Tate Consulting

Lexington Princes Dock Development, Liverpool

Director Shane Tate

With offices in Leeds and London, Tate Consulting is an industry-leading building services engineering company that provides a strategic and innovative approach in delivering a wide range of engineering and management consultancy services. Its reputation has been built on its designs of low-carbon buildings, which help create environments that improve the quality of health and wellbeing experienced by their inhabitants. Director Shane Tate tells *The Parliamentary Review* more about its range of services.

Having built up an impressive billion-pound portfolio of work that spans every market sector, including residential, industrial and commercial, our teams enable us to secure contracts and joint ventures with some of the biggest commercial brands and large-scale development projects across the country.

Health and wellbeing

As engineers, we take global responsibility very seriously and our ethos is to use technology and innovation to minimise the impact on the environment while providing an efficient and cost-effective service using renewable energy and sustainable practices. By using building data and technology, designers now have the ability to eliminate sick building syndrome (SBS), a term used to describe how building occupants experience acute health problems and discomfort, which is linked to a building's environment. The symptoms associated with SBS can include headaches, nausea and fatigue, as well as eye, nose or throat discomfort. Prolonged exposure can also cause chronic health problems like asthma and other

FACTS ABOUT TATE CONSULTING

- Director: Shane Tate
- Founded in 2003
- Based in Leeds and London
- Services: Mechanical, electrical and plumbing
- No. of employees: 25
- www.tateconsulting.eu

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respiratory issues in children as a result of damp and mouldy places caused by inadequate building ventilation. Improving natural and artificial lighting, thermal comfort, air quality, acoustics and natural ventilation are just some of the ways that can help create an environment proven to have a positive impact on health and wellbeing.

With the use of advanced technology and by creating smart buildings we can help alleviate these problems by automatically managing and maintaining the indoor air quality by using odour and humidity sensors. In addition, Tate Consulting are designing-in graphical interface touchscreen technology to enable occupiers to access their own data and insight to help them operate the building and control energy consumption. We understand that good design, incorporating health and wellbeing, in turn leads to a lower tenant turnover, which is good for long-term security of tenure and provides a more stabilised income yield for investors.

Digital technology

Another important part of improving productivity, quality outcomes and stakeholder financial return is the use of digital technology to generate data and develop insight and innovation in building design and construction. Through the use of technology, building designs can be worked on collaboratively instead of teams working individually. This team collaboration enables a more co-ordinated building design and means less disruption and downtime on construction sites, which ultimately helps to reduce labour input on site and improves productivity.

The benefits of using Building Information Modelling (BIM) technology is that all the co-ordination and interfaces between different disciplines can be undertaken in the predevelopment phase to avoid costly time and issues on site. It also enables high-quality information to be handed over to building operators and maintenance teams at completion so that the building design principles,

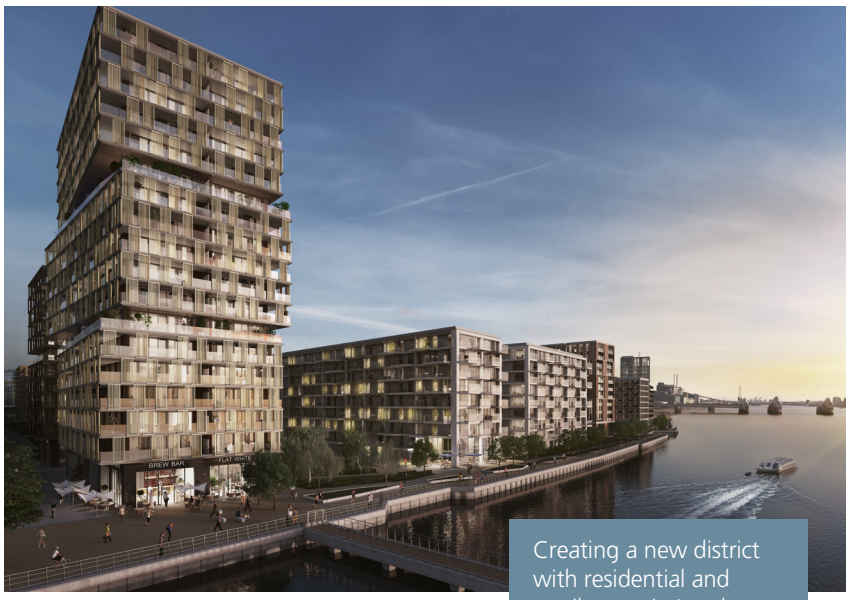
Gulfstream Aerospace Corporation's new service centre at TAG Farnborough Airport

asset schedules and specifications are available throughout the remaining 90 per cent of the building's life cycle. This ensures that key features, like low energy in-use and reduced maintenance labour input costs are achieved, increasing the overall productivity in construction as well as playing a vital role in reducing fuel poverty and increasing energy security for our country.

Tate Consulting used BIM technology on the Royal Wharf project, comprising 2,000 apartments as part of a £3.5 billion regeneration scheme to create a new community in the Docklands area of London. Our fabric-first philosophy, to minimise energy use before offsetting via renewables, allowed an overall reduction in carbon emissions of between 40 and 50 per cent compared with building regulations' minimum standards. In addition, 900 affordable housing units at Royal Wharf were constructed using off-site construction and prefabrication methods, which has substantial environmental, societal, economic, time, quality and health and safety benefits. This approach has been shown by research conducted at Cambridge University to reduce energy use in construction by 80 per cent, building operation by 25 per cent and to contribute to a reduction of 60 per cent in vehicle movements when compared with traditional techniques, which often result in a greater number of small deliveries.

Harnessing technology and skills

One of the main challenges within the industry is the need to embrace the benefits of technology. Smart buildings can present real opportunities to optimise the planning and usage of a building, and help to make the building run more intelligently and efficiently, to improve living, working and leisure environments and to create a unique building experience tailored to individual needs. But technology developments within our sector are still largely a new and unfamiliar inclusion for the majority of contractors, so there is a need to educate contractors and clients of the benefits, as well as to address the disadvantages and realistic limitations of smart technology systems to ensure we achieve a safe and secure cyber environment.



Creating a new district with residential and retail space in London Docklands

Another problem within engineering is staff shortage, and disappointingly it's still a much more male-orientated sector, with just 12 per cent of engineers being women, something the industry needs to actively help change. More needs to be done to educate young people on the marketability and benefits of a career in engineering, but for real change to happen, this problem needs to be tackled within early education to push science, technology, engineering and mathematics industries. At Tate Consulting our business culture emphasises ongoing professional development by creating a workplace that allows positivity and productivity to flourish. As a company, if we can help change the industry work culture today, we're hopefully attracting and retaining talent and inspiring millennials to solve tomorrow's problems.

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