

ENGINEERING THE FUTURE

Nicky Belben **explains what Tube Lines is doing to address the skills shortage in engineering**

This year, the CBI announced that the UK will need to double its volume of science and engineering graduates by 2014 or see skilled jobs go overseas. Currently, around 45,000 people emerge each year with a degree in science, engineering or technology, constituting around 12 per cent of all UK graduates. The CBI believes that to match the predicted growth in skilled jobs in the UK, this figure needs to increase to at least 25 per cent.

The engineering industry in the UK continues to go from strength to strength; a recent report found that performance in the sector is at its healthiest for 11 years. For engineering companies, the results from the CBI illustrate something already known by many – that we need to get more graduates onto engineering courses to sustain this ongoing success.

Tube and rail passenger numbers are increasing at a steady rate and this growth brings with it an increased pressure on the infrastructures that maintain these vital modes of mass transit. The average age of the UK's engineering population is getting older, an especially worrying fact when combined with fewer students undertaking engineering courses. The predicted skills shortage will affect the rail industry in a number of ways, most notably in slowing the rate of innovation and creating an international recruitment market as companies find the need to recruit employees from abroad.

For tube and rail, upon which the 21st century will place ever increasing demands, forward planning and the development of strategies to ease potential business impacts is particularly important. Recognising and addressing industry skills shortages through such initiatives as raising the profile of engineering as a career, specialised apprenticeship programmes and good strong graduate schemes will inevitably bring business benefits in the medium to long-term. Indeed, the recent Leitch report on skills recommended greater involvement of employers in the development of educational and vocational training.

At Tube Lines, we have implemented a number of initiatives which aim not only to attract new recruits, but also to address the skills



Enhanced track renewal at Kilburn on the Jubilee line.

shortage. For example, we recognise the value of apprentices and their importance in developing the company's skill base and believe that apprenticeships are another way of bringing people into the industry on a structured development programme – we do not just rely on graduates. In fact our intake of apprentices for 2006 is double that of 2003 when we assumed responsibility for the Jubilee, Northern and Piccadilly lines of the London Underground, making us the second largest employer of apprentices within the London area. We operate an Advanced Apprenticeship scheme over seven disciplines, covering both the SEMTA and Go Skills frameworks, and encourage our apprentices to continue their education post-scheme and fully support them whilst they do so.

Our chief executive, Terry Morgan, says how proud he and his colleagues are of Tube Lines' apprentice scheme. 'New recruits can see that there is a clear path to climb here and they will be offered the best training with some of the best engineers in the industry. The rail industry is going to face a massive skills-shortage if we don't start to address these issues and start rebuilding engineering as a career path.'

The engineering sector needs to think about working with schools, universities and careers advisers to help spark students' interests in engineering and lead them to choose it as a degree subject and a career. As well as programmes to promote our apprentice programme, initiatives already in place at Tube

Lines include working with schools to raise the profile of engineering as a career and a strong graduate scheme which is currently attracting some of the best in the industry. Our annual programme of activities includes a variety of links with the local community and schools, including special targeting of girls' schools to encourage more women into a typically male-dominated industry. Interactive workshops, such as the government funded STEM initiative, were established as a joint partnership between Tube Lines and London Underground.

Tube Lines' long term commitment to heading off skills shortages has involved on-going investment in training. Our purpose-built £10m specialist Skills Training Centre in Stratford, with top-notch facilities, includes a purpose-built signals training school, available to apprentices, graduates and other employees.

If the engineering industry is to move forward and meet this challenge, it needs to act now. For some, the engineering professions have a tired and dated image. We feel that the reality is very different – we are part of an exciting, diverse and innovative industry which allows us to get involved in exciting projects with a direct impact on people's everyday lives. By communicating this to young people, we stand a better chance of attracting top calibre students into engineering, whether through apprenticeships, degrees or other routes. It is vital for the industry's future.

Nicky Belben is the director of HR for Tube Lines.