

## **UOA 28 CIVIL ENGINEERING: OVERVIEW REPORT**

### **Conduct of the Assessment Work**

The Panel worked according to its published Criteria and Working Methods. The Panel received advice from two specialist advisers in the area of surveying, and, through cross-referral, also received advice from the Built Environment and the Earth Sciences Panels. The Panel examined in detail more than 10% of the cited outputs, and significantly more in a number of apparent borderline cases. While a large proportion of outputs were papers published in international refereed journals and conference proceedings, the Panel's judgement of quality did not disadvantage other forms of output. As civil engineering research, by its nature, is often applied and orientated towards industry, the Panel had no difficulty in assessing applied research on an equal footing with pure research.

The Panel carried out sensitivity analyses on a range of weightings for each parameter within the aggregate scoring. All weightings were within the published ranges, and all models placed emphasis on the quality of outputs. The sensitivity analyses revealed a number of anomalies. The Panel therefore used a number of models for aggregating the quantified elements of submissions, thereby ensuring that the final award of grades was informed, but not determined, by the quantitative modelling. The Panel's application of the standard of international excellence was confirmed by all five non-UK experts.

### **Overview of the Research Activity Assessed by the Panel**

Institutions demonstrated greater selectivity in their decisions to submit to the Civil Engineering Panel in 2001, with the Panel receiving 31 submissions compared to 43 submissions in 1996 (a 28% decrease from 1996, mostly relating to the submissions rated 1 and 2 in 1996). The Panel also noted that some departments were more selective in 2001 in the return of staff for assessment.

It should be noted that General Engineering and Built Environment UoAs also encompass civil engineering research. It is possible that these other units of assessment may have received submissions from departments previously submitted to the Civil Engineering UoA in 1996.

Overall, the Panel noted an improvement in the quality of civil engineering research submitted to this UoA compared with 1996, particularly evident in the high quality of the outputs cited in RA2. As a result of the greater selectivity and increased quality, the profile of 2001 grades is higher and flatter than the profile in 1996.

Within the research submitted to this UoA, the submissions showed growth in geo-environmental engineering activity and an apparent decline in research in structures, possibly reflecting the decline in funding opportunities in this area. Sustainability was a recurring theme across the range of research submitted, and there was evidence of growing interdisciplinary research. The Panel also noted significant international collaborations and involvement of UK civil engineers in international work, particularly with respect to Europe.

With regard to the quantitative data, the Panel noted a decline over the assessment period in the number of postgraduate research students and in the number of externally-funded new studentships. The Panel is concerned that if this decline continues, then in time, the health of civil engineering research in UK universities will be undermined. Across all submissions, the level of research income per FTE has been maintained over the assessment period.

Generally, departments appear to have made good progress against their 1996 plans. There was also evidence of better strategic planning and organisation of research compared with the 1996 Exercise, and this augers well for the future of research in the discipline in the UK.