

SCIENCE RESEARCH COUNCIL

Estimates 1965/6

Note by the Chairman

The Council will wish to note the extract below from Civil Estimates which shows the provision approved for the Council's activities in 1965/6. The estimates were drawn up from proposals submitted to D.E.S. and the Treasury by the various predecessor bodies and allow for the payments which will have to be made to other Government departments (mainly the Ministry of Aviation, the Ministry of Public Building and Works and H.M.S.O.) for services which have hitherto been given without charge.

Nearly all the individual sub-heads in the Estimates were reduced below the sums originally requested, but despite the economic situation, a substantial increase over the previous year has been allowed in most cases. I suggest that the appropriate funds should now be allocated to the Laboratories, Observatories and Station in accordance with the approved Estimates, and that a provisional allocation be made between the Divisions for research grants, awards and other services as provided in the Estimates.

The effects of this on research grants and awards would be:-

Post-Graduate Awards

£4,227,000 - estimated to be sufficient for 2,900 new Studentships and 150 Fellowships.

Research Grants

| | |
|--|------------|
| Nuclear Physics: | £1,370,000 |
| Space Research: | 397,000 |
| Human Sciences: | 170,000 |
| Earth Sciences (SRC is to handle these for two months on behalf of NERC) | 375,000 |
| Other Sciences: (Including Astronomy) | 3,863,000 |
| Total - | £6,175,000 |

Some adjustment of the distribution of funds for research grants could be made during the summer or autumn if the work of the Boards and Committees showed this to be necessary.

SCIENCE RESEARCH COUNCIL

I. ESTIMATE of the amount required in the year ending 31st March 1966 for grants in aid of the Science Research Council including subscriptions to certain international organisations.

Twenty-eight million four hundred and seventy-six thousand pounds*
(£28,476,000)

II. Subheads under which this vote will be accounted for by the Department of Education and Science, and additional detail.

| 1964-65 | | 1965-66 |
|------------|---|------------|
| £ | | £ £ |
| | GRANTS IN AID OF THE SCIENCE RESEARCH COUNCIL | |
| 19,561,000 | A. SCIENCE RESEARCH COUNCIL | 23,528,000 |
| | For:- | |
| 14,587,500 | (1) General expenses (net) (see Appendix I) | 18,205,000 |
| 4,973,500 | (2) Capital expenditure (net) (see Appendix II) | 5,323,000 |
| 2,400,000 | B. SUBSCRIPTION TO THE EUROPEAN ORGANISATION FOR NUCLEAR RESEARCH The expenses are met by subscriptions from member states of which the U.K.'s share under the Convention is not more than 25%. Provision is made for the balance of the U.K. share for the year ending 31 December 1965 and an advance for the year ending 31 December 1966. | 2,893,000 |
| 870,000 | C. SUBSCRIPTION TO THE EUROPEAN ORGANISATION FOR SPACE RESEARCH The expenses are met by subscriptions from member states of which the U.K.'s share under the Convention is not more than 25%. Provision is made for the balance of the U.K. share for the year ending 31 December 1965 and an advance for the year ending 31 December 1966. | 1,750,000 |
| 304,000 | D. CONTRIBUTIONS TO NATO SCIENTIFIC SCHEMES | 305,000 |

*Subject to the passage of the Science and Technology Bill

NOTE

Expenditure from the grants in aid will be accounted for in detail by the Science Research Council to the Comptroller and Auditor General who is responsible for auditing the Councils' accounts but expenditure from the international subscriptions and contributions will not be accounted for in detail to him. Any unexpended balance of the sums issued to the Council will not be liable to surrender to the Exchequer nor will any unexpended balance of the International subscriptions issued by the Council to the international organisations be surrendered to the Council.

NATIONAL ACCOUNTS CLASSIFICATION

| 1964-65 | | 1965-66 |
|------------|---|------------|
| £ | | £ |
| 7,072,500 | Current expenditure on goods and services | 8,563,000 |
| 3,233,000 | Current grants to persons | 3,965,000 |
| 2,110,000 | Current grants to private bodies | 2,588,000 |
| - | Capital grants to private sector | - 226,000 |
| 4,000 | Loans to private sector at home | 2,000 |
| 3,449,000 | Current grants abroad | 4,823,000 |
| 7,266,500 | Gross fixed capital formation at home | 8,761,000 |
| 23,135,000 | | 28,476,000 |

APPENDIX I

GENERAL EXPENSES

| 1964-65 | | 1965-66 | |
|-----------|--|-----------|-----------|
| £ | | £ | £ |
| 327,000 | A.1. ADMINISTRATION AND CENTRAL EXPENSES* | | 651,000 |
| 285,000 | (1) Salaries, wages, &c. | 410,000 | |
| 14,000 | (2) Travelling and subsistence expenses, &c. | 33,000 | |
| 11,000 | (3) Post Office services | 25,000 | |
| 9,000 | (4) Miscellaneous | 70,000 | |
| - | (5) Rent, rates, maintenance, &c. | 106,000 | |
| | (6) Loans to the staff of the ex N.I.R.N.S. laboratories to assist them in house purchase | 3,000 | |
| 4,000 | (7) Fee payable to Exchequer and Audit Department for audit of European Organisation for Nuclear Research (See Y(6)) | 4,000 | |
| 4,000 | | | |
| 4,567,000 | A.2. RUTHERFORD LABORATORY | | 5,072,000 |
| 1,260,000 | (1) Salaries, wages, &c. | 1,535,000 | |
| 90,000 | (2) Employer's superannuation payments | 100,000 | |
| 90,000 | (3) Travelling and subsistence payments, &c. | 106,000 | |
| 30,000 | (4) Post Office services | 31,000 | |
| 60,000 | (5) Other Administrative expenses | 60,000 | |
| 2,742,000 | (6) Stores, Materials and Services | 2,888,000 | |
| | (7) Extramural research and experimental agreements with universities, &c. | 287,000 | |
| 250,000 | (8) Rent, rates, &c. | 65,000 | |
| 45,000 | | | |
| 390,000 | A.3. DARESBUURY LABORATORY | | 625,000 |
| 143,000 | (1) Salaries, wages, &c. | 285,000 | |
| 10,000 | (2) Employer's superannuation payments | 25,000 | |
| 6,000 | (3) Travelling and subsistence payments, &c. | 13,000 | |
| 3,000 | (4) Post Office services | 6,000 | |
| 11,000 | (5) Other Administrative expenses | 17,000 | |
| 176,000 | (6) Stores, Materials and Services | 246,000 | |
| | (7) Extramural research and experimental agreements with universities, &c. | 30,000 | |
| 40,000 | (8) Rent, rates, &c. | 3,000 | |
| 1,000 | | | |
| 386,000 | A.4. ATLAS COMPUTER LABORATORY | | 392,000 |
| 64,000 | (1) Salaries, wages, &c. | 102,000 | |
| 4,000 | (2) Employer's superannuation payments | 5,000 | |
| 6,000 | (3) Travelling and subsistence payments, &c. | 9,000 | |
| 7,000 | (4) Other Administrative expenses | 10,000 | |
| 270,000 | (5) Stores, Materials and Services | 231,000 | |
| | (6) Extramural research and experimental agreements with universities &c. | 30,000 | |
| 30,000 | (7) Rent, rates, &c. | 5,000 | |
| 5,000 | | | |

*The figures for 1964-65 reflect the provision for salaries and administrative expenditure of staff transferred from the Department of Scientific and Industrial Research.

APPENDIX I (cont.)

GENERAL EXPENSES (contd.)

| 1964-65 | | 1965-66 |
|------------|--|------------|
| 853,550 | A.5. OTHER ESTABLISHMENTS | 1,134,000 |
| 632,500 | (1) Salaries, wages, &c. | 746,500 |
| 36,400 | (2) Travelling and subsistence expenses, &c. | 43,000 |
| 11,250 | (3) Post Office services | 14,500 |
| 121,100 | (4) Minor items of apparatus and equipment, laboratory materials, repair work, &c. | 184,500 |
| 2,300 | (5) Expenses of outside research | 4,000 |
| 50,000 | (6) Rent, rates, maintenance, &c. | 141,500 |
| 4,408,000 | A.6. GRANTS TO UNIVERSITIES AND OTHER BODIES FOR SCIENTIFIC RESEARCH | 6,175,000 |
| 774,000 | (1) Nuclear Physics: | |
| 326,000 | (a) Provision of capital equipment | 865,000 |
| | (b) Salaries and other recurrent expenditure | 505,000 |
| 1,519,000 | (2) Other: | |
| 1,331,000 | (a) Provision of capital equipment | 2,573,000 |
| | (b) Salaries and other recurrent expenditure | 1,665,000 |
| 333,000 | (c) Upper Atmosphere and Satellite Instrumentation research | 397,000 |
| 120,000 | (d) Human Sciences in Industry | 170,000 |
| 5,000 | (3) <u>Short term O.E.C.D. Visiting Fellowships</u> (See Y(7)) | - |
| 3,233,000 | A.7. POSTGRADUATE TRAINING AWARDS | 4,227,000 |
| 2,318,000 | (1) Studentships | 3,033,000 |
| 158,000 | (2) Research Fellowships | 264,000 |
| 757,000 | (3) Research Training Support Grants | 930,000 |
| 755,000 | A.8. SPACE RESEARCH CENTRAL EXPENSES * | 948,000 |
| | (1) Payments to the Ministry of Aviation for the cost of satellite engineering and work on sounding rockets, &c. | 921,000 |
| 705,000 | (2) Tapes, computing, &c. | 27,000 |
| 50,000 | | |
| 14,919,550 | GROSS TOTAL, APPENDIX I | 19,224,000 |
| | Deduct: | |
| 332,050 | Y. RECEIPTS | 1,019,000 |
| 140,550 | (1) Fees and charges paid by U.K. Government Departments and other bodies | 178,250 |
| - | (2) Repayment of housing loans by staff of ex N.I.R.N.S. laboratories | 1,000 |
| 44,500 | (3) Canteen, Hostel and housing receipts | 49,000 |
| 16,000 | (4) Sales and miscellaneous receipts | 27,750 |
| 125,000 | (5) Contribution from N.A.T.O. (for NATO Postgraduate Training Awards - See A.7) | 125,000 |
| 1,000 | (6) Nominal Audit fee payable by the European Organisation for Nuclear Research (See A.1(7)) | 1,000 |
| 5,000 | (7) <u>Contribution from the Council of O.E.C.D.</u> (See A.6(3)) | - |
| - | (8) Payment from D.E.S. for research grants in Earth Sciences (Class VII, Vote 9, Subhead G) (See A.6) | 375,000 |
| - | (9) Payment from D.E.S. for training awards in Earth Sciences and Ecology (Class VII, Vote 9, Subhead H) (See A.7) | 262,000 |
| 14,587,500 | NET TOTAL, APPENDIX I | 18,205,000 |

*This Subhead covers only external work. Salaries of management staff are borne on subhead A.1, all other expenditure is borne on the Ministry of Aviation Vote.

APPENDIX II

| 1964-65 | 1965-66 | | | |
|---|---|------------|---------------------------------------|----------------------|
| £ 4,973,500 | A.9. CAPITAL EXPENDITURE ON LAND, BUILDINGS AND EQUIPMENT | | £ 5,323,000 | |
| SCHEMES COSTING £50,000 OR MORE | Total Estimate | | Probable Expenditure to 31 March 1965 | Required for 1965-66 |
| | Original | Current | | |
| | £ | £ | £ | £ |
| RADIO RESEARCH STATION | | | | |
| Steerable Aerial Chilbolton | 335,000 | 434,000 | 50,000 | 300,000 |
| New Telemetry complex building . . . | 30,000 | 71,000 | 27,000 | 24,000 |
| Extension to Main Laboratory Building | 50,000 | 60,000 | - | 1,000 |
| ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX | | | | |
| Isaac Newton Telescope | 685,000 | 997,000 | 378,000 | 343,000 |
| Computer for Nautical Almanac Office | 200,000 | 165,000 | - | 150,000 |
| ROYAL OBSERVATORY, EDINBURGH | | | | |
| Rome outstation | 60,000 | 66,000 | 16,000 | 18,500 |
| RUTHERFORD LABORATORY | | | | |
| Nimrod 7 GeV Proton Synchrotron . . | 6,900,000 | 10,480,000 | 10,475,000 | 5,000 |
| Beam Handling Plant, Phase I | 1,000,000 | 980,000 | 975,000 | 5,000 |
| Beam Handling Plant, Phase II | 400,000 | 355,000 | 320,000 | 35,000 |
| Heavy Liquid Bubble Chamber | 420,000 | 457,000 | 416,000 | 41,000 |
| Helium Bubble Chamber | 416,000 | 497,000 | 336,000 | 135,000 |
| Staff Canteen | 86,000 | 106,000 | 102,000 | 4,000 |
| Nimrod Control Block Extension . . . | 221,000 | 221,000 | 201,000 | 20,000 |
| Heavy Laboratory and Office Block . . | 195,000 | 221,000 | 213,000 | 8,000 |
| Proton Linear Accelerator Laboratory | 230,000 | 273,000 | 265,000 | 8,000 |
| Parasitic Area Extension | 200,000 | 186,000 | 183,000 | 3,000 |
| Heavy Plant Store | 75,000 | 75,000 | 30,000 | 45,000 |
| Experimental Area Extension | 71,000 | 73,000 | 69,000 | 4,000 |
| Roads and Car Parks | 55,000 | 55,000 | 51,000 | 4,000 |
| Site Power distribution | 74,000 | 74,000 | 70,000 | 4,000 |
| Oxford Precision Encoding and Pattern Recognition Project | 240,000 | 240,000 | - | 170,000 |
| High Energy Physics Apparatus . . . | 100,000 | 100,000 | - | 10,000 |
| Laboratory and Office Block (1) . . . | 150,000 | 150,000 | - | 5,000 |
| Laboratory and Office Block (2) . . . | 250,000 | 250,000 | - | 1,000 |
| 2nd Main Experimental Area | 290,000 | 290,000 | - | 1,000 |
| Power Supplies and Services | 150,000 | 150,000 | - | 1,000 |
| Auxiliary Building for High Energy Physics | 100,000 | 100,000 | - | 1,000 |
| Sweeping Magnet | 50,000 | 50,000 | - | 30,000 |
| Proton Linear Accelerator Tank I improvements | 80,000 | 80,000 | - | 1,000 |
| Active Components Workshop | 50,000 | 50,000 | - | 25,000 |
| Track Measuring Equipment | 80,000 | 80,000 | - | 80,000 |
| DARESBUURY LABORATORY | | | | |
| NINA 4 GeV Electron Synchrotron . . | 3,120,000 | 4,580,000 | 1,742,000 | 1,970,000 |
| NINA External Beam | 405,000 | 405,000 | - | 45,000 |
| Positron facility NINA | 150,000 | 150,000 | - | 10,000 |
| Hostel and Flats | 150,000 | 150,000 | - | 10,000 |
| Extension of Laboratory accommodation | 650,000 | 650,000 | - | 1,000 |

APPENDIX II (cont.)

| 1964-65 | | | | 1965-66 |
|--|--|-----------|---------------------------------------|----------------------|
| £ | A.9. CAPITAL EXPENDITURE ON LAND, BUILDINGS AND EQUIPMENT | | | £ |
| SCHEMES COSTING £50,000 OR MORE | Total Estimate | | Probable Expenditure to 31 March 1965 | Required for 1965-66 |
| | Original | Current | | |
| | £ | £ | £ | £ |
| ATLAS LABORATORY: | | | | |
| Atlas Computer | 3,400,000 | 3,121,000 | 2,583,000 | 339,000 |
| Mass Store | 250,000 | 250,000 | - | 50,000 |
| Building Extension | 70,000 | 70,000 | - | 1,000 |
| Printer | 50,000 | 50,000 | - | 50,000 |
| SCHEMES DETAILED ABOVE | | | | 3,958,500 |
| SCHEMES COSTING LESS THAN £50,000 (not detailed) | | | | 1,365,500 |
| 4,973,500 | Gross Total for Capital Expenditure on Land, Buildings and Equipment | | | 5,324,000 |
| | Deduct: | | | |
| | Z. RECEIPTS: | | | |
| | Miscellaneous | | | 1,000 |
| 4,973,500 | NET TOTAL APPENDIX II | | | 5,323,000 |

APPENDIX III

EXPENDITURE BY RESEARCH ESTABLISHMENTS

| Establishment | General Expenses (Appendix I) | Capital Expenditure (Appendix II) | Receipts (Appendices I and II) | Net Total | |
|---|----------------------------------|--------------------------------------|-----------------------------------|-------------------|-------------------|
| | | | | 1965-66 | 1964-65 |
| | £ | £ | £ | £ | £ |
| Rutherford Laboratory . . . | 5,072,000 | 1,453,000 | 70,000 | 6,455,000 | 6,149,000 |
| Daresbury Laboratory . . . | 625,000 | 2,300,000 | - | 2,925,000 | 1,750,000 |
| Atlas Computer Laboratory . . | 392,000 | 508,000 | 150,000 | 750,000 | 1,568,000 |
| Radio Research Station . . . | 503,000 | 399,000 | 6,000 | 896,000 | 651,000 |
| Royal Greenwich and Cape of Good Hope Observatories . . . | 491,000 | 545,000 | 20,250 | 1,015,750 | 698,000 |
| Edinburgh Observatory . . . | 140,000 | 119,000 | 750 | 258,250 | 158,000 |
| Unallocated (Capital) . . . | - | - | 1,000 | - 1,000 | - |
| TOTAL RESEARCH ESTABLISHMENTS | 7,223,000 | 5,324,000 | 248,000 | 12,299,000 | 10,974,000 |

APPENDIX IV

STAFF EMPLOYED BY COUNCIL

| | Estimated 1 April, 1965 |
|--|----------------------------|
| A. HEADQUARTERS | |
| (1) Administrative, Executive and Clerical, &c. | 158 |
| (2) Scientific and Technical | 42 |
| B. RESEARCH ESTABLISHMENTS | |
| (1) Administrative, Executive and Clerical, &c. | 279 |
| (2) Scientific and Technical | 1,022 |
| (3) Industrial | 477 |
| New staff estimated to be in post by 31 March 1966 | 327 |
| TOTAL | 2,305 |