Ryder Architecture is leading a campaign to refocus built environment training at UK universities. **Robert Mallett** looks at the key issues

Degree of collaboration

The UK university system, particularly in England, has undergone seismic change over the past two years. As a direct consequence of 2008's financial crisis, the government introduced a radical new system of student-financed tuition fees for English higher education institutions, which has increased the financial burden on undergraduates, but made no additional government funding available to universities. Nevertheless, one outcome of this albeit controversial fee paying system is that the 'consumers' – students, professional bodies, employers – now expect greater value for money from higher education establishments, even if the latter are struggling to meet such expectations.

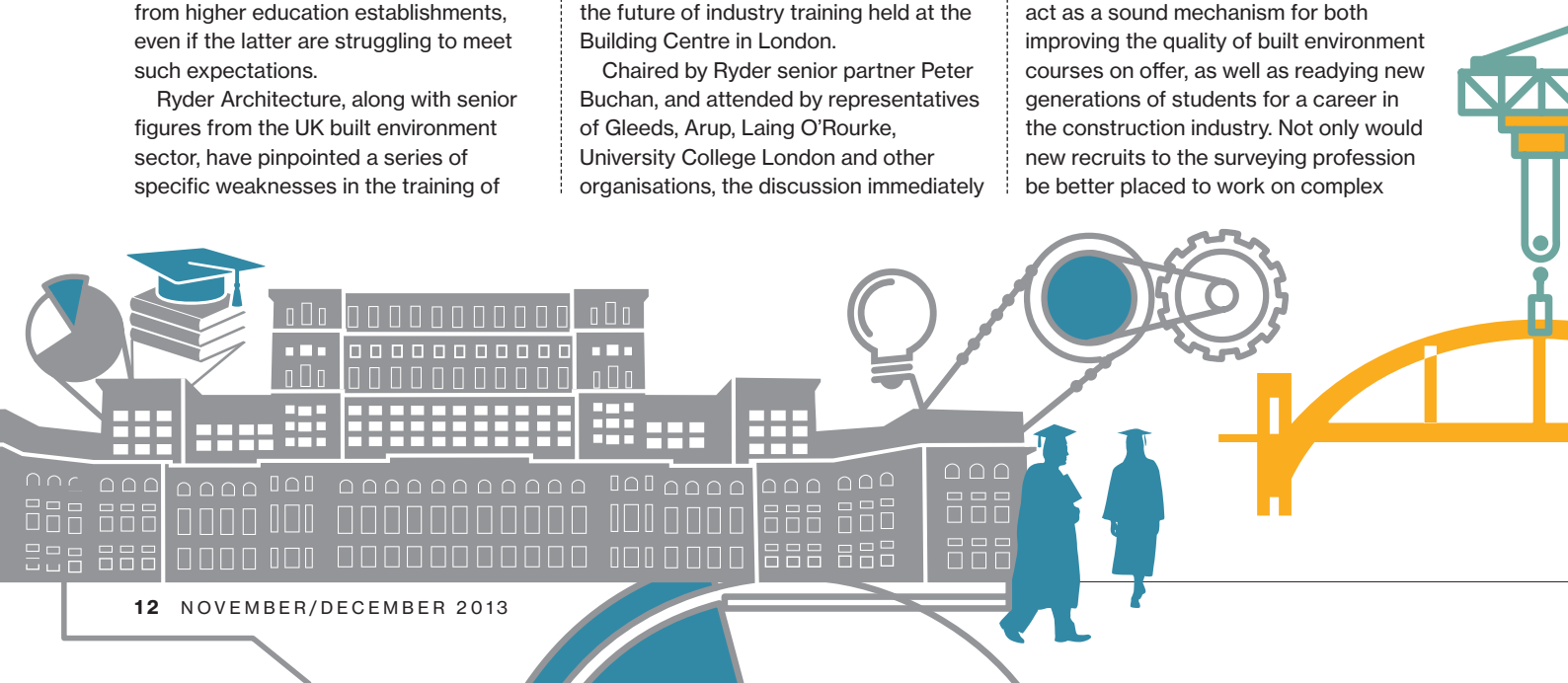
Ryder Architecture, along with senior figures from the UK built environment sector, have pinpointed a series of specific weaknesses in the training of undergraduates destined for careers in architecture and the construction industry (*see page 14*). During an inaugural Ryder-hosted roundtable on the future of the Built Environment degree last year, proposed improvements to the built environment teaching provision were identified, which would benefit not only graduates and their future employers, but potentially society as a whole. Most notably, the meeting called for greater student training for engagement with industry, more advanced courses with a greater multi-disciplinary emphasis, multiple gateways into the construction industry and, ultimately, a better quality of undergraduate training.

There is no doubt that the campaign has gained a good deal of attention and momentum over the course of the past year, as industry concerns over the quality of training for its undergraduates continue to rise. On 5 June, many of these concerns, along with a number of ideas on how they might be addressed by the higher education sector, were the focus of an RICS-hosted roundtable on the future of industry training held at the Building Centre in London.

Chaired by Ryder senior partner Peter Buchan, and attended by representatives of Gleeds, Arup, Laing O'Rourke, University College London and other organisations, the discussion immediately focused on the pressing need to develop a new partnership between industry, professional organisations and academe. As Buchan noted in his opening remarks, a great many school leavers do not aspire to a career in the built environment industries, and neither do they appreciate the wide number of specialisms that exist in the surveying profession. As a result, barriers continue to prevail that prevent the creation of the type of construction industry that is now needed, both in the UK and globally.

Plainly, both the industry itself and current university training for prospective construction industry professionals, are still not doing enough to attract greater numbers of high-calibre undergraduates. Neither, as a number of the representatives present argued, were the courses always preparing students to be properly fit for purpose by the time they had left higher education. As Alan Muse, RICS Director of Built Environment Professional Groups noted, the average contact time for an undergraduate enrolled on a built environment degree course totalled just 13 hours per week, not ideal given the complex and highly technological nature of sectors such as construction. Although university funding constraints are plainly a significant factor, UK university contact hours are, generally speaking, lower than in many other countries.

Closer collaboration between universities and industry could potentially act as a sound mechanism for both improving the quality of built environment courses on offer, as well as readying new generations of students for a career in the construction industry. Not only would new recruits to the surveying profession be better placed to work on complex



infrastructure projects anywhere in the world, but employers would be spared considerable time and expense in preparing them once out of higher education, as is now too often the case.

As RICS Project Management Board member David Reynolds emphasised, the need for better trained professional surveyors was now greater than ever. Whether it be large companies such as EC Harris, or the many small- and medium-sized enterprises that make up the surveying profession, there was a clear need to operate on a global basis and to be technologically proficient as a consequence. Given such pressures, only a far closer relationship between the academic environment and the various built environment industries could develop the high level of training required for today's construction projects, whether large or small.

So how do the various interested parties in the debate plan to bring about the 'massive culture change', as Buchan termed it, needed to strengthen professional competitiveness? In the first instance, greater involvement on the part of industry in shaping the future education and training process was now regarded as an all but essential prerequisite. Each of the representatives present agreed that there currently existed a disparity between what the built environment industry needed by way of new recruits, and what academia was able to produce. Working together, the two sectors could, Muse argued, lead to more a more collaborative form of undergraduate course delivery and, subsequently, to greater levels of specialism. Naturally, this would require something of a systemic change from a teaching culture that many within the industry claim cannot easily provide students with all of the professional skills needed by modern industry. Such a change would need to fully embrace the concept of a more collaborative built environment degree programme, delivering what the construction sector needed – better trained, highly qualified professionals.

Aside from achieving a closer and binding relationship between industry and academe designed to improve the Built Environment learning experience for UK undergraduates, work placements were also seen by many as a vital ingredient of future study programmes. In outlining his own time as a student, Matthew Saunders, RICS Associate Director for the Built Environment, placed considerable emphasis on the high value of 'hands on experience blended with learning'. The depressed economic climate of the past five years has seen a great reduction in the number of such placements, so greater emphasis on a coordinated scheme as an integral component of all undergraduate programmes, would produce more aware and practically minded professionals.

As Arup's Becci Taylor concluded, the objective of the new approach proposed by the Ryder campaign was 'teaching people how to think'. However, one might also add that increasing the individual student's range of experience while at university would also be the natural objective of such a project. The panel agreed unanimously that this range of experience should include an over-arching framework of global qualifications with a focus on technology, a solid understanding of what being part of a professional discipline involves and a focus on disciplines. It was important, added Reynolds, to impress on youngsters that surveying qualifications offered a 'global passport', and a good measure of influence abroad.

Transforming the content and focus of existing UK Built Environment degrees, will not be an easy or straightforward matter. In the first instance, it will require detailed planning on the part of universities, industry and professional bodies such as RICS. Running a pilot course would then reveal what, if any, modifications may be required to the curriculum, modes of delivery etc. Built into this process should be a close evaluation of what type of professional the course will be designed to produce: a management-based, industry professional or a more 'technical' professional, or both?

In his closing remarks, Buchan told the meeting that discussions had begun with University College London, and Muse confirmed that RICS would support such a venture which should include all 51 RICS partner universities. Of course, the costs of financing any new degree programme will not be modest. But with the UK government having placed such great emphasis on national infrastructure programmes, would it be too much to expect that state funds be released to produce the next generation of industry professionals, better trained and educated than ever before? In the meantime, the built environment sector could do much to raise awareness about the benefits a career in its industries offers to tomorrow's generation of professionals.

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Peter Buchan argues that a new Built Environment BSc is essential if the UK construction industry is to attract and train the best quality professionals

Bring back the melting pot

For centuries, buildings from the most simple to the most sophisticated were constructed through a combination of the master builder and the skilled craftsmen organised through guilds. Entry into a chosen craft was through apprenticeship, and the families of young hopefuls paid for the privilege of such training. The system served the industry well until engineering developed into a design process rather than an empirical basis of learning from each building, and architecture into an academic pursuit.

The Grand Tour exposed gentlemen of worth to new civilisations and cultures. Meanwhile, architecture became an art rather than a craft, and 19th-century polytechnics in Paris began to train engineers. The process of separating design from construction had begun.

As life became increasingly complex during the 20th century, more and more professions joined the construction mix – including all of those represented by RICS. So, added to the major divide that evolved between design and construction were dozens of sub-segregations, which has now created an industry of silo operations with woeful levels of understanding between them.

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Of course we need specialists, but we also need generalists and we certainly need a common platform of understanding that will promote collaboration and, ultimately, seamless interdisciplinary working. A new melting pot of talents and skills is needed to provide the new breed of professionals the construction industry deserves if it is to keep pace with advances in computer and materials technology in global marketplaces. The industry has not really advanced since the middle of the 20th century, and nor will it until we change the ways we train our professionals. If we are to attract the very best young talent into the construction sector, then it needs to be equal to the calibre of young professional entering the aeronautical engineering or computer science sectors.

Here in the UK, we produce great built environment professionals. The country's education standards are well renowned, and its graduates highly sought after. However, the talking shop across architecture education alone has gone on for as long as I can remember, and I find it troubling that we still experience difficulties in promoting cross-disciplinary design, let alone encouraging new breeds of valuable hybrid professionals.

At Ryder Architecture our proposal, which we are developing with industry partners and academics, is for a new kind of 'melting pot' degree namely, a 'Bachelor of the Built Environment'. Many school leavers have no comprehension of the range of disciplines that currently contribute to our built environment discipline, which is hardly surprising given the UK's complex professional structures. Such a degree will make it rather more comprehensible, raise its status, so attracting even better students and more importantly, allowing individuals to find the route into the industry and the area of expertise that is right for them.

A better choice of modules will allow for gradual specialism through this first degree. Where appropriate, a Masters can be undertaken while in employment that will lead to chartered status in a chosen profession. This process will naturally provide a range of generalists and specialists, and serve as a breeding ground for better informed, more collaborative professionals, as well as fostering new hybrids. We could conceivably produce the, 'environmental computer scientist' or economist to take us close to where it all started, with the 'architect engineer'. Who knows ?

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