Written evidence submitted by Atkins Limited (GAP0052)

Introduction

0.1 Atkins is the UK’s largest engineering consultancy and one of the world’s most respected design, engineering and project management consultancies. We build long-term trusted partnerships to create a world where lives are enriched through the implementation of our ideas. We employ over 9,500 people in the UK and Europe as part of our 18,000+ worldwide strength.

0.2 The skill sets our people employ occupy much of the STEM spectrum. The main groups in short supply are:

- Acousticians
- Aeronautical engineers
- Building services engineers
- Chemical engineers
- Civil and structural engineers
- Electrical and electronic engineers
- Environmental scientists
- Geotechnical and tunnelling engineers
- Mechanical engineers
- Mathematical modellers
- Mathematicians
- Physicists and nuclear scientists
- Surveyors

In particular they utilise skills necessary to deliver design and engineering consultancy, a relatively small yet vital part of the workforce in the infrastructure, transportation and energy sectors in which we work.

0.3 These shortages manifest themselves both at entry level and experienced hires. Over the last two years we have filled on average ninety vacancies per month to sustain the UK business.

0.4 Our response to the challenges this creates for our business can be grouped into four main areas, although there are overlaps:

1. Schools outreach

1.1 Atkins is committed to developing effective relationships with schools and colleges to encourage the STEM agenda. We have over 500 STEM Ambassadors and relationships with over 350 schools and colleges in the UK. We have active STEM groups in 23 of our UK offices. In the 2015/16 academic year we welcomed 190 key stage 4 students for work experience placements. In arranging and designing placements we follow the Tomorrows Engineers employer’s best practice guide to ensure that all students have a valuable and worthwhile experience.

1.2 Our Young Engineer and Scientist (YES) Programme is Atkins’ after-school STEM Club for year 8-9 students in the Epsom area. Students from the local community sign-up for a year-long programme of five to eight 2-hour sessions to learn about different Science, Technology, Engineering and Maths (STEM) careers through fun, interactive and hands-on activities run by expert volunteers and STEM Ambassadors. Each session is designed to show the students how the science and maths they are currently learning is used in specific STEM disciplines. This encourages students to utilise their creativity and imagination in design.

1.3 Pathways to Engineering is a programme that Atkins runs in collaboration with the charity CitizensUK. Currently involving sixth-formers from seven schools and colleges in the London area, the programme provides engineering work experience, employability skills training and support to young people to help them jumpstart a career in engineering.

1.4 We have developed several interventions that we can take into schools including a board game to explain the breadth of STEM disciplines involved in railway engineering projects and an interactive Lego model used to simulate the effectiveness of flood protection measures.

1.5 In our schools outreach we are very well supported by Tomorrow’s Engineers and STEM Learning. STEM outreach is included in our Diversity and Inclusion planning so we are using these opportunities to explain the routes into STEM careers in the expectation that the industry will attract a more diverse population.

1.6 Evaluation: We have been sending evaluation forms out to activities solely run by us over the last six months. Feedback suggests that the ratings are higher when students are there by choice. There have been several examples of young people really inspired by the experience and declaring their intention to pursue a STEM career. We have started seeing more applications for work experience and apprenticeships from the schools we interact with.

1.7 Costs: The most significant cost is time. Atkins staff are entitled to 2 days ‘volunteering leave’ per year which can be used on STEM activities. In 2016 the total cost of volunteering leave, including STEM outreach, was in excess of £250,000.
2. Awareness

2.1 Atkins sponsors and participates in several national and regional events each year to raise awareness of STEM careers, including The Big Bang, Big Bang Near Me, TeenTech, IET Open House Day, SEMTA Skills Awards and The Telegraph STEM Awards. In 2016 we helped the National Railway Museum to design an interactive exhibit for Future Engineers week. Many of these activities allow young people (and in some cases their parents) to meet and be inspired by our graduates and apprentices.

2.2 Providing inspirational role models is a great way of encouraging young people to consider STEM careers. In 2016 Sanna Shabir from our London office won the Asian Apprentice of the Year Award and was also Apprentice of the Year at the ACE Awards.

2.3 We have also developed an online attraction game to help inspire school children and undergraduates into the world of engineering.

2.4 Evaluation: The national events, such as The Big Bang Fair, tend to undertake their own evaluations.

2.5 Costs: Many local activities are free or very low cost, e.g. less than £1,000. The high profile and national activities each require more significant funding, typically in the region of £10,000 - £50,000.

3. Apprenticeships

3.1 The Atkins professional apprentices programme started in 2013 in response to the government’s apprenticeship reform programme and the increasingly competitive engineering graduate market. Each year we hire around 80 advanced and higher apprentices in the UK. We now have over 250 apprentices in the programme, most of whom will achieve a professional qualification at completion.

3.2 As a member of the Technician’s Apprenticeship Consortium we have collaborated with sector partners to develop several new frameworks and, more recently, trailblazer standards in key subject areas including civil engineering, building services, building and quantity surveying, mechanical and electrical engineering. Approximately 40% of Atkins apprentices are on a framework or standard created by the consortium.

3.3 Evaluation: The retention rate for apprentices in Atkins is similar to the rest of the workforce. Approximately 150 Atkins apprentices have completed their apprenticeship since 2013.

3.4 Costs\(^1\): Approximately 50% of our external costs (academic provision and assessment) of apprenticeships are currently funded by the SFA. Internal costs are significant and include time for day release, on the job learning and mentoring by more senior colleagues. These are difficult to quantify but could be in the region £5,000 - £10,000 per apprentice per annum. Providing a subject matter expert to participate in an employers’ group developing and maintaining one apprenticeship standard typically costs Atkins £5,000 per annum.

4. Diversity

4.1 We recognise that diversity is a key element in closing the skills gap and we reflect this in our approach to attraction, retention and in supporting ‘returnees’ – professionals that have taken a career break. We partner with organisations such as WISE, Business in the Community, Stonewall and The Big Idea to promote diversity and benchmark our commitments. Atkins’ Women’s Professional Network provides a friendly and informal forum to encourage a gender-balanced and inclusive workplace. Our flexible working arrangements enable employees to balance their working life with parental and other caring responsibilities, as well as other commitments outside the workplace.

4.2 In 2013 we published Britain’s got talented female engineers. Successful women in engineering: A careers research study in partnership with The Royal Academy of Engineering, BP and Rolls Royce. The research asked female engineers why they chose engineering careers and whether they were fulfilled by their choice.

4.3 Evaluation: We are seeing positive results in graduate recruitment. Our intakes over the period 2014 to 2016 averaged 27% female. The UK university student population for Engineering & Technology is around 17% female.

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\(^1\) All costs quoted represent approximate opportunity costs to Atkins of deploying staff on fee-earning work.