



Department
for Education

Skills England: Sector skills needs assessments

Construction

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Contents

Summary	3
Priority jobs and skills	3
Training routes into the sector	6
Securing the future workforce	6
Key gaps in provision	7

Summary

The construction sector contributed almost £140 billion to the UK economy (or 6.2%) in gross value added in 2022.¹ Despite this, construction has had the lowest productivity and research and development investment rates of any industrial sector in the UK over the past two decades and the Construction Leadership Council identified that output per worker per hour lagged 13.5% behind the economy average.^{2,3}

Demand for construction will increase further with the following government commitments:

- Commitment to build 1.5 million homes over the course of the Parliament;
- Retrofitting to meet the 2050 net zero target;
- Commitment to upgrading 5 million homes over 5 years;
- Major infrastructure projects e.g. new green infrastructure for clean power by 2030.

The evidence and forecasts detailed in this chapter do not account for the government's commitment to deliver 1.5m homes in this Parliament. Work to assess the additional skill requirements associated with these commitments is ongoing and not reflected in the estimates below.

Priority jobs and skills

In 2024, there were an estimated 2 million workers in the construction sector including 745,000 self-employed individuals which represent 36% of workforce (compared with only 13% self-employment in the overall workforce).^{4,5} Across construction industries, workforces include an estimated 160,000 social housing professionals, 74,000 surveyors, 42,000 registered architects, 22,000 town planning professionals and around 4,000 registered building inspectors.^{6,7,8,9,10}

Industry forecasts for the period 2024-28 estimated an additional 251,500 workers would be needed to meet current UK construction output.¹¹ Construction roles are vital across a number of priority sectors including clean energy. Industry forecasts estimate an additional 40,000 engineering construction workers could be needed, 40% of these

¹ [Regional gross value added \(balanced\) by industry](#), ONS (2024)

² [Creating a Productive environment for UK Construction](#), CLC (2023)

³ [The wider economy - helping every British business become a digital business](#), gov.uk (2023)

⁴ [Employment by industry](#), ONS (2024)

⁵ [Employees and self-employed by industry](#), ONS (2024)

⁶ [State of the profession](#), PTRB (2023)

⁷ [Registration data reflects Building Control Profession's commitment to high standards](#), HSE (2024)

⁸ [ARB publishes 2023 Annual Report and Financial Statements](#), ARB (2024)

⁹ [CSN Industry Outlook - 2024-2028](#), CITB (2024)

¹⁰ [Research into professionalism among housing staff](#), IFF (2022)

¹¹ [CSN Industry Outlook - 2024-2028](#), CITB (2024)

engineering construction workers could be required to work on offshore wind projects and 25% could work on the pre-construction phases of hydrogen and carbon capture projects.¹²

The Construction Industry Training Board (CITB) state that the major industries for skills in demand include private housing, infrastructure, and repair and maintenance. The specific occupations that will have the highest average growth to 2028 are:¹³

- Carpenters and joiners (+1.8%);
- Steel erectors and metal workers (1.7%);
- Plumbing and heating, ventilation, and air conditioning (1.6%);
- The strongest growth in managerial professions is projected for construction project managers (1.4%), and architects among professional services (1.1%).

The percentage of construction establishments with at least one hard-to-fill vacancy was 11%, below the overall average (15%), but there was a notable increase in vacancies as a proportion of employment from 3.2% in 2017 to 5.2% in 2022. Employers struggle to fill more than half (52%) of vacancies due to a lack of skills, qualifications or experience.¹⁴ Alongside this, 31% of construction employers surveyed said finding suitably skilled staff was their key challenge.¹⁵ This suggests skills are a problem in recruitment and training rather than within the current workforce.

Employers mentioned specific shortages in a number of skill areas including: housebuilding trade skills (e.g. bricklaying), town planning, architecture, and civil engineers. Key roles highlighted include engineering roles and skilled trades such as welders, pipe fitters, and planners. It was also noted that informal recruitment methods, for example SMEs not recruiting online, might lead to an underestimation of the true skills gap. The Employer Skills Survey (ESS) corroborates the need for housebuilding skills; the top hard-to-fill vacancies due to skills issues include glaziers and fitters, floorers and wall tilers and carpenters and joiners.¹⁶

The top occupations in critical demand in the construction sector were rail construction and maintenance operatives, crane drivers and electrical service and maintenance mechanics and repairers.¹⁷

Our engagement with employers¹⁸ suggested that more should be done to improve gender and ethnic diversity in the workforce. The construction workforce is predominantly

¹² [Labour Forecasting Tool](#), ECITB (2023)

¹³ [CSN Industry Outlook - 2024-2028](#), CITB (2024)

¹⁴ [Employer Skills Survey 2022](#), DfE (2023)

¹⁵ [CSN Industry Outlook - 2024-2028](#), CITB (2024)

¹⁶ [Employer Skills Survey 2022](#), DfE (2023)

¹⁷ [Occupations in demand](#), DfE (2024)

¹⁸ During this engagement process and the drafting of this publication, Skills England was set up in shadow form within the Department for Education (DfE). [Skills England - GOV.UK](#)

male, although this varies across industry and role. In 2024 women made up 15% of construction employment, compared with around half of the overall workforce.¹⁹ The on-site home building workforce is overwhelmingly male; 96% of Home Builders Federation Workforce Census 2023 respondents identified as male.²⁰ Around a third (32%) of architects were female in 2024.²¹ In June 2024, 9% of the construction sector were from ethnic minority backgrounds (15% across all industries); 14% of registered architects were from ethnic minority backgrounds.^{22,23}

In June 2024 the split of construction workers across age groups was broadly similar to the split across all industries, with 34% over 50 in construction compared with 33% across all industries.²⁴ However, in London in 2022 there were more younger construction workers (35% of construction workers surveyed were aged 25 to 34 years compared to 26% across the UK).²⁵ The proportion of economic output of the construction sector is similar across regions and more than 70% of LSIPs (27 of 38 areas) highlighted construction and related sectors as a priority, with 23 LSIP areas involved in a working group for designated ERBs.^{26,27} In 2022, half of all registered architects were based in London and the South East.²⁸ 20% of the housebuilding workforce is made-up of non-UK nationals according to Home Builders Federation 2023 census, however in London this rises to 65% of the workforce.²⁹

Employers indicated that trends such as automation, modular construction, and Modern Methods of Construction (MMC) will significantly impact the sector, requiring new skills and increasing productivity.³⁰ There are still significant barriers to tackle before MMC is in widespread use. Government commitments will also drive changes in skills need. Net zero initiatives and green infrastructure will require a shift in skills. For example, retrofitting buildings requires the skills system to support learning that teaches not only basic principles, but also a wider understand of existing building physics and dynamics – including airflow and ventilation – so that when insulation is installed or a heating system is replaced the building performance is improved.

¹⁹ [Employees and self-employed by industry](#), ONS (2024)

²⁰ [Home Building Workforce Census](#), HBF (2023)

²¹ [Equality, Diversity & Inclusion Data](#), ARB (2024)

²² [Annual Population Survey Jul 2023-Jun 2024](#), ONS (2024)

²³ [Equality, Diversity & Inclusion Data](#), ARB (2024)

²⁴ [Annual Population Survey Jul 2023-Jun 2024](#), ONS (2024)

²⁵ [Workforce Mobility and Skills in the UK Construction Sector 2022](#), CITB (2023)

²⁶ [AI analysis of local skills improvement plans](#), DfE (2023)

²⁷ [Industries in the UK](#), House of Commons Library (2024)

²⁸ [Architects Today](#), ARB (2022)

²⁹ [Home Building Workforce Census](#), HBF (2023)

³⁰ [Modern methods of construction in the housing industry](#), House of Lords Library (2024)

Training routes into the sector

In 2023/24, there were 24,200 apprenticeship starts in Construction, Planning and the Built Environment sector subject area (SSA). Intermediate apprenticeships accounted for just under half of all starts (47%) in the construction SSA, a similar level to last year (50%), but down from nearly two thirds (65%) in 2017/18. Apprenticeship standards each fit into one of 15 occupational routes. Construction and the Built Environment was the second most popular route in 2023/24 with 10% of starts.³¹

Since April 2021, there have been over 50,000 starts from DWP's Sector-based Work Academy Programmes³² (SWAPs) in the construction sector.³³

Focus on industries

Construction trades

Construction trade training is mainly focussed on Levels 2 and 3 qualifications, although some trades require Level 4 qualifications. Industry has a strong preference for training routes with a large element of on-the-job training, such as apprenticeships. Short courses such as skills bootcamps, and Levels 1 to 3 FE taught courses often act as an initial route into training for the trades, before students progress onto an apprenticeship.

Town planning

Routes into planning include independent degree level and post graduate study or direct entry with on-the-job training (apprenticeship or masters). Chartered town planner status requires a Royal Town Planning Institute accredited post graduate qualification plus Assessment of Professional Competence, which requires at least 2 years of professional experience.

Securing the future workforce

Our engagement with the sector suggested that a key problem is completion and retention rates rather than initially attracting learners to courses in further and higher education. Low apprenticeship achievement rates are a particular barrier to growth; achievement rates in construction subjects were 53% in 2022/23, the lowest of the four

³¹ [Apprenticeships 2023/24](#), DfE (2024)

³² DWP's Sector-based Work Academy Programmes (SWAPs) help employers with immediate and future employment needs by upskilling benefit claimants to fill local job vacancies. SWAPs last up to six weeks and include pre-employment training, a work experience placement and either a job interview with an employer or support to help participants through an employer's application process.

³³ [Sector-based Work Academy Programmes \(SWAPs\) Management Information, April 2021 to December 2024 - GOV.UK](#)

STEM subject areas and the third lowest overall.³⁴ The teacher vacancy rate for construction is 9.6 per 100 (the second highest subject), suggesting teacher supply should be an area of focus.³⁵

Employers suggested that current training models (e.g. apprenticeships) are not financially viable for some SMEs and are too complex and administration heavy for them. Instability and short-term contracts also deter employers from taking on apprentices and rapid technological changes are currently outpacing training programmes.

Key gaps in provision

Our engagement highlighted areas where changes could help improve the skills offer:

- Flexibility: employers would value ability to use the levy more flexibly to cover a broader range of training costs and support shorter courses (specifically flexible and shorter-duration apprenticeships).
- Modularisation: there is appetite from the sector to modularise apprenticeship provision to allow learners to become job ready in specific areas of the sector by breaking down existing courses into shorter modules. Opportunities have been highlighted in bricklaying and plumbing.
- Site cards: those completing further education courses often do not have the necessary credentials to access sites upon completion. Further work may be required to ensure college leavers are offered the opportunity to gain these credentials which could aid transition into onsite working.

³⁴ [Apprenticeships 2023/24](#), DfE (2024)

³⁵ [Further education workforce 2022/23](#), DfE (2024)



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