



Gyrfa Cymru  
Careers Wales



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# The Construction Industry in Wales





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## 1. Introduction

The Construction industry is defined by standard industrial classification (SIC) codes; specifically building, civil engineering and specialist construction firms working on sites. As explained in the [The Real Face of Construction 2020 | CIOB](#) report, this definition is used to estimate the industry size and economic value. Areas that are *not* included in this definition include:

- Work undertaken by professionals including architects, engineers, and quantity surveyors
- Plant hire firms and building materials suppliers
- Non-construction organisations who employ construction professionals or in-house construction teams
- Self-builders
- Professional services such as finance

[RICS](#) notes the importance of the construction industry to the UK economy, ***employing 9% of the entire UK workforce and contributing 7% of UK GDP. While the sector provided a rare and essential success story throughout the pandemic and shows continued growth, headwinds are growing.***

They have called for industry bodies and the government to futureproof UK construction through strategies including improving productivity, driving decarbonisation, and future-proofing skills.

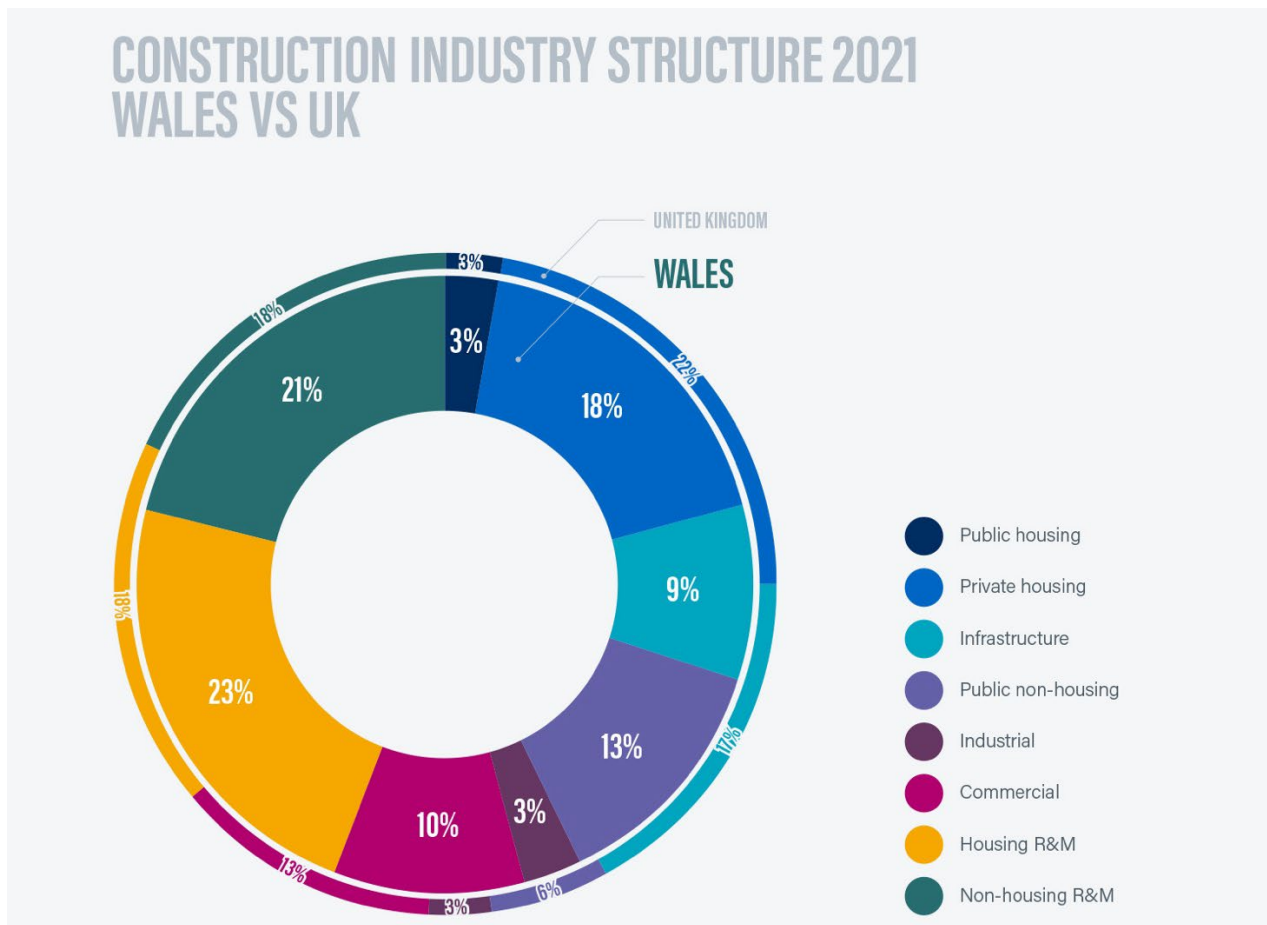
**In Wales there are 121,669 people employed in the Construction Industry (Lightcast™, 2022) which is 9% of the workforce population in Wales.**

## 2. Overview data on the Construction Industry in Wales

The volume of construction work in Wales is slightly below the UK forecast of 3.2% at an annual average rate of approximately 2.8%. However, in 2021 construction output in Wales is estimated to have grown by just over 20%, which is higher than the UK level of growth.

The future growth areas are:

- New build
- Housing repair & maintenance (R&M)
- Private housing
- Public non-housing



Source: [wales-lmi-final.pdf \(citb.co.uk\)](https://citb.co.uk/wales-lmi-final.pdf)

**The annual recruitment requirement in Wales of 2.1% per year is slightly above the UK average of 2.0% and means an extra 11,500 workers will be needed from 2022 to 2026.**

This means the construction industry would have to increase current recruitment by 2,300 new workers each year. The greatest recruitment needs are for:

- Bricklayers (540 per year)
- Electrical trades (280 per year)
- Plumbing and Heating, Ventilation and Air Conditioning (HVAC) trades (280 per year)

Source: [wales-lmi-final.pdf \(citb.co.uk\)](https://citb.co.uk/wales-lmi-final.pdf)



## Greatest Change in Workforce by occupation in Wales 2020 – 2026

Occupation	2020 – Actual	2026 – Forecast	Predicted Change
Electrical trades and installation	6,800	7,500	+700
Other construction professionals and technical staff	6,700	7,200	+500
Plasterers	4,000	4,500	+500
Wood Trades & Interior Fit-Out	12,500	12,900	+400
Bricklayers	6,000	6,400	+400
Surveyors	3,500	3,900	+400
Civil Engineers	2,600	3,000	+400
Specialist Building Operatives	4,300	4,000	-300
Non-construction Operatives	1,800	1,600	-200

Source: [wales-lmi-final.pdf \(citb.co.uk\)](#)

The longer term output forecast 2022 - 2026 in Wales, is that the volume of work will grow by an annual average rate of 2.8% (slightly below the UK rate of 3.2%). All areas will see growth over the forecast period, with new build being slightly stronger than Repair and Maintenance (R&M).

Source: [wales-lmi-final.pdf \(citb.co.uk\)](#)



### 3. Construction Job Postings

There were **20,585** unique job postings in the Construction Industry in Wales from November 2021 to October 2022.

Top Posted Occupation (SOC)	Unique (Nov 2021 - Oct 2022)
Elementary Construction Occupations	2,362
Civil Engineers	2,033
Electricians and Electrical Fitters	1,464
Health and Safety Officers	1,184
Quantity Surveyors	1,014
Estimators, Valuers and Assessors	940
Carpenters and Joiners	938
Production Managers and Directors in Construction	868
Plumbers and Heating and Ventilating Engineers	826
Construction Project Managers and Related Professionals	792

Source: Lightcast™, November 2022

The top 10 occupations in the Construction Industry advertised in Wales in the latest 30 days to 21<sup>st</sup> November 2022 include Civil Engineers, Elementary Construction Occupations and Electricians and Electrical Fitters in the top 3).

Plumbers and Heating and Ventilating Engineers show the greatest percentage change in postings when comparing September 23<sup>rd</sup>—October 22<sup>nd</sup> to October 23<sup>rd</sup>—November 21<sup>st</sup>.

Occupation	Latest 30 Days Unique Postings	Latest 30 Days Unique Postings % Change <sup>1</sup>
Civil Engineers	458	8.3%
Elementary Construction Occupations	415	-9.0%
Electricians and Electrical Fitters	280	-7.0%
Health and Safety Officers	232	5.0%
Estimators, Valuers and Assessors	207	0.0%
Carpenters and Joiners	188	5.0%
Construction Project Managers and Related Professionals	178	6.0%
Plumbers and Heating and Ventilating Engineers	170	17.2%
Quantity Surveyors	169	-8.2%
Construction and Building Trades	166	8.5%

Source: Lightcast™, November 2022

Latest percent change in postings (comparing September 23<sup>rd</sup>—October 22<sup>nd</sup> to October 23<sup>rd</sup>—November 21<sup>st</sup>)

## 4. Construction Skills across the regions of Wales



[North Wales Regional Skills Partnership](#)

[Mid Wales Regional Skills Partnership](#)

[South West Wales Regional Skills Partnership](#)

[Cardiff Capital Region Regional Skills Partnership](#)

The 4 RSPs in Wales will be publishing their updated 3 year Regional Skills Plans over the next few months, where a detailed breakdown of regional and local economic data and trends with specific focus on industry and sector skills will be available. The RSP Skills Plans are key to inform Welsh Government's strategic approach to the delivery of employment and skills provision.

These are edited highlights from the RSPs focussing on key regional themes for the construction industry in Wales.

### Cardiff Capital Region Skills Partnership

The construction sector plays a vital role in delivering a vibrant economy and a quality environment across SE Wales. Construction roles vary from traditional 'on-site' construction to more professional service based roles such as planners, architects, and surveyors. Around two thirds of the workforce is employed in skilled trades and operatives with another third employed in managerial, professional and office based roles.

Increasing energy costs, rising costs of materials and the availability of suitably qualified and trained staff are all combining to create testing environments for the construction sector.

According to the CITB, and through their 5-year outlook (2022-2026), total sector output in 2021 was £5.5bn with an estimate of £5.7bn for 2022. In 2021, construction output in Wales recovered quickly following the Covid lockdown of 2020 and is estimated to have grown by just over 20%, which is higher than the UK level of growth.

Key sectors driving future growth are new build private housing, public non-housing and housing repair and maintenance, and major projects such as those detailed earlier in the report, e.g. the Dowlais Top to Hirwaun section of the A465. The sector can be transient in nature, and skills demanded can be driven by the type of project within the pipeline. Monitoring this pipeline of future construction projects is therefore essential.



The sector has issues with the adoption and use of new technology which could change the skills demands for the sector. Some technologies, for example, Drones, AR/VR and automation have been adopted by some but there isn't consensus on which technologies will be widely used in future. The journey to net zero also provides an opportunity for growth and industry transformation. Construction can significantly influence UK emissions and CITB estimate that 50,000 retrofits will be needed in Wales each year from 2020 to hit net zero targets. 12,000 new jobs will also need to be created in energy efficiency by the end of the 2020s. To elaborate further, and by 2028, Wales will need a significant increase in a range of construction roles including project managers, plumbers, HVAC trades, labourers, building envelope specialists and retrofit coordinators and designers.

### South West Wales Regional Learning and Skills Partnership

It is difficult to recruit the next generation to replace an ageing workforce due to poor perceptions of sector and gender (80% of the workforce are male). However, the future for this sector is potentially quite exciting for the younger generation to engage with. Technical, Robotics, Net Zero and sustainability etc. The sector would like to engage with pre 16 education / careers advisors and showcase opportunities within the sector at a local level. [Kier construction](#) have done this to good effect.

Decline in availability of trade skills (since 2018)

- -14% in Plasterers
- -26% in Painters and Decorators
- -5% in bricklayers

Employers are also really struggling to find site managers and senior project managers. More encouragement is needed for upskilling experienced tradespeople. The sector is expecting to have future high demand for:

- Pipefitters (due to new energy projects)
- Electricians & High voltage (due to new energy projects)
- Assessors (Trust Mark MCS)

We expect many tradespeople will have to be upskilled to comply with Trust Mark / MCS regulation when released. Blended learning or eLearning where possible would be beneficial to enable easy access to upskill processes.

### Work Ready Skills

Just 12% of the construction sector surveyed stated new starters were work ready, lack of experience and poor attitudes being major factors. All sectors have raised this to be an issue. 16.5% of all survey responders stated new staff are work ready, and all sectors would like to see a more widely used work ready programme put in place.

64% of construction employers and 68% of all surveyed employers stated they would be interested in offering Work Experience / Placements. Work Experience would also aid future work readiness and we already have industry interest.





### North Wales Regional Skills Partnership

- Recruitment and retention are an identified issue across the sector for most roles and levels from casual labourers to more skilled construction operatives such as quantity surveyors, roofers and scaffolders. There is a feeling of a lack of loyalty toward employers due to the shortage in the workforce and the competitiveness of salaries, with many smaller businesses missing out.
- There is concern that provision in the region is not meeting the skills shortages. Looking to the future, there is more emphasis on Green Construction and Retrofit and there are major skills gaps in these particular areas of Construction.
- An ageing workforce with only 12.5% of 16-24 year olds working within the sector in North Wales.
- A need to scale up engagement with schools to inspire and inform young people about their career paths and career opportunities within the sector as well as supporting employers with a more streamlined engagement process with schools.

### Occupational skills gaps and sector specific skills needs

There are immediate skills gaps in specific Low Carbon Construction and Retrofit construction such as Retrofit Coordinators, Building Envelope Specialists, Surveying, Design, Energy Evaluation, Onsite assembly.

Employers identified skills gaps within their existing workforce, with the following occupations being a priority for upskilling:

- Civil Engineers
- Architects
- Logistics
- Project Managers
- Plumbers

### Generic skills gaps for the sector

In most cases employers said these are more important than technical skills or previous work experience/qualifications:

- Green construction and more sustainable forms of building. This part of the sector in particular needs growth in terms of workforce imminently and will transcend most jobs within the construction sector
- Digital skills are becoming more and more important as construction companies move towards digital plans, detailed drawings and site models and plans. There is also a basic digital skills gap across the sector
- Project management and management skills are also in shortage, both on site and off site supporting the main construction work

## 5. Current Challenges Facing the Construction Industry

The current challenges in the Construction industry in Wales, the UK and globally can be summarised as:

- Technological changes
- Net Zero
- Perceptions and diversity of the workforce
- Global impact or transformational events
- Skills shortages

### Technology



The digital technologies of the Fourth Industrial Revolution have transformed industries, improved productivity and sustainability, and created jobs. However, according to the World Economic Forum's [Future Scenarios Implications Industry Report](#), most companies in the Infrastructure and Urban Development industry (IU) still use primarily manual labour, mechanical technologies, offer traditional products and services and follow established business models.

The capacity of digital technology to transform construction was highlighted by the CITB's report [Unlocking construction's digital future: A skills plan for industry](#) in 2018, when reviewing the importance of skills for the sector. The CITB noted that the construction industry should be clear on what digital construction means, how best to use it and what skills will be needed. They noted that innovative technology is generally limited to small pilots but sharing best practice will help with understanding the value of digital and the skills and training needed.

New technologies, including building information modelling (BIM), prefabrication, wireless sensors, automated and robotic equipment and 3D printing, are changing how infrastructure, real estate and other built assets are designed, constructed, and maintained. [Future Scenarios Implications Industry Report 2018.](#)

**Scaling retrofit will inevitably lead to more widespread adoption of innovative approaches, technologies and delivery models, not least as a response to the shortages of skills.**

The [RICS](#) is working to futureproof the Construction industry through improved understanding of the use of novel technologies to support the industry, such as digitalisation and data usage e.g. [digital twins, industrialised construction](#), and [modern methods of construction](#).

## Net Zero



The [Optimised Retrofit](#) project will see more than 1,724 homes across Wales made more energy-efficient with £13m Welsh Government funding.

Research from [Decarbonising the Welsh housing stock](#) reports that the Welsh housing stock, among the oldest and least efficient in Europe, is responsible for 21% of Welsh carbon emissions. In 2019, the UK Committee for Climate Change (CCC) determined that Wales should target a 95% reduction in emissions by 2050. By 2050 80% of Wales's buildings have already been built, making the industry's priority to achieve net zero by decarbonising the existing stock. Placing construction industry at the forefront of Wales's contribution to achieving a net zero nation.

According to [CITB Wales Industry Insights and Analysis, 2021](#) [CITB Wales Industry Insights and Analysis in 2021](#), skills to address the retrofit challenge appear to be the most urgently needed as evidenced by the research.

The shortfalls facing the industry of specific trades and occupations identified:

- 2,800 plumbers and Heating, Ventilation and Air Conditioning Engineers
- 2,500 Project Managers, including specific Retrofit Coordinators
- 900 Building Envelope Specialists
- Unspecified numbers of Quantity Surveyors

**Net Zero is a challenge but it also provides a unique opportunity for industry to modernise, grow, and create a green jobs revolution. To do this, industry will need to attract a more diverse workforce into key occupations with large forecast skills shortages.**

[CITB 2021](#)

## Diversity of the workforce



According to Chwarae Teg's latest [State of the Nation Report 2022](#) **only 12.5% of the Construction workforce are women.**

This is a slight increase of 0.9% on the previous year, the report also shows that the construction sector employs the least number of women amongst the 20 Standard Industry Classification groupings. They also found that only 3% of apprenticeship starts in Construction in Wales (2021) were female.

Our labour market is still segregated on the basis of gender. Women continue to be under-represented in senior positions in many sectors and are much less likely to be working in sectors traditionally seen as "male", such as construction, engineering and manufacturing. This inequality and segregation is shaped by the choices that are made early in our lives. Careers advice and guidance is a critical tool in challenging stereotypical ideas about career choices that young people have.

The CITB is well aware of the challenges they face in creating a more diverse workforce and recently developed more resources and exposure to successful women in the construction industry, such as a new video released for International Women's Day and Women in Construction Week ([Women explain how they have excelled in Welsh construction - CITB](#)).

To tackle a recruitment challenge of this scale, the construction industry must do more to attract the best talent possible, and to change the image of the industry. This will include actions to bring in more women, workers from BAME communities, people with disabilities and other under-represented groups. [CITB 2021](#)

## Global Impacts or Transformational Events



RICS' UK Construction and Infrastructure Monitor suggests that industry workloads are continuing to grow, with the infrastructure sector showing the strongest growth. Key challenges highlighted in the monitor survey include:

- Shortages of materials (83%)
- Labour issues (77%)
- Problems recruiting quantity surveyors (60%)
- Financial constraints (54%)

According to [RICS 2022 UK Construction & Infrastructure Survey](#) material costs have on average risen by around

25% over the past year and are projected to continue increasing, hitting SMEs in particular. This has resulted in significant delays to projects commencing on-site, as start dates are pushed back to accommodate higher material and labour costs. Labour costs are also predicted to record further gains (8% for skilled labour and 6-7% for unskilled labour) reflecting near record vacancy rates across the industry.

The COVID-19 pandemic had a significant impact on the construction sector and is a key industry that sets the barometer of economic wellbeing of a nation. Since the easing of lockdown restrictions during 2021, other supply chain organisations have increased their production of building materials, allowing the construction to 'bounce back' and maintain its potential to stimulate recovery. The industry bounce back has not yet reached pre pandemic levels in terms of apprenticeship starts or training qualifications completed and employers are facing a delay in work ready on site skills. Optimistic forecasts by the CITB in 2021 were expecting to reach pre pandemic outputs by 2023 have now been reassessed following Russia's invasion of Ukraine that led to rising global commodity prices.

The CITB reports that whilst these macroeconomic influences weaken the sector in the short-medium term, however the greatest challenge facing the industry is the lack of sufficiently skilled people to fill the growing number of vacancies.

## 6. Education and Training in Construction



Following Qualifications Wales' [Building the Future](#) report into construction and built environment qualifications, City & Guilds and EAL have developed a new set of Construction and Building Services Engineering qualifications for learners in Wales which were released in September 2021 and September 2022.

**The new qualification framework aims to make progression routes clearer, as well as bringing qualifications in line with what employers are looking for, preparing learners for the world of work.**

There are a range of useful resources available to navigate the vast range of education and training available:

- The [Skills for Wales](#) website has been developed by City & Guilds and EAL to provide information and support on the new framework.
- CITB's [Go Construct](#) website is a platform that provides resources for anyone looking for a career in the construction and built environment sector with details on routes into different roles and courses.
- Careers Wales' overview of the [Construction Industry](#), provides details of 86 jobs included in this industry detailing entry routes, skills, progression and related job ideas.
- In response to industry, employers and stakeholders call for a comprehensive skills and training map for Wales, the Welsh Government have published a [Skills & Training Map](#) which aims to provide a clear outline of qualifications and training opportunities across Wales that are available to support Retrofit requirements effective from August 2022.



## 7. Conclusion

The commentary from various reports is that the construction industry is operating with cautious optimism in Wales and across the UK. External influences, particularly the fallout from the Russia-Ukraine War and Brexit continue to send shockwaves through UK business and industry, with supply chains tightly squeezed. This has led to building product and manpower shortages as well as soaring prices in construction industry.

**“The good news in the latest report is that the industry remains positive about the outlook for activity and that the generally upbeat mood can be seen not just in regard of infrastructure and housing development but also in the commercial sector. However, it is clear that the sector faces significant challenges which have been reflected in recent official data showing a sharp rise in vacancies across the construction industry.”**

**RICS Chief Economist, Simon Rubinsohn**