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ENGINEERING SECTOR

The demographic time bomb is ticking . . .

Talented over 55s will need to be replaced. But, recruiters tell Huw Richards, a nuclear skills gap is looming

Both demographics and an international proliferation of large capital projects mean that the skills of well-qualified engineers will be at a premium for the foreseeable future, says a leading recruiter in the field.

Tobias Read, of EPCglobal, which claims the world's largest database of engineering and construction jobs, notes that while the market for talent is global, its core is in Britain and the US.

He points to what he terms a demographic time bomb for the near future: "A huge amount of that talent is 55 or more and due to retire in the next few years, but there is a serious deficit in the 30 to 50 age group who you would expect to replace them, in part because a lot of people with engineering qualifications opted for jobs in information technology in the 1990s."

At the same time he sees big projects creating ever-decreasing demands for those skills: "Wembley, Crossrail, Heathrow Terminal 5 and widening the M25. New power stations, with the nuclear

option back on the table and most nuclear engineers long retired. And there are very few nuclear engineers around nowadays. And that's just in Britain."

There will, he says: "Be enormous opportunities for anyone in their 30s or 40s already established with a major company, and for those coming into the industry."

Nor is such demand limited to people with construction-related talents. Keith Williams of Praxis HIS, a Bath-based systems company, says: "Systems engineers will become more and more important as systems become more complex and the ability to connect them becomes more important."

The latest Association of Graduate Recruiters (AGR) report echoes this, showing a 38.4 per cent year on year increase in vacancies in manufacturing engineering, although demand for mechanical engineers has not changed.

The worry, as ever, is how that demand is to be met. Problems at

the school end of the equation are exacerbated by the mathematical skills of engineering graduates making them attractive to other sectors. Research sponsored by Siemens shows that students are being deterred from taking science A-levels by their reputation for difficulty at a time when the pressure to secure top grades is higher than ever.

"There's no reason why someone with an engineering degree should not become an investment banker," says Carl Gilleard, chief executive of the AGR – and with an average investment bank starting salary of £35,000 compared to the engineering median of £21,000, it is not hard to see why they might.

The Equal Opportunities Commission points to this as another sector where skill shortages are exacerbated by skewed gender patterns, with only 64,000 women in a work force of just under 800,000.

Catching potential recruits young, and enthrusing them about the possibilities of the

trade, is the likeliest answer, argues Jenny Cridland, Resourcing and Development Director of BAE Systems. Initiatives include a schools road show using actors to sell engineering and science to pupils. There is, she argues, plenty to inspire enthusiasm among her company's 36,000 posts. "You might be working on design for a new Eurofighter or a new aircraft carrier," she points out.

BAE also operates apprenticeships, bringing in school leavers post-GCSE. While less over-subscribed than their graduate scheme – which receives 30 applicants per place – a total of 1,663 applicants for 288 places means they are broadly satisfied with the quality of their intake.

Ms Cridland says: "It takes three or four years depending on whether you go the technician route, which includes a Higher National Diploma, or the craft route which uses City and Guilds level 2, mostly on day release. We have 1,100 apprentices at any one time and the skills they learn are

a vital resource for us as a company."

Apprenticeships are also being revived by National Rail as it attempts to restore an industry craft base which deputy chair Iain Croucher acknowledges was neglected by predecessor Rail-track after privatisation.

"There are very exciting and complex engineering challenges involved in maintaining a system 24 hours a day, 365 days a year, but what we have to do is attract people who in the recent past have been put off by the poor image of the railways."

It received more than 1,000 applications for 200 two-year apprenticeships to be run from a newly-acquired training base at HMS Sultan in Gosport: "We've been very happy with the calibre of applicants we're getting.

"Over the next decade we'll be bringing more than 2,000 highly skilled people who are motivated to work for the railways – the supervisors and managers of the future – into the industry," says Mr Croucher.

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