Ford (Chairman) | I.C.S.T. |
| Mr. M.B. Coyle | A.E.I. Ltd. |
| Mr. T.G. Fellows | N.R.D.C. |
| Professor W.B. Hall | Manchester U. |
| Professor S.P. Hutton | Cardiff |
| Professor J. Loxham | Cranfield |
| Dr. Ewen M'Ewen | Hobourn Group |
| Mr. D. Penny | N.E.L. |
| Professor A.G. Smith | Nottingham U. |
| Mr. T.M. Tilsley | P.E.R.A. |
| Mr. D.T.H. Williamson | Molins Machines Ltd. |

Assessors

Ministry of Technology - Mr. C.F. Watkinson
Ministry of Defence (or Service Departments)

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the award of Research Grants and Training Awards in mechanical and production engineering.

Human Sciences

(Training Awards only)

| | |
|--------------------------------|----------------------------|
| Professor G.C. Drew (Chairman) | University College, London |
| Professor W.M. Gorman | Oxford U. |
| Professor E. Grebenik | Leeds U. |
| Professor Marie Jahoda | Brunel |
| Professor H. Kay | Sheffield U. |
| Professor D.J. Robertson | Glasgow U. |
| Professor W.H. Scott | R.C.A.T., Salford |
| Professor G. Westby | Cardiff |
| Miss J. Woodward | I.C.S.T. |

Reactor Committee (Joint Committee with Atomic Energy Authority)

| | |
|---------------------------|------------------------------|
| Sir John Cockcroft | Churchill College, Cambridge |
| Dr. S.C. Curran | Strathclyde U. |
| Professor J. Diamond | Manchester U. |
| Professor E.W.J. Mitchell | Reading U. |
| Dr. V.S. Crocker | Atomic Energy Authority |
| Dr. P.E. Egelstaff | |
| Dr. J.J. McEhill | |

Terms of reference

The function of the Committee (in respect of S.R.C. responsibility) is to advise on the provision of grants for university reactors, to advise on the support required for university research on A.E.A. reactors, and to negotiate with A.E.A. the provision of reactor facilities for university research.

Atlas Computer Laboratory

| | |
|-----------------------------------|-----------------------------------|
| Professor B.H. Flowers (Chairman) | Manchester U |
| Professor R.A. Buckingham | London U. |
| Lord Halsbury | |
| Dr. A.H. Halsey | Oxford U. |
| Dr. J.C. Kendrew (or his nominee) | M.R.C. Cambridge U. |
| Professor T. Kilburn | Manchester U |
| Dr. W.C. Marshall | A.E.R.E., Harwell |
| Dr. E.S. Page | Newcastle U. |
| Professor R.E. Peierls | Oxford U. |
| Dr. T.G. Pickavance | Rutherford High Energy Laboratory |
| Professor M.V. Wilkes | Cambridge U |

Terms of reference

To advise the U.S.T. Board of the Science Research Council on the operation of the Atlas Computer Laboratory.

AD HOC PANELS OF THE U.S.T.B.

National Instrument Centre Panel

Professor G. Porter (Chairman)

Dr. D. Davies

Dr. S.R. Elsdon

Mr. R.M.S. Hall

Professor B.C. King

Dr. J.W. Menter

Dr. H.T. Openshaw

Professor N. Sheppard

Mr. J. Wallace

Dr. D.H. Whiffen

Sheffield U.

I.C.I. Ltd.

Food Research Institute (A.R.C.)

O.S.T.I. (D.E.S.)

Bedford College

Tube Investments Ltd.

Wellcome Research Laboratories

East Anglia U.

Ministry of Technology

N.P.L.

Terms of reference

The Panel's function is to enquire into the need for and extent of a national instrument centre and to make recommendations to the Board.