

Summary of Demand from Industry for Skills / Training – December 2021

The SERSF has compiled the following information from feedback from industry, industry clusters/associations and data available from the Skills and Labour Market Research Unit (SLMRU) of SOLAS. It is presented for a number of key economic sectors that are of vital economic importance to the region.

In addition to the identified skills shortages / training needs, sectors have an ongoing need for a wide variety of other training which is being met by the various education and training bodies within and outside the region, internal training and private contracted training providers.

Construction – (13,600 employed)

This sector in the South East includes a range of companies employing approximately 13,600 staff (excluding South Tipperary which is recorded in the Mid West regional statistics). This comprises 11,600 per CSO Quarterly Labour Force Survey Q3 2021 and an estimate of 2,000 professionals & associate professional (architects, consulting engineers, quantity surveyors & related technicians).

The recently revised National Development Plan has a total budget of €165bn from 2021-2030. Civil construction has been the slowest sector of the construction industry to recover since the recession. Many of the projects mentioned in the NDP are Civils (Roads & Bridges). However, the obligation for a 2:1 ratio of roads to public transport is likely to delay many road projects and has affected their budgets. Irish Water have a budget in excess of €1 billion so more water infrastructure projects are likely to be seen in the next few years which again should be good for the civils Industry.

It is expected that housing output will increase steadily over the next few years with requirements for additional block layers, carpenters, plasterers & painters in particular. There is a better supply of plumbers and electricians who will also be in demand. The many office projects that have been keeping the industry busy for the last 10 years are likely to decrease thus freeing up more labour for the housing sector.

While the targets contained in the National Retrofit Scheme and the implications of transitioning to a low carbon economy are very ambitious, the rate of uptake will likely depend on the type of funding/incentives that are offered by Government. Retrofitting and heat pump installation skills will be in demand as a result.

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This sector includes a variety of companies in the following disciplines:

- Construction of buildings & infrastructure – housing / commercial / industrial / roads / bridges
- Professional & Associate Professional Services eg architects, consulting engineers and quantity surveyors & related technicians.
- Specialist Construction Services eg Mechanical & Electrical Contractors, Heating, Ventilation, Air Conditioning (HVAC)
- Trades persons – many sole traders and micro enterprises – carpentry, plumbing, block laying, plastering, tiling, etc.
- Construction materials & components manufacture & supply

Construction activity has recovered in 2021 since Covid restrictions were eased from April 2021. The sector is experiencing good levels of activity and skills shortages being reported. There is an ongoing demand for civil engineers and persons with associate engineering qualifications such as Estimators, Quantity Surveyors, Site Foremen. There is also strong evidence of a shortage of construction craft qualified personnel eg plasterers, blocklayers, carpenters and plumbers.

Roles in demand within the region include:

- Civil & Structural Engineers
- Building Services Engineer
- Sustainable Energy Engineer
- Quantity Surveyor
- Estimator
- Construction Site Foreman
- Construction Trades: blocklayer, carpenter, plasterer, tiler
- High Voltage Technicians and Engineers

Job types expected to be in demand due to low carbon transition, particularly between 2022 and 2024 as Government support measures are implemented.

Retrofitting / heat pumps / solar PV

- Insulation operatives
- Retrofit engineers
- Heat pump installers
- Domestic solar PV installers

Renewable energies

- Ship crew & officers from 2024 onwards
- Wind turbine technicians

Electric Vehicles

- EV technicians

Skills shortages identified by employers and a need to upskill staff in the following disciplines for 2022:

- Construction Trades, particularly 'Wet' Trades for house construction and plumbing and carpentry.
- Electrical Trades – Electricians, Electrical Instrumentation, High Voltage Electrical
- Site Management
- Estimating
- CAD, BIM skills
- LEAN for Construction
- Sustainable Energy Engineering
- Near Zero Energy Building (NZEB) design & fundamental skills for trades
- Occupational Health & Safety

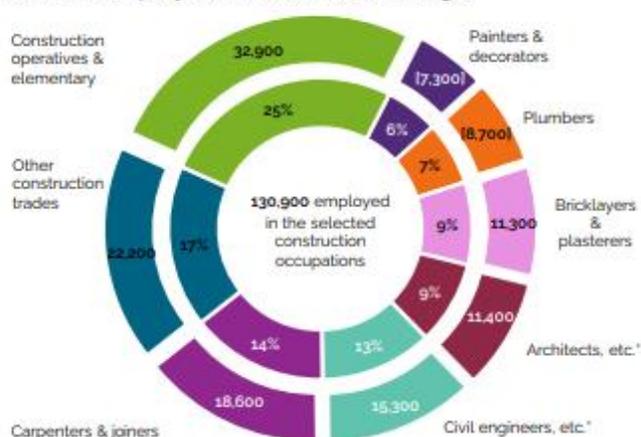
Extracts from the National Skills Bulletin 2021

10.8 Construction Occupations

Overall employment: approximately 130,900 persons (97% male) were employed in the selected construction occupations, representing 5.7% of the national workforce.

- **Sector:** 72% of overall employment was concentrated in the construction sector; a further 16% were employed in industry and professional activities combined
- **Employment growth (5-year):** between 2015 and 2020, overall employment increased by 5,400 (0.8% on average annually compared to 2.2% nationally). The strongest rate of employment growth was observed for bricklayers and plasterers (13.1%) during the period
- **Age:** the 25-54 age group accounted for the majority of persons employed, at 71%. The share aged 55 and over (20%) was slightly above the national average of 19%
- **Education:** a half of those employed in the selected construction occupations had attained higher secondary/FET qualifications, above the national average share of 35%. The share who had attained third level qualifications (26%) was well below the national average (51%)
- **Full-time/part-time:** full-time employment accounted for 92% of employment
- **Nationality:** the share of non-Irish workers was slightly below the national average of 17%, while 85% of workers were Irish nationals.

Numbers employed, 2020 (annual average)



Outlook for these Occupations

The Climate Action Plan (2019) and Programme for Government (2020) set targets to reduce carbon emissions by 2030 with activities such as the installation of renewable energy heating sources in residential premises (400,000 buildings) as well as the retrofit to B2 BER of housing stock (c500,000 buildings) by 2030. These targets, along with ambitious Government plans to address housing supply, through delivery of an average of 33,000 homes annually over the next decade,⁴⁶ are expected to increase demand for construction-related skills across a variety of occupations (operatives, skilled trades/supervisors, engineers) and may lead to future skills and labour shortages. Upskilling and reskilling of those already employed will also be required as the recent EGFSN report on the built environment⁴⁷ notes that the nature of the tasks associated with construction occupations is likely to undergo substantial change.

In the short-term, the recovery in employment for these occupations will depend on a return to full construction (and other economic) activity, as well as resolving issues with the supply of construction-related materials which have been accentuated as a result of factors such as COVID-19 and Brexit.

Occupation	Economic summary
Civil engineers & construction project managers	Employment growth was slightly below the five-year national average, due to a fall in numbers employed in 2020, related to COVID-19 restrictions. Despite this, employment permits continued to be issued for this occupation throughout 2020, and these roles were identified as difficult to fill in the Recruitment Agency Survey. The closure of construction sites in the early part of 2021 is likely to have further impacted employment in this occupation; however, the lifting of lockdown restrictions in quarter 2 2021 will create a demand for these roles which is likely to continue in the short-term. Although the number of level 8+ awards in higher education increased in the last two years, the numbers have not yet recovered to those prior to the recession. If construction activity returns to pre-COVID levels, skills shortages for civil engineers and construction project managers are likely to arise.
Architects & town planners, architectural technologists, & surveyors Shortage: Quantity surveyors	Contrary to the decline observed for many other construction occupations, there was no overall change in employment numbers for this occupation since 2019. Employment permits continued to be issued in 2020, primarily for quantity surveyors but also for architects and architectural technologists. Quantity surveyors in particular were identified as difficult to fill in both the Recruitment Agency Survey and in the recent EGFSN report. Following several years of decline, supply from the higher education system for quantity surveyors began to grow in 2018, with the number of level 8 awards reaching almost 150 in 2019. Despite this increase in supply, replacement and expansion demand for quantity surveyors in the economy, combined with employers' preference for experienced professionals, is such that supply is unlikely to be sufficient in the short-term, resulting in shortages.
Bricklayers & plasterers	The high five-year employment growth in this occupation may relate to changes that occurred on the introduction of the new Labour Force Survey in 2017; employment levels remained relatively unchanged in recent years with COVID-19 having no obvious impact on 2020 figures. New apprenticeship registrations, which had begun to recover, declined again in 2020 and remain one tenth of what they were in 2005. Although currently eligible for employment permits, uptake for bricklayers and plasterers remained small in 2020 (approximately 30). Demand for these occupations is expected to grow due to cosmetic and repair work associated with retrofit activities. This will help to offset the reduced demand for these roles onsite due to the introduction of new technologies and offsite construction methods.

⁴⁶ <https://www.gov.ie/en/publication/ef5ec-housing-for-all-a-new-housing-plan-for-ireland/#for-low-income-households>

⁴⁷ Building Future Skills; The Demand for Skills in Ireland's Built Environment Sector to 2030, EGFSN 2020

Plumbers	Although employment numbers had been increasing in recent years for this occupation, they declined in 2020 as a result of COVID-19. The number of apprenticeship registrations also fell in 2020 but remained well above figures five years previously. Plumbers will be required in relation to Ireland's targets for a low carbon economy, for both retrofit and new build activities. However, many plumbers may require re/up-skilling to carry out the work linked to alternative renewable energy sources (e.g. the installation of heat pumps).
Carpenters & joiners	Employment growth over the five-year period was slightly above the national average, although the numbers fell in 2020 as a result of COVID-19. Although there was a decline in the number of new apprenticeship registrations in 2020, for the last three years the numbers have been higher than at any time since 2008. The new employment permits issued related to shuttering carpenters and were primarily issued in the early months of 2020. The demand for carpenters is likely to return to growth once COVID-19 restrictions are fully lifted. Carpenters will be required to fulfil ambitions set out in the Programme for Government and the Climate Action Plan 2019 resulting in potential skill shortages. ⁴⁸
Painters & decorators	The above average five-year employment growth in this occupation may relate to changes that occurred on the introduction of the new Labour Force Survey in 2017 and mask the fact that employment was unchanged between 2018 and 2019, and subsequently declined in 2020. New apprenticeship registration numbers remained small for this occupation (24 in 2020). Painters/decorators are likely to be in future demand due to the cosmetic work resulting from retrofit activities.
Other construction trades	Employment growth over the five-year period was slightly above the national average, despite a decline between 2019 and 2020. Difficulty in filling vacancies, reported in the Recruitment Agency Survey, related to curtain wallers, steel fixers/erectors and fitters/glaziers. Assuming full commercial construction activity resumes, demand for these occupations is expected to resume. Furthermore, renewable energy targets may create additional demand for roofers in relation to the installation of solar panels, although this may require re/up-skilling for some.
Construction operatives & elementary	Although there was negative employment growth over the five-year period, this relates to changes that occurred on the introduction of the new Labour Force Survey in 2017. A relatively high volume of recent job hires in 2020 indicates that turnover was occurring. Difficulty in filling vacancies, reported in the Recruitment Agency Survey, refers to scaffolders, ground workers and pipe layers. Despite this demand, a high share of persons from the construction sector remained on PUP, and it is difficult to determine the extent to which supply matches demand.

For detailed table see Appendix A

The **Expert Group for Future Skills Needs** published its '**Skills for Zero Carbon – The Demand for Renewable Energy, Residential Retrofit and Electric Vehicle Deployment Skills to 2030**' report in November 2021.

The report is available at www.skillsireland.ie

The following extracts give some insights into the additional projected demand for construction related skills arising from the national targets to achieve carbon neutrality by 2050.

Across the globe, it has become increasingly clear that the transition to a zero carbon economy must urgently accelerate. In Ireland, in the context of an ambition for carbon neutrality by no later than 2050, as set by the Climate Action and Low Carbon Development Act, the Climate Action Plan and Programme for Government (2020) have set ambitious targets to substantially reduce emissions by 2030; the most significant targets that have been set, and on which this report focuses, are those relating to the significant public and private investment in renewable energy, electric vehicles and the retrofit of the housing stock.

This requires a transformational change of how the economy and society operates, which in turn, brings about changes in sectors and occupations, with resultant demands placed on workforce skills and competencies. The economy's future competitiveness will be tied to its ability to decarbonise. The labour market must adapt to the changing need, as enterprises and employers source the appropriate level of skills for the Irish workforce, while employees in certain 'sunset' sectors face uncertainty as their roles are phased out. The message is clear – there is much work to be done to transition to a zero carbon and resilient economy and this report identifies the biggest challenges in terms of distinguishing between a skills shortage within certain occupations and an overall labour shortage within other occupations required for the renewable energy, retrofit and electric vehicle transformation.

The table below summarises the Labour Market Analysis conclusions for each main occupational group, along with relevant supply strategies to inform the recommendations.

Occupation	Labour Market Analysis Summary	Relevant Supply Strategies
Engineering	Other than Electrical and Retrofit Engineers/Designers, there does not appear to be a significant gap in FTE Labour Demand relative to overall HEI supply. There does appear to be a shortage of engineers with the necessary skills and experience to work in the sector.	<ul style="list-style-type: none"> - Boost availability of / capacity in Electrical, Energy and Building Services engineering courses - Increase exposure to Renewable Energy topics in third-level engineering courses - Provide more upskilling and CPD opportunities for engineers in topics relevant to the Zero carbon Economy
Environment, Planning, Legal and Professional	There does not appear to be a labour shortage relative to overall HEI supply. There does appear to be a shortage of professionals with the necessary skills and experience to work in the sector.	<ul style="list-style-type: none"> - Provide more upskilling and CPD opportunities professionals topics relevant to the Zero carbon Economy. - Explore measures to attract skilled professionals to Ireland
Construction	While formal labour supply indicators are not available for many construction occupations, there are likely to be labour shortages among general construction occupations relative to the projected increase in demand.	<ul style="list-style-type: none"> - Continue to implement recommendations of the Building Future Skills report to boost supply in construction occupations
Other Emerging and Niche Renewable Energy Occupations	A number of new occupations will be required in the Renewable Energy Occupations. Given their novelty, most currently lack direct and obvious routes for new entrants, which acts as a barrier to stable supply.	<ul style="list-style-type: none"> - Consider the creation of direct entry routes into Emerging and Niche occupations
Electric Vehicles	Current levels of training for EV technicians appears to be sufficient in the short-term, while the inclusion of EV training within the existing Motor Mechanic apprenticeship would likely ensure stable supply for most of the decade.	<ul style="list-style-type: none"> - Fully integrate EV training within the existing Motor Mechanic apprenticeship programme - Monitor developments in the overall labour demand for Vehicle Mechanics, and explore potential re-training pathways if necessary.
Craft & Retrofit	There appears to be significant labour and skills shortages among most craft & retrofit occupations relative to current supply indicators. This shortage will be particularly acute in the middle of the decade, when retrofit targets are expected to reach their maximum output. There is also a disparity in the numbers completing apprenticeships, and the low numbers subsequently undertaking further training to work in the retrofit sector (e.g. heat pump installation training for plumbers).	<ul style="list-style-type: none"> - Increase the provision and uptake of training for Retrofit occupations - Fully integrate Retrofit Occupations within relevant apprenticeship programmes