

Building Futures: Skills Shortages in the Evolving Construction Industry

WHITE PAPER



G4C (Generation for Change)
is the next generation
professional voice of the UK
built environment industry,
the single organisation
charged with driving the
change agenda in
construction.

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Introduction

The UK construction industry stands at the edge of a transformative era—one where innovation, opportunity, and inclusivity are reshaping what it means to work in the built environment. While the sector faces a well-documented skills shortage, this challenge presents an exciting chance to redefine the narrative, modernise educational pathways, and build a stronger, more diverse future workforce.

To realise this potential, we must look closely at four interconnected themes: how the industry is perceived within education, the flexibility and relevance of the curriculum, the construction sector's broader public image, and the emerging positives that signal a bright future.

When I was asked to write the introduction to this paper it took me back to spring 1999 when I was putting the finishing touches to my dissertation on the 'skills shortage'. My research took me back to the 1960's and the breakdown of direct labour organisations and the subsequent fragmentation of the supply chain. Fast forward 25 years and the challenges remain the same and are perhaps even tougher. My own journey into construction came through an education system where at school I was seen as someone who wanted to be 'just a builder', a stigma which remains engrained today despite huge improvements in the industry's image, demography and acceptance of technology.

The UK construction industry remains at a critical juncture. As demand for infrastructure and housing accelerates, the sector faces a growing skills shortage that threatens productivity, innovation, and long-term growth.

This paper produced by CEWales G4C explores the root causes of the skills gap through four interconnected lenses: the perception of construction within education, the responsiveness of the curriculum to industry needs, the sector's public image, and the emerging opportunities that signal a more resilient future. Each theme offers actionable insights for decision-makers who are shaping the future of the built environment. Now is the time for bold leadership. By investing in talent pipelines, strengthening partnerships with educators, and championing diversity and innovation, industry leaders can turn today's challenges into tomorrow's competitive advantage. The thought-provoking views have challenged me to do more to promote our industry and ensure the next generation are as enthused as I was to join this hugely rewarding industry, I hope it does the same for you.

Mike Baynham – Construction Director Knox and Wells Ltd

Education's Perception of Construction: A Misinformed Narrative

"Pay attention, or you'll end up on a building site."

Phrases like this, still echoed in schools today, reveal a deeply ingrained stigma: that construction is a backup plan for academic failure rather than a vibrant, skilled profession. This mindset does lasting damage, discouraging bright, capable students from exploring careers in a sector that contributes over £100 billion annually to the UK economy.

There is concern amongst the present industry that the range of career opportunities is not being demonstrated to those in education, whereby, the term 'construction career' determines the unconscious bias of students to instantaneously perceive muddy boots, a box of tools and a male dominated environment. The construction industry offers far more than that in today's environment; its diversity caters for all experiences, ages and sexes, from manual employment, such as carpentry and electrical installation, to technical roles, such as architecture and planning. All roles available within the industry are pivotal for driving its overall success, thus, generating greater awareness amongst students is a fundamental factor to combatting the existing skills shortage.

Lack of awareness around work experience and apprenticeships compounds the issue. Since the COVID-19 pandemic, fewer students have pursued on-site placements an invaluable entry point into the industry. Meanwhile, schools tend to push university pathways as the superior route to success, reinforcing the myth that apprenticeships are second-tier options. In truth, apprenticeships offer practical experience, financial benefits, and strong career progression often without the burden of student debt. If we are to combat the skills shortage effectively, it begins with changing how construction is introduced in the classroom not as a fallback, but as a forward-thinking, future-proof profession.

The Curriculum: Bridging the Gap Between Classrooms and Sites

Alongside perception issues sits a structural challenge: the disconnect between education and the evolving demands of the industry.

As mentioned commonly across the table, a consistent theme arose regarding how construction topics are being taught within education, and whether there were any opportunities to develop some of these educational methods. It was agreed that bringing in industry professionals to deliver construction courses could be beneficial and bridge the gap between education and the construction industry. Bringing professionals into the classroom or providing teachers with real-world placements could improve the relevance and appeal of construction education. As one participant put it, "We need to teach the teacher". Without bridging this knowledge gap, students may enter the workforce with unrealistic expectations of the industry, or the opportunities available. The second common theme across the table was regarding the lack of mobility within education courses. The industry is changing constantly and it's clear that our current education system within the UK does not currently adapt to this.

"It takes 18-24 months to get qualifications and courses approved and into curriculum within the UK"

As a result, the current workforce is not meeting the everchanging landscape of the industry. Addressing these challenges would require a reduction in the time it takes to have qualifications and courses approved into curriculum within the UK, while the use of apprenticeships offered at the likes of Cyfle can bridge the gap we are currently facing. Government support plays a critical role here. SMEs, which make up a large portion of the construction sector, often struggle to release apprentices for training or absorb the cost of off-site courses. Accelerating curriculum updates and ensuring funding reaches the areas of greatest need is essential for closing the gap between education and employment.

Tackling Construction's Image

Among the many pressing challenges facing our sector, one stood out with particular urgency: the construction industry continues to be perceived as unattractive to new and existing talent. This perception, though informed by longstanding structural issues, is neither inevitable nor insurmountable. As a committee committed to driving change in the construction industry, we must be bold in acknowledging the roots of the problem while charting a course for meaningful, systemic reform.

The construction industry remains largely perceived as physically demanding, male-dominated, and lacking in job security, an impression rooted in historic realities but far removed from today's evolving sector. Gender imbalance remains a key concern. While women are making gains in architecture and quantity surveying, site-based and managerial roles remain overwhelmingly male. This reinforces outdated stereotypes and discourages female participation, despite industry-wide efforts to promote inclusion.

Additionally, the divide between white-collar and blue-collar roles has become more pronounced. Digital careers and office-based jobs are often seen as more appealing, while vital roles in groundworks, plant operation, and site supervision are overlooked. This division weakens the industry's foundations; white- and blue-collar roles must be seen as interdependent, not hierarchically distinct.

Economic concerns also weigh heavily. Apprenticeship costs such as tools, travel, and modest starting wages can make entry into construction financially unattractive for many young people. Add to this the industry's cyclical nature, marked by redundancies and company insolvencies, and it's clear why many opt for more "stable" professions. Frequent high-profile insolvencies and waves of redundancy provide a sobering reminder of the construction sector's cyclical instability. The stop-start nature of construction projects, heavily influenced by government investment cycles and market volatility, makes it difficult to build a stable, long-term career. For bright and capable individuals weighing their options, the risk often outweighs the reward.

The Bright Side

While the skills shortage is a significant challenge, it has also catalysed overdue reforms and exciting innovations within the industry.

Enhanced Career Prospects

One of the most immediate benefits of a skills shortage is the increased demand for workers, which translates into more job openings, better job security, and often, higher wages. Young people and career changers entering the industry can fast-track their careers, as employers are more willing to invest in training and development to fill critical roles.

"Shifting direction as an industry may feel uncomfortable, but it often paves the way for progress and becomes the new normal."

Investment in Training

To address the skills gap, many companies are investing heavily in training programmes, apprenticeships, and upskilling initiatives. This renewed focus on workforce development not only benefits new entrants but also supports existing workers in progressing their careers and learning new technologies and methods.

Cyfle has become a model of best practice in shared apprenticeships and is supported by CITB (Construction Industry Training Board), Welsh Government, and various industry partners. Furthermore, Cyfle has developed a 10-day work experience programme that supports individuals in gaining hands-on exposure to the construction industry, helping them make informed career choices while easing their transition into apprenticeships or further training. As part of this, participants gain a toolkit worth £150.

Embracing Innovation

The skills shortage has accelerated the industry's adoption of technology and modern construction methods. From Building Information Modeling (BIM) to prefabrication and robotics. This evolution is creating new types of roles—such as drone operators, data analysts, and digital engineers—broadening the industry's appeal.

A More Inclusive Workforce

The pressure to attract talent is forcing the industry to think differently about diversity. Initiatives are increasingly focused on recruiting women, ethnic minorities, and underrepresented groups. Diversity is no longer an aspiration, it's a necessity.

Boosting Local Economies

According to industry analysis, every £1 invested in the construction sector contributes approximately £5.26 to the wider UK economy, highlighting the industry's significant multiplier effect and its critical role in driving economic growth.

The need for skilled labour is prompting companies to source talent locally, especially for regional and infrastructure projects. This leads to job creation in areas that may have suffered from economic decline, providing a positive knock-on effect for local businesses and communities.

Flexibility and Mobility

Construction roles are evolving to offer greater flexibility including remote planning work, better work-life balance, and clearer career pathways. By continuing to invest in people, training, and technology, the construction industry can turn current skills gaps into long-term gains, ensuring a steady pipeline of talent and sustainable growth for years to come.

Conclusion: Rebuilding the Narrative, Reskilling the Workforce

The construction industry is more than scaffolding and steel, it's the backbone of every community, the enabler of innovation, and a driver of national growth. While the skills shortage is real, it also presents an opportunity to reshape the sector for the better.

To seize this moment, we must:

- Reframe construction as a modern, skilled, and forward-thinking career choice.
- Align education with industry needs through faster curriculum reform and stronger industry-education partnerships.
- Invest in people—through training, apprenticeships, and diversity initiatives.
- Promote the industry's strengths: innovation, inclusivity, and long-term career opportunity.

With collaboration between government, schools, and industry leaders, we can ensure construction doesn't just build buildings, it builds futures.

The UK construction industry is undergoing rapid transformation. As we build towards a more sustainable, inclusive, and technologically advanced future, our greatest asset remains our people. Yet, the sector is facing a critical challenge: a widening skills gap that threatens to slow progress and undermine delivery across the built environment.

This paper, *Building Futures*, has explored the root causes of the skills shortage—misconceptions in education, misaligned curricula, and outdated perceptions of our industry—and highlights the emerging opportunities for meaningful change. It captures the voices of practitioners, educators, and industry leaders committed to reshaping construction's image and attracting the next generation of skilled professionals.

Importantly, this is not a document of problems—it is a call to action. It encourages collaboration across education, industry, and government to modernise training, increase diversity, and elevate construction as a career of choice. The insights and recommendations shared here are a valuable contribution to ongoing national dialogue.

We must now move from discussion to delivery—ensuring that the foundations we lay today support a more resilient and future-ready construction industry. **Jane O'Leary- BSc, MRICS, MCIOB**

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