Queen Mary
University of London

School of Engineering and Materials Science

Notes of the Industrial Liaison Forum held on 21 November 2007

Present: Chris Lawn (Chair), Dan Bader, James Busfield, David Compton Industrial Chemical Group Ltd, John Fyson Kodak, Tony Gillespie DSTL, John Hartley, Exel Composites Ltd, Jayne Hawkins, Lisa Hearty, Anthony Hughes Ford Motor Co, Jens Mueller, Alan Muhr TARRC, Nobuoki Ohtani, Martin Osment EVRS, Ton Peijs, Thomas Poon Corus, Mike Reece, Morris Roseman MERL, David Rugg Rolls Royce, Julia Shelton, Patricia Stoneham Knowledge East, Natalie Stingelin-Stuzmann, Mehdi Tavakoli TWI Ltd, Christopher Townsley Mott MacDonald, Ranjan Vepa, Jim Wickerson Rolls Royce, Gleb Sukhorukov

Apologies: Adam Mannis UKCME, Robert Pye, John Stark

1 Welcome and Introductions

Professor Lawn welcomed the members of the Board and expressed the Schools gratitude to those that gave the School advice and support and introductions were made. It was noted that the minutes from the previous meetings of the separate Engineering and Materials Advisory Boards had been overtaken by events.

2 Terms of Reference

The proposed Terms of Reference for the new combined Board were agreed (attached).

3 Formation of the School

Julia Shelton updated staff on the formation of the School. The merger which was approved by the Council of the College was effective from 1 January 2007 and would help to break down barriers to make working together between Engineering and Materials easier as it

- Improves the research environment
- Helps innovate new joint taught programmes
- Utilises space more effectively

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Staff Changes

There are approximately 100 staff, of which 60 are academic. There were three new appointments in the Materials area: Martin Heeney and Kees Bastiansen who had both started and, Jeremy Sloane who would start on 4 January 2008.

Financial Status

The majority of the income to the School comes from teaching. The income sources are HEFCE (both teaching and research), student fees, Research Councils and Industry.

The School has a Senior Management Team consisting of:

John Stark	Head of School
Julia Shelton	Deputy Head of School, Director of UG Studies
Ton Peijs	Deputy Head of School, Director of Research
Dan Bader	School Director of PG Studies (Research)
Ray Smith	School Director of PG Studies (Taught)
James Busfield	School Admissions Director
Jayne Hawkins	School Manager

All committees of the School have standing items that SMT can feed into.

Building Refurbishment

There is a planned programme of building refurbishment that will see all the activities of the School brought together in the Engineering Building. Releasing IRC Building will make savings and ensure staff are located in one building.

- Administration Hub
- Undergraduate laboratory facilities
- Undergraduate space for SCL/PBL
- Enhanced accommodation for PhD students
- Consolidation of research space

4 Recruitment

Materials programmes have been streamlined. Recruitment is healthy. 50% of postgraduate students are from abroad. Care has to be taken that we do not become reliant on overseas students from one country. The School is very much a happy world community.

The balance of Undergraduate and Postgraduate students gives a good use of resources. The Materials undergraduate intake is the second largest in the country. Students do not realise the benefit of the polymers units at the moment and industry can help us with this.

The School has an active Schools outreach programme and Summer Schools.

Industry needs good people with core elements. We need a matrix of the graduate we can produce and an industry matrix of the skills needed for graduates they can place.

The Medical and Biomaterials programmes attracts very good student who have not managed to secure a place on medicine. Mechanical Engineering has recruited more students this year, which mirrors the trend elsewhere. The reason for this is unclear.

Many students want to do work placements in principle but do not always secure a place.

5 Curriculum Review
The School has a range of undergraduate programmes

- Mechanical Engineering
- Medical Engineering
- Aerospace Engineering
- Avionics
- Engineering Business Management
- Sports Engineering
- Energy Engineering
- Design & Innovation
- Materials Science & Eng.
- Biomedical Materials Sci.
- Dental Materials
- Aerospace Materials
- Materials with Business
- Sports Materials
- Materials with Forensic Science

The Materials with Forensic Science course has not recruited as well as was hoped. The Design and Innovation is a joint course with Goldsmiths and will grow. There are a range of postgraduate programmes:

- Aerospace Engineering
- Sustainable Energy Systems
- Biomedical Engineering
- Medical Electronics & Physics
- Materials Research
- Technology Management
- Project Management
- Biomaterials
- Dental Materials

Sustainable Energy Systems has not run this year. The School wants to ensure any niche areas are covered. It is also important to understand how industry values an MSc. Some students that go on them have a 2:2. The industrial view was that the awarding University is a useful indicator but it is mainly the interview process that determines the applicants' suitability. Enthusiasm from a student and how they market themselves are crucial. The degree indicates the commitment a student has.

Suggestions were made for the following MSc courses

Energy	Should not be too specialist
Water Treatment	Possibly too chemistry focused
Nuclear	
Medical Devices	

It was noted that the Mechanical and Aero courses were up for review in early April 08.

6 Research Strategy

The RAE Submission is a big exercise that is just being completed and after this the rules are changing.

The Centre for Materials Research (CMR) has been established to promote cross-disciplinary materials research between departments. CMR has become the focal point for all materials research at QMUL, involving researchers from:

- School of Engineering and Materials Science (SEMS)
- Department of Physics
- School of Biological and Chemical Sciences (SBCS)
- School of Medicine and Dentistry (SMD).

The key research achievements for the School (2001-2007) are

- Strengthened its core activities in Biomedical Materials and Materials Processing.
- Developed new strategic areas including Nanomaterials, Energy & Environment and Functional Materials.
- Published ~1000 peer-reviewed scientific publications.
- Increased the number of publications in high-impact journals.
- Expanded research staff from 13.7 FTE in RAE2001 to 30.1 FTE
- Awarded 96 PhD's compared to 53 in the previous RAE.
- Received major investments in research infrastructure exceeding a total of *£20 million* under SRIF and LDA & DTI, as well as strategic College funding.
- Established 5 new Central Research Laboratories in Carbon Nanostructures; Nanomaterials Processing; Stem Cells; X-ray diffraction; Nano-scale Imaging; and general Materials Characterisation.

The School has also attracted substantial grant income.

Members of the Board were asked if they would like to be part of an 'Industry Club' that would give them access to the library and the capacity for having small experiments carried out. Agreed that a formal proposal for this should be circulated.

Action TP

7 Third-Stream Funding

Innovation and Enterprise

Adam Daykin explained the function of Innovation and Enterprise (I&E) which is the focus of Knowledge Transfer activity at Queen Mary. I&E offers the following services:

- Commercialising Intellectual Property (IP), including patenting and negotiating licensing deals.

- Creating and supporting College spin-out companies.
- Identifying and securing funding for collaborative research.
- Entrepreneurship training and professional development.
- Help to establish consultancy and contract research arrangements with businesses.
- Organising events and workshops in Knowledge Transfer topics such as new funding sources and IP management.

It is planned that I&E will become a limited company in 2008.

Nanoforce
Anuj Sood explained that Nanoforce was owned 100% by the College and had the objective to exploit and disseminate nanotechnology to creative industries and ensure sustainability and growth. It helps to link the College with Industry.

Nanoforce:
- Has eight full time employees
- Has a pool of sponsored PhD and post graduate students
- Is able to draw upon the academic resource within the University complemented by their established contacts within industry and commerce
- Has some of the most specialised equipment in polymer processing and ceramics processing
- Website www.nanoforce.co.uk is being maintained and updated regularly

8 Items Outstanding from Departmental IABs
It was noted that the Engineering Board had asked for an industrial member to Chair and Materials had appointed one who was never able to Chair the meeting. The School wished to pursue this option and since Rolls Royce had already been approached under the old regime, members agreed that they should be asked again. Rolls Royce representatives agreed to discuss this between themselves.

It was agreed that the next meeting would be on 16 July 2008 and would have a small recruitment activity as part of the day.