



## **Dublin City University**

Report to Governing Authority

of

the Quality Review of

The School of Physical Sciences

conducted in 2001-2002

Approved by Governing Authority, 14 November 2002

## Background

The Quality Reviews are conducted in accordance with the legislative requirement set out in Section 35 the Universities Act (1997) and with a framework model developed and agreed through the Conference of Heads of Irish Universities' (CHIU) Inter University Quality Steering Committee (IUQSC).

The basic model at DCU consists of a number of basic steps:

1. An internal team in the School/Unit under review completes a detailed **Self-Assessment report**
2. This report is sent to a team of peer assessors, the Peer Review Group (PRG) – composed of members from outside DCU and from other areas of DCU – who then visit the School or Unit and conduct discussions with a range of staff, students and other stakeholders
3. The PRG then writes a report (termed the **Peer Review Group Report**).
4. The School/Unit produces a plan of action in response to the various issues and findings (termed the **Quality Improvement Plan**)
5. Both the Quality Promotion Committee and the University Executive consider the Review Group Report and Quality Improvement Plan
6. The University Executive (in consultation with the School/Unit under review) produces a response to the above reports (termed the **Executive Response**). The School/Unit under review and the Quality Promotion Committee are invited to comment on the response.

## Publication

Under Section 35(2) of the Universities Act, the Governing Authority is required to provide for the publication in such form and manner as it thinks fits of findings arising out of the application of the quality assurance procedures.

The model for DCU is to present the following to the Governing Authority for its approval and subsequent publication:

On an annual basis, for the quality reviews conducted during that year, the Governing Authority will be presented with (for each individual review):

- A brief background to the School/Unit under review with salient statistics
- A *brief summary* of the Review Group Report
- A *brief summary* of the Quality Improvement Plan
- The Executive response to the Review Group Report and the Quality Improvement Plan

The Conference of Heads of Irish Universities (CHIU) (through the Registrar's Group) have agreed that, in the spirit of the "publication of outcomes" requirement of Section 35 of the Universities Act (1997), the reports on all quality reviews will be published, in cases where the Peer Review visits took place after January 1 2002. [Ref: GA02/M3/7.1]

Following approval by the Governing Authority, the following will be published on the university website

- Summary Report on the Quality Review to the Governing Authority (this document)
- Full text of the Peer Review Group Report
- Full text of the School Quality Improvement Plan

This will be the first time that these reports have been made publicly available. All universities have agreed that the reports will be released as soon as possible after November 1 2002.

## Universities Act (1997)

### Section 35. Quality Assurance

(1) A **governing authority**, in consultation with the academic council, shall, as soon as practicable after the governing authority is established under this Act and at such other times as it thinks fit, require the chief officer to establish procedures for quality assurance aimed at improving the quality of education and related services provided by the university.

(2) The procedures shall include—

(a) the evaluation, at regular intervals and in any case not less than once in every 10 years or such longer period as may be determined by the university in agreement with An tÚdarás (the Higher Education Authority), of each department and, where appropriate, faculty of the university and any service provided by the university, by employees of the university in the first instance and by persons, other than employees, who are competent to make national and international comparisons on the quality of teaching and research and the provision of other services at university level, and

(b) assessment by those, including students, availing of the teaching, research and other services provided by the university,

and shall provide for the publication in such form and manner as the **governing authority** thinks fit of findings arising out of the application of those procedures.

(3) A **governing authority** shall implement any findings arising out of an evaluation carried out in accordance with procedures established under this section unless, having regard to the resources available to the university or for any other reason, it would, in the opinion of the governing authority, be impractical or unreasonable to do so.

(4) A **governing authority** shall, from time to time, and in any case at least every 15 years, having regard to the resources available to the university and having consulted with An tÚdarás, arrange for a review of the effectiveness of the procedures provided for by this section and the implementation of the findings arising out of the application of those procedures.

(5) A **governing authority**, in a report prepared in accordance with *section 41*, shall publish the results of a review conducted under *subsection (4)*.



## **Quality Assurance/Quality Improvement Programme 2001-2002**

Report to Governing Authority

### **Review of the School of Physical Sciences**

Self Assessment Undertaken by School	September - March 2001
Review Group Visit	4-6 April 2002
Peer Review Group (PRG) Report received by Quality Promotion Unit (QPU)	24 May 2002
PRG Report considered by Quality Promotion Committee (QPC)	29 May 2002
School Quality Improvement Plan (QuIP) received by QPU	10 September 2002
School QuIP considered by QPC	12 September 2002
PRG Report and School QuIP considered by University Executive	24 September 2002
Response of University Executive Received by QPU	1 November 2002
Response of University Executive and Summary Report considered by QPC	6 November 2002
Summary Report presented to Governing Authority for approval	14 November 2002

This report is presented for members of the Governing Authority of Dublin City University as a short yet comprehensive account of the above review and the responses to the review by the School and the various University Committees and Bodies. The presentation of the Review Group report and the School Quality Improvement plan are précis conforming as closely as possible to the intent and wording of the full Review Group Report and Quality Improvement Plan.

Dr. Pdraig Walsh, Director of Quality Promotion, November 2002

### **Members of Review Group**

- Mr. Frank Turpin , Education Manager Intel Ireland (Chair)
- Prof. Ignatius McGovern, Department of Physics, Trinity college Dublin
- Prof. Dietrich Zahn, Institut für Physic/Halbleiterphysik, Technical University of Chemnitz, Germany
- Prof. Charles McCorkell, School of Electronic Engineering, DCU
- Ms. Miriam Corcoran, Head of Planning & Administration, The Library, DCU (Rapporteur)

### **Nomenclature used in Report**

CHIU	Conference of Heads of Irish Universities
ESPEO	Ecole Supérieure des Procédés Electroniques et Optiques
FTEs	Full Time Equivalents
HEA	Higher Education Authority
IT	Information Technology
ITs	Institutes of Technology
IUQSC	Irish Universities Quality Steering Committee
NCPST	National Centre for Plasma Science and Technology
NCSR	National Centre for Sensor Research
PRG	Peer Review Group
PRTLII	Programme for Research in Third-Level Institutions
QPC	Quality Promotion Committee
QPU	Quality Promotion Unit
TRIP	Training and Research for Industry Programme

## Profile of the School of Physical Sciences (as at April 2002)

The School of Physical Sciences is one of four Schools that comprise the Faculty of Science and Health.

### Staff Numbers

Academic:	18
Administrative:	4
Technical:	7
IT/Computing Support	1
Research (Postdoctoral)	17
Research (Other)	7

### Students

	Numbers	FTEs
Undergraduate (Home Degrees)	190	128
Undergraduate (Service Teaching)	569	105
Postgraduate (Taught)	9	9
Postgraduate (Research)	38	114
Total	806	356

### Undergraduate Programmes Offered

BSc in Applied Physics  
 BSc in Physics with French/German  
 BSc in Science Education  
 Certificate in Plasma and Vacuum Studies (part-time)

### Postgraduate Programmes Offered

Graduate Diploma/MSc in Plasma & Vacuum Technology  
 (part-time)

### Research & Scholarship: 1997-2001

Books (Authored):	1
Chapters in Books:	3
Articles in Refereed Journals:	147
Reviews	1
Other Publications:	5
External Lectures/Papers/Presentations:	109
Research Students Graduated (MSc)	20
Research Student Graduated (PhD)	16
Research Grants Obtained	60
Research Income (excluding PRTL I Programme)	€5.5m

**SUMMARY OF**  
***PEER REVIEW GROUP REPORT***  
**ON**  
**THE SCHOOL OF PHYSICAL SCIENCES**



## Executive Summary

This Quality Review Process was conducted in accordance with the legislative requirements of the Universities Act (1997). The School of Physical Sciences established a Co-ordinating Committee in 2001 and produced a comprehensive self-assessment report in March 2002. This report formed the basis of the subsequent Peer Review Group (PRG) site visit and review.

### Profile

The School of Physical Sciences is a constituent school of the Faculty of Science and Health and is an active teaching and research department with a total staff complement of 54 (permanent and temporary). This includes 18 academic (15 permanent posts and three replacements for seconded staff), 24 research (13 postdoctoral and 11 other researchers) and 4 administrative staff (one permanent) supported by 7 technicians (5 permanent) and one Analyst Programmer (permanent).

The School offers undergraduate degrees in Applied Physics, Physics with a Language and Science Education and both taught and research postgraduate degrees. In association with TRIP (Training and Research for Industry Programme) the school provides short courses aimed at industry in the areas of vacuum and plasma science and technology. The School also contributes to other undergraduate programmes across science, engineering and the humanities.

Research in the School is organised mainly in five groups; Centre for Laser Plasma Research, Optical Sensor Laboratory, Plasma Research Laboratory, Semiconductor Spectroscopy Laboratory and Surface Science Research Laboratory. Some staff pursue research individually. The School also provides the leadership for the National Research Centres for Plasma Science and Technology (NCPST) and for Sensor Research (NCSR).

### The Review Process

The PRG noted the enthusiastic and open response of both staff and students and was particularly impressed by the consistency of positive views expressed from first year undergraduates through to graduates.

The documentation provided to the PRG was comprehensive and candid. It was well structured, accessible and did not shy away from identifying shortcomings. The PRG commend the Self Assessment Co-ordinating Committee for producing an excellent report, which greatly facilitated the work of the group.

### Organisation and Management

This is a well-organised School with an effective committee structure. A team-based management style ensures broad participation in management. The emergence of the large-scale interdisciplinary research centres, two of which are headed up by members of the School, and in which 75% of the school staff are involved is the dominant dynamic needing management attention.

The School is going through a period of rapid development with the emergence of these research centres and the related significant increase in funding. The relationship between the School and the centres is ambiguous.

### **Programmes and Instruction**

The PRG congratulates the School on its commitment to Instruction and on its efforts to refine and define new programmes, which will attract extra students to the university.

The flagship BSc in Applied Physics is highly valued by former and current students, as well as by employers. The recent decline in enrolment is of concern, as is the ageing of laboratory equipment and the availability of industrial placements. The introduction of the peer-tutor system and general student-centred efforts towards improving first-year retention rates is to be welcomed. Teaching in other undergraduate programmes appears to be well received by students and their respective schools. Staff members are "very approachable" and the school is a student-centred unit. The case for a recognisable "common-space" within the school is well argued.

Postgraduate numbers (current and projected) warrant the provision of some formal coursework, with certification linked to progression from Masters to Doctoral registration. Web-based and other "off-campus" students present opportunities and challenges to both the School and the University.

### **Scholarship and Research**

A high proportion of academic staff in the School are 'research active'.

There is a strong synergy between the research performed and Instruction, in particular the Applied Physics course. Research is strongly coupled to that performed in the National Research Centres for Plasma Science and Technology and for Sensor Research. That the School provides the leadership in the two centres is evidence of its research profile within the university.

The School has benefited from major equipment donations and a good level of external research funding. However, there are deficiencies in the infrastructure, especially insufficient technical support and the absence of career paths for research-only staff. In terms of research output the School is competitive on an Irish level. Elements of the School are internationally competitive and the School as a whole has the potential to compete on an international level. The expansion of computational physics (numerical modelling and simulations) and growth in postgraduate student numbers would underpin the future development of research.

### **Social and Community Services**

There is strong involvement in outreach, access programmes and the promotion of physics in the local post-primary schools.

### **Staffing, Accommodation and Resources**

The School has a well-motivated staff with a high proportion of researchers and good quality research equipment.

The current senior/junior ratio inadequately reflects the age and experience of academic staff. The lack of promotional opportunity poses a serious threat to the research potential of the School. The fact that all 24 research-only staff members are on contracts of not more than one year is unhelpful.

Office and laboratory space will be well catered for when the nearly complete centres come on line. There is however a lack of a School "common space". The undergraduate equipment is out of date and a cause for concern.

## **Key Recommendations**

### **Organisation and Management**

1. Develop a comprehensive strategic long-range plan based on the excellent self-assessment report developed for the Quality Assurance & Quality Improvement Programme and incorporating the recommendations of the PRG.
2. The School must develop a clear and well-defined vision around the respective roles of the School and the large research centres (Plasma and Sensors).

### **Programmes and Instruction**

3. The undergraduate laboratory equipment needs to be upgraded and modernised. Predictable budgets should be put in place to ensure that the higher level is maintained.
4. The issue of declining undergraduate numbers needs to be tackled – perhaps using a university provided professional marketing approach supported by the School.

### **Scholarship and Research**

5. A structured, professional marketing approach is needed to attract high quality postgraduates.
6. The level of technical support must be increased in line with the increased complexity and volume of research activity.
7. The risk of losing technical expertise should be addressed by improving the length of contracts for full time postdoctoral and other researchers.

### **Staffing, Accommodation and Resources**

8. There is a need to address the constraints currently imposed on quality and promotional opportunity by the 60:40 allocation ratio.
9. The provision of a common assembly area in the School for students and staff is essential.

**SUMMARY OF**  
**THE SCHOOL OF PHYSICAL SCIENCES**  
***QUALITY IMPROVEMENT PLAN***

## 1. INTRODUCTION

In this document we present a quality improvement plan based on a major review of all activities in the School. While it is evident from the findings reported below and in the Peer Review Group report that the School has achieved very high standards in all areas, there are some areas where improvements can be made. The implementation of this plan will require considerable support not only at School level, but also at university and indeed national level.

## 2. RECOMMENDATIONS FOR IMPROVEMENTS

### 2.1. Organisation & Management

Given the outcomes reported above and the changing environment within which the School is operating, notably the creation of the NCSR and NCPST research centres, the new university management structures and new budget systems, the following are the recommendations for improving the organisation and management of School business:

- A clear and well-defined vision around the respective roles of the School and the large research centres covering both teaching and research is required
- A new long-term Strategic Plan for the School to include clear prioritisation and costings over five years should be developed
- A university-provided professional marketing approach supported by the School should be adopted to address declining student numbers

#### *Actions already implemented*

- Postgraduate and postdoctoral representatives attend School meetings
- A School Resources and Finance Committee has been established

### 2.2. Programmes & Instruction

For the main Applied Physics degree programme:

- Identify market needs
  - i. Retain title and update contents
  - ii. Examine feasibility of an exit after year 3 with a suitable qualification
- In the context of the outcomes of a professional marketing analysis, examine the potential of an MSc in Science Education, a broadened BSc in Science Education, and multistrand physics degree exit options from a single common entry
- Develop strategic alliances with key International institutes and in particular foster the relationship with ESPEO (Orleans, France)
- Seek professional qualifications in EU scientific translation for the Physics/Language graduates
- Review the balance of teaching methods used (lectures, labs, projects, team learning)

#### *Actions already implemented*

- A pilot problem-based learning programme has been put in place for several groups for 2002-03

### 2.3. Scholarship and Research

- Develop a recruitment strategy (linked to the School strategic plan) to entice high quality postgraduates to carry out research programmes in the School
- Appoint technical specialists to support advanced research equipment and facilities
- Develop a career path for postdoctoral and contract researchers
- Build on existing international links at research level

*Actions already implemented*

- A funding policy for supporting improved completion times of MSc and PhD degrees has been adopted by the School

**2.4. Social and Community**

- Evaluate and strengthen the DCU partnership with local schools to optimise the returns from the commitment involved
- Continue to participate fully in national and international organisations and professional bodies linked to Physics

**2.5. Staffing, Accommodation and Resources**

The recommendations below are presented under three headings: budget, facilities and personnel. These impact on all aspects of the School and accordingly are significant for all the other recommendations in this plan.

**2.5.1 Budgets**

- Set the budget weighting for Physics to be the same as that for the other sciences
- Develop a capital funding programme to upgrade and modernize the undergraduate laboratories
- Develop a budget system for the service, repair and replacement of research and workshop equipment, and for regular upgrades of staff computing/IT resources
- Fund the tutoring and demonstrating services delivered by the School from central resources
- The funding of library periodicals should be addressed by all Universities nationally

**2.5.2 Facilities**

- A common informal meeting/assembly area for School personnel should be prepared
- Access to buildings at night and weekends needs to be facilitated
- The standard of office and desk space provided for research staff should be improved

**2.5.3 Personnel**

- Promotions of all categories of staff should be based on merit alone, and the use of quotas should be discontinued
- Anomalies in practices and salaries between DCU and other universities/ITs for all categories of staff should be examined and eliminated where appropriate
- Career structures should be developed for postdoctoral and contract researchers (referred to above under Research & Scholarship)
- In the light of comments in the Peer Review Group report, the balance of senior: junior academic staff should be improved to reflect the standing and experience of School staff
- Strategic needs should override methods based purely on student numbers for allocating staff to Schools

**2.6. Services Delivered and Received**

- The quality and timeliness of information from the central administration offices should be substantially improved, and an up-to-date Management Information System should be installed
- The highly bureaucratic procedures used for staff recruitment, particularly for incidental and short-term work, should be eliminated
- The procedures used by the Buildings Office for costing and carrying out laboratory refurbishments and minor works should be reviewed

### 3. PRIORITISED RESOURCE REQUIREMENTS

This section contains a list of resource requirements necessary to implement the recommendations outlined in the Self Assessment and Peer Review Group reports. Estimates of the cost involved are included. Separate lists are shown for undergraduate, research and other needs. These prioritised requirements formed the basis for the School of Physical Sciences sub-section of the DCU Submission to the HEA Quality Assurance Programme 2002 (funded under the National Development Plan 2000-2006) in the qualifying area of "Quality Improvement following Quality Review".

	<b>Recommendation</b>	<b>Estimated Cost (€)</b>
<b>Undergraduate</b>	Professional marketing programme to address issue of declining numbers on undergraduate programmes, to include the identification of possible new degrees	20,000
	Upgrading of undergraduate laboratory equipment and facilities	250,000 over five years
<b>Research</b>	Recruitment of two technical staff to support advanced research facilities and equipment	80,000 per annum (possible cost sharing with Research Centres)
	Development of a scholarship programme for high quality postgraduate student recruitment	60,000 pa (to be funded in part by industrial sponsors)
	Research and workshop equipment maintenance and replacement programme	Based on % of value of equipment and as part of an agreed national budget process
<b>Other</b>	Provision of common social area in the School	5,000
	Personnel support to implement the quality improvement plan	10,000 per annum for two years

***RESPONSE FROM***  
***THE UNIVERSITY EXECUTIVE***  
**TO BOTH**  
**THE PEER REVIEW GROUP REPORT**  
**ON THE SCHOOL OF PHYSICAL SCIENCES**  
**AND**  
**THE SCHOOL OF PHYSICAL SCIENCES**  
**QUALITY IMPROVEMENT PLAN**



The Peer Review Group set up to undertake a quality review of the DCU School of Physical Sciences presented its report (Review Group Report for the School of Physical Sciences) in May 2002. Following detailed consideration of the recommendations contained in the report the School undertook a comprehensive internal review and has already implemented many of the changes and improvements recommended in the PRG report. These have been detailed in the comprehensive Quality Improvement Plan, dated September 2002, and submitted to Executive for consideration at its meeting of Tuesday 24<sup>th</sup> September. In addition to the changes already under way internally within the School of Physical Sciences a number of issues had been detailed for the attention of the Executive.

The Executive noted the Peer Review Group report, acknowledged the large amount of detailed work that underlay its recommendations and expressed its appreciation of the time and effort expended on behalf of the university by the members of the PRG.

The efforts of all the staff in the School in preparing for the review and in interacting with the PRG were particularly acknowledged. The wide range of issues identified during the review and recommendations made in the report were noted and tribute was paid to Professor Martin Henry and the staff of the School of Physical Sciences for their comprehensive response to these. Executive noted the gratifyingly overall positive response of the Peer Review Group report to their visit to the School and to the discussions that took place with staff, researchers and students.

Executive noted the actions already implemented by the School in its response and compliments the School on its achievements to date in this regard.

In making its response, Executive is mindful of the structural changes currently under way throughout the university and has taken these into account. These changes arise from the adoption and ongoing implementation of the university's strategic plan, Leading Change. The change which will impact most strongly on the academic Schools is likely to be the devolution to Faculty level of much of the responsibility for fiscal and personnel management and planning. The School of Physical Sciences is a constituent School of the Faculty of Science and Health, for which the appointment process for an Executive Dean is currently under way. In future some of the responses to quality review recommendations will involve a Faculty input from the Executive Dean of the appropriate Faculty.

### **Issues for Executive Response:**

The issues identified by the School are largely summarised in its response in Section 5 (Summary of the One-Year Plan) and in section 4 (Prioritised Resource Requirements).

- *Career structure for contract technical and research staff*  
A solution to this issue is already well advanced in the University and is expected to be adopted shortly; the aim being to issue "life-of-centre" long-term contracts in appropriate cases with terms and conditions of employment analogous to those of permanent staff.
- *Budget weighting for Physics*  
With the new structures currently being adopted, this issue can be addressed with the new Executive Dean and the other Schools within the Faculty of Science and Health.

- *Inclusion of all research staff in calculation of research budgets for Schools*

The current agreed method of calculation is based on the quota of permanent academic staff posts allocated to a School, the intent being to provide the School with an identified budget which it can then use strategically in a "pump priming" manner to assist its academic staff to initiate/undertake research. Executive assumes, where the School already has research staff in place, that these will already be funded externally or through local research revenue-generating activities. However it is open to the School of Physical Sciences to make a formal and reasoned proposal, for consideration by the University Executive and in other fora, for any change in the method of allocation that might find widespread support from Schools and Faculties generally.

- *Promotion policy based on merit alone*

The university has in effect had two systems for academic promotion running in parallel for the two most recently concluded promotion rounds to Senior Lecturer. One of these has been open to competition from right across the university, is purely merit-based and independent of the School senior:junior staff ratio. In each of these two rounds one of those promoted on merit alone has been from the School of Physical Sciences.

The other system has related to Schools which, for historical reasons, had a low senior:junior staffing ratio and the university has been addressing this via a quota process which is also merit-based and subject to competition within the Schools concerned. The School of Physical Sciences is one of those Schools that has had an advantageous senior:junior ratio and therefore fell outside the latter process.

Now that most Schools have reached similar senior:junior ratios, the university will be reviewing its approach to promotion to Senior Lecturer in the near future and the mechanisms required to ensure continuing merit-based promotion.

The current policy for promotion to Associate Professor is non-competitive and based entirely on merit. Only one application for promotion from Senior Lecturer to Associate Professor was received from the School of Physical Sciences during the past two promotion rounds and this was successful. Two other members of staff from the School had already been promoted to Associate Professor level at an earlier date.

The university is currently developing procedures for merit-based promotional processes for administrative and support staff.

- *Professional marketing approach for the School*

The university has now centralised its marketing budget within the Communications and Marketing Office to support a professional marketing approach to student intake. There will be plenty of opportunity for staff of the School of Physical Sciences staff to interact with this Office in regard to addressing declining student numbers in physics.

- *Up-to-date Management Information system in operation*

The university has recently decided on the purchase of a new system and this will shortly be installed. It is planned that it will be functional across the university by early summer 2003 and this should dramatically improve this aspect of the university's operations.

- *Effective procedures for out-of-hours access to research facilities*  
Procedures for out-of-hours access to research facilities have recently been reviewed and a new system agreed and introduced. Inputs from all levels were considered in developing these and they are now operational.
- *The relationship between the Schools and its related Research Centres*  
This issue is not unique to the School of Physical Sciences and needs to be addressed more widely. Executive suggests that this topic should be high on the agenda for the new Executive Deans when appointed and the outcomes at local Faculty level can in turn inform the further evolution of general university policy in this area.
- *Upgrading of undergraduate and research laboratory and workshop equipment and facilities*  
Executive is conscious of the ongoing need to upgrade ageing equipment. However within the limitations of current budget allocations via the HEA, and in the absence of adequate core capital equipment allocations to the university generally, this presents a serious budget difficulty. Executive will look sympathetically at this as an issue during future budget allocation rounds. In the meantime the university has made an application for funding, in which much of the support sought is based on the outcome of the Quality Review Group Report, to the HEA under the Quality Improvement Programme.

However there is an urgent and long-standing need for the operation nationally, via the HEA or otherwise, of an adequately funded programme of capital equipment replacement and updating. Currently no such source of funding exists and attempting to replace/update expensive teaching and research equipment/instruments makes impossible demands on already fully stretched recurrent budgets. However the university will be considering modifications to its budget allocation system to permit greater flexibility in its response to resource implications arising from the quality review process.

- *Recruitment of technical staff to support advanced research facilities and equipment*  
Executive recommends that the School pursue the suggested option of cost sharing with the Research Centres. Discussions should involve the Executive Dean and include consideration of a Faculty-based policy. A new career grade at Research Officer level for technical staff with advanced technical skills should perhaps also be considered by the Faculty as part of the development of a new promotion policy applicable to technical staff.
- *Development of a scholarship programme for high quality postgraduate student recruitment*  
Executive recommends that the School, in collaboration with the DCU Educational Trust, seek external sponsorship for the programme as suggested by the School.
- *Provision of a common social area within the School*  
Executive suggests that the School make a detailed proposal on this issue.
- *Personnel support to implement the quality improvement plan*  
Executive recommends that the School redeploys its current staffing allocation to support the implementation of the plan, supported where necessary by any funding which might be allocated by the HEA under the Quality Improvement Programme for this purpose.

- *Services received*

Mention has been made earlier to the imminent introduction of the new Management Information System and the beneficial effect it will have on access to high quality and timely information.

The recruitment of staff, whether permanent or on long-term or short-term contracts, must be subject to properly implemented defined policies and procedures that comply fully with current employment and equality legislation, also freedom of information considerations. The School should detail those aspects of current procedures that might be streamlined whilst facilitating retention of the necessary rigour in making appointments.

It is open to the School to discuss with the Buildings Office those aspects of the procedures for the costing and carrying out of laboratory refurbishment and minor works which might be improved and, where possible, suggest improvements.

- *Budgets*

The university has no additional budget to which costs relating to the service and repair of equipment can be allocated. These items must be budgeted for by each School, as appropriate, from within the annual budget allocation to the School.

Similarly, tutoring and demonstrating, for all modules delivered by a School, are services for which each School must make local provision from within its own budget.

Library services (periodicals, books, on-line information etc) are very costly and particular difficulties arise currently from the significantly higher inflation applying to library costs than to university-related inflation generally. The university librarians work closely together on many issues and are currently involved in detailed negotiations aimed at alleviating the serious difficulties currently being encountered in the provision of essential services. It is hoped that funding to alleviate specific problems relating to library support of research in particular may be made available.