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Editorial
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Editorial

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In this editorial I shall discuss the impact of two significant changes which are currently taking place; before introducing the excellent papers in this issue of *Construction Materials*.

The first change is the new fee structure in English universities. I am writing this from Coventry University where the fee for our current students from the European Union (EU) is approximately £3000 per year. For the students who enter in September 2012 it will be £9000 per year. The full effect of this will not be known until they actually arrive. It is clear that it will affect some universities more than others. Some elite institutions will still have no difficulty in filling their places but others, like Coventry, which are not so highly ranked but still undertake very good research, may be badly affected.

Overseas (non EU) students are not affected by the fee change, but recently introduced visa regulations are affecting numbers. While we are doing everything we can to help applicants, the government has made the process far more complex and demanding and some are being put off.

One significant response from the universities has been to try even harder to maximise income from other sources such as consultancy. Another response may be the introduction of multiple start dates for courses throughout the year. Whether these will affect the number and quality of papers that are written by staff and research students remains to be seen.

The second change arises from the ever-increasing consequences of cheap and fast digital storage and transmission of documents. The various benefits of publishing this way, such as the ability to publish without waiting for space in a printed issue, and the ability to publish long papers with colour pictures are often discussed. However one benefit which is rarely mentioned is the very significant potential cost savings for university libraries. At present librarians are kept busy shelving and binding paper copies of journals and replacing lost or damaged issues. A vast amount of expensive floor space is occupied by the shelves. Digital copies cannot be lost or damaged and do not take up space that needs to be built, heated and cleaned. They do not need re-shelving after use.

Readers may be aware that there is significant debate about whether the change to digital should be accompanied by a change to the 'author pays – free to the reader' model for journals; but library costs can be greatly reduced regardless of which model is used. What is needed is a long-term arrangement for access to past issues to give libraries the necessary confidence to dispose of the paper copies. The floor space can then be put to other use or even sold.

My own experience indicates that students, particularly the younger ones, are quite happy to read papers on a screen, and rarely wish to print them. Indeed they would probably be quite happy to study them on their smart-phones if our system permitted downloads to machines which are not in the university domain.

In this issue Evernden and Mottram (2012) present the very interesting case for houses to be built from pultruded fibre reinforced polymers (FRPs). There is no doubt that the provision of new housing in the UK is failing to meet demand, and the authors argue that FRP offers an opportunity to produce new units on the scale that is needed. They present data to show that this process can offer systems which are both economically and environmentally advantageous when compared to the masonry structures which are currently prevalent in this country.

Hirst *et al.* (2012) also present an alternative to current house-building systems. Hemp-lime offers an environmentally friendly system for providing solid walls in timber-framed buildings. The results show that the strength is comparable with other rigid insulation materials and increases, as expected, with mix density and age. However there are a number of complicating factors related to interactions between the hemp and the binder. Increasing the understanding of these should make this material more attractive to developers.

Shahriar and Nedhi (2012) report some very detailed studies on the rheological properties of oil well cement slurries. Using an advanced rheometer capable of making accurate measurements at different temperatures, the authors show that the coupled effects of temperature and admixture type are very significant. Overall the new ranges of polycarboxylate-based high range water-reducing admixtures, which are popular in self-compacting concrete, performed best. These results will contribute to the successful use of cement slurries as oil wells get ever deeper.

In the final paper Gopalakrishnan (2012) tackles the complex problem of predicting the properties of hot-mix asphalt for use in road construction. The paper takes advantage of recent developments in computer hardware and software and applies

types of artificial neural network known as evolving connectionist systems. This type of sophisticated analysis is very relevant at a time when it is essential to obtain the maximum working life of a road surface while minimising the use of hydrocarbon-based materials.

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