

UNIVERSITY COLLEGE CORK
NATIONAL UNIVERSITY OF IRELAND, CORK

QUALITY IMPROVEMENT/QUALITY ASSURANCE

PEER REVIEW GROUP REPORT

SCHOOL OF ENGINEERING

ACADEMIC YEAR 2013

Confidential

Date 4.04.2013

PEER REVIEW GROUP MEMBERS

| Name | Affiliation | Role |
|--------------------|---------------------------------------|------------|
| 1. P.K.Stansby | University of Manchester | Chairman |
| 2. L.R. Weatherley | University of Kansas | Rapporteur |
| 3. G. Hurley | National University of Ireland Galway | |
| 4. E. Rogan | University College Cork | |
| 5. D. van Sinderen | University College Cork | |

NOTE text in *bold italics* is from the suggested template

TIMETABLE OF THE SITE VISIT

- *Give the timetable of the site visit* , see Appendix
- *Comment on suitability and adequacy of the timetable.*

The timetable was appropriate enabling discussion with relevant groups (staff, students, stakeholders) and University/College officials and flexible enough for some additions to be made: meeting with Postdoctoral researchers and a Tyndall Research Professor.

PEER REVIEW

- *Methodology*
 - *List areas of primary responsibility of each member of the Peer Review Group.*

It was suggested that the Chair and Rapporteur should be external to UCC: Peter Stansby was made Chair and Laurence Weatherley was Rapporteur as Ger Hurley was a UCC graduate. Ger's primary responsibility was research. Emer Rogan and Douwe van Sinderen were responsible for teaching and learning. Laurence was mainly responsible for overall School structure and organisation and future development. All members were free to contribute on all aspects.

- *Make any comments deemed appropriate.*
- *Site Visit*
 - *Comment on any aspects of the site visit as appropriate.*

The site visit showed adequate laboratory facilities in Civil Engineering, quite extensive laboratory facilities in Electrical Engineering and in Process and Chemical Engineering. The Research Centres were not visited although Peter Stansby visited HRMC the day before the review and was given a generous overview. It would not have been possible to schedule visits to Centres within the two days. The visit to the library indicated an excellent environment and service for teaching, learning and research support.

- *Peer Review Group Report*
 - *How was the Peer Review Group Report put together?*

The template provided was largely followed and parts of the Report were allocated by the Chairman in consultation and agreement with the group according to their areas of primary responsibility.

OVERALL ANALYSIS

- **Self-Assessment Report**
 - ***Comment on the Self-Assessment Report. In particular refer to any relevant issue that was not addressed in the Report. Include a comment on the completeness of the Report and the accuracy of the contents.***

The report gave a valuable introduction to the School and its short history. The story is of a School with good individual academics, established undergraduate programmes with an emerging programme in energy, some effective Masters programmes and effective research in strategic areas strongly linked to Research Centres. Financial problems largely due to external government policy were apparent. The School was benchmarked quite favourably against Engineering in Aberdeen. It was however recognised that the School had not become established as a coherent entity with associated management structures. Perhaps because the School is relatively new the following were not fully addressed:

A vision for the next 3-5 years across the board but particularly for core academic activity in Civil, Electrical, Process/Chemical engineering including relationships with Research centres.

Succession planning and staff recruitment with business plan/justification. The need for a Chair in Process and Chemical Engineering and staff replacement was stated.

A staff load model with guideline metrics including for example: number of modules taught per annum, number of post graduate researchers per staff member, annual research income per staff member, which would feed into staff development/promotion.

A structure with School committees for Undergraduate programmes, Postgraduate programmes, Research programmes, safety. This is particularly important as methods for dealing with tight financial constraints would be best addressed at School level.

Industrial advisory board for undergraduate and postgraduate programme development and research direction; at the meeting with the industrialists they were particularly complimentary about the School graduates and said they would be very willing to contribute. There was clearly a strong appreciation and loyalty to UCC.

Administrative/support was raised as an issue but there was no integrated plan.

Issues of retention of 1st year undergraduates; at our meeting some students suggested this was quite high. Data provided later suggested this was lower than the students' perception.

Information from student questionnaires. At the meeting with students they were generally complimentary but raised issues of feedback on coursework and coursework timetabling.

- **SWOT Analysis**
 - ***Comment on the overall analysis (strengths, weaknesses, opportunities and threats) of the department, both as addressed in the Self-Assessment Report and from the perspective of the Peer Review Group.***

A detailed SWOT analysis was conducted as part of the School retreat held in December 2012. Concerns were expressed in the SWOT analysis and in staff surveys about communications within the School. On the other hand communication with students is considered by the staff to be very good. This was confirmed by the students whom the Peer Review Group interviewed, indicating that academic staff were generally accessible and responsive.

As quoted in the Self-Assessment document, the SWOT analysis also indicated a lack of communication between School management and staff, that there is a lack of information on

the budgetary situation, that there should be more transparency with respect to budgetary decisions, that there should be input from all staff into budgetary decisions. The lack of communication was articulated by some of the staff we interviewed and this also emerged during the open forum with the academic staff. The lack of communication was not necessarily attributed to the Head of School directly but reflected lack of understanding of the structure and logic of the School by the staff and inadequacies in communication arising from the structure.

The findings of the SWOT as recorded in the Self-Assessment are commented on as follows:

The PRG agreed that the School has a highly-regarded academic reputation, committed academic educators and researchers, and is well connected with local and national industries

The PRG also found that working relationships are generally very good and collegial but with some concerns that these may be placed at risk unless changes are made in the modus-operandi of the school especially with regards to communication and transparency.

The PRG largely agreed that the structure of the School is in need of strong focussed leadership with both upward and downward vision to cement internal relationships between Departments and the School, and with the University leadership at College and Senior Management levels.

The external image of the School (e.g., online presence, etc.) is poor and does not adequately represent the School's strong reputation and tradition of academic excellence. The PRG did not see strong evidence for this in any of the interviews and meetings with the stakeholders. Nevertheless this is an important area requiring priority if the School is to be effectively marketed and to sustain strong outreach.

The PRG agreed that significant challenges to the School include diminishing student numbers in engineering, reduced funding and staffing embargoes. There seemed to be no clear plan on how these challenges would be addressed. The PRG suggests that advocacy of a business case and strategic plan with the College Head and UCC Senior Management be developed. This could be based on the anticipated increases in research funding as mentioned in the next paragraph, on an aggressive undergraduate recruitment, on Masters level student recruitment strategy, and on cogent cases for strategic faculty hires.

The PRG agreed that the SWOT analysis revealed significant opportunities for the School to increase revenue streams including the demand for upskilling and CPD, the increased interest in energy-related research and education, and the potential for expanded interdisciplinary research and teaching, including increased interaction with the UCC research centres. The potential of these areas for development could be further quantified by incorporation of financial projections for revenue generation in each of the stated areas.

- **Benchmarking**
 - *Comment on the benchmarking exercise carried out by the department/school.*

In January 2013 two of the senior professors from the School of Engineering conducted a benchmarking visit to the University of Aberdeen. The stated purpose of the benchmarking was twofold, to compare overall performance and to learn how Aberdeen operates across a range of disciplines as a single School. The PRG reviewed the findings of the bench-marking exercise but found no clearly defined conclusions. On the face of it the two Schools are not dissimilar with some variations on the positive and negative sides in both cases. For example, Aberdeen has significantly more faculty (46 vs 34.5 for UCC), and more professors (13 vs 7 for UCC). On the other hand UCC has significantly more research income reported (5.83M euro for UCC vs 3.0M euro for Aberdeen in 11/12). These and other differences aside the

PRG believes that some useful lessons might be learned from the Aberdeen model for the modus operandi of the School. Key points for consideration include the following:

- The Aberdeen School appears to have a strong committee structure (see Appendix K, led from the School with committees covering undergraduate teaching, student – staff liaison (graduate and undergraduate), post-graduate teaching, technical staff, research, administrative staff, safety committee academic workload committee and an industry advisory board. While the PRG would not necessarily recommend an exact replication of the Aberdeen model, such a committee structure with representation across the School with the strong leadership would encourage continuance of strong collegiality and communication.
- The Aberdeen School has instituted program directors for each program, together with Directors for Undergraduates, Graduate Teaching, and for Research. The PRG think this might also be a good approach for UCC with the Directors having oversight of each of the relevant committees. This would provide cross program leadership thus encouraging more collegiality and further potential for collaboration and cooperation.
- Targeted recruitment of international students (Appendix K, page 5) is a successful feature of the Aberdeen approach noted by the PRG and perhaps should be considered in the UCC context as a means of increasing international enrolments to offset reduction in student numbers in some areas.

FINDINGS OF THE PEER REVIEW GROUP

Comment, as appropriate, on any of the details in the Self-Assessment Report. The headings that the department/school were specifically asked to address were:

- *Teaching & Learning*

Note Department/School Details and Department/School Organisation & Planning are included separately under Teaching and Learning and Research and Scholarly Activity

The school delivers four undergraduate degree programmes, BE Hons in Civil Engineering, BE Hons in Electrical & Electronic Engineering, BE Hons in Energy Engineering and BE Hons in Process & Chemical Engineering, and furthermore offers five taught MEngSc Degrees, research degrees of MEng and PhD, a part-time evening Certificate/Diploma in Process & Chemical Engineering, and also participates in the part-time MSc in Technology Management. The school recently restructured the BE programmes such that all Engineering undergraduate students enter an essentially common First Year (50 credits of common modules) and take one 5-credit programme-specific module and one 5-credit module from any of the other three programmes. In second and third year, programmes still have a significant number of shared modules, and further streamlining of the undergraduate teaching programmes is envisaged. The PRG highly commends the school on its efforts to streamline the various undergraduate and postgraduate programmes to facilitate transfer and minimize overlap in programme content.

Class representatives of all programmes, from first to final year students, were interviewed in order to obtain their views on the undergraduate programmes, module content, teaching staff, etc. In general, undergraduate Students expressed their high level of satisfaction regarding course content and teaching staff, and particularly the technical staff were praised for their involvement and enthusiasm. Students did express concern about the unequal heavy loading of assignments towards the end of the teaching period. Lack of attendance at lectures was also highlighted and the students generally expressed appreciation of having guest lecturers. The

PRG therefore recommends that the school should endeavour to spread out the distribution of assignments, as much as is practically possible.

Student retention figures did not seem to be of concern, while the percentage of BE graduates that obtain a 1H degree seems exceptionally high (compared to other undergraduate degree programmes in the College of SEFS), this may be a reflection of the very high quality of students. The PRG was pleased to note that an undergraduate student mentoring scheme was in operation, although this scheme is not in operation for all undergraduate degree programmes.

There was limited proof of end of module questionnaires being handed out and subsequently acted upon; the recently announced university-wide, centrally analysed on-line Student Survey Questionnaire is expected to remedy this if all staff embrace this initiative. Such surveys will be instrumental in highlighting issues that may otherwise go unnoticed, e.g. PRG interviews with students highlighted their appreciation for (timely) feedback regarding marks given to assignments. Furthermore, the establishment of an active Staff-student committee is recommended in order to allow students to liaise with staff on issues such as software problems, internet access, availability of computers, conflicts in time tabling, and incompatibilities between leaving cert curriculum and first year modules (e.g. Maths).

The BE Hons in Energy Engineering students currently lack a sense of belonging to any particular academic unit; the PRG recommends a better integration of this programme within the School.

The teaching facilities were considered to be of high quality by the PRG and fit for purpose, although the PRG noted some variation in facilities between the various buildings that housed teaching facilities of the various Engineering disciplines. The PRG endorses the School's plans to review teaching laboratory space, to upgrade this where needed, so as to free up space for research activities.

Stakeholders (all from industry, but also including former graduates) praised the School for its very high quality students who possess industry-matching competencies, and who in their opinion are well rounded with an ability to think and problem solve. The work placements were perceived by both students as well as stakeholders to be extremely important in terms of training and exposure to the real world, and as a resource for future employees. Stakeholders expressed a desire for the degree programmes to include a teaching module that underpins financial management and communication skills, including languages.

- ***Research & Scholarly Activity***

Laboratory infrastructure/working environment

The panel visited the CEE Building, the EEE building and the PCE faculties.

1. The CEE building is an old building and would appear to need a facelift in terms of painting and overall maintenance. It mainly houses two large lecture theatres, a computer suite, a CAD office and other mainly undergrad laboratories as well as staff offices. Some students remarked that maintenance of the computer equipment was an issue but we understood that there was an upgrade of the computer equipment in the offing. There was very little evidence of research activity; we understand that this is mainly carried out at the HMRC.
2. By contrast the EEE building was in excellent condition with a very impressive entrance. There were posters on the history of the department and also posters explaining the various topics of the discipline. All of the equipment had been recently replaced or refurbished. All the labs and project rooms were occupied by students and postgrads. Undergrad students would be aware of the high level of research activity and see the relevance of their studies to the broader field.

3. The PCE facilities are located in the ground floor of the Food Science Building. The lab facilities were extensive although there was very little activity in evidence. CEE and EEE are adjacent and PCE is further way. PCE is based in a science environment and the students would not be generally aware of activity in the CEE and EEE engineering buildings.

Equipment

There is a huge variation between disciplines. The CEE research facilities are housed in the HMRC, the panel did not see this facility but feedback from staff and postgrads was positive. CPPU unit is housed in the CEE building and the activity wasn't visible from the outside. The facilities in EEE were well up to the best international standards and access to it was widespread. The panel didn't visit Tyndall but everyone attested that the facilities are world-class. The PCE research facilities were spread over several specialist labs and were well appointed.

Number of PhD's & MSc students & PDRA's

The number of PhD students in the School is well up to national average and growing. Recent research funding success will maintain that growth. EEE has a disproportionately higher number of PhD students per staff member. The number of research Masters students is relatively small; this is in line with national policy to grow PhD numbers. Most of the PDRA's are in Tyndall and HMRC, with a cluster in the ERI.

Number and Quality of Publications

Publications in the School are very healthy and the number of journal papers has been stable over the last 5 years. The issue of affiliation between disciplines and centres provides some distortion, for example the self assessment report shows an increase in journal publications from 54 to 117 between 2008 and 2012, whereas the count from the Research Office is 69 to 85. There is some evidence to suggest that the publication activity is largely generated by a small number of staff. Citations data provided by the Research Office show that the performance is above the world average for Engineering and compares favourably with other Irish universities.

Staff-postgrad student relations

The postgrads were generally very positive about their experience and were happy with the level of supervision and research facilities.

They were not aware of any expectations or guidelines in terms of publications or participation in conferences relevant to their field of study.

In general postgrads did not contribute substantially to teaching or lab supervision for u/g students. This is a missed opportunity in terms of their development. It appears that a structured PhD is not fully implemented.

Research income (National bodies, European sources, Industry)

Overall research income fell between 2009/10 and 2011/12, this was largely due to a number of large projects coming to the end. However, recent success in large SFI awards will put the overall funding picture back on track.

Data provided by the Research Office show that applications for funding across all sources is very healthy and involved more than 50% of staff.

Collaboration with the Research Institutes such as Tyndall, HMRC and ERI provides the bulk of the overall funding and this is largely National (SFI and Enterprise Ireland). With the reduction in National Funding in recent years there has been a shift back to EU funding. Programmes like PRTL reduced the dependence on EU funding in the period 2000-2006. Industry is now emerging as a greater source of funding for research.

Commercialisation of research has been a growing activity for several years, the issue of IP ownership and protection is often seen as a blockage to finalising agreements with industry partners.

- *Staff Development*

Government freeze under the Employment Framework Programme has meant that there have been no promotion outlets for the last five years and retiring staff are not always replaced. The recent Senior Lecturer Promotion Scheme will offer limited places to a very large pool of potential applicants. Staff members do not perceive that the evolution of the School model will help this.

PDRA's are very concerned by the adoption of the Career Framework which caps research appointments to two 3-year periods.

- ***External Relations***

A feature of recent research awards in the School is the extent of external collaboration both with other Irish universities and Irish industry.

Several industrial representatives spoke well of the quality of the graduates and see postgrads as a growing part of their workforce profile.

- ***Support Services***

The Research Office offers several support services to research, including

1. Proposal writing and mentoring
2. Workshop for young researchers to apply for EU funding
3. Seed funding for new researchers including subsidy to visit partners in industry or other research institutions.

- ***Departmental/School Co-ordinating Committee & Methodology employed in the preparation of the Self-Assessment Report***

The SAR was produced mainly by the School Co-ordinating Committee, of which the Head of School was an active member, with two senior professors doing the benchmarking, with input from staff through the SWOT analysis and surveys and input from other groups through surveys. The role of the Head of School was more or less confined to drafting factual content and working with an executive assistant in compiling the final documentation.

The Peer Review Group is asked to comment specifically on the department/school under the following headings:

- ***Governance*** – a key theme repeatedly referred to above and in Recommendations for Improvement
- ***Services*** – referred to in relation to teaching/learning and research above. The impression particularly through interviews is that good services are available through the College but are not fully exploited at School level.
- ***Staffing*** – key theme with a strong statement in Recommendations for Improvement
- ***Accommodation*** – referred to above and in Recommendations for Improvement
- ***Financing*** - key theme referred to in relation to teaching and research with a statement in Recommendations for Improvement
- ***Communications*** – key theme linked to governance with strong statement in Recommendations for Improvement
- ***Implementation of recommendations for improvement made in Peer Review Group Report arising from last quality review***

The last quality reviews were for the individual Departments of Civil and Environmental Engineering, Electrical and Electronic Engineering, Microelectronic Engineering, and Process Engineering in the period 2002-2005. The Departments of

Electrical and Electronic Engineering and Microelectronic Engineering had merged and the Process Engineering had become Chemical and Process Engineering before the formation of the new School. However these reviews were a long time ago and much has changed with the formation of the new School. Nevertheless there are some recurrent themes from those reviews, e.g. the need for a Chair in Process Engineering, the need for an Industrial Advisory Board, the need to upgrade the Civil Engineering infrastructure and the high external regard for UCC and its graduates. It certainly would appear that Electrical and Electronic Engineering has improved since the time of the reviews. There was also a research review for School in 2009 in which many of the recommendations are consistent with the present review. However these reviews have been largely superseded by the School-specific benchmarking exercise with Aberdeen and the SWOT analysis at the recent School away day and here we focus on the resulting analyses.

- ***Compliance with European Standards and Guidelines for Quality Assurance in the European Higher Education Area – especially relevant sections of Part 1 of the ESG***

This was not referred to explicitly in the SAR although the importance of being Bologna compliant was mentioned several times in discussions. Formal internal QA would appear to be weak within the School as discussed above and in the Recommendations for Improvement. The favourable comments by students and external stakeholders would suggest that historically QA has been effective but there is little evidence of implementation moving forward.

RECOMMENDATIONS FOR IMPROVEMENT

- ***Recommendations for improvement made by the department/school***
 - ***Comment on the recommendations for improvement made by the department/school.***

- **GOVERNANCE**

The PRG strongly endorses the recommendation that the School of Engineering develop a strong School of Engineering with an organisational and committee structure to ensure that it functions as a cohesive unit. The PRG received feedback from staff confirming difficulties with communication and lack of understanding of the modus-operandi of the School. An organizational chart showing the clear lines of responsibility and the job descriptions of all the members of the management team would be helpful for all members of the School. The PRG recommend that the School take a close look at the Aberdeen model for the organization and governance of the School, to decide on a clear structure with defined responsibilities for the various directors, which should be communicated to all members of the School (see under “*Benchmarking*” above).

The PRG endorses the recommendation of a School approach to curriculum development, including the co-ordinated development of Master’s courses, to support the College of SEFS plan to increase the number of postgraduate students in the College.

- **TEACHING AND LEARNING**

The PRG very much endorses the School’s approach to curriculum development and co-ordinated development of MSc programmes, and we recommend that the School establishes a School Curriculum Committee to continue rationalization in order to achieve full integration, coherence and sustainability of all relevant taught

programmes, focussing on undergraduate level programmes, yet not ignoring postgraduate level programmes.

- **INTERNATIONAL VISIBILITY**

The PRG strongly supports the development of a more positive external School image and increased visibility (e.g., a maintained School website). The PRG considers this to be an essential component of a wider outreach strategy which should include enhanced international and EU student recruitment, development of donor-based funding development and promotion of the research successes in the School, and promotion of individual staff successes.

- **ACCOMMODATION**

The PRG endorses the recommendation that the School undertake a detailed review of teaching laboratory space to make best use of the space for teaching purposes and to free up space for research laboratories.

In order to enable the School to develop to its potential, the following actions are required of the University:

- **STAFFING**

Appoint a Professor of Process & Chemical Engineering to lead the discipline and strengthen UCC's profile in the areas of food and pharmaceuticals.

Have a succession plan for the Chair in Energy since the present incumbent is due to retire and research in this area has high priority with substantial funding. **The PRG strongly emphasise the need for these actions to be completed.**

Replace retiring staff within the framework of the strategic plan to ensure that the teaching and research mission of the School can be maintained and the School can continue to develop. The PRG recommend that succession plans be an essential component of a revised and extended School strategic plan as listed below.

Appoint a School Administrator to provide the necessary administrative leadership for the School to function effectively. The PRG emphasise the need for resources for this position to be released in support of the Head of School and his/her administrative staff.

- **ACCOMMODATION**

Provide funds to bring the Civil Engineering Building up to modern standards befitting a leading School of Engineering. The PRG endorse this recommendation.

- ***Recommendations for improvement made by the Peer Review Group***

- ***Recommendations for improvement that the Peer Review Group would like to make in addition to those made by the department/school.***

- **COMMUNICATIONS**

The PRG strongly recommends that communication throughout the School be reviewed and enhanced. The development of an effective committee structure with regular meetings and with participation across the School, perhaps based on the Aberdeen model should be considered. This would enhance collegiality and encourage buy-in to the School concept. The School leadership might also consider regular informal meetings (for example over lunch) for different groups of staff to meet with the members of the School management committee, and program directors.

Another possibility would be the distribution periodically of a School newsletter by email to all staff.

- **FINANCES**

The PRG recommend that greater transparency regarding budget matters would engender greater trust among the School stakeholders. Presentation of budget information need not be very detailed but could aim to provide an overview of revenue and expenditures relevant to the various programs, with some explanation of the rationale for financial allocations. Linkage of budget decisions to an agreed strategic plan would also add value to making this information available.

- **STRATEGIC PLAN**

The PRG recommends the development of a new strategic plan and vision statement which addresses the future direction of the School over the next five years. The plan should include clear goals, action items, and expected outcomes with respect to program and course development, student enrolments, student retention, research strategy, administration of the School, outreach and international affairs. The projected impact on revenue generation and the current funding shortfall should be a priority. An important component of the plan should be that a business plan be developed with the College Head and UCC Senior Management. This could be based on the anticipated increases in research funding as mentioned in the next paragraph, on an aggressive undergraduate recruitment, on masters level student recruitment strategy, and on cogent cases for strategic faculty hires.

- **TEACHING AND LEARNING**

The PRG recommends that the School, through its School Curriculum Committee, should plan for a fifth year Taught MSc degree to be added to the BEng degree programmes so as to meet Engineers Ireland requirements for professional accreditation in line with the Bologna Declaration, and to meet the requirements for Chartered Engineer status.

The PRG recommends that the school, perhaps through the School Curriculum Committee, should endeavour to spread out the distribution of assignments, as much as is practically possible, throughout the teaching periods. This will also be guided by semesterisation.

The PRG recommends that the undergraduate student mentoring scheme be adopted throughout the School, possibly operated through a School Committee related to Teaching and Learning and the Student Experience.

The PRG recommends that all academic staff members of the school should subscribe to the on-line Student Survey Questionnaires, and that the outcomes of such surveys be dealt with by a School Committee related to Teaching and Learning and the Student Experience, which should also engage with student representatives on a regular basis to enhance student-staff communication and to address student issues.

The BE Hons in Energy Engineering students currently lack a sense of belonging to any particular academic unit; the PRG recommends a better integration of this programme within the School, e.g. by having a central administrative location would go far to ameliorate this.

The PRG recommends that the School Curriculum Committee should explore the feasibility of degree programmes containing elective modules for the development of language, management and/or communication skills

- **EXTERNAL ADVISORY BOARD**

The PRG recommends the establishment of an external advisory board. The PRG considers the board could provide valuable insights into program and course development, strategic planning for the School, act as a conduit for student and graduate feedback, and provide external leverage for School needs and initiatives. Membership could include alumnus of the School, employers of School graduates, representatives of other strategically important local and national industries, a member from another School of Engineering, representatives from each School program, from funding agencies, and from local government.

- **EXTERNAL DONATIONS**
The School should consider how it may support College and University initiatives in the development of private donations, with identification of possible infrastructure needs for the School, student scholarships, endowed staff positions which might appeal to potential donors.

APPENDIX – Timetable of site visit

In Summary

- Tuesday 12 March: The Peer Review Group (PRG) arrives at the River Lee Hotel for a briefing, followed by an informal meeting with School staff members.
- Wednesday 13 March: The PRG considers the Self-Assessment Report and meets with school staff, student and stakeholder representatives. A working private dinner is held that evening for the PRG.
- Thursday 14 March: The PRG meets with relevant officers of UCC. An exit presentation is given by the PRG to all members of the School. A working private dinner is held that evening for the PRG in order to finalise the report. This is the final evening of the review.
- Friday 15 March: External PRG members depart.

| Tuesday 12 March 2013 | |
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| 16.00 – 18.00 | Meeting of members of the Peer Review Group. Briefing by: Professor Ken Higgs, Acting Director of Quality Group agrees final work schedule and assignment of tasks for the following 2 days. Views are exchanged and areas to be clarified or explored are identified. Venue: Tower Room, River Lee Hotel, Western Road |
| 19.00 | Dinner for members of the Peer Review Group & Head of School of Engineering including the School Co-ordinating Committee: Professor Alistair Borthwick Dr. Michael Creed Dr. Maria De Sousa Gallagher Dr. Paul Leahy |

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| | Professor Peter Kennedy Professor Nabeel Riza |
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Venue: Jacobs on the Mall

Wednesday 13 March 2013

Venue: Tower Room 2, North Wing, Main Quadrangle UCC
(unless otherwise specified)

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| 08.30 – 08.45 | Convening of Peer Review Group | |
| 08.45 – 09.30 | Dr Michael Creed, Head of School | |
| 09.30 – 10.30 | Group meeting with all School staff Venue: Council Room, North Wing, Main Quadrangle | |
| 10.30 – 11.00 | Tea/coffee | |
| 11.00 – 13.00 | Private meetings with individual staff members 11.00: Prof. N.Riza 11.15: Prof. Ger Kiely 11.30: Dr. Brian O Gallachoir 11.45: Ms. Julie Holland 12.00: Dr. Vikram Pakrashi 12.15: Dr. Jerry Murphy 12.30: Prof. Tony Lewis 12.45: Prof. Alastair Borthwick 13.00: Dr. Paul Leahy Venue: Tower Room 2 | Private meetings with individual staff members 11.00: Dr. Liam Marnane 11.15: Professor Peter Kennedy 11.30: Mr. Denis Ring 11.45: Mr. John Barrett 12.00: Ms. Mary O’Leary 12.15: Dr. Maria De Sousa Gallagher 12.30: Dr. Pdraig Cantillon-Murphy 12.45: Dr. Denis Kelliher Venue: North Wing Conference Room |
| 13.00 – 14.00 | Working lunch | |
| 14.00 – 15.00 | Visit to core facilities of School, escorted by Dr Michael Creed, Head of School and Prof. Nabeel Riza, Head of Department of Electrical & Electronic Engineering and Dr. John Fitzgerald, Department of Process & Chemical Engineering | |
| 15.00 - 15.40 | <u>Representatives of 1st and 2nd Year Students</u> Mr. Henry Donnelly (1 st Civil) Mr. Sean Philips (1 st Elect) Mr. Olivier Melon (1 st Energy) Mr. Sean Looney (1st Process) Ms. Aoife White (2 nd Civil) Ms. Caitlin Keane (2 nd Elect) Mr. Conchubhair O’Dalaigh (2 nd Energy) Ms. Anna Cremin (2nd Process) | |
| 15.40 – 16.20 | <u>Representatives of 3rd and 4th Year Students</u> Mr. Robert Wright (3 rd Yr Civil) Ms. Alison O’ Shea (3 rd Elect) Mr. Dave O’ Hare (3 rd Energy) Ms. Ailbhe Connolly (3rd Yr Process) Mr. Joe Shinkwin (4 th Civil) | |

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| | Mr. James Foody (4 th Yr Elect) Ms. Sarah Ryan (4 th Yr Energy) Mr. Sean Daly (4 th Process) |
| 16.20 – 16.55 | <u>Representatives of Graduate Students</u> Mr. Sergio Maldonado (PhD, 2nd Yr, Civil) Mr. Kilian O'Donoghue (PhD, 2nd Yr, Electrical & Electronic) Mr Philip Donnellan (PhD 2nd Yr, Process & Chemical) Mr. Brendan Barry (PhD, 1st Yr, Electrical & Electronic) Mr. James Browne (PhD, 3rd Civil) Mr Olan Kenneally (MEngSc, Sustainable Energy) |
| 17.00 – 18.00 | <u>Representatives of stakeholders, past graduates and employers</u> Mr. Peter Anthony, (Civil Eng), Horganlynch Consulting Engineers Mr. Sean Carrigy, (Civil Eng), P J Hegarty Mr. Ger Dennehy, (Civil Eng), SISK Mr. Sean Hayes, (Energy Eng), Eirdata Energy Mr. Ger Hellen, (Elec Eng), NeoDyne Mr. Diarmuid Hogan, (Energy Eng), Excelsys Technologies Ltd Mr. John Lee, (Civil Eng), Malachy Walsh Mr. Tom Lynch, (Energy Eng), Energy Services Mr. Frank Maguire, (Civil Eng), RPS Mr. John O'Mahony, (Civil Eng), Arup Mr. Dermot O'Sullivan, (Process Eng), Phillips 66 Whitegate Refinery Mr. Sheldon Phillips, (Process Eng), Pfizer Mr. Michael Willers, (Elec Eng), MOOG Venue: Staff Common Room, North Wing, Main Quadrangle |
| 19.00 | Meeting of Peer Review Group to identify remaining aspects to be clarified and to finalise tasks for the following day, followed by a working private dinner. Venue: Tower Room, River Lee Hotel, Western Road |

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| Thursday 14 March 2013 | |
| Venue: Tower Room 2, North Wing, Main Quadrangle UCC <i>(unless otherwise specified)</i> | |
| 08.30 – 09.00 | Convening of Peer Review Group |
| 09.00 – 09.45 | Professor Patrick Fitzpatrick, Head of College, SEFS |
| 09.45 – 10.00 | Mr Seamus McEvoy, Interim Chair of Student Services |
| 10.00 – 10.15 | Professor Anita Maguire, Vice-President for Research Policy & Support |
| 10.15 – 10.30 | Mr. Cormac McSweeney, Finance Office |

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| 10.30 – 11.00 | Tea/coffee |
| 11.00 – 11.15 | Dr. Marian McCarthy, Deputising for the Vice-President for Teaching and Learning |
| 11.15 – 12.20 | <p>Visit to UCC Library, meeting with Ms Catherine Clehane, Food Science and Engineering Librarian, Boole Library</p> <p><u>Representatives of Post-doctoral researchers</u></p> <p>Dr John Morrissey (Civil Eng), CPPU division. Fionn Rogan (Civil Eng), ERI. Dr Michele Magno. (Elec Eng) Gordan Dalton, (Civil & Eng) HMRC Division. Dr Andrei Temko. Dept. Electrical & Electronic Engineering Duc Dinh, Tyndall</p> <p>Venue: Tower Room 2</p> |
| 12.20 – 12.35 | Research Professor Cian Ó Mathúna, Microsystems, Tyndall National Institute |
| 12.30 – 13.00 | Professor Paul Giller, Registrar and Senior Vice-President for Academic Affairs |
| 13.00 – 14.00 | Working lunch |
| 14.00 – 15.00 | Preparation of first draft of final report |
| 16.20 – 16.55 | Head of School |
| 17.00 – 17.30 | <p>Exit presentation to all staff, to be made by the Chair of the Peer Review Group or other member of Peer Review Group as agreed, summarising the principal findings of the Peer Review Group.</p> <p>This presentation is <u>not</u> for discussion at this time.</p> <p>Venue: Council Room, North Wing, Main Quadrangle.</p> |
| 18.30 | <p>Working private dinner for members of the Peer Review Group to complete drafting of report and finalisation of arrangements for completion and submission of final report.</p> <p>Venue: Tower Room, River Lee Hotel, Western Road</p> |