

Laser Laboratory Steering Committee

High Power Laser Facility Management and Staffing Arrangements

L C W Hobbis

Introduction

1. At previous meetings of the Committee, proposed management and staffing arrangements were discussed for the Joint Project then under consideration. New proposals for a facility funded solely by the SRC are now presented for information and discussion. Some of the points covered below are, perhaps, obvious, but are included to give a complete picture.
2. Funds for the High Power Laser Facility, after approval by the Science Board and agreement by Council, will be included in the allocation to the Rutherford Laboratory with the Director, Rutherford Laboratory being responsible for the setting up, operation, and development of the facility.
3. It is proposed that there should be a Facility Committee to advise the Director on these functions as the principal management Committee for this part of the Laboratory programme. This will form part of new arrangements at present under consideration by the SRC to assist Boards and Establishments in the management of central facilities. The Facility Committee will therefore also serve the Science Board and its subject committees.
4. Sub-Committees of the Facility Committee will be set up as required to deal with detailed matters.
5. In discharging his responsibilities the Director will exercise his normal financial delegation within the allocations of funds made by Council; namely unlimited for recurrent expenditure within programmes approved by the appropriate Board and Council, and up to £10K on items of capital expenditure outside individually approved schemes.

6. Financial control of the approved capital scheme to set up the facility will be exercised by the Director, Rutherford Laboratory, advised by a Project Management Committee. Subsequent major schemes will be treated in the same way.
7. Outline terms of reference, explanatory notes and proposed membership of the various new committees are given below.

8. THE HIGH POWER LASER FACILITY COMMITTEE

This is to be the principal management committee and will be set up at the outset. It will meet about three times per annum.

8.1 Terms of Reference

These are in the course of broad formulation and have not yet been considered by the Science Board. It is expected however that they will be along the following lines:

- a) To advise the Director of the Rutherford Laboratory on the setting-up, operation and development of the High Power Laser Facility;
- b) To advise Subject Committees and the Science Board on the programmes proposed by university scientists and the resources needed for their execution;
- c) To monitor the execution of the facility programme as approved by the Board and Council;
- d) To report to the Board annually on the programme carried out and to make recommendations on future requirements;
- e) To approve capital expenditure within its delegation.

8.2 Explanatory Notes on Function

Subject to modification so as to be consistent with the actual terms of reference, the following indications are given on the modus operandi:

- a) The Committee is concerned with the setting up of the Centre, the execution of the experimental programme and the development of the facilities.

- b) Proposals for the operation and development of the facility, and estimates of resources needed for its operation, development and use are prepared by the Director advised by the Facility Committee.
- c) The Director submits reports to the Science Board and seeks its approval for allocation of funds after consideration by the Facility Committee. Programme proposals and estimates are also presented to the appropriate subject committees which will be responsible for general approval of the research programmes, and acceptance of their associated costs and manpower implications.
- d) Investigators wishing to use the facilities will normally submit broad programme proposals annually for Subject Committee/Board approval. These submissions may look forward several years and will be accompanied by a Laboratory assessment of the resources needed to support them, and recommendations by the Facility Committee.
- e) Proposals by users for individual experiments are submitted to a sub-committee of the Facility Committee which will advise on allocation of time and resource needed to support the experiment. Such proposals must normally lie within research programmes already approved by the Science Board (or Subject Committee) and must be consistent with any guidelines laid down by the Board. There should be some scope for allocation of time at the Director's discretion in consultation with the Chairman of the Sub-Committee; for example in order to perform exploratory experiments necessary for the formulation of programme proposals.
- f) Funds to be spent by university departments in support of approved experiments will be provided through Laboratory with the University Agreements. These Agreements will include the support of technicians and research associates where such staff are necessary for the effective use of the facility.

8.3 Proposed Membership

Chairman - Senior University Scientist
 Director, Rutherford Laboratory
 ~ 5 Senior University Scientists
 Project Manager
 Project Officer
 Secretary, Rutherford Laboratory
 Science Division, SRC London Office (2 representatives)
 MOD observer
 Secretariat - Joint R.L/L.O

8.4 Sub-Committees

The Facility Committee will set up sub-committees as it deems fit to handle detailed matters.

It is expected that a users' advisory sub-committee will be needed. It will report to the Facility Committee and will advise the project team on all matters relating to the effective use of the facility by users except the business of experiment proposals and time allocation. (Prof. A Gibson is Chairman of an interim Users' Advisory Committee.)

It may also be appropriate to have a Sub-Committee of experts to adjudicate on individual proposals by users and on the allocations of Laser time and resources for support of the experiments selected.

9. PROJECT MANAGEMENT COMMITTEE

9.1 Terms of Reference

To assist the Director of the Rutherford Laboratory to exercise overall financial supervision and control of the approved capital scheme for the High Power Laser Facility and to ensure completion within the approved estimate and time scale. The life of the Committee is limited to the duration of the approved scheme and it will meet about three times per annum during that period.

9.2 Proposed Membership

Director, Rutherford Laboratory
Secretary, Rutherford Laboratory
Project Manager
Project Officer
Chairman, Facility Committee
Chairman, Users' Sub-Committee
Head Science Division, SRC London Office
Head Finance Division, SRC London Office
AERE Contracts
Secretary, Rutherford Laboratory

9.3 Executive Sub-Committee

Responsible for supervising detailed execution of the major capital scheme. Meeting about once per month.

Project Manager
Project Officer

Chairman, Users' Committee or nominee
Rutherford Laboratory finance officer
AERE Contracts
SRC London Office observer

10. STAFFING

- a) There will need to be a strong emphasis on applied science and technological disciplines in the project team. Specialist expertise in lasers is required but a large component of the work is appropriate to engineers, technicians, and applied scientists with no special expertise in high power laser research.
- b) The number of full-time Rutherford Laboratory staff directly engaged in the work of the project is expected to rise to 40 by the end of the second full year following approval. This total will be distributed approximately as follows: 12 professional scientists, 5 professional engineers, 14 who fall broadly into the category of technologists, 4 administrative and secretarial staff and 5 skilled craft workers. Within the 12 scientists, 8 or 9 specialist staff with directly relevant laser experience will need to be recruited from outside the Rutherford Laboratory; these would include any university staff seconded to work full-time in the project team.
- c) The work of the project will be directed by four senior members of the team, the Project Officer and three Group Leaders. Brief job descriptions define their roles.

Project Officer

Responsible under a Division Head, for all day to day management.

Project Engineer

Coordination of all support engineering on the project. Particular responsibility for temporary and permanent buildings and services; establishment and control of close support workshops and design office; special research and development projects in high power laser engineering and applications ~ 18 staff.

Head of Glass Laser Group

Responsible for the construction and operation of neodymium glass lasers and preparation of targets. Direction of research and development activity towards improving the performance of the glass laser systems. Participation in 'in house' research programme using the glass lasers.
~ 11 staff.

Head of 'New Laser' Group

Direction of the research and development programme, centred on the electron-beam facility, in 'gas laser development'. Basic research into new laser systems. Development of new lasers linked to the continuing development of the programme.
~ 6 staff.

In addition there will be a small local administration group of ~ 4.

11. UNIVERSITY MANPOWER

- a) University Scientists (staff and research students) visiting the facility will receive the normal travel and subsistence support from Laboratory funds. This includes provision for long term visits should these be necessary to permit effective use of the facility by a university group.
- b) Financial Agreements can be drawn up between the Laboratory and universities to support experiments; these can include provision for associated manpower requirements.
- c) University staff seconded to the Laboratory to work as members of the project team would be paid, or have their salaries reimbursed to the university, by the Laboratory.
- d) It is expected that university departments will be able to undertake appropriate project tasks on behalf of the Laboratory. These are arranged through EMR Agreements which also can include financial provision for associated manpower.