

Utilisation of the Tunnelling and Underground Construction Academy

TfL Lane Rental Industry Publication



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Introduction

The Tunnelling and Underground Construction Academy (TUCA) is a world class state of the art training facility for tunnelling and underground construction, which opened in September 2011. Its aim is to provide the specialist skills required not only for the Crossrail project, but also as a specialist training facility for other future infrastructure projects – effectively making it a legacy to the UK construction industry.

The TUCA was established by Crossrail Ltd and supplemented by a grant from the Department for Business, Innovation and Skills via the Skills Funding Agency (SFA). As a condition of this grant, TUCA's role would be to provide long-term underground construction skills (This SFA grant conditions expires 25 October 2020) and also act as the London centre for the National Skills Academy for Railway Engineering (NSARE).

At this time TUCA is the only facility in Europe that is dedicated to soft-ground tunnelling techniques and provides tunnelling courses, apprenticeships, commercial Health & Safety, and preemployment training for local unemployed people seeking to improve their prospects on major projects.

With the conclusion of the Crossrail tunnelling work in 2016 it is intended that TfL will take on responsibility for TUCA. TfL is investigating the full potential of TUCA as a Pan-London Training Academy whilst still maintaining its core principles and legacy identity for which it was originally established.

Current demand for TUCA's specialist facilities is falling although there is still a significant delivery of general Health & Safety courses as well as Institute of Learning & Management (ILM) courses, which will continue to provide limited revenue for TUCA in the short term. It is anticipated that demand for TUCA's specialist training facility will increase as a number of large projects are due to start over the next 4- 5 years.



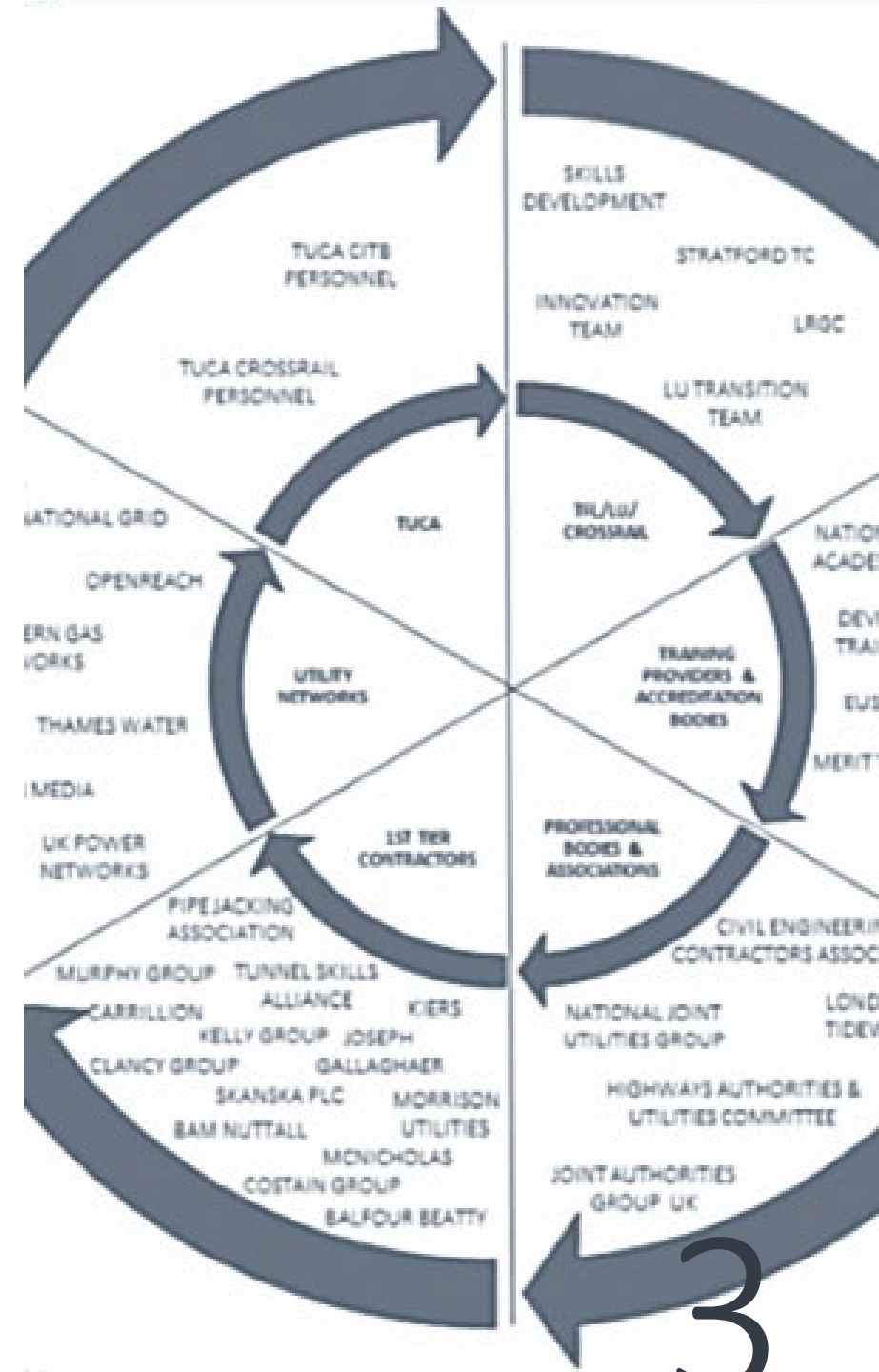
Case Study

A study was undertaken by TfL on the future of the Tunnelling and Underground Construction Academy (TUCA) if the facility transfers from Crossrail to TfL. As part of the work by the TUCA Industry Advisory Panel, a review was commissioned to investigate opportunities within the highways and utilities sectors for an enhanced training and R&D programme. The review was funded by TfL's Lane Rental Scheme and had three objectives:

1. To develop a proposal and business case for expanding the current remit of the Tunnelling and Underground Construction Academy (TUCA) to include training and R&D on underground construction with a focus on utilities. Consistent, high quality training fully aligned to CITB
2. Collaborative Research & Development in underground construction specifically related to the utilities sector
3. Sharing and developing best practice

Consultation was carried out with key stakeholders including the six main utility companies, first tier construction contractors, specialist sector bodies, utility training providers as well as industry professional associations and bodies, with discussions focussed around training, R&D and innovation opportunities.

In order to collate well-balanced, good quality data both quantitative and qualitative methods were used. This involved producing two questionnaires one for training and another for research & development, which gathered relevant and specific information that was then used to complement telephone and face to face interviews. By combining both approaches more inclusive research would provide key facts and conclusions.



Outcomes

With regards to R&D opportunities for TUCA, the information provided showed there is considerable activity in projects, innovation groups and forums around London. Many companies are already part of multiple groups with a shared interest. Consideration was given to the feasibility of a collaborative R&D group based at TUCA and the potential for this to drive training opportunities. It was concluded that there was insufficient demand to support another R&D group; however, there are several options available using a different approach.

Given the large number of R&D and Innovation initiatives in the sector there is an opportunity to develop TUCA as a Centre for Innovation. This approach would provide many tangible benefits for all stakeholders including sharing best practice, raising awareness (even advertising) and enhancing TUCA's image. A number of notable organisations in the Industry, such as the Civil Engineering Contractors Association (CECA), have shown an interest in partnering with TfL should this be an option that is taken forward.

Lessons Learnt

The utility companies were all keen to stress that in house training would remain in place in order to maintain the quality assurance and consistency throughout their supply chain. In the majority of cases utility personnel are compelled to hold a mandatory training accreditation awarded by recognised bodies. This is a key policy to keep skills updated, and competency levels consistent and in line with current legislation. This often means contractors will only want to attend those courses offered by utilities companies because they also include training to get approval to work on their sites as well. However, there is an opportunity and appetite to establish TUCA as a centre for innovation in construction.





Conclusion

In conclusion, although there is insufficient appetite from utility companies to use TUCA for operational training purposes, there are a number of other opportunities that should be considered as part of a wider training programme, such as sewer condition classification, or the safe control of gas operations. The most promising opportunity appears to be the development of TUCA as a centre for innovation, which might encompass the highway and utilities sector. This could provide tangible benefits in terms of sharing best practice evolving over time to help secure TUCA's reputation as a centre for Innovation Excellence in addition to Tunnelling Excellence. The outputs from this project shall be discussed by the TUCA Board, with any recommendations taken forward under a separate funding stream

TfL Lane Rental Scheme

Optimising customer journeys through the delivery of safer, innovative and sustainable roadworks



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