Submission to the APPG for Excellence in the Built Environment inquiry into the impact of Brexit on future skills needs in the construction industry

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Crossrail submission to the APPG for Excellence in the Built Environment fifth inquiry

Background and introduction

1. Crossrail is Europe's largest infrastructure project, building a 118km long high frequency metro style railway under central London – from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east. Once open, the railway will be known as the Elizabeth line and will increase London's rail capacity by 10%.

2. The Crossrail project is being delivered by Crossrail Limited (CRL), which is a wholly owned subsidiary of Transport for London (TfL). The project is jointly sponsored by TfL and the Department for Transport (DfT). Crossrail is being delivered with a £14.8bn funding package from our Sponsors; and is expected to produce at least £42bn of net economic benefit once it is complete.

3. Around 12,000 people are working directly on the project and will create 75,000 business opportunities which will support over 55,000 full-time equivalent jobs across the UK through our supply chain.

4. CRL recognised that the industry was suffering from a skills shortage before construction started in 2009. In response it implemented a skills strategy that not only supported the delivery of Crossrail but is also helping to create a skills base in the UK for the delivery of future major projects.

5. CRL's Learning Legacy programme seeks to take the lessons learnt across the project, including from our skills programme, and make them available for future infrastructure projects. This information is being collated while Crossrail is still underway and is being released online: (http://learninglegacy.crossrail.co.uk/). More detail on the CRL skills programme can be found in the appendix of this document.

6. CRL's Chairman, Sir Terry Morgan, authored the Transport Infrastructure Skills Strategy for the Department for Transport, which was published in January 2016. The Strategy adopts many of the learnings from CRL's skills programme and seeks to address the industry's skills challenge.

7. The skills challenge facing the industry are both longstanding and distinct to the UK's decision to leave the EU; however the implications of exiting the EU may greatly exacerbate this challenge if these risks are not recognised and acted upon.

Skills in transport and infrastructure delivery

8. The infrastructure sector is a vital part of the UK economy and has the potential to be the next great British industrial success story at home and abroad on a par with the automotive and aerospace sectors.

9. Improved infrastructure enables greater productivity across the entire economy, as businesses benefit from improved connectivity and the ability to reach a greater proportion of the labour market.

10. A key consequence of improved productivity for the delivery of infrastructure is that public sector projects, from HS2 to school and hospital construction, can be delivered more quickly and at a lower cost.

11. The construction sector is a significant contributor to the economy, representing 8% of GDP and 10% of employment. It is 6 times larger than the automotive industry. Every year £150 billion is invested through the public and private sectors. However productivity levels are comparably poor and this must be addressed for the industry to meet its full potential and reduce delivery costs. Skills investment is critical to achieving this.

12. The continued investment in infrastructure is one of the most effective levers the Government has to maintain economic growth and position the UK as a competitive and attractive place to do business. Underpinning this will be the industry's skills base and its ability to delivery quality design and delivery of infrastructure.

13. The largest challenge facing the infrastructure delivery and transport industries today is in the recruitment and development of a skilled workforce. This has been an ongoing problem which was identified well before the UK voted to leave the EU.

14. For example, fewer than one in five workers in the rail sector are under 30 years old while nearly half are over 45. Over 33,000 workers within the transport sector could retire by 2020.[1] Similarly, within the construction sector 30% of the workforce are over 45 years old.[2]

15. This comes at a time when there is increased demand for transport and infrastructure construction skills. Over half of engineering companies are currently recruiting engineers and this figure is likely to rise further in the coming years as the industry delivers the £400bn of infrastructure projects identified by the National Infrastructure Pipeline.

16. There has been some very good analysis on the causes of this skills shortage in the industry, most recently by Mark Farmer[3]. Brexit presents both risks, as well as opportunities to the sector.

17. The opportunity can, in part, be realised if government and the industry can continue to move away from the short term investment cycle and provide the certainty and funding needed to invest, strategically, in a domestic skills base.

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[1] Department for Transport, 2016. *Transport Infrastructure Skills Strategy: building sustainable skills.*
[2] CITB, 2015. *Workforce Mobility and Skills in the UK Construction Sector 2015*
[3] http://www.cast-consultancy.com/wp-content/uploads/2016/10/Farmer-Review-1.pdf

18. As Mark Farmer has argued, government and industry also need to tackle the significant structural obstacles which over many decades have discouraged contractors from innovating and improving productivity through training and up-skilling the workforce. These obstacles have included intense price-based competition, low profit margins, heavily fragmented supply chains (much more marked in the UK than elsewhere), and weak protections against “free-riding” and false self employment.

19. If the demand for skills and these underlying weaknesses are not addressed, the industry is unlikely to have the capacity to deliver on vital transport infrastructure projects across the country. One consequence of this is that the viability of housing developments and regeneration projects will also be impacted.

20. To address this underinvestment, the challenge the industry faces is to deliver 30,000 apprenticeships in road and rail, alone, by 2020. This means that one in three of all entrants between 2015 and 2020 will need to be an apprentice.

21. Developments in new construction methods and technologies will also increase demand for talent as the existing workforce is unlikely to have all the skills needed. As well as investing in upskilling the existing workforce in order to make the most of these developments, it is essential that the industry uses this change as an opportunity to recruit new entrants to the industry with the appropriate technical skills.

22. National Colleges – such as Crossrail’s Tunnelling and Underground Construction Academy or the National College for High Speed Rail – will play an important role in delivering the higher level technical skills needed by the industry. Linking these centres with large infrastructure projects will maximise their impact and ensure that their curriculum is aligned with the industry’s demand for skills.

23. If it does not, productivity and innovation development in the industry will fall even further behind those countries which have so far proved far more capable than the UK in embracing developments in construction technology.

24. As a result, not only will non-British firms take a greater share of the international export opportunity, but they may end up being better placed to deliver major projects in the UK, running the risk of our infrastructure investment profits going to non-British based companies.

Implication of the UK’s decision to leave the European Union

25. While the number of EU citizens in the UK construction workforce is not counted separately by the Home Office, migrant workers make up a larger proportion of the construction workforce in London than in the rest of the UK. In London, migrant

workers make up 54% of the construction workforce, compared to 12% across the UK as a whole.[4]

26. Similarly, CRL does not routinely collect information on the nationality of our contractors' workforces; however, recent contractor reports suggest that perhaps between a quarter and a third of those working on the project are non-British, EU citizens.

27. As such, changes to the ability of migrant workers to access the UK labour market could impact on the ability of the construction industry to recruit, particularly in the capital, if there is not an increase in the skills of domestic labour to compensate.

28. The Home Office Shortage Occupation List sets out the sectors of the labour market with a demonstrable lack of experienced workers. Of the 32 standard occupations listed, half are either in engineering sectors or allied professions (such as physical scientists and environmental professionals).

29. This is maybe compounded by a downturn in recruitment across the sector following the referendum. Over a third of engineering employers surveyed by the Institution of Engineering and Technology expected their recruitment to be negatively affected by the decision to leave the EU. Only 5% expected a positive impact.

30. Following the referendum result, the Government has made it clear that the freedom of movement between the UK and EU member states will form part of the exit negotiations. Depending on any final settlement with the EU, it may be more difficult for employers to recruit from the EU than at present.

31. The consequence of this would be an increased reliance for employers on the domestic workforce. As there are currently shortages in the skills needed to deliver infrastructure projects in the UK, this would mean that projects would risk being delayed, incurring higher costs or losing access to design and delivery expertise.

32. Similarly, an end to freedom of movement could make it more difficult for the UK workforce to work on projects within the EU. Project management and consultancy could be significant exportable services within the UK because of our expertise in delivering large infrastructure projects. As this service requires the ability for personnel to work abroad, the ability for the UK to export this may be reduced by changes to freedom of movement.

Conclusions

33. The UK's skill shortage is not a consequence of the UK's decision to leave the EU. However it does present a further risk to the industry if more is not done to develop

[4] National Institute of Economic and Social Research, 2016. *The impact of free movement on the labour market: case studies of hospitality, food processing and construction*

our domestic skills base, whilst also recognising there will be a need to continue to import some skills.

34. Measures which restrict the ability of the construction industry to recruit non-UK workers could negatively impact the industry's ability to deliver major infrastructure projects if there is not an increase in the skills of domestic labour to compensate.

35. However this must be seen in the context of the wider skills challenge facing the industry today. The recruitment of new talent into the workforce is one of the greatest threats to the successful delivery of major projects; if it is not addressed, the industry will face an even greater challenge in delivering the projects set out in the National Infrastructure Pipeline.

36. It is essential that the Government works with industry to invest in the continuing development of the domestic based skilled workforce needed to meet the delivery of the UK's pipeline of upgraded and new infrastructure. It must also work with industry to delivery a broader, modern skills base, such as digital and off-site manufacture. There is also a pressing need for government and industry to address the long-standing, structural obstacles to sustainable skills development which have been highlighted most recently in the Mark Farmer report.

37. Even with the ability to develop home grown talent, ready and cost efficient access to skilled international labour will be essential to meet the needs of the sector so that it can continue to seamlessly deliver the pipeline of projects on time and on budget over the coming years.

38. The industry and government must therefore seek a future relationship with Europe that succeeds the existing free movement arrangements with ones which allow us to access the skills that are not in sufficient supply domestically.

39. Similarly, the Government should give consideration as to how best protect and exploit the export opportunity of British skills, in particular design, project management and delivery.

40. The opportunity is that we create a sector in the UK built upon a new generation of British engineers and manufacturing & construction workers that further provides economic stability, facilitates inward investment and drives economic growth.

Appendix: Crossrail's skills programme

41. Crossrail's skills programme has contributed to building a skilled workforce, capable of delivering Crossrail and future infrastructure projects.

42. As part of this programme, Crossrail built the Tunnelling and Underground Construction Academy (TUCA) in Ilford in 2011. TUCA is the only facility of its kind in Europe and 15,000 students have been enrolled on at the Academy to date. Working with industry, it adapts the programmes it offers to match the skills needed by business.

43. The core of Crossrail's skills programme has been apprenticeships. Crossrail had an initial target of creating 400 apprenticeships over the course of the project – to date, we have created 602 apprenticeships. In the conclusion to our learning legacy report on apprenticeships, Crossrail made the following recommendation:

    All stakeholders in the UK construction industry have an interest and responsibility to tackle the long-term, structural obstacles to investment in construction skills. This requires not only a rethink of training and development arrangements, but also a fundamental reconsideration of current construction business models, employment practices and labour market institutions. As well as overcoming systemic labour shortages, a wide-ranging overhaul of construction skills and employment systems could help the UK industry address other long-standing issues, including comparatively low productivity, poor quality, patchy uptake of new technology, over-reliance on immigration, and the limited appeal of construction careers to young people. Any review should take note of any distinctive institutional and other arrangements which enable other countries' construction sectors to perform so much better than the UK. Specific matters for each of the industry's stakeholders to consider include:

    - *Contractors: alternatives to current business models and practices, including the form and extent of subcontracting; how supply chain management techniques might be used to improve subcontractors' delivery of skills objectives; and, what new labour market institutions, or improvements to existing institutions, might be required to support sustained improvements in industry performance;*

    - *Clients: in addition to a more coordinated approach on apprenticeships, what broader support to provide for skills and employment good practice and the labour market institutions underpinning such practice;*

    - *Government: what further steps can be taken to embed socially sustainable skills and employment practices through public procurement; whether current 'employer-led' models of vocational education and training are fit for purpose, or if (as in other countries) a broader range of stakeholders should be involved; and, what legislative and administrative changes (e.g., in connection* *with tax and employment status) are required to counteract construction's currently degenerative competitive environment;*

- *Workforce: how workforce interests and perspectives are to be represented in the development of a more sustainable labour model for the construction sector, and the operation of this model through particular practices and institutions.*

44. Crossrail has also worked to improve the diversity of its workforce and has worked with Women into Construction to provide opportunities for women looking to enter the industry. Our 2015-16 apprentice intake was 27% female, significantly higher than the industry average.

45. Many of the learnings from Crossrail have been adopted by the Department for Transport's Transport Skills Strategy, which was authored by Crossrail's Chairman Sir Terry Morgan. The Strategy aims to deliver 30,000 apprenticeships in road and rail by 2020 and increase female and BAME participation in the industry.