



Let's Talk Real Skills  
Leeds College of Building

# Curriculum Research Information

HIGHER EDUCATION  
AND CONSTRUCTION  
DESIGN MANAGEMENT



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# Context

Leeds College of Building (LCB) is a unique institution, being the only General Further Education College (GFE) to focus on Construction and the Built Environment. LCB is in Leeds serving its local communities and is also delivering in the national marketplace as a specialist provider.

The landscape that LCB operates within is constantly evolving. Our offer is sequenced to reflect UK Industrial Strategy, construction sector and employer requirements, student needs, demand and demographics. Some of these factors are expected to change significantly post Brexit and in response to the impact of Covid-19 on learning delivery.

Curriculum content is fundamental to the successful outcomes for students, apprentices and employers and should reflect the changing needs of the construction sector in its widest sense. Students and apprentices from LCB progress into a variety of roles within the sector, and their training should equip them with the knowledge, skills and behaviours required to develop their careers and set them on a path of

lifelong learning whereby they continue to engage and access additional training to support their progression.

The technical construction sector provides a wide range of services from Building and Civil Engineering, Highways Maintenance, Built Environment and Design, Surveying and Site Supervision. Technical skills are vital to support the work of construction specialists such as engineers, architects, and surveyors.

This document is intended to evaluate this operating context and identify the key challenges and opportunities for LCB and shape our understanding of the knowledge, skills, competencies, and behaviours the construction sector needs now and in the future.

- 01 - Leeds College of Building - South Bank Campus*
- 02 - Leeds College of Building - North Street Campus*



01



02

# UK Construction Industry Outlook

The Covid-19 pandemic altered the UK economy and construction sector inexorably in the current financial year 2020/21. The lockdown closed much of the economy in March 2020 with Government restrictions on movement and the closure of sites and premises severely impacting productivity, GB construction output fell by 42.8%<sup>1</sup> between February and April 2020, the largest drop in outturn since records began in 2010.

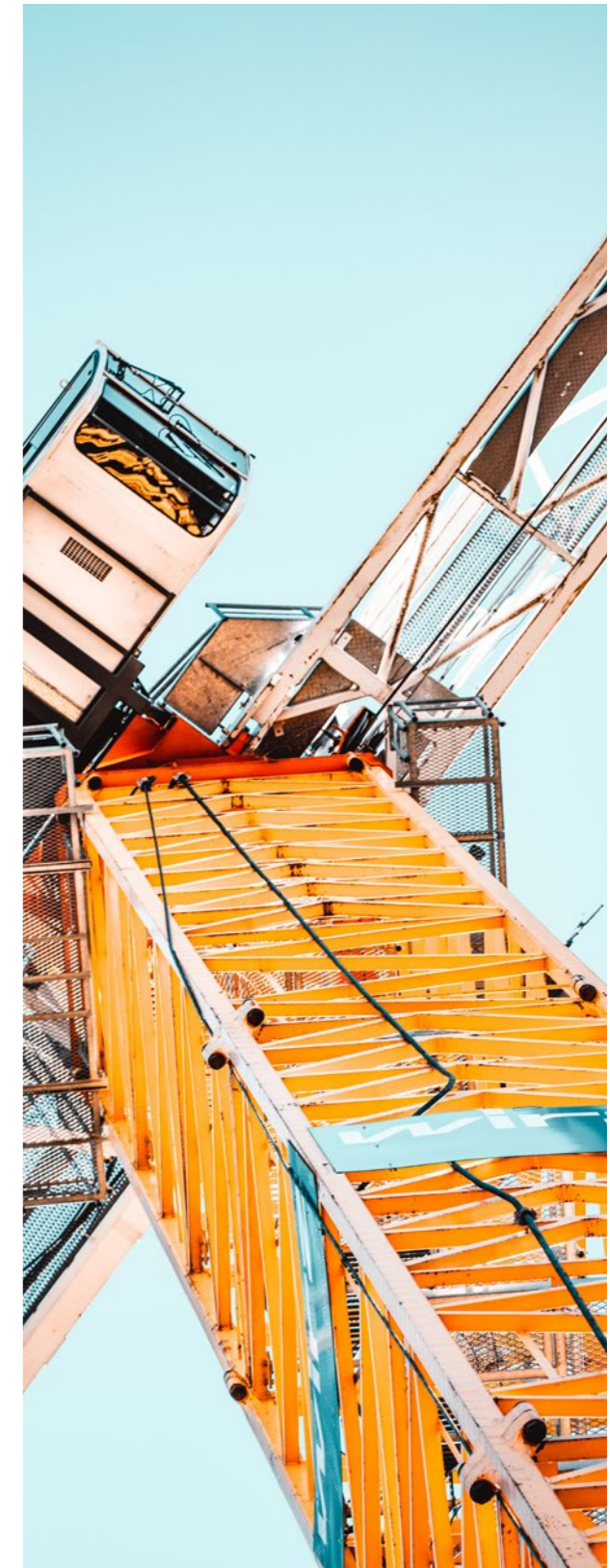
On exiting lockdown, the industry rapidly responded to the changing environment and trading conditions, adopting the Government's Covid-19 guidance and adapting health and safety measures such as social distancing to enable a safe and managed return-to-work. A Government survey conducted in May<sup>2</sup> showed some evidence of increasing construction industry activity. Of construction industry respondents, 12.6% responded that they had restarted trading after a prolonged pause during lockdown. This was more than any other industry and more than double the 4.7% average for all industries.

The third quarter saw a 75.8% change in all construction output indicating a sharp rebound in performance as businesses reopened in Spring/Summer. While all repair and maintenance sectors have recovered above their February 2020 pre-lockdown level, most new work sectors are yet to do so except for infrastructure and private new housing.

It is notable that while the housing sectors (new work and repair and maintenance, both private and public sector) saw the largest falls in March and April 2020 they have since bounced back relatively strongly from April to November 2020 compared with the other types of work. However, public new housing work in November 2020 remains 22.1% (£122 million) below the February 2020 level.

The construction industry saw a large drop in vacancies April-June 2020 (down 71.7%<sup>3</sup>), it has recovered positively and is one of only three industries (UK SIC 2007 Section D – electricity, gas, steam and air conditioning supply and Section L – real estate activities being the other industries) with an estimated annual increase in vacancies September to November 2020 returning to pre-pandemic levels.

The closing months of 2020 saw a more gradual recovery and the outlook for the next two years is expected to continue in this vein. Government spending will be a key driver for growth in construction, the Spending Review in November 2020 announced a £100 billion investment in economic infrastructure, schools, health and defence. A National Infrastructure Strategy was launched detailing plans for a new £4 billion 'Levelling Up Fund' by directing investment into local infrastructure outside of the South-East and move towards net zero carbon emissions by 2050<sup>4</sup>. There is to be a new infrastructure bank headquartered in the North of England that will work with the private sector to finance new investment projects. In respect of housing, the Government committed to a simplification of the planning process to increase homebuilding as well as £7.1 billion National Home Building Fund and £12.2 billion Affordable Homes Programme.



The longer-term impact of COVID-19 on the technical construction sector is that companies will have to contend with decreased demand as governments face rising slow GDP rebound and high deficits. This suggests that smaller businesses and sub-contractors will have a tough time adjusting to fluctuating demand and cashflows and may fail rapidly. Contract management will become increasingly important as customers seek to terminate or renegotiate contracts. Work in other regions may become less viable as countries put more restrictions on foreign companies because of COVID-19 and Brexit.

This impact of COVID-19 for students has been extremely challenging to the delivery of learning and to the experience of FE for a young person. This has brought about a raft of new needs such as learners needing support and information regarding health and wellbeing (including mental health) and how they can maintain social distancing and use PPE at the workplace to protect themselves and society.

As many learners in construction find it easier to learn via hands-on learning, it is essential to continue to support and facilitate hands-on learning where possible as this will reflect when they use the skill in a real work situation. However, with COVID-19 a lot of learning has been digitalised which has implications for learners and employers and providers need to be proactive in assessing the impact on training and skills acquisition.



Figure 1. ONS Vacancies by Industry 2020-2021



# Brexit Implications for Construction

Throughout 2020, Brexit uncertainty has been ever present with the possibility of leaving the Single Market without a deal that posed significant risks to the construction industry of major price increases, a weak pound and disruption to value chains. The UK and EU have now agreed a Free Trade Agreement (FTA)<sup>5</sup> that on the face of it looks positive for the construction industry. It eliminates all customs duties on goods which originate in the other party and provides a comprehensive self-certification process to determine when and how goods originate in the UK or EU.

The agreement is less detailed on the how the new relationship with the EU will work for services, workers' rights, and the movement of people. What is certain is that the UK has moved from being a member of the Single Market with equal access to the EU member states, to having rules that vary across member.

The UK's construction services sector including construction consultancy is heavily connected to the EU market and the absence of provisions in the trade deal will mean restrictions and ultimately less EU market access for the UK's services industry. The rules on market access vary between EU member states and could effectively block some UK services firms from accessing the EU market. The UK Government intends to continue negotiating with the EU to add more industries and sectors to the trade agreement over time to overcome these significant restrictions but the impacts in the short-medium term could be significant.

This also impacts the movement of people and recognition of their qualifications and experience. UK workers/employers will need to seek recognition of their qualifications on a state-by-state basis. Students will also need guidance around working abroad as many students plan to travel once upon leaving education. There is intent to develop a future framework for the recognition of professional qualifications through a Partnership Council, but this is not in place yet. This will have a bearing on the development of standards and provision needed to support employers' ambitions to work in EU and recruit there.

The longstanding challenge of skills shortages in construction will likely be amplified by Brexit. Public and private sector spending and new projects are expected to gain traction towards the end of 2021 and employment levels will increase while EU workers are leaving the labour market. Post-Brexit arrangements for accessibility of work for the self-employed will also be critical to productivity and capacity.



# Key Sector Issues

## Productivity

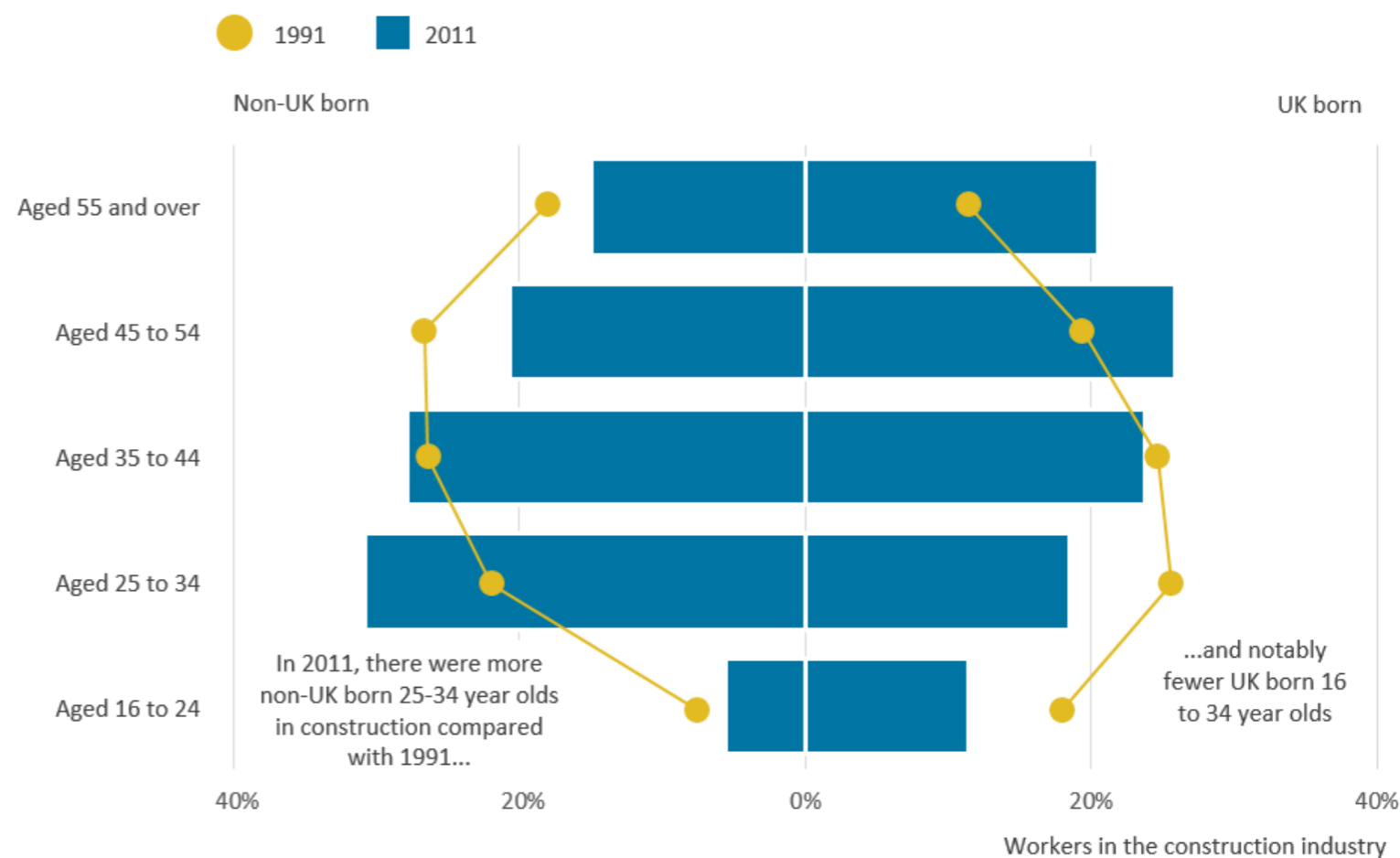
Productivity will be one of the key challenges to recovery. Output per hour in construction nationally is £35.34 compared to the average for all industries of £57.70<sup>6</sup>. The industry will need to improve productivity in order to be internationally competitive and to fully take advantage of the unprecedented, planned infrastructure spending. How the industry adapts, innovates, develops the workforce, adopts technologies and modern methods of construction (MMC) will contribute to delivering productivity gains.

## Demographics

The construction industry has an ageing demographic profile and is older than it has been in the past as indicated by Figure 2<sup>7</sup>. This is further compounded by the outward migration of Non-UK nationals following Brexit, who are typically younger and overall account for 8% - 10% of the construction workforce<sup>8</sup>. In the third quarter of 2020, there was a 28% drop in the number of Non-UK workers, greater than the 7% fall in total employment in construction over the same period<sup>9</sup>.

Of concern is the notably smaller proportion of UK born 16–34-year-olds in the industry to fill gaps left by the Non-UK workers exiting the labour market. In order to meet future labour demands the industry will need to upskill existing workers, attract new entrants and recruit from other sectors and/or people currently unemployed who will also require training and support to remove barriers.

Figure 2. The age distribution of the construction workforce, by country of birth, at the 1991, and 2011 Census



## Self Employment

According to data published quarterly by the ONS, there was an average 802,000 self-employed construction workers October-December 2020, a 13% reduction on the same period in 2019 which could potentially impact the availability and supply of workers.

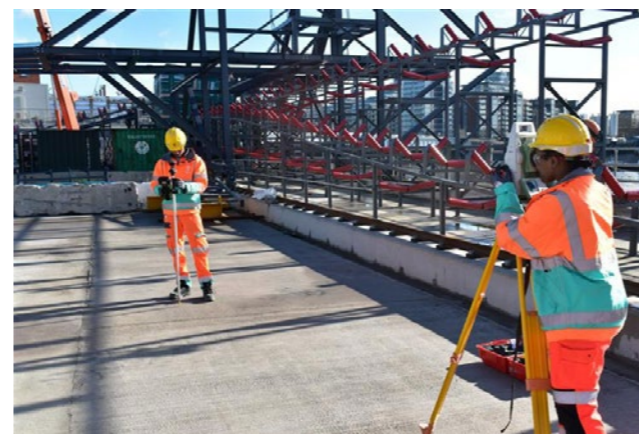
The data indicates that 60% of the UK construction workforce is self-employed becoming the norm following the 2008 financial crises. Having a self-employed workforce benefits clients and contractors by offering the flexibility to manage resources in line with workflows and to find skills from a large and dynamic pool of recruits. However, it is also considered one of the main barriers to workforce development in the construction industry because self-employed workers do not typically have access to training, apprenticeships and are less likely to invest in training themselves.

The Coronavirus pandemic has also exposed the risk associated with this type of employment, during lockdowns and closures, self-employed construction workers were released without pay or entitlement to furlough and many were not eligible for the Government's Covid relief funds for the self-employed because they have not filed a profit in the previous year or been trading for a full tax year.

## Training

Substantial and long-term investment is needed to support industry to increase labour supply, improve retention, address shortages and develop the new skills needed to take advantage of technologies. The National Infrastructure Strategy describes how the Government will support industry to address its skills challenges, it will:

- Leverage public contracts to boost opportunities for construction apprentices, traineeships, and T levels in the construction sector, and to recruit a more diverse workforce.
- Improve apprenticeships for employers across the economy, which the construction industry will especially benefit from, allowing them to transfer more of their unspent levy funds before they expire and use more intensive apprenticeships training options.
- Introduce construction sector traineeships to bridge the gap between further education courses and entry to employment; and
- Allocate funding for adult learners to access short training modules (4-16 weeks) for upskilling and reskilling via the National Skills Fund investment<sup>4</sup>.





## Health & Safety

Management of workplace health and safety in the construction industry has become increasingly complex due to Covid-19. Public Health England has released specific guidance on social distancing for those in the construction industry but ensuring that the guidance is adhered to on-site is challenging and the risk to health is likely to be present for some time yet. Managing absence, bereavement and workers' physical and mental health difficulties will continue to be critical areas of work.

In Construction Crafts, a barrier to entry for placing students on site is the requirement for CSCS cards and Employers Liability insurance as there is a cost implication and it can lead to a reluctance to access young inexperienced recruits and students on site.



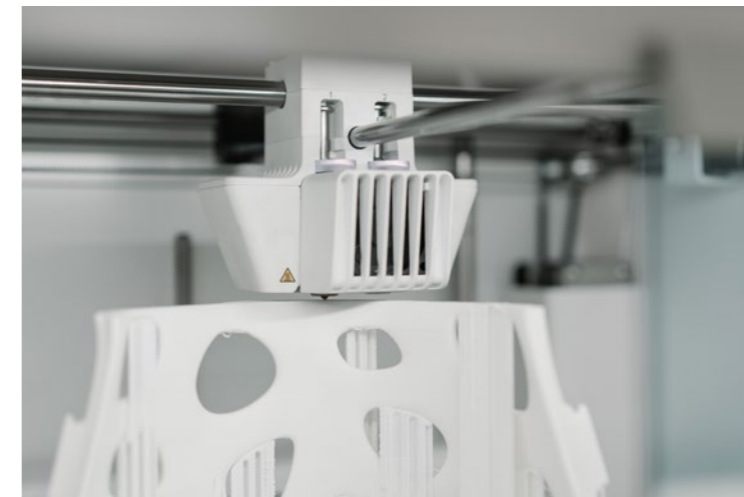
## Digitalisation

The benefits of digital construction are well rehearsed, and adoption provides huge opportunities. Digitalisation is at the heart of the Construction Sector Deal and policies designed to raise sector productivity. The imperatives for change are also rooted in longstanding industry issues. Tight profit margins, high profile project overruns and issues with quality continue to dog the industry. More recently, Brexit and the potential impacts on the availability of labour have sharpened the focus on doing things differently. However, the pace of digitalisation is gradual.

The Pandemic has accelerated the process of digitalisation due to the limitations on travel and face-to-face contact. Businesses are investing in e-invoicing, modernised CRM, workforce management systems, digital sales, marketing and communication systems and are realising the improvements to efficiency and profitability.

The implication for the workforce is an increase in demand for workers in with a wider skill base in Information and Communication Technology (ICT). Training for new entrants will need to reflect the new skills employers require and also focus on people already in the industry who can develop their skills. The future Technical Construction area will demand digitally literate, multi-skilled individuals. This requires industry to work with FE providers to deliver new upskilling routes for existing workforce and new entrants to the sector.

A quickening pace of innovation and technological progress is also an opportunity to improve the sector's image and attractiveness to young people and improve recruitment and diversity in the construction workforce by promoting the range of careers available and the opportunities related to the use of digital technology. Whilst competition with other industries for ICT recruits will be challenging, given that they are also in short supply nationally, construction pays well compared to other industries and has a healthy economic forecast and prospect of offering sustainable careers.



## The CITB's Research Findings

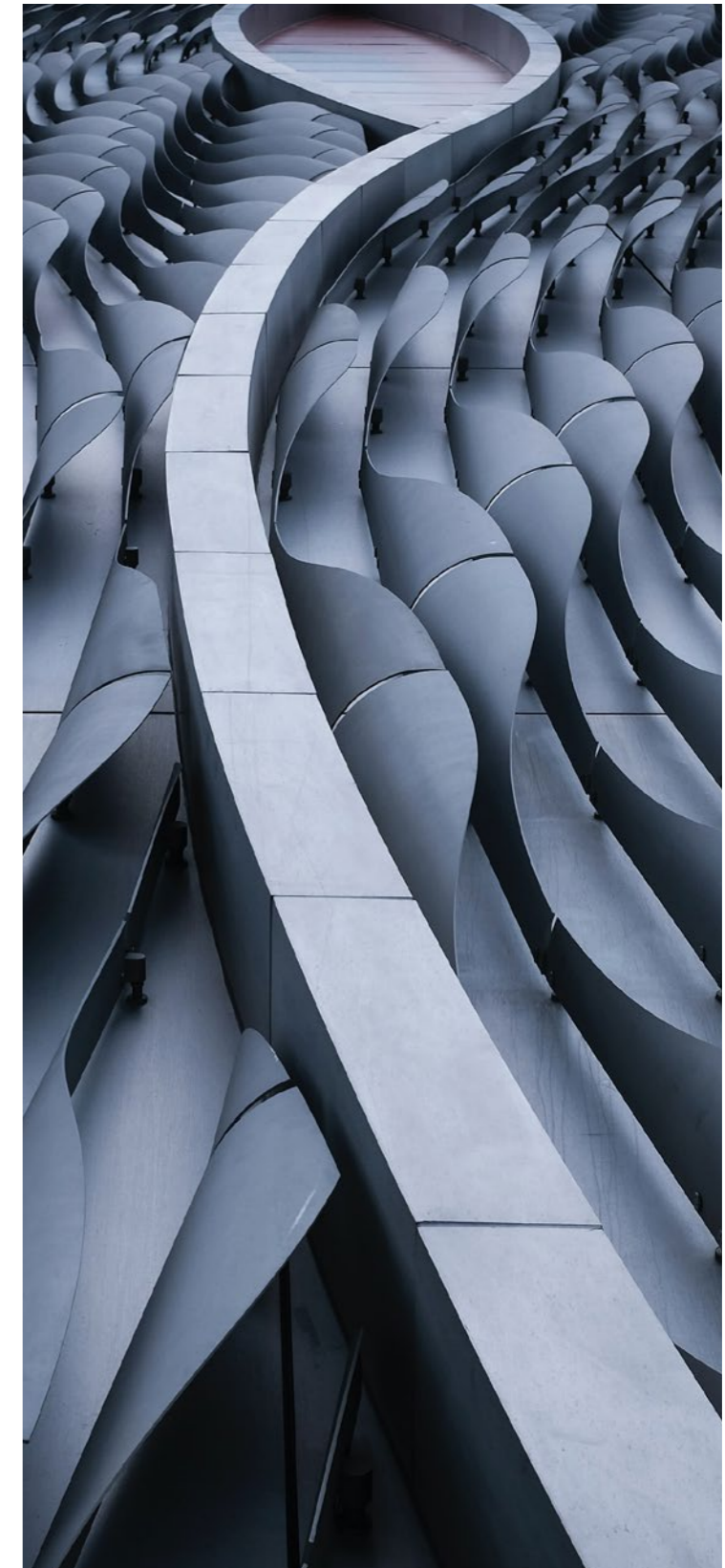
The CITB's research<sup>10</sup> found that:

- Digital construction is understood to mean different things by different people. Many assume digital construction means Building Information Modelling (BIM) but it is wider than that. True understanding is concentrated on digital construction specialists. Those trying to implement digital methods felt frustrated when persuading others to take a 'leap of faith' because of the lack of understanding in how technology could be used to solve problems.
- Much tech that is being used is not at the cutting edge of what is available. Drones, Lidar, smartphones and tablets are increasingly widely used but innovative tech – if used at all – is generally limited to small pilots or trials, as investment in larger scale innovations is considered too risky. Sharing best practice will help industry evolve understanding of the value of digital and the skills and training needed.
- Data and its effective collection, communication and management are central to digital transformation. Industry needs to demystify how data is used and the skills required across the entire workforce. Genuine understanding of what data management involves is limited.
- Tech-specific skills are not the problem – but broader skills and competencies at various levels need to be addressed. Leaders need skills in implementing digital change and creating the right structures and culture. Managers and operatives need problem-solving skills and greater digital

savviness. Not everyone needs to be at the same level. It is about enabling top-down and bottom-up change.

Digital construction comprises of new technology hardware and software, data-led processes and equipping staff with the skills needed to maximise digital applications. This research set out to explore the adoption, use and expected uptake of a broad range of digital technologies across construction, including:

- Augmented reality/virtual reality
- Drones/unmanned aerial vehicles (UAVs)
- 3D printing
- Artificial intelligence (AI)
- Wearable tech
- Lidar
- The Internet of things
- Productivity/planning apps
- Data Analytics



## Sustainability

The UK target to reach 'net zero emissions by 2050'<sup>4</sup> suggests there will be a continuing pressure to reduce the energy consumption in construction and improve the energy performance of buildings. Additional pressures to reduce waste will also drive the market for new skills. The implications for future skills requirements are very significant with changes in the Building Services.

A new report by the CITB 'Building Skills for Net Zero'<sup>12</sup> outlines the skills implications for the workforce of the Government's commitment to achieve net zero by 2050. The majority of the requirement for additional skills will come from addressing energy-related emissions from existing buildings. The UK Green Building Council estimates that up to 95% of emissions from the built environment over the next 30 years could come from buildings that exist today.

Most of the effort to decarbonise must therefore be focused on the energy efficiency retrofit of existing buildings. At least some retrofit work will be required on around 27 million residential and two million non-residential buildings to reduce emissions over the next 30 years. Even with new ways of working, we will need to recruit, train and in some cases retrain large numbers of people to do the work. CITB estimate that an additional 59,000 plumbers and HVAC workers will be required, primarily in the installation of heat pumps by 2028. The research also highlights that just over 86,000 project managers will be required by the same date, this includes specific roles like Retrofit Coordinator. The requirement for building envelope specialists, including insulation installers, will be 27,000 in 2028.

### BUILDING SERVICES ENGINEERING TRADES

Theme	Learning Outcomes
<b>Low energy / Low carbon building</b>	<ul style="list-style-type: none"> <li>Understand the effect upon the building fabric of remedial or new installation work (e.g. installers should know the effects of walls and windows on heat loss; heating designers should be able to accurately calculate U-values).</li> <li>Understand ventilation and its effects on health, condensation, dampness etc.</li> <li>Understand the principles of renewable energy technologies systems installation, commissioning, handover and maintenance including heat pumps, solar thermal and PV, water harvesting/reuse and biomass systems.</li> <li>Understand how heating technologies, such as radiators and underfloor heating, and combustion and heat pumps can be integrated.</li> <li>Understand the effect that control systems (including weather compensation, thermostats, individual room control and internet-based controls) have on heating.</li> <li>Understand the difference between insulation types and how they are incorporated into the building fabric.</li> <li>Understand the main causes of overheating and how to reduce it.</li> <li>Understand basic life cycle costing (e.g. capital cost, energy consumption, energy costs, business case) for lighting and heating systems.</li> <li>Understand the principles of flexible HVAC and lighting systems in creating adaptable spaces.</li> </ul>
<b>Sustainable products</b>	Know and identify responsibly sourced materials (FSC/PEFC and responsibly sourced products, e.g. BES6001).
<b>Waste, reuse and recycling</b>	Understand the principles of materials storage, recycling and reuse opportunities in order to minimise waste.
<b>Water</b>	Have a working knowledge of water efficiency on a construction site. Communicate to customers appropriate resource-efficient water systems.
<b>Whole build process</b>	<ul style="list-style-type: none"> <li>Understand the role of dependent trades in the build process.</li> <li>Understand the main requirements and objectives of the commissioning process, as well as the various standards and how to meet them.</li> </ul>

Figure 3: Recommended learning outcomes for sustainable building<sup>11</sup>

## Modern Methods of Construction (MMC)

MMC is likely to grow in new-build work and have a lesser impact on the trades involved in repair and maintenance. The main skills implications are a reduction of trades on-site and increasing need for mechanical handling and a parallel growth in off-site trades and use of Computer Aided Design (CAD). This is likely to present challenges for companies to take advantage of the opportunities for MMC because of the low levels of tech integration in the design process. Causeway's research into construction attitudes to design innovation has revealed little over a third of construction professionals have an integrated technology solution in place for infrastructure design<sup>11</sup>.

The Smart Construction Network has established a free digital resource <https://www.smartconstructionnetwork.org.uk> to help companies navigate the expertise and support available from training and knowledge sharing to R&D. The University of Huddersfield's Innovative Design Lab, is listed as the Yorkshire region's centre of excellence having BIM & Digital Construction and High Performance Building capabilities which can be drawn upon. Linking FE to these projects and will create opportunities for regional learners and employers.



# The Local Picture

Whilst LCB operates nationally, attracting apprentices from across the country, most of its students and apprentices come from Leeds.

The Leeds City Region employs 66,000 people in its construction workforce, 5% of all jobs in the local economy<sup>13</sup>. The West Yorkshire area has 9,830 construction businesses registered for VAT or PAYE, over 35% of which are located in Leeds<sup>14</sup>. Construction growth in Yorkshire and Humber, according to the CIOB<sup>15</sup> has been driven by housing like most regions. There are more construction workers than people who are employed in construction and as such, the region is a net exporter of skills which is beneficial to the regional economy. Whilst this might mute the skills shortages in some respects, CITB's Construction Skills Network (CSN)<sup>16</sup> puts the annual required recruitment rate at 2,010 per annum over the period 2019-2023 in order to fill the gaps made by those leaving the industry.

The prospects of future sustained growth are encouraging, the The National Infrastructure Strategy confirmed the Government's commitment to major infrastructure projects in the region such as Northern Powerhouse Rail, connecting Leeds with Manchester, there are major transport investments planned in Bradford and Sheffield and housing in Leeds and York. The Government also confirmed its commitment to expanding the devolution deal for West Yorkshire that will increase local decision-making<sup>4</sup>.

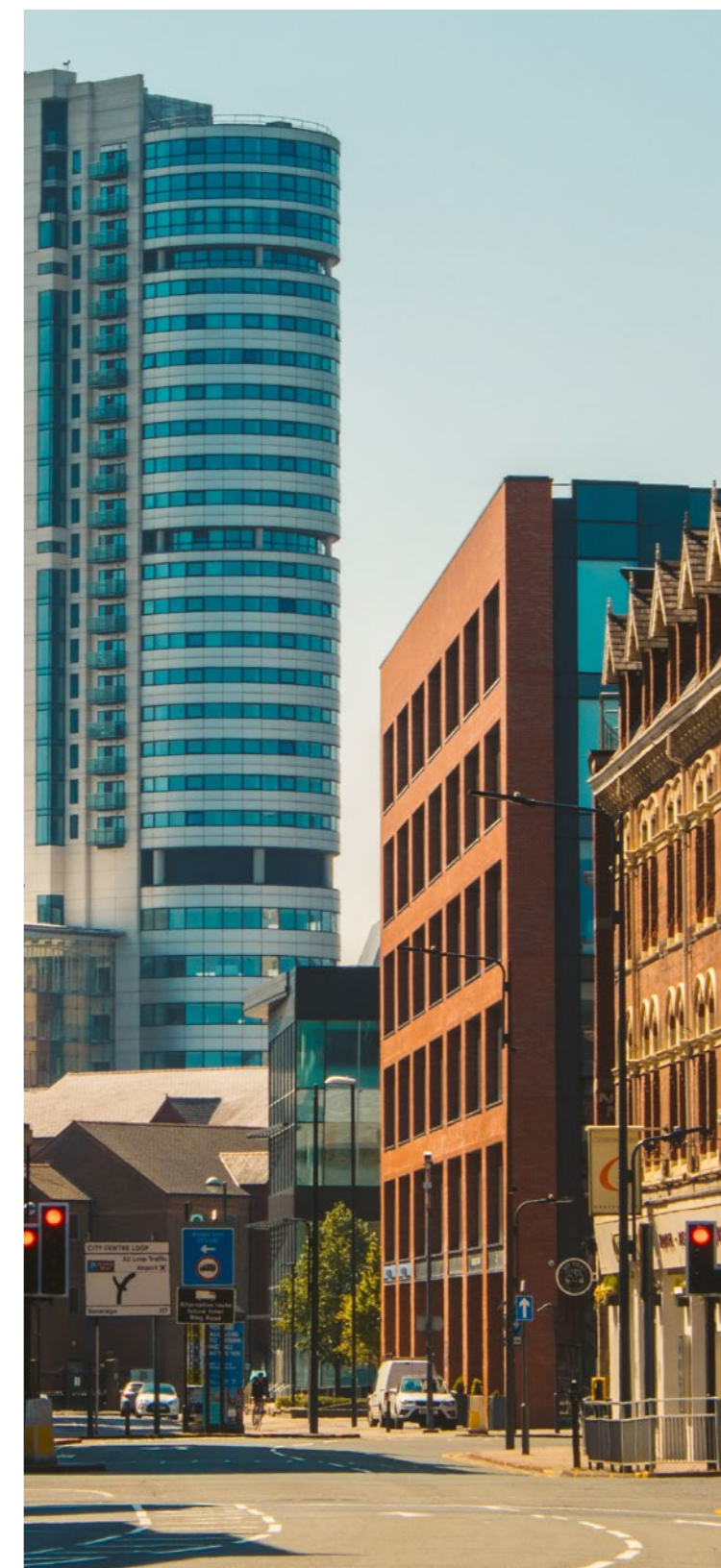
Looking at current rates of pay, the average (median) male, full-time construction employee earns £36,354, which is approximately 17% more than the average male across all industries in Yorkshire and the Humber<sup>14</sup>. This should assist with the task of increasing recruitment and enable the industry to compete for cross-cutting skills e.g. ICT and digital.

Demographics are an important factor in meeting the skills demands from across the City and wider Leeds City Region.

The key demographic is the birth rate as this highlights the growing demand for training that students, leaving school at 16 will place on providers. This then transfers into older students through the years, impacting on Higher Education approximately two to three years later.

The number of 16-year-olds in Leeds is due to increase by 33% in the 10 years between 2018 and 2028. Between 2018 and 2023, the number of 16-year-olds increases by 17%. Post 16 provision in Leeds will need to grow and change to accommodate additional student numbers.

The number of Leeds resident 16- to 18-year-olds participating in full time education in schools and colleges in 2018/19 was 15,260 (Vector/DFE data). Increasing this number by 33% gives a raw number of 5,036 additional places required by 2028.



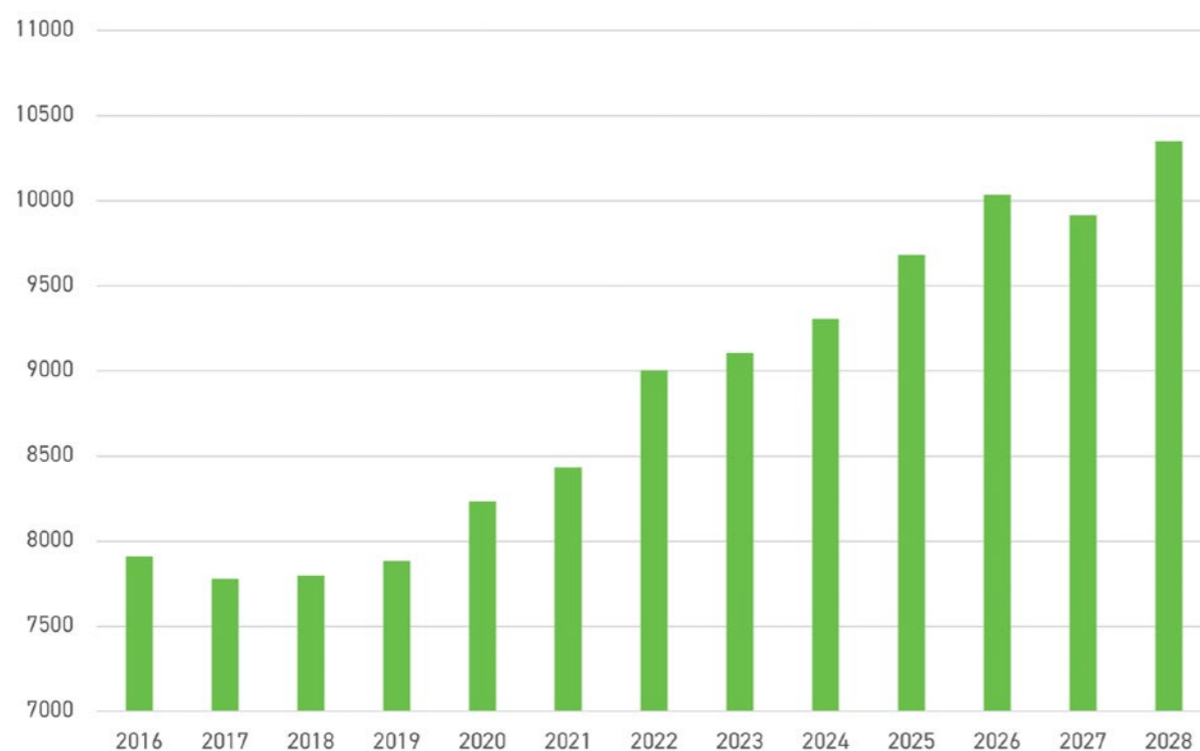


Figure 4: Number of 16 Year Old in Leeds

LCB currently attracts 5% of the 16-18 market, which equates to approximately 900 full time students per year. A 33% increase on this means that by 2028, LCB would need to accommodate just short of 1,200 full time students. For apprenticeships, it would equate to an additional 400 apprentices studying at LCB, giving a total student number of approximately 4,000. These figures assume a similar market share percentage.

In order to maintain and potentially increase the student numbers, which in turn then supports the construction sector by providing sufficient skilled workers for its demands, it is essential that LCB provides high quality, relevant and industry leading training that effectively supports progression into the construction industry.

The impact of Covid-19 on full time students is only likely to increase the volume due to the lack of apprenticeship

opportunities, as the economy recovers over the next three to four years.

The Leeds City Region Business Survey, 2020<sup>17</sup> reported the following findings in relation to workforce skills:

- Just over a third (36%) of businesses have a training and skills plan, which represents a decline compared with 2019 (39%). The proportion that have a training budget is stable, at three in ten (29%).
- Training & skills plans are less common in smaller businesses, the private sector and in construction.
- The skills most commonly in need of improving continue to be sales and marketing (26%), other technical or job-specific skills (25%) and digital/advanced IT skills (22%).

- The skills most commonly lacking are other technical or job-specific skills (71%), which is in line with last year. The next highest proportion mention a lack of science, technology & engineering skills (8%).
- 57% of construction firms (115 companies) reported anticipating skills gaps in the next 12 months.

The Regional scan<sup>18</sup> also identified the following skills are most requested in construction related job adverts (specialised skills). Highlighted areas for Technical.

Electrical Work	332
Plumbing	203
Customer Service	151
Painting	132
Budgeting	121
Civil Engineering	113
Teamwork/collaboration	105
Wiring	105
Carpentry	81
Project Management	76
Heating Ventilation and Air Condition	76
Scheduling	74
AutoCAD	73
Boilers	69
Emergency lighting	65
Quality Management	63
Facilities Management	61
Hand tools	60
Revit	58

Figure 5: Most requested skills in construction related job adverts

# Skills Shortage

Construction labour shortages in the UK are widely documented and current events threaten to exacerbate the already precarious situation. An ageing workforce, reducing pool of available labour as a result of Brexit, and self-employed workers exiting the industry juxtaposed with increasing demands as construction industry workflows bounce back and increasing pressures to decarbonise and digitise will lead to greater recruitment challenges.

The latest CIOB cross industry research report<sup>19</sup>, supported by 276 companies employing 160,000 people, found that the following roles face 'severe shortages':

- Construction and building trades supervisors
- General labourers
- Quantity surveyors
- Construction project managers and related professionals
- Bricklayers
- Civil engineers
- Carpenters & joiners
- Plant and machine operatives
- Production managers and directors in construction
- Chartered surveyors

The report recommended that the list should be considered by the Migration Advisory Committee for inclusion in the Shortage Occupation Lists (SOL). The latest SOL issued in December 2020 includes the following roles that are pertinent to construction as detailed in Figure 6<sup>20</sup>.

Occupation Code	Job Types included on the shortage Occupations list	Areas of the UK where there is a Shortage
2133	Physical scientists – only the following jobs in the construction-related ground engineering industry: engineering geologists hydrologist geophysicist	England, Scotland, Wales, Northern Ireland
2129	Engineering professionals not elsewhere classified – all jobs	England, Scotland, Wales, Northern Ireland
2135	IT business analysts, architects and systems designers – all jobs	England, Scotland, Wales, Northern Ireland
2136	Web design and development professionals – all jobs	England, Scotland, Wales, Northern Ireland
2139	Information technology and communications professionals not elsewhere classified – only cyber security specialists	England, Scotland, Wales, Northern Ireland
2431	Architects – all jobs	England, Scotland, Wales, Northern Ireland
2461	Quality control and planning engineers – all jobs	England, Scotland, Wales, Northern Ireland
5215	Welding trades – only high integrity pipe welders, where the job requires 3 or more years related on the job experience	England, Scotland, Wales, Northern Ireland

Figure 6: Skilled Worker Visa – Shortage Occupations (Dec 2020)

There is a misalignment between the occupations declared in severe short supply by industry and those listed in the SOL, with general labourers and trades omitted as well as Surveyors which has been a problematic recruitment area for companies for some time. Furthermore, the SOL list indicates there is a shortage of IT, digital and physical science related skills which could be a limiting factor on the construction industry's capacity to progress its digitalisation, sustainability and MMC agendas. The industry will need to compete with other sectors for these skills and has historically struggled to attract a workforce that reflects the diversity of society.

## Reasons for Skills Gaps

According to the LMI Outlook 2019<sup>21</sup> Over half of employers believe that the main reason for skills gaps is the retirement of older staff. Around one fifth to one quarter point to expensive or time-consuming training, and new methods of working or the introduction of digital technologies (both of which may be connected to the need to train). 9% say that they are not able to access external training. Employers who mentioned 'other' reasons for skills gaps listed insufficient young people wanting to work in the industry and lack of experienced, qualified operatives and technical workers.

When looked at from the perspective of the size of company, the reasons for skills gaps in the current workforce showed areas of considerable difference. Larger companies are more likely to see skills deficiencies resulting from an inability to retain experienced staff, from new materials, new digital technologies and new manufacturers' equipment.

On the other hand, the larger the company the less likely it is that they will see skills gaps arising from a reluctance of staff to undertake training, and training expense and time demands. Around 44% of employers expect their skills gaps to increase (worsen) over the next three years, albeit almost the same proportion expect no change.

Small employers also felt that the larger companies are driving the skills agenda and directing provision to meet their needs and as a result are disappointed with the preparedness of candidates for the industry. It was reported that most small businesses try to recruit fully qualified workers instead of training on the job despite a shortage of candidates with experience.

IFF Research<sup>22</sup> reports that a lack of workplace diversity heavily aggravates the skills shortages with huge areas of untapped potential within the labour market. This is attributed to negative assumptions that the sector is not well paid or exciting. Employers felt that construction was not an industry that is pushed as an option for high achievers, and as a result faced an uphill struggle to recruit to the various technical and professional trades.





## Employer Demands

The top occupations in greatest demand in the Leeds City Region based on volume of job postings in construction from Aug 2018-July 2019 included the following professions: Land surveyors, chartered architectural technologists and town planning, construction manager, quantity surveyors, civil engineer<sup>18</sup>.

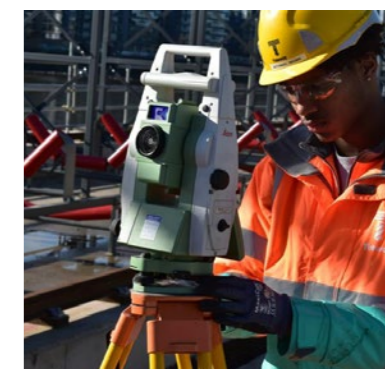
Electrician	427
Construction Manager	417
Construction Operative	340
Carpenter	242
Labourer/material handler	193
Civil Engineering Technician	93
Painter	85
Plumber	71
Construction Supervisor	51
Pipe fitter	36
Plasterer	38
Brick/Stone Mason	29
Floor fitter	19
Glazier	13
Roofing/Siding Worker	13

Figure 7: Construction occupations in the greatest demand in the Leeds City Region

LCB from its own mapping and intelligence gathering with employers is aware that many regional firms are experiencing a severe shortage of project managers, surveyors and technicians. It is believed that this largely due to perceptions of the industry that are out of step with the reality, that these roles can only be fulfilled by men in muddy boots and hard hats.

Negative perceptions are a limiting factor on recruitment as has been discussed, however, and LCB's work with employers needs to promote awareness of the inclusive and quality, professional and technical career opportunities available in the industry. Additionally, in terms of higher skills and progression, there are advanced levels of specialisation such as engineering, architecture, electrical and project management.

The construction industry offers a diverse range of career opportunities and young people are not fully informed about the breadth of roles available. Many school and university leavers are not looking to the construction industry as route into the labour market due to the perception gap between the view of roles that involve "getting dirty doing manual work outside" and the vast range of roles and careers available. A possible reason for this view is because construction is not digitised enough to attract the younger generation who are tech-savvy to get updated on the industry. In order to get through to the younger generation the industry needs to be able to reach them on platforms they use such as; TV Adverts, Facebook, Instagram, Twitter etc.



## Future Needs

Around two-thirds of employers expect future upskilling needs - they are most likely to highlight their managers as being affected.

Based on the Employer Skills Survey, two-thirds (65%) of employers expect that at least some of their staff will need to acquire new skills or knowledge over the next twelve months. This is slightly higher than the national average of 62%. The main drivers of this need are the introduction of new working practices, the development of new products and services, the introduction of new technologies or equipment and new legislative or regulatory requirements.



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