



**2024 Workforce Census  
Regional Report**

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This report was produced by the Engineering Construction Industry Training Board.

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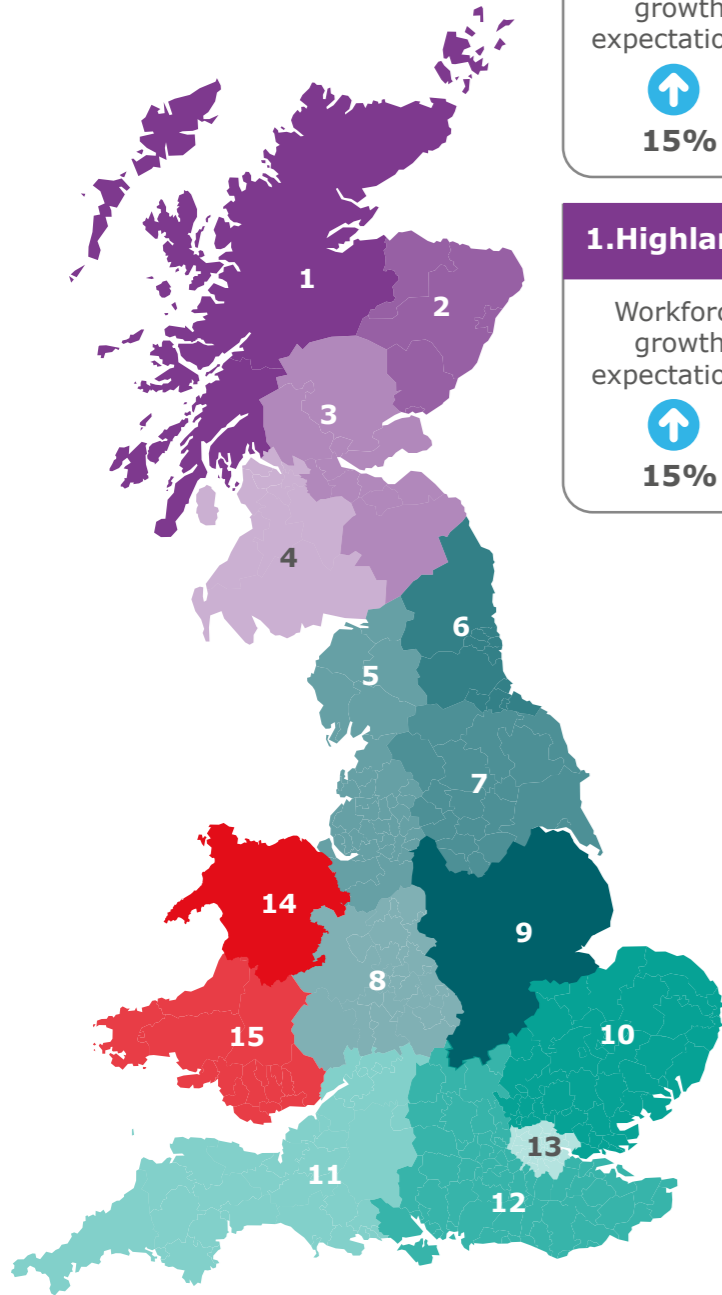
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# At a glance



### Offshore (9,350 workers - 9.9%)

Workforce growth expectations: <b>↑ 15%</b>	Nationality: <b>99% UK</b>	Gender: <b>♂ 97%</b> <b>♀ 3%</b>	Age: <b>&gt;30 40%</b> <b>30-49 53%</b> <b>&lt;50 40%</b>
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### 1. Highlands and Islands (2,500 workers - 2.6%)

Workforce growth expectations: <b>↑ 15%</b>	Nationality: <b>99% UK</b>	Gender: <b>♂ 71%</b> <b>♀ 28%</b>	Age: <b>&gt;30 18%</b> <b>30-49 41%</b> <b>&lt;50 41%</b>
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### 2. North East Scotland (7,250 workers - 7.7%)

Workforce growth expectations: <b>↑ 7%</b>	Nationality: <b>93% UK</b>	Gender: <b>♂ 74%</b> <b>♀ 26%</b>	Age Profile: <b>&gt;30 13%</b> <b>30-49 52%</b> <b>&lt;50 35%</b>
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### 3. East Scotland (2,800 workers - 3%)

Workforce growth expectations: <b>↑ 23%</b>	Nationality: <b>99% UK</b>	Gender: <b>♂ 95%</b> <b>♀ 5%</b>	Age Profile: <b>&gt;30 16%</b> <b>30-49 38%</b> <b>&lt;50 46%</b>
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### 4. West and South West Scotland (3,600 workers - 3.8%)

Workforce growth expectations: <b>↑ 15%</b>	Nationality: <b>93% UK</b>	Gender: <b>♂ 81%</b> <b>♀ 19%</b>	Age: <b>&gt;30 17%</b> <b>30-49 43%</b> <b>&lt;50 40%</b>
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### 5. North West England (26,650 workers - 28.1%)

Workforce growth expectations: <b>↑ 8%</b>	Nationality: <b>98% UK</b>	Gender: <b>♂ 81%</b> <b>♀ 19%</b>	Age: <b>&gt;30 22%</b> <b>30-49 44%</b> <b>&lt;50 34%</b>
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### 6. North East England (6,000 workers - 6.3%)

Workforce growth expectations: <b>↑ 18%</b>	Nationality: <b>94% UK</b>	Gender: <b>♂ 85%</b> <b>♀ 15%</b>	Age: <b>&gt;30 19%</b> <b>30-49 41%</b> <b>&lt;50 40%</b>
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### 7. Yorkshire and the Humber (6,450 workers - 6.8%)

Workforce growth expectations: <b>↑ 10%</b>	Nationality: <b>97% UK</b>	Gender: <b>♂ 90%</b> <b>♀ 10%</b>	Age Profile: <b>&gt;30 19%</b> <b>30-49 40%</b> <b>&lt;50 41%</b>
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### 8. West Midlands (2,050 workers - 2.2%)

Workforce growth expectations: <b>↑ 25%</b>	Nationality: <b>91% UK</b>	Gender: <b>♂ 75%</b> <b>♀ 25%</b>	Age Profile: <b>&gt;30 26%</b> <b>30-49 46%</b> <b>&lt;50 27%</b>
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### 9. East Midlands (1,250 workers - 1.3%)

Workforce growth expectations: <b>↑ 4%</b>	Nationality: <b>99% UK</b>	Gender: <b>♂ 85%</b> <b>♀ 15%</b>	Age Profile: <b>&gt;30 21%</b> <b>30-49 38%</b> <b>&lt;50 41%</b>
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### 10. East England (1,250 workers - 1.3%)

Workforce growth expectations: <b>↑ 19%</b>	Nationality: <b>96% UK</b>	Gender: <b>♂ 84%</b> <b>♀ 16%</b>	Age Profile: <b>&gt;30 17%</b> <b>30-49 46%</b> <b>&lt;50 37%</b>
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### 11. South West England (7,750 workers - 8.2%)

Workforce growth expectations: <b>↑ 15%</b>	Nationality: <b>83% UK</b>	Gender: <b>♂ 81%</b> <b>♀ 19%</b>	Age Profile: <b>&gt;30 16%</b> <b>30-49 48%</b> <b>&lt;50 40%</b>
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### 12. South East England (9,500 workers - 10%)

Workforce growth expectations: <b>↑ 10%</b>	Nationality: <b>84% UK</b>	Gender: <b>♂ 81%</b> <b>♀ 19%</b>	Age Profile: <b>&gt;30 12%</b> <b>30-49 42%</b> <b>&lt;50 46%</b>
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### 13. Greater London (4,950 workers - 5.2%)

Workforce growth expectations: <b>↑ 17%</b>	Nationality: <b>83% UK</b>	Gender: <b>♂ 73%</b> <b>♀ 27%</b>	Age: <b>18% &gt;30</b> <b>52% 30-49</b> <b>30% &lt;50</b>
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### 14. North Wales (1,050 workers - 1.1%)

Workforce growth expectations: <b>↑ 15%</b>	Nationality: <b>98% UK</b>	Gender: <b>♂ 82%</b> <b>♀ 18%</b>	Age: <b>&gt;30 8%</b> <b>30-49 42%</b> <b>&lt;50 50%</b>
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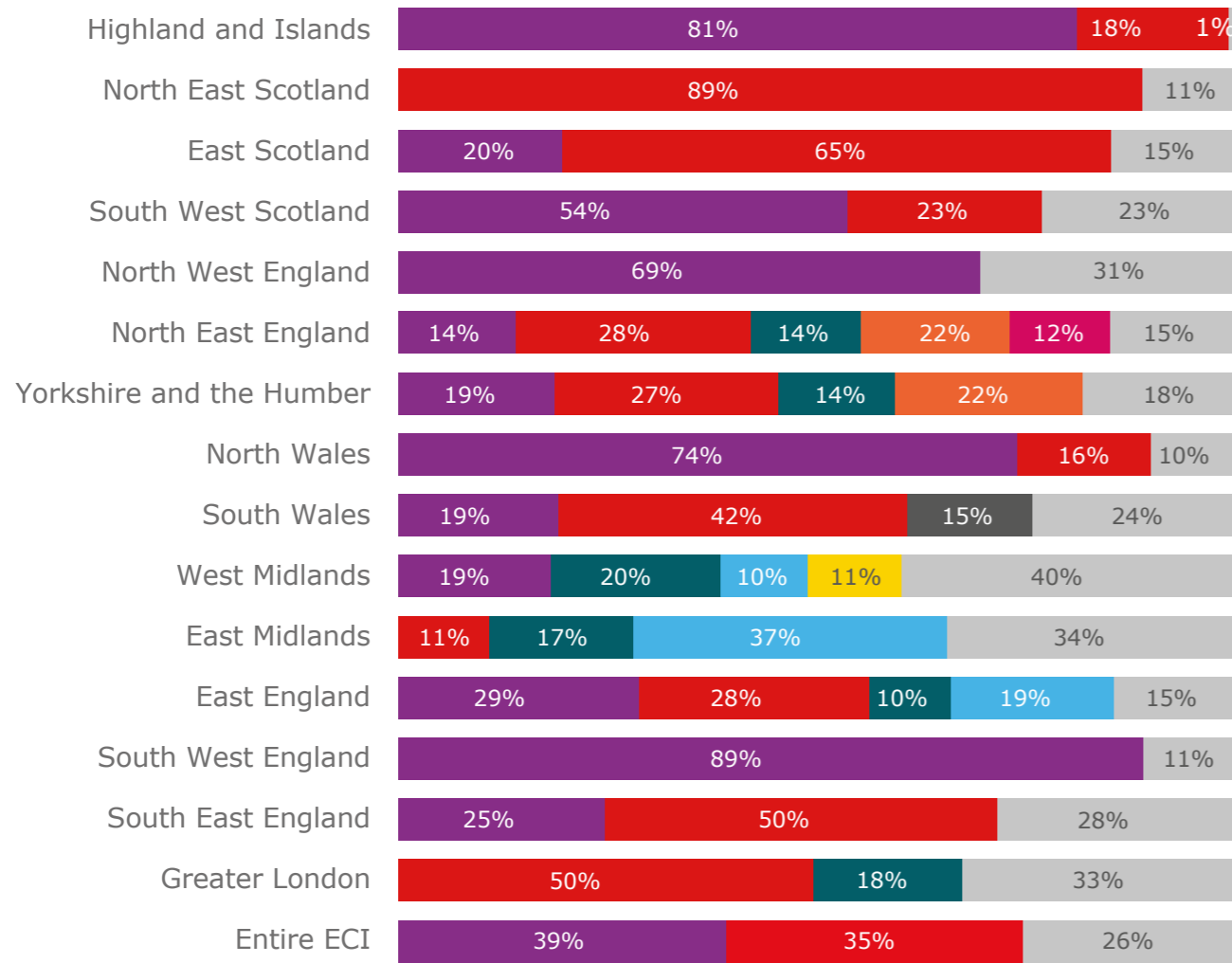
### 15. South Wales (1,150 workers - 1.2%)

Workforce growth expectations: <b>↑ 14%</b>	Nationality: <b>99% UK</b>	Gender: <b>♂ 97%</b> <b>♀ 3%</b>	Age: <b>&gt;30 17%</b> <b>30-49 45%</b> <b>&lt;50 39%</b>
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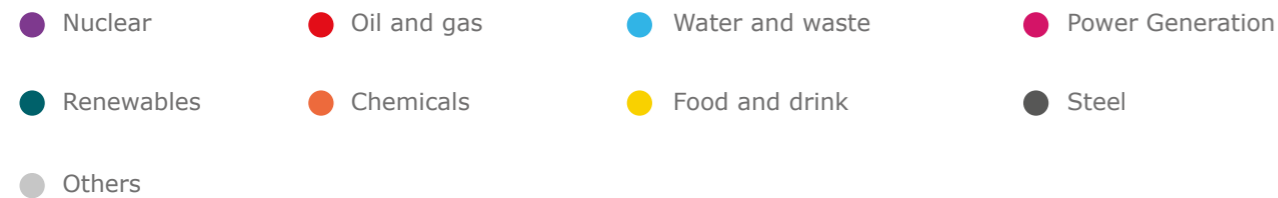
### Entire ECI

Workforce growth expectations: <b>↑ 12%</b>	Nationality: <b>95% UK</b>	Gender: <b>♂ 83%</b> <b>♀ 17%</b>	Age Profile: <b>&gt;30 17%</b> <b>30-49 46%</b> <b>&lt;50 37%</b>
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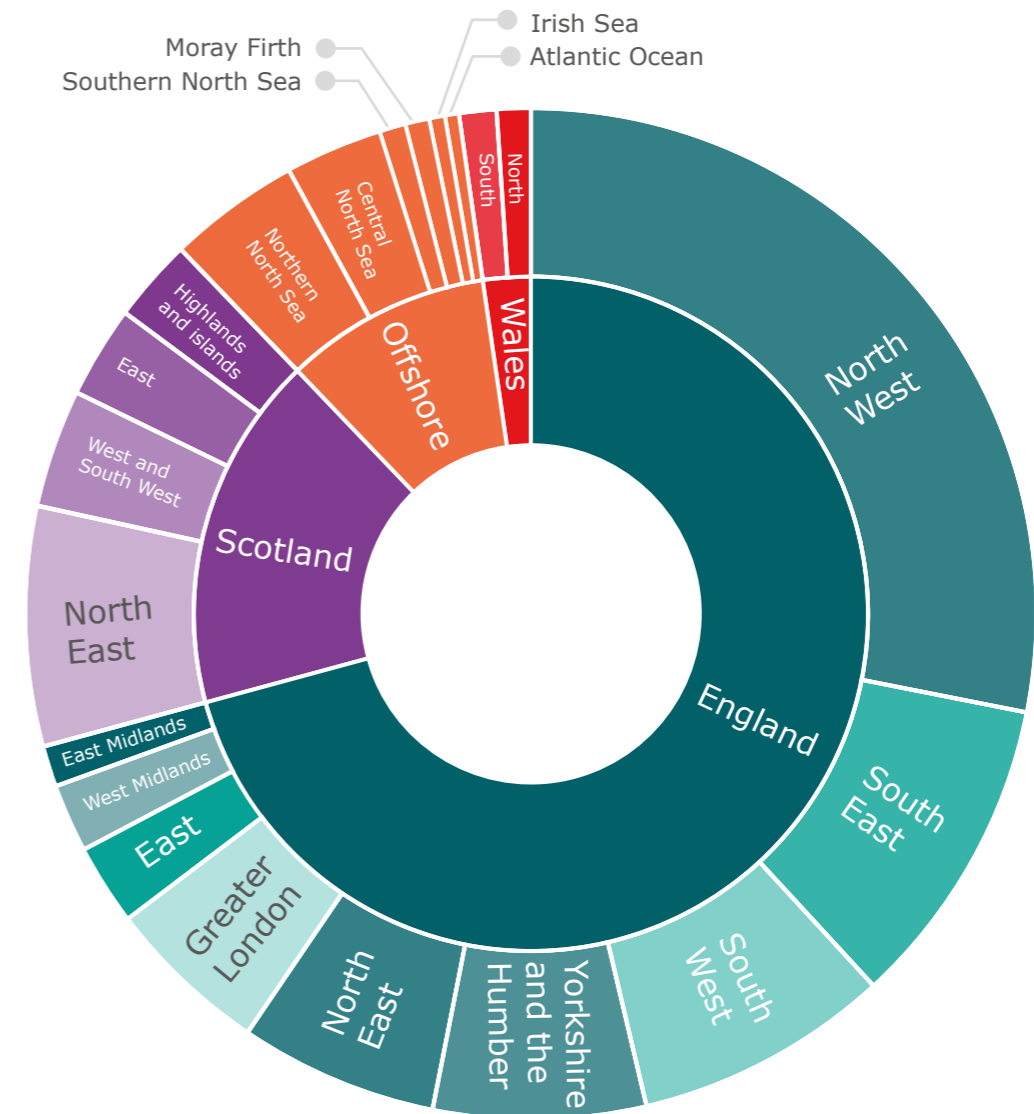
## Sectoral distribution



Sectors that account for less than 10% of the workforce are grouped under the "Others" category. The full list of sectors for each region can be accessed in that region's dedicated section.



## Regional distribution



Regions	%	Regions	%
England North West	28.1%	Offshore Northern North Sea	4.2%
England South East	10.0%	Offshore Central North Sea	3.1%
England South West	8.2%	Offshore Moray Firth	0.8%
England Yorkshire and the Humber	6.8%	Offshore Southern North Sea	0.8%
England North East	6.3%	Offshore Irish Sea	0.5%
England Greater London	5.2%	Offshore Atlantic Ocean	0.5%
England East	2.6%	Wales South	1.2%
England West Midlands	2.2%	Wales North	1.1%
England East Midlands	1.3%		
Scotland North East	7.7%		
Scotland West and South West	3.8%		
Scotland East	3.0%		
Scotland Highlands and Islands	2.6%		

# Executive summary

This report provides a regional breakdown of the Engineering Construction Industry (ECI) in Scotland, England and Wales, with a distinct section dedicated to the offshore workforce. The overview and sectoral reports are available on the ECITB's website.

The data collected in May and June 2024 provides a snapshot of the industry and its 94,680 workers, informing on each region's specificities and unique challenges. The geographical, sectoral and occupational characteristics of the workforce, as well as perspectives on recruitment difficulties and business opportunities, are presented throughout sixteen regional sections together with the three national overviews. The Census data covers employers within the scope of the ECITB and may not fully capture the entire ECI workforce operating in each region (see page 11 for more information).

Seventeen percent of the ECI workforce is based in Scotland, primarily in the North East (7.7%). Although oil and gas remains the main employer in Scotland (59%), the nuclear sector is the primary employer in the Highlands and Islands (81.4%) and in the South West (54%). England employs 70.7% of the ECI workforce, with the North West being the largest region in Great Britain in terms of workforce numbers. The nuclear sector employs 47% of the workforce in England, but sectors such as renewables, water and waste treatment and food and drink are also major employers in regions like the West and East Midlands, the East

and London. The chemicals sector maintains its strong presence in the North East and in Yorkshire and the Humber. Wales accounts for 2.3% of the ECI workforce, with a nearly equal distribution between the north and the south. The north is primarily involved in nuclear decommissioning activities (74%), while the south employs 42% of its ECI workforce in oil and gas, 19% in nuclear and 15% in steel manufacturing. Finally, 9.9% of the ECI workforce is deployed offshore, down from 12% in 2021. By definition, the offshore ECI workforce primarily operates in the oil and gas sector<sup>1</sup>.

The ageing workforce issue, which has been an increasingly common theme across the ECI over the past few years, is particularly persistent in the North of Wales, the South East of England and the East of Scotland. On the contrary, workforces in the East Midlands, London and the North West of England are relatively younger. The regions in which the gender balance is the least disparate are the Highlands and Islands, the North East of Scotland and the West Midlands. Offshore, South Wales and the East of Scotland are areas with a relatively lower percentage of women in the workforce. The workforce in South England is generally more reliant on foreign workers compared to South Wales, the East Midlands, the East of Scotland and the Highlands and Islands.



HPC Construction site with views to the Bristol Channel. Photo courtesy of EDF Energy

Workforce growth expectations are more optimistic in the West Midlands and the East of Scotland, and less optimistic – although still positive – in the East Midlands and the North West of England. However, these growth expectations must be considered in the light of each region's total workforce size to assess the expected volume of potential new recruitments.

Each region presents specific demographic characteristics, as evidenced in the At the Glance section. All the sixteen regional workforces as well as the key regional hiring challenges can be reviewed in their respective sections, providing unique insight into the capabilities and training needs of each.

<sup>1</sup> It is important to note that according to the Industrial Training Act and the supporting legislation, in relation to the offshore wind sector, the ECITB's scope is limited to activities carried out within GB Territorial Waters. Consequently, the vast majority of offshore ECI workers operate in the oil and gas sector. Please note the ECITB Labour Forecasting Tool includes the entire offshore wind sector, using data from external sources.

# Introduction












Aerial Views of Pembroke Dock and Oil and Gas terminals at Milford Haven, Wales, UK  
© Philip / Adobe Stock

The Engineering Construction Industry Training Board (ECITB) is the statutory skills body for the Engineering Construction Industry (ECI) in Great Britain. As a non-departmental public body, the ECITB operates under the Department for Education and reports to Parliament. The ECITB collaborates with employers, government agencies, training providers and many others to develop, train and qualify personnel across a diverse set of craft, technical, professional and management roles within the industry.

Employers primarily engaged in engineering construction activities fall under the ECITB's remit and are considered "in-scope". In-scope employers over a certain size are legally required to pay an industrial training levy. Nevertheless, all in-scope employers, irrespective of size, can access grants to support workforce training.

The engineering construction industry is broad and multifaceted, spanning several sectors focused on the processing, maintenance and decommissioning of heavy industries, including but not limited to:

 Chemicals	 Food and drink	 Nuclear
 Oil and gas	 Pharmaceuticals	 Power generation
 Renewables	 Water Treatment	 Steel

In January 2025, the ECITB published the overarching report of the second iteration of the Workforce Census, presenting national-level results on a wide range of topics: sectoral, regional and occupational data based on work locations, demographics, growth and hiring challenges.

This comprehensive report offers an overview of the entire industry, highlighting trends across all sectors and regions.

This regional report provides a more detailed analysis of geographical disparities across Scotland (4 regions), England (9 regions) and Wales (2 regions). A distinct section is dedicated to the offshore workforce. It is the first time the Census data for Scotland and Wales is broken down into several subdivisions.

This analysis examines key characteristics of the 94,680 workers that make up the ECI, employer confidence and perceptions, as well as external factors affecting the ECI. Results for regional ECI workforces are often compared with data on each region's general population, providing a clearer picture of

the industry's role across Great Britain and informing the unique characteristics and challenges faced by each region. This report should be read alongside the aforementioned industry overview.

For more details regarding the methodology and data collection process, please refer to our main report: ECITB 2024 Workforce Census: Overview of the Engineering Construction Industry.

Readers should note that the census was conducted with employers registered with the ECITB and, therefore, does not encompass all employers in the engineering construction industry. However, we are confident that the analyses in our reports are representative of the industry. Sample sizes for individual regions are smaller than for the industry as a whole, so caution should be exercised when generalising results for specific regions. However, the authors are confident that data in the regional report are indicative of each respective area. Instances where the data quality does not permit appropriate reporting are indicated in the footnotes.



Offshore wind turbine farm on Scotland coast of Aberdeen. © Federico Rostagno / Adobe Stock

## Scotland (17.1% - 16,150 workers)

In September 2024, the Scottish Government unveiled a new Green Industrial Strategy<sup>2</sup> designed to align closely with the forthcoming Energy Strategy and Just Transition Plan. The strategy identifies key sectors critical to Scotland's green transition – offshore wind, hydrogen, and carbon capture, utilisation and storage – all of which are expected to require substantial support from Scotland's engineering construction industry. Recognising the pivotal role of a skilled workforce, the Scottish Government emphasises the need to develop talent capable of advancing these industries.

The transition of workers from carbon-intensive industries to sustainable energy roles across the country will be vital for supporting the aforementioned sectors. Increasing societal and environmental expectations for a cleaner and more diverse workforce will exert further influence on the future of Scotland's engineering construction industry.

Scotland employs 17.1% of the ECI workforce, primarily in the oil and gas (59%) and nuclear (29%) sectors, with major workforce hotspots in Aberdeen, Thurso, Glasgow and Grangemouth.

The share of ECI workers above 60 (16.2%) is higher than that of the entire ECI (13.9%) and also exceeds the proportion in the general active population in Scotland (11.1%). In 2021, only 8% of the ECI workforce in Scotland was over 60. Meanwhile, the share of workers under 30 is 15% for the ECI in Scotland. This compares to 17% for the wider ECI and 23.3% in the active Scottish population and is down from 16% in 2021 for the ECI in Scotland.

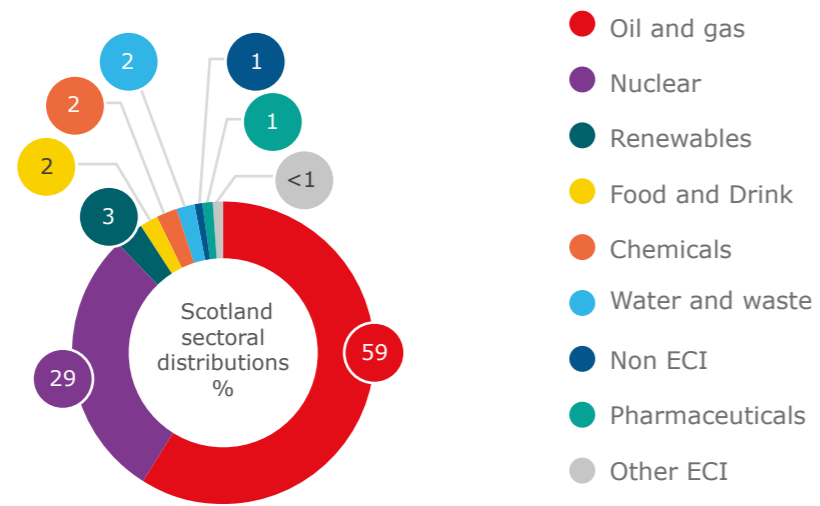
Women make up 22% of the ECI workforce in Scotland in 2024 (23% in 2021), compared to 17% in the wider ECI. The reliance on foreign workers is similar to that seen across Great Britain. The ECI workforce in Scotland is less ethnically diverse than the wider ECI, and less diverse than Scotland's general population<sup>3</sup>.

The following pages provide a more detailed analysis of regional differences within Scotland, including sectoral and geographical distributions, occupations, demographics, as well as business opportunities, hiring challenges and projected workforce growth.

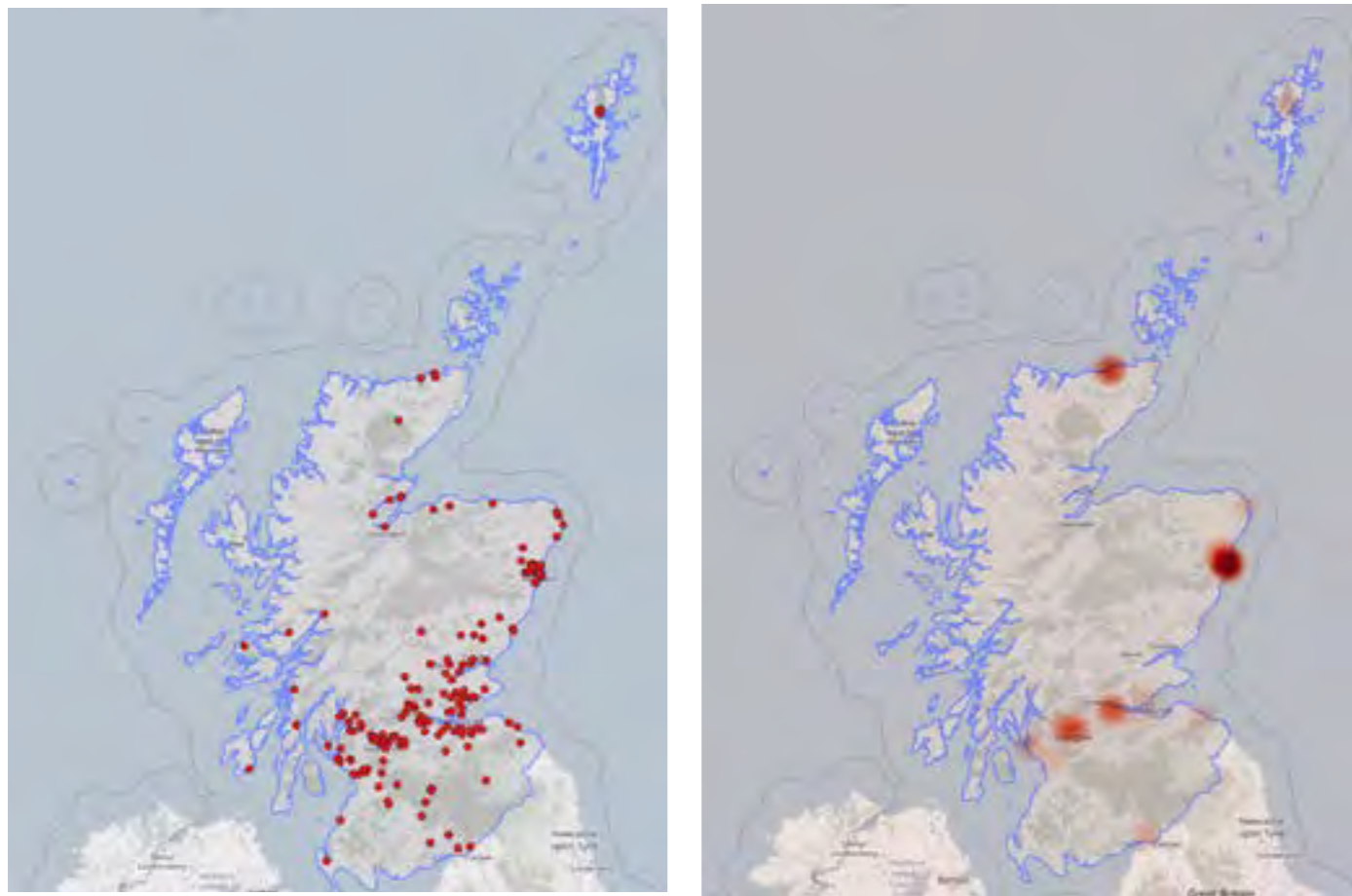
<sup>2</sup> Green Industrial Strategy (Scottish Government – 2024)

<sup>3</sup> It should be noted that ethnicity estimates for the ECI in Scotland are primarily based on data from the South West and the Highlands and Islands.

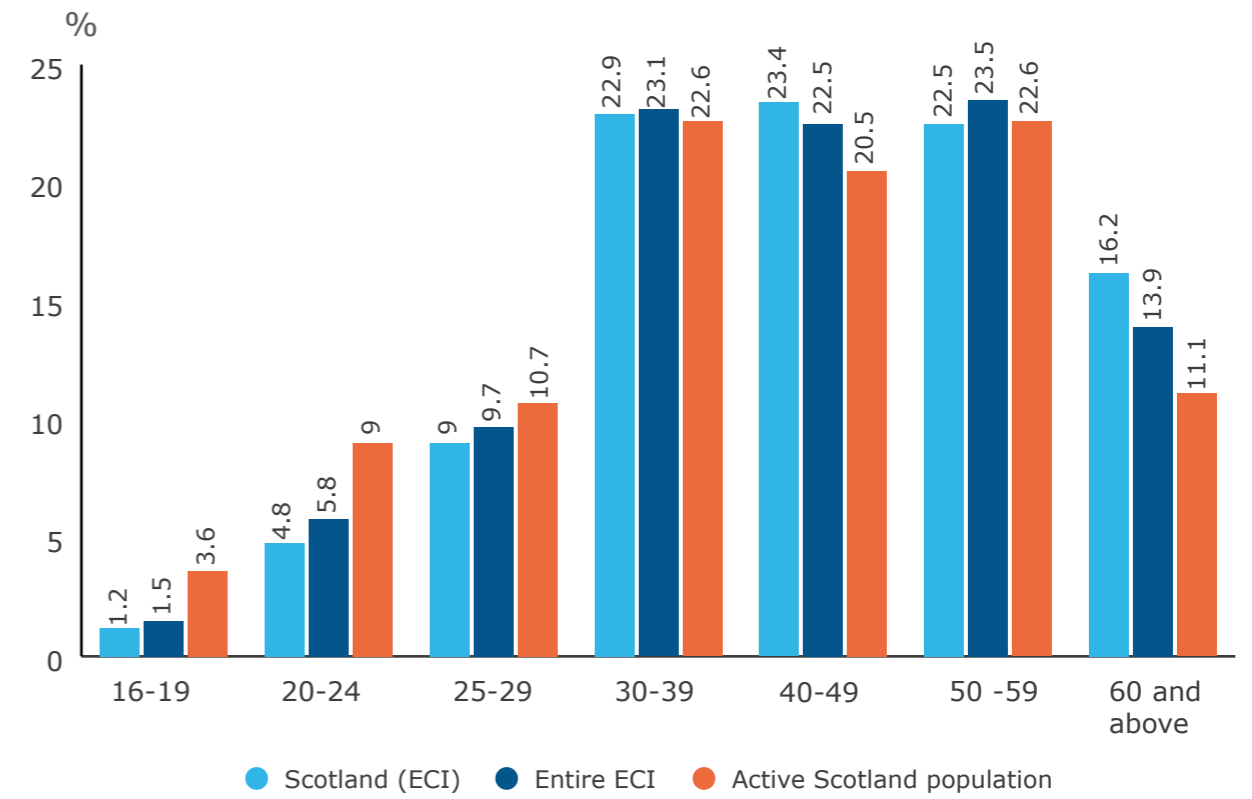
**Figure 1: Sectoral distribution of the workforce in Scotland**



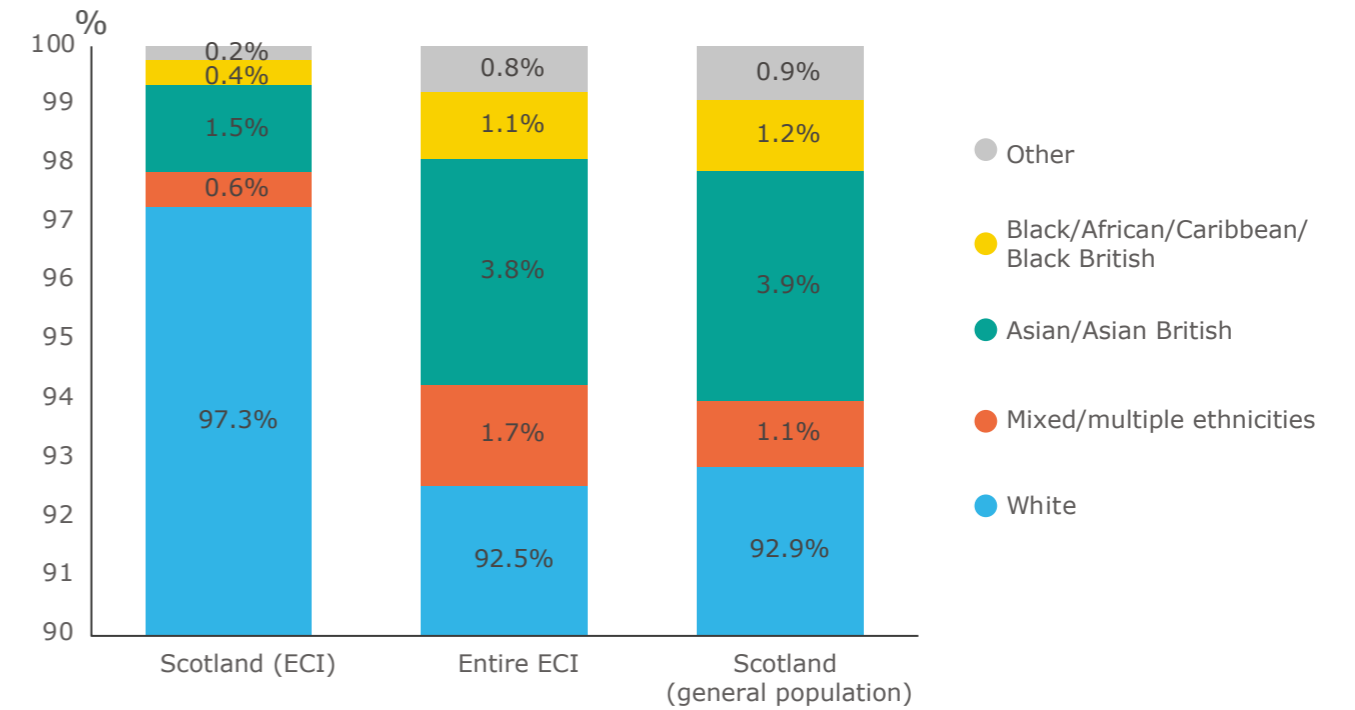
**Maps 1 and 2: Location of workers in Scotland (data points and heatmap)**



**Figure 2: Age profile of the ECI workforce in Scotland**

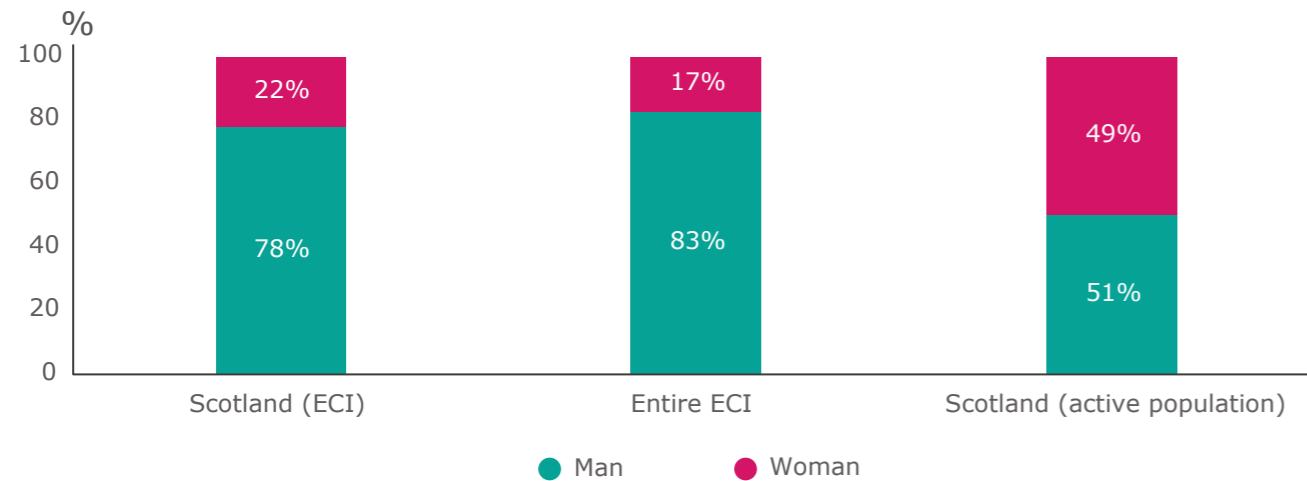


**Figure 3: Ethnicity profile of the ECI workforce in Scotland (scale in y-axis 90 to 100)**

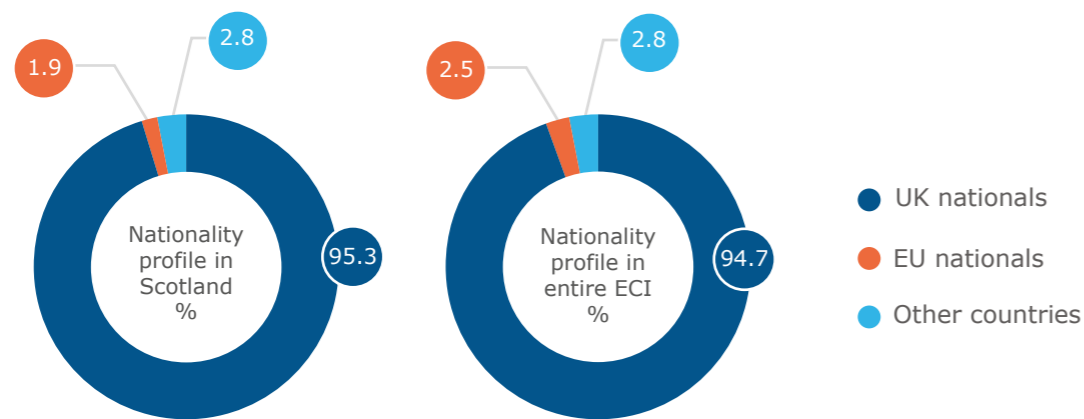




**Figure 4: Gender profile of the ECI workforce in Scotland**



**Figure 5: Nationality profile of the ECI workforce in Scotland**



**Highlands and Islands (2.6% - 2,500 workers)**

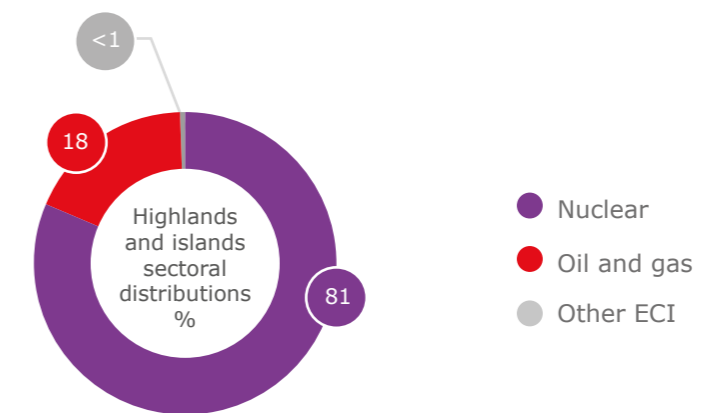
The ECI workforce in the Highlands and Islands primarily works in the nuclear (81%) and oil and gas (18%) sectors, with most personnel located near Thurso and in Shetland. While some water treatment and renewables companies operate in the region, they often deploy a workforce initially based elsewhere. The nature of the water treatment and onshore wind sectors, which often require multiple short interventions, can make it difficult to capture the full extent to which workers are deployed across the territory.

They attribute these difficulties to a lack of qualifications and training, as well as limited resources for attracting new recruits.

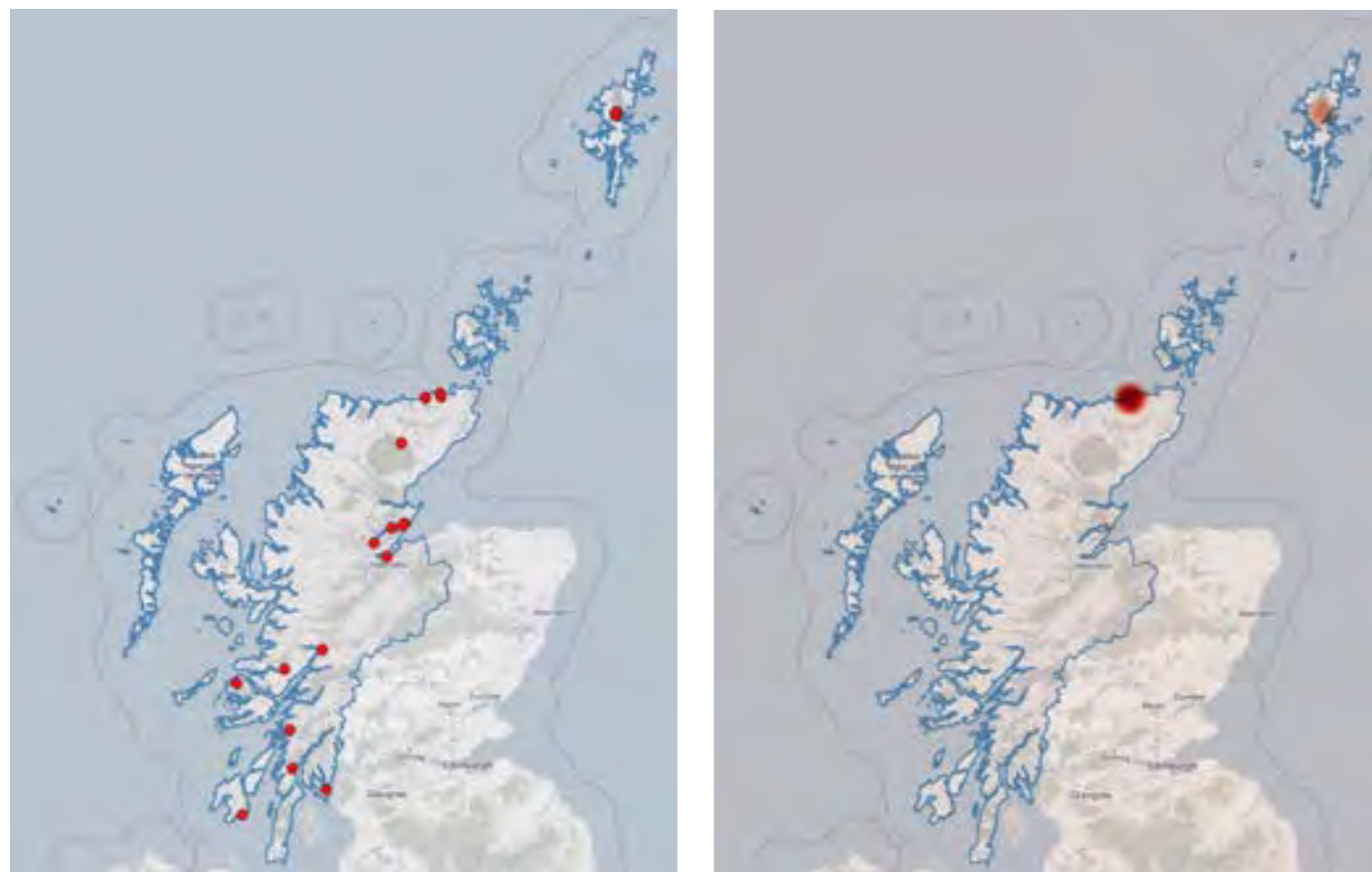
The share of workers under 25 in the Highlands and Islands is slightly higher than in the broader ECI. Compared to the local active population, the ECI workforce in the area shows a significantly higher representation in the 30–39 age group, while underrepresenting the 60+ group. Ethnically, the ECI workforce is, like the Highlands and Islands’ general population, predominantly White (99% and 97.6%, respectively). With 29% of the workforce being women, the gender balance in the region’s ECI workforce is more equitable than the overall ECI average (17%). This disparity may stem from the remote location of certain sites and the predominance of the nuclear sector, with its associated site restrictions.

There is a higher proportion of apprentices, trainees, supervisors and semi-skilled workers in this region compared to the wider ECI, with a strong emphasis on mechanical roles. Although data from this region is limited, employers with substantial activities in the Highlands and Islands generally report that engineers, project managers, project controllers, pipefitters, welders and designers are particularly challenging to recruit.

**Figure 6: Sectoral distribution of the workforce in the Highlands and Islands**



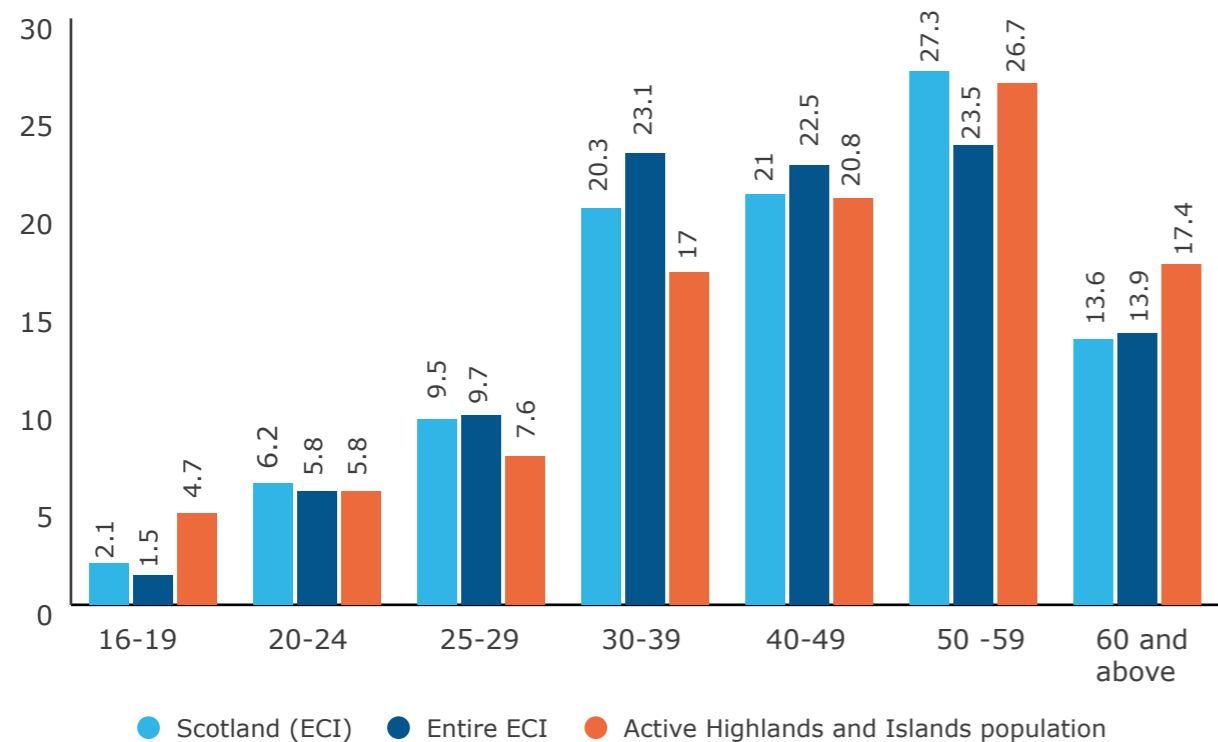
**Maps 3 and 4: Location of workers in the Highlands and Islands (data points and heatmap)**



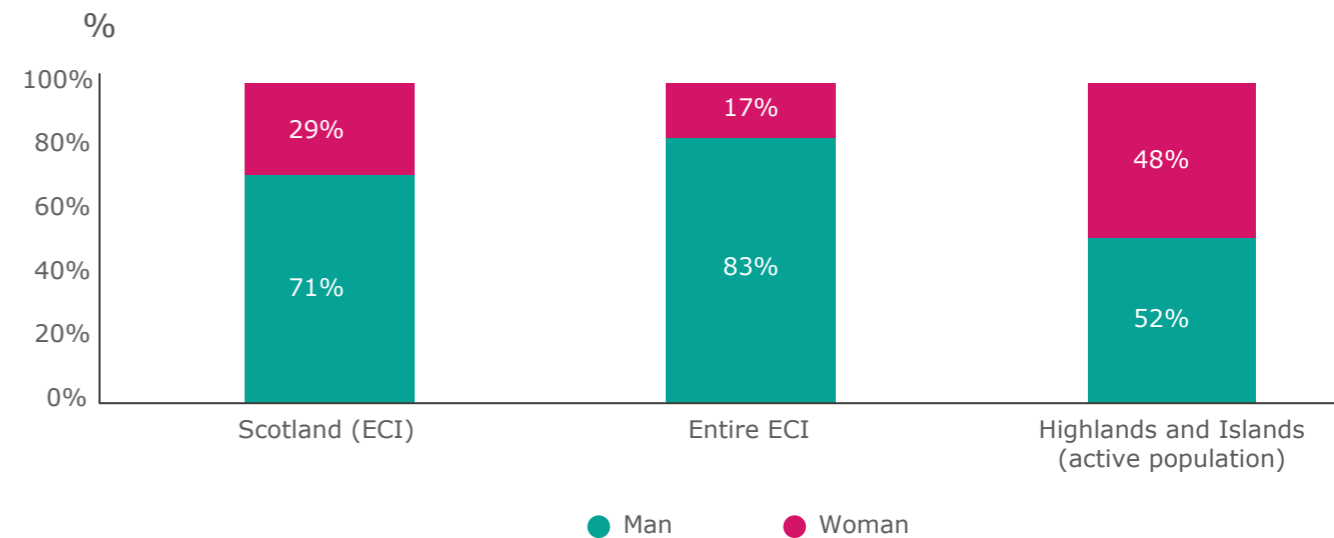
**Table 1: Workforce in the Highlands and Islands by occupation.**

<b>Apprentices and trainees</b>	<b>117</b>	<b>Semi-skilled</b>	<b>525</b>
Design (mechanical) apprentices and trainees	15	Decommissioning semi-skilled	441
Other apprentices and trainees	102	General operatives semi-skilled	52
<b>Craft</b>	<b>251</b>	Other semi-skilled	32
Mechanical fitting craft	64	<b>Supervisors</b>	<b>263</b>
Decommissioning craft	39	Decommissioning supervisors	134
Scaffolding craft	33	Mechanical fitting supervisors	16
Electrical fitters craft	32	Health physics supervisors	12
Instrumentation and control craft	32	Lifting supervisors	11
Blasters and painters craft	20	Scaffolding supervisors	11
Rigging craft	12	Other supervisors	79
Other craft	17	<b>Support</b>	<b>296</b>
<b>Engineers</b>	<b>244</b>	Administrative support	141
Mechanical engineers	79	Health and safety support	42
Electrical engineers	29	Contracts support	33
Instrumentation and control engineers	23	Finance support	21
Project engineers	19	Human resources support	20
Chemicals engineers	14	Communications support	12
Insulation engineers	12	Learning and development support	11
Civil and structural engineers	10	Other support	16
Other engineers	59	<b>Technicians</b>	<b>206</b>
<b>Managers</b>	<b>238</b>	Health and safety technicians	54
Project managers	118	Mechanical technicians	36
Waste managers	58	Instrumentation and control technicians	24
Procurement managers	16	Operations technicians	24
Strategy managers	12	Electrical technicians	20
Other managers	34	Other technicians	48
<b>Professionals</b>	<b>372</b>	<b>Other</b>	<b>7</b>
Quality assurance/quality controls professionals	92		
Data and analysis professionals	88		
Environmental professionals	56		
Planning professionals	48		
Health physics professionals	29		
Radiological protection professionals	19		
Safety case professionals	12		
Other professionals	26		

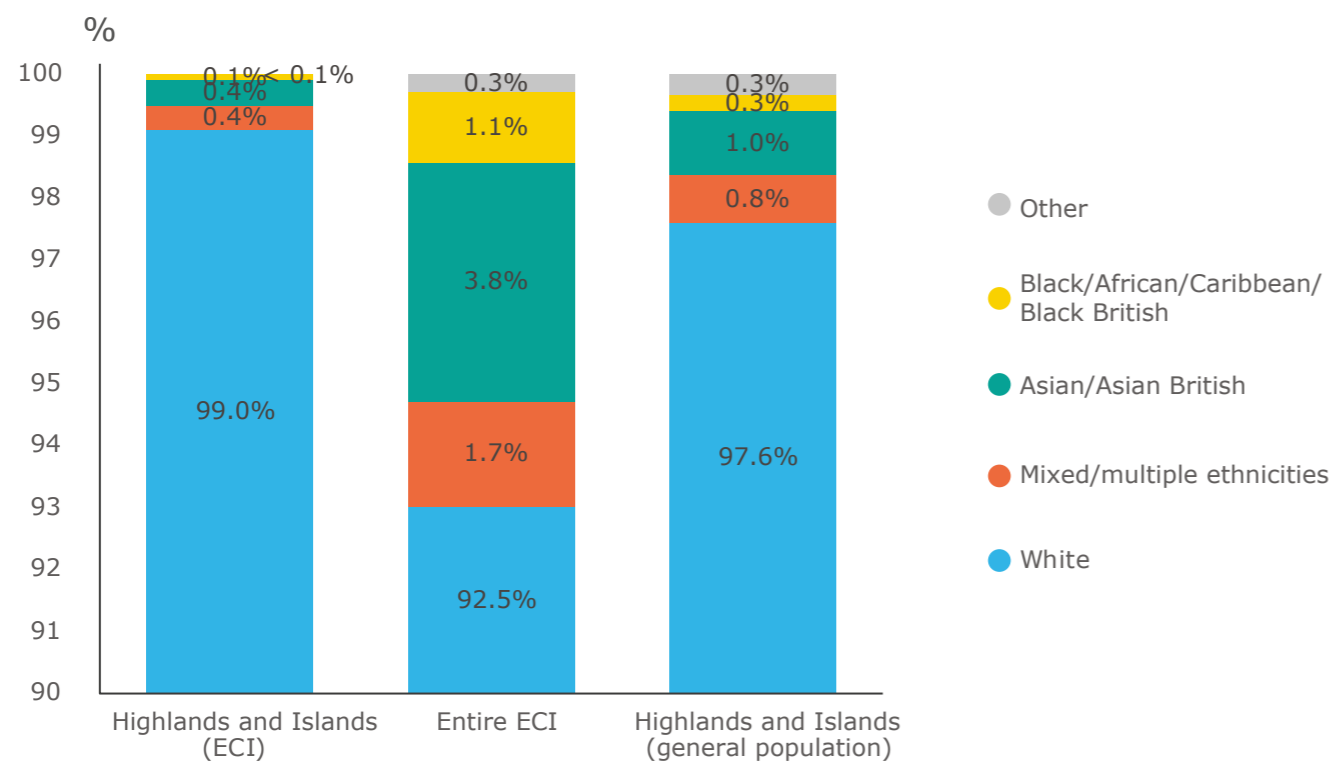
**Figure 7: Age profile of the ECI workforce in the Highlands and Islands**



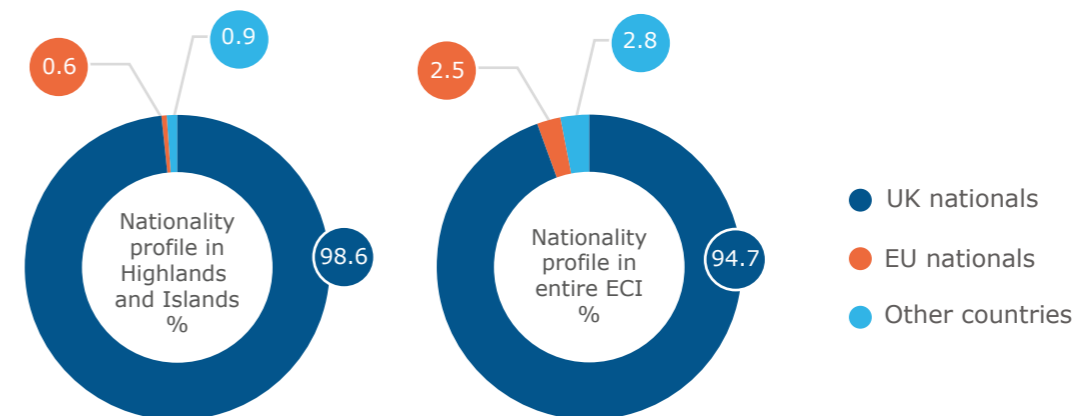
**Figure 9: Gender profile of the ECI workforce in the Highlands and Islands**



**Figure 8: Ethnicity profile of the ECI workforce in the Highlands and Islands (scale in y-axis 90 to 100)**



**Figure 10: Nationality profile of the ECI workforce in the Highlands and Islands**



## North East Scotland (7.7% - 7,250 workers)

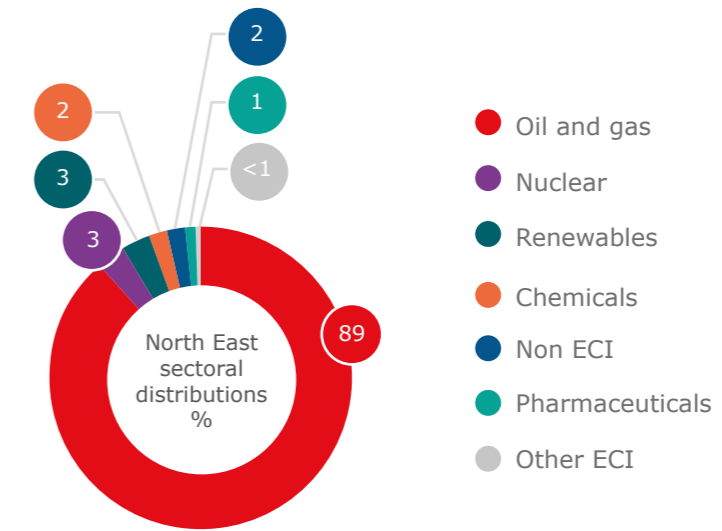
The ECI workforce in the North East is the largest in Scotland, and primarily works in the oil and gas sector (89%), with most personnel located in and around Aberdeen. Details on the offshore workforce are provided at the end of this report. Key roles in North East Scotland include subsea specialists, scaffolders, project engineers and managers, structural engineers and process engineers. Offshore wind, oil and gas, hydrogen and carbon capture and storage are identified as the biggest growth opportunities for the region, with nuclear, energy from waste and petrochemicals also presenting growth potential, though to a lesser extent.

Employers in the North East report that positions such as senior engineers, structural designers and engineers, piping designers and engineers, instrument technicians, process engineers, pipefitters and welders are among the most difficult to recruit. This challenge is attributed to a shortage of skills, a competitive local labour market, the niche nature of some roles and limited resources to offer competitive salaries.

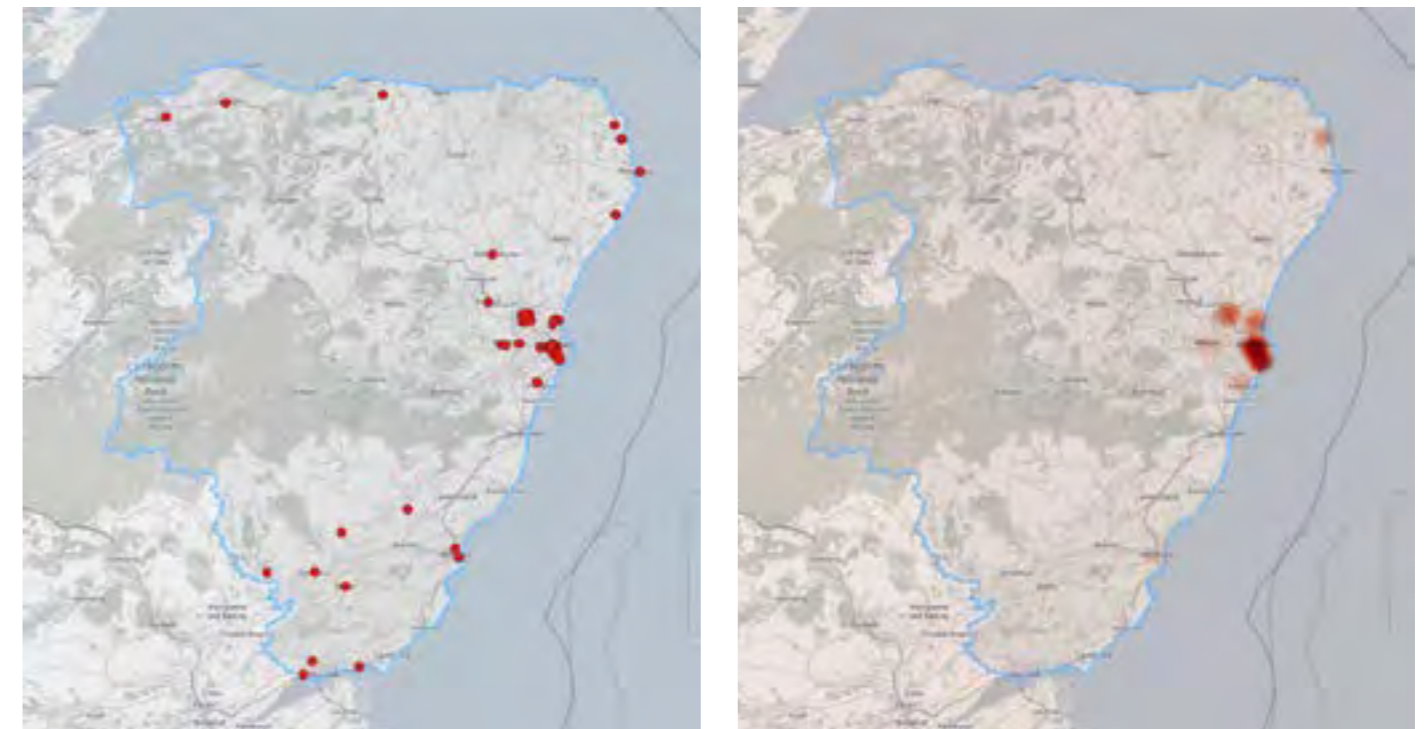
Additionally, some employers note the reduced attractiveness of oil and gas compared to other industries as a concern. The region expects a 12% increase in headcount by 2027, aligning with broader ECI growth expectations.

The North East ECI workforce is less represented in the under-30 age categories than the wider ECI and regional active population. However, there is stronger representation in the 30-49 and 60+ age groups. Women constitute 26% of the regional ECI workforce, exceeding the wider ECI by ten percentage points.<sup>4</sup>

Figure 11: Sectoral distribution of the workforce in the North East Scotland



Maps 5 and 6: Location of workers in North East Scotland (data points and heatmap)

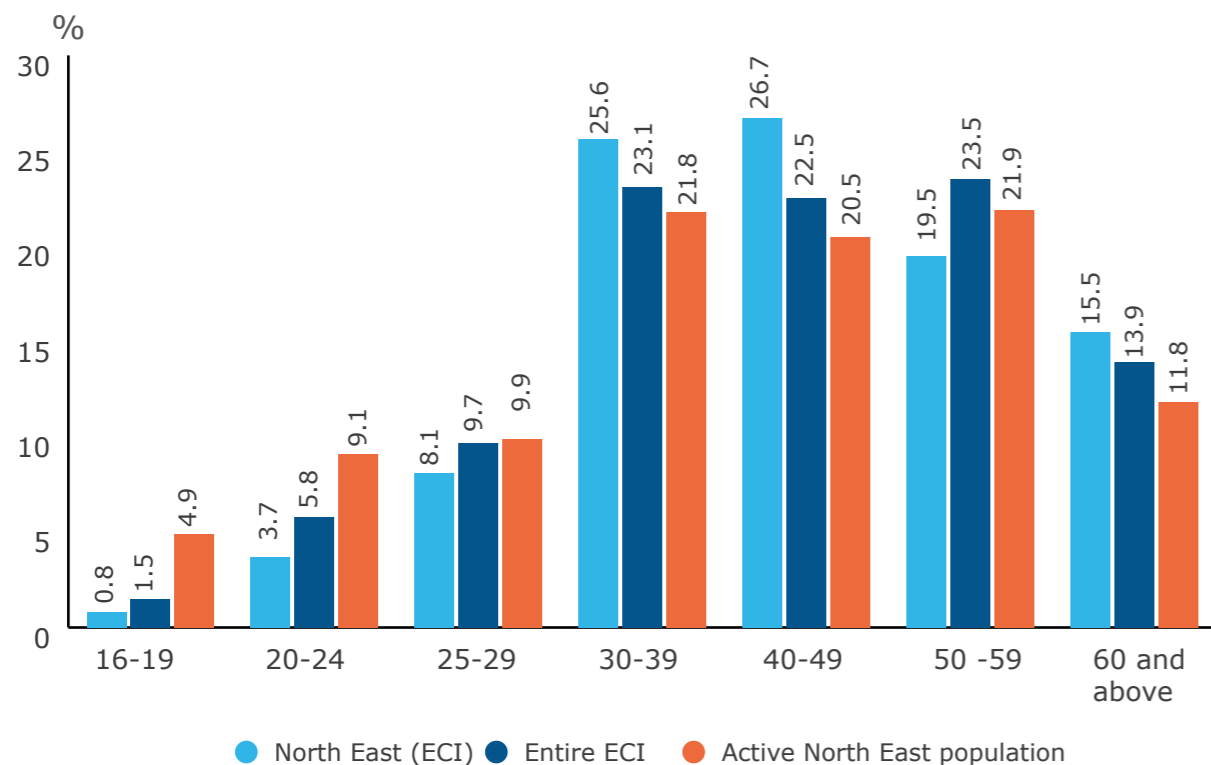


<sup>4</sup> Ethnicity data for the North East is based on very limited information and is therefore not reported in detail. Limited findings, which should be interpreted with caution, suggest that the ECI workforce may be more ethnically diverse than the regional active population. This would align with the key geographical hotspot in Aberdeen, which has a more ethnically diverse population than other areas in the region.

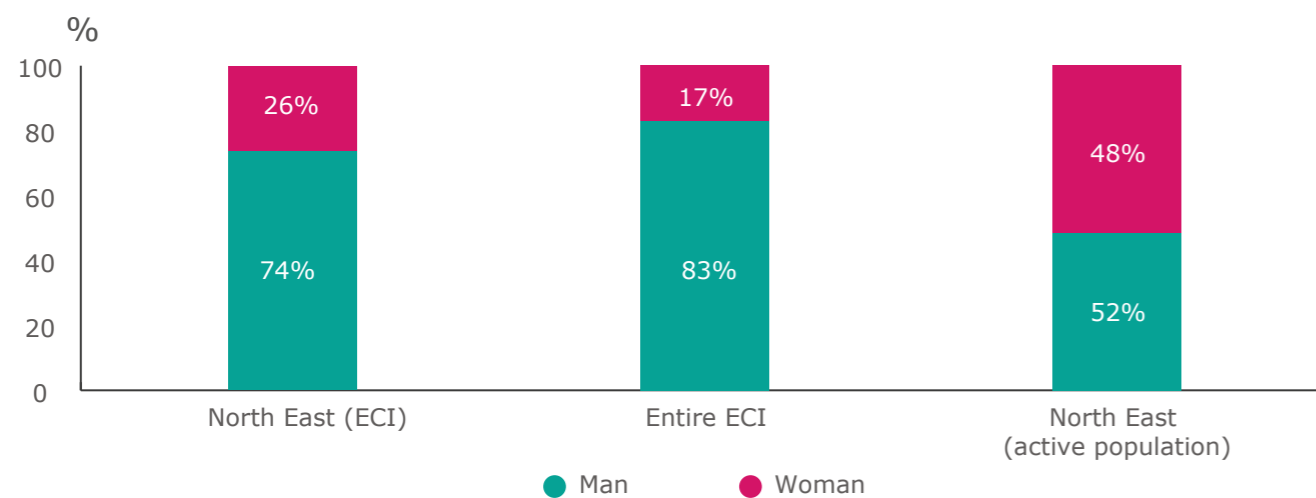
**Table 2: Workforce in North East Scotland by occupation**

<b>Apprentices and trainees</b>	<b>87</b>	<b>Managers</b>	<b>1,511</b>	<b>Professionals</b>	<b>1,020</b>	<b>Support</b>	<b>847</b>
Instrumentation and control apprentices and trainees	12	Project managers	218	Planning professionals	120	Finance support	241
Other apprentices and trainees	75	Operations managers	105	Procurement professionals	99	Administrative support	119
<b>Craft</b>	<b>432</b>	Commercial managers	93	Health and safety professionals	83	Commercial support	89
Scaffolding craft	217	Finance managers	82	Data and analysis professionals	73	Logistics support	82
Blasters and painters (rope access) craft	40	General managers	74	Document controls professionals	72	Human resources support	76
Rigging craft	20	Construction managers	66	Cost controls professionals	56	Project management support	42
Mechanical fitting craft	19	Other directors	66	Quality assurance/quality controls professionals	47	Health and safety support	31
Welding craft	19	Process managers	57	Project controls professionals	45	Personal assistants support	22
Pipefitting craft	18	Engineering managers	50	Human resources professionals	44	IT support	18
Blasters and painters craft	13	Human resources managers	48	Technologists professionals	44	Supply chain support	15
Other craft	86	Presidents	45	IT professionals	41	Legal and compliance support	13
<b>Engineers</b>	<b>1,656</b>	Health and safety managers	44	Legal and compliance professionals	36	Project controls support	13
Project engineers	206	Maintenance managers	42	Other consultants professionals	35	Training support	11
Structural engineers	173	Quality assurance/quality controls managers	41	Learning and development professionals	25	Facilities management support	11
Process engineers	141	Planning managers	37	Construction professionals	24	Other support	64
Mechanical engineers	123	Learning and development managers	33	Estimating professionals	18	<b>Technicians</b>	<b>921</b>
Instrumentation and control engineers	120	Supply chain managers	32	Commercial professionals	17	Subsea technicians	138
Piping engineers	92	Legal and compliance managers	31	Contracts professionals	15	Design (piping) technicians	85
Integrity engineers	91	Project controls managers	27	Supply chain professionals	13	Non-destructing testing technicians	75
Electrical engineers	82	Communications managers	26	Environmental professionals	12	General technicians	70
<b>Health and safety engineers</b>	<b>48</b>	IT managers	25	Other professionals	103	Design (structural) technicians	67
Wells engineers	38	Site managers	19	<b>Semi-skilled</b>	<b>213</b>	Electrical technicians	46
Commissioning engineers	37	Estimating managers	17	General operatives semi-skilled	106	Process technicians	42
Cost engineers	36	Document controls managers	14	Cleaning semi-skilled	20	Quality assurance/quality controls technicians	37
Design engineers	34	Procurement managers	13	Logistics semi-skilled	12	Mechanical technicians	35
Maintenance engineers	33	Data and analysis managers	12	Scaffolding semi-skilled	12	Operations technicians	33
Quality assurance/quality controls engineers	31	Project (risk) managers	12	General operatives (rope access) semi-skilled	11	Instrumentation and control technicians	31
Construction engineers	30	Contracts managers	11	Other semi-skilled	52	Material control technicians	28
IT engineers	27	Proposals managers	11	<b>Supervisors</b>	<b>285</b>	Design (instrumentation) technicians	27
Insulation engineers	24	Marketing managers	11	General supervisors	36	Design technicians	26
Civil and structural engineers	22	Other managers	146	General (rope access) supervisors	19	Surveyors technicians	25
Subsea engineers	22			Maintenance supervisors	19	Production technicians	21
Drilling engineers	21			Construction supervisors	16	Maintenance technicians	17
Pipeline engineers	18			Scaffolding supervisors	16	Design (electrical) technicians	15
Systems engineers	17			Design (piping) supervisors	15	Logistics technicians	14
Operations engineers	13			Design (structural) supervisors	15	General (rope access) technicians	13
Insulation (rope access) engineers	12			Lifting supervisors	13	Materials technicians	13
Data and analysis engineers	12			Other supervisors	137	Other technicians	62
Other engineers	153					<b>Other</b>	<b>282</b>

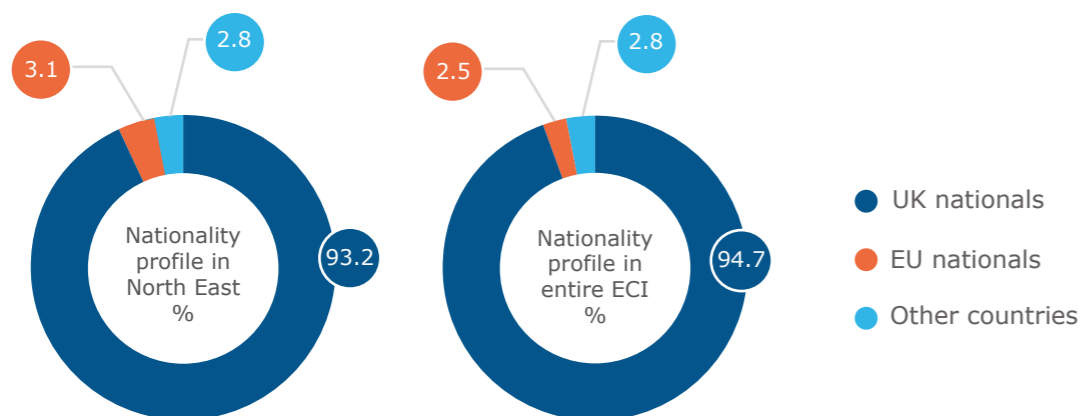
**Figure 12: Age profile of the ECI workforce in North East Scotland**



**Figure 13: Gender profile of the ECI workforce in North East Scotland**



**Figure 14: Nationality profile of the ECI workforce in North East Scotland**



**East Scotland (3% - 2,800 workers)**

East Scotland’s<sup>5</sup> engineering construction workforce primarily focuses on oil and gas (65%) and nuclear (20%) projects, with food and drink, chemicals and renewables each representing less than 5%. Grangemouth is the primary hotspot in the region, with smaller concentrations in Cowdenbeath, Kirkcaldy and Torness. The workforce is significantly underrepresented in managers, professionals and support staff, with a greater focus on craft and semi-skilled roles. Key roles include scaffolders, pipefitters, labourers, operators and insulators.

expect a 23% increase in headcount over the next three years – among the highest growth expectations across Great Britain. It is worth noting that these expectations are not forecasts and that bidding and competition in the labour market could impact each employer’s ability to meet them. However, these insights shed light on economic dynamics, particularly when compared between regions and paired with business opportunities.

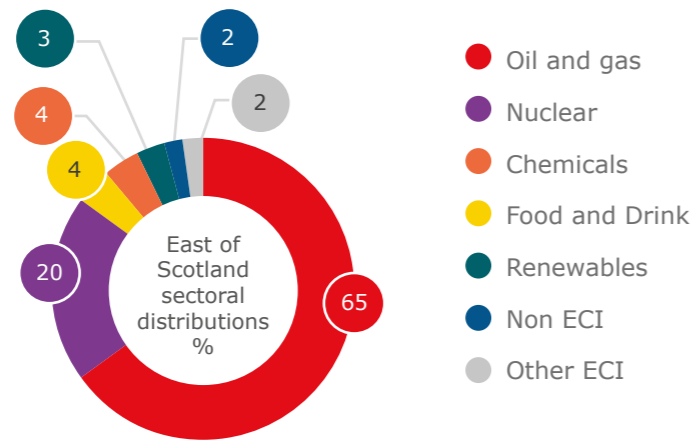
Companies with a strong presence in the region cite a competitive labour market as the main hiring challenge, especially for niche roles requiring highly specific skills. Fabricators, mechanical designers, welders, process engineers and maintenance engineers are particularly difficult to recruit.

The optimistic growth expectations are tempered by the workforce’s age profile, with 21.3% of the regional ECI workforce aged over 60, compared to 13.9% in the broader ECI and 11.2% in the local active population. This aging trend highlights the need to attract new workers to address the anticipated retirement wave. Women make up only 5.4% of the workforce, reflecting the predominance of craft roles, which remain significantly male-dominated (see the overarching Census report, Demographics section). Reliance on foreign labour is minimal, with 98.9% of the workforce holding a UK citizenship<sup>6</sup>.

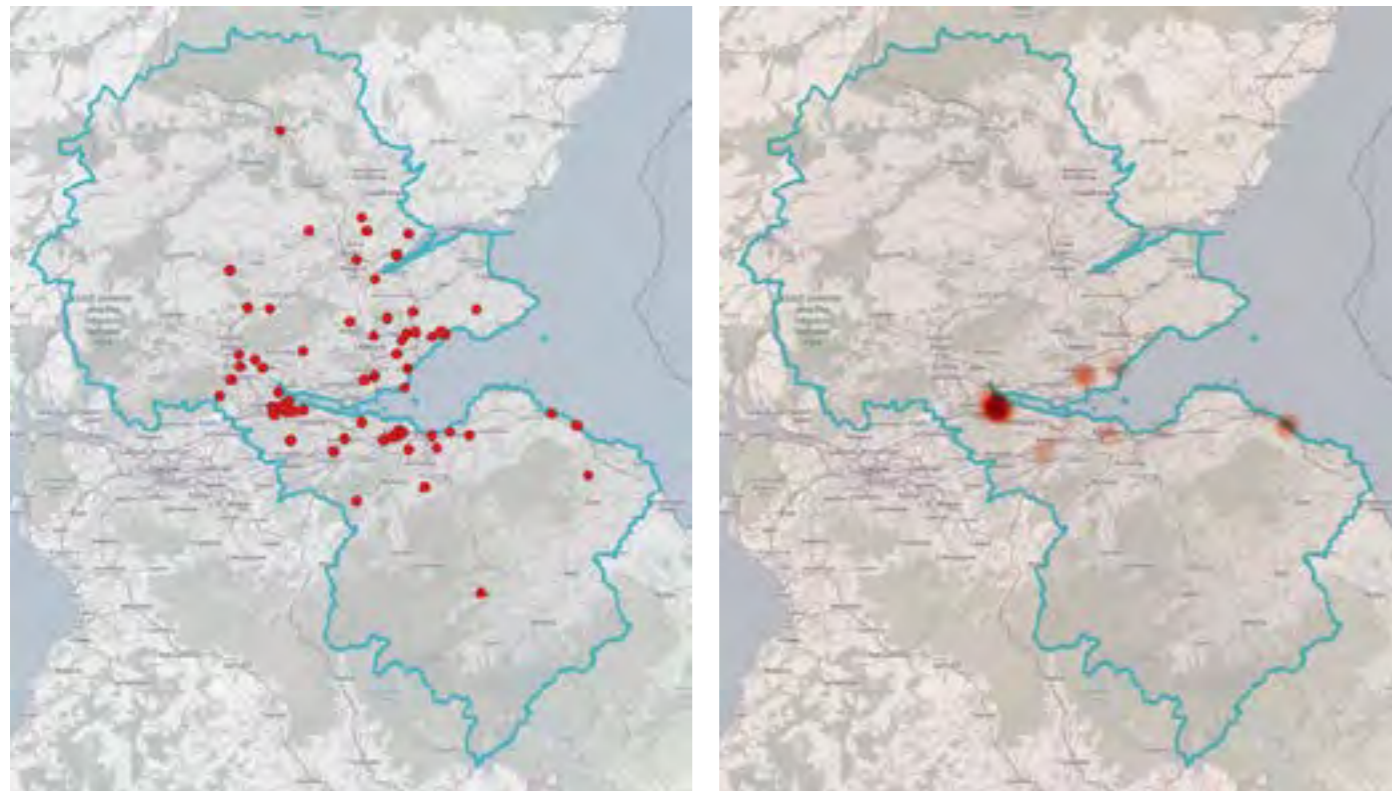
According to employers, offshore and onshore wind present the most significant growth opportunities in the region, while sectors like energy from waste, carbon capture, hydrogen and oil and gas also hold potential to a lesser extent. Employers

<sup>5</sup> Eastern Scotland is defined as the region encompassing the local authority areas from Angus and Perthshire to Roxburghshire. Exact boundaries are illustrated in maps 7 and 8. The ECITB welcomes requests for alternative geographical delineations and will evaluate them on a case-by-case basis.  
<sup>6</sup> Ethnicity data for the East is based on very limited information and is therefore not reported in detail. Limited findings, which should be interpreted with caution, suggest that the ECI workforce may be aligned with the general population of the region.

**Figure 15: Sectoral distribution of the workforce in East Scotland**



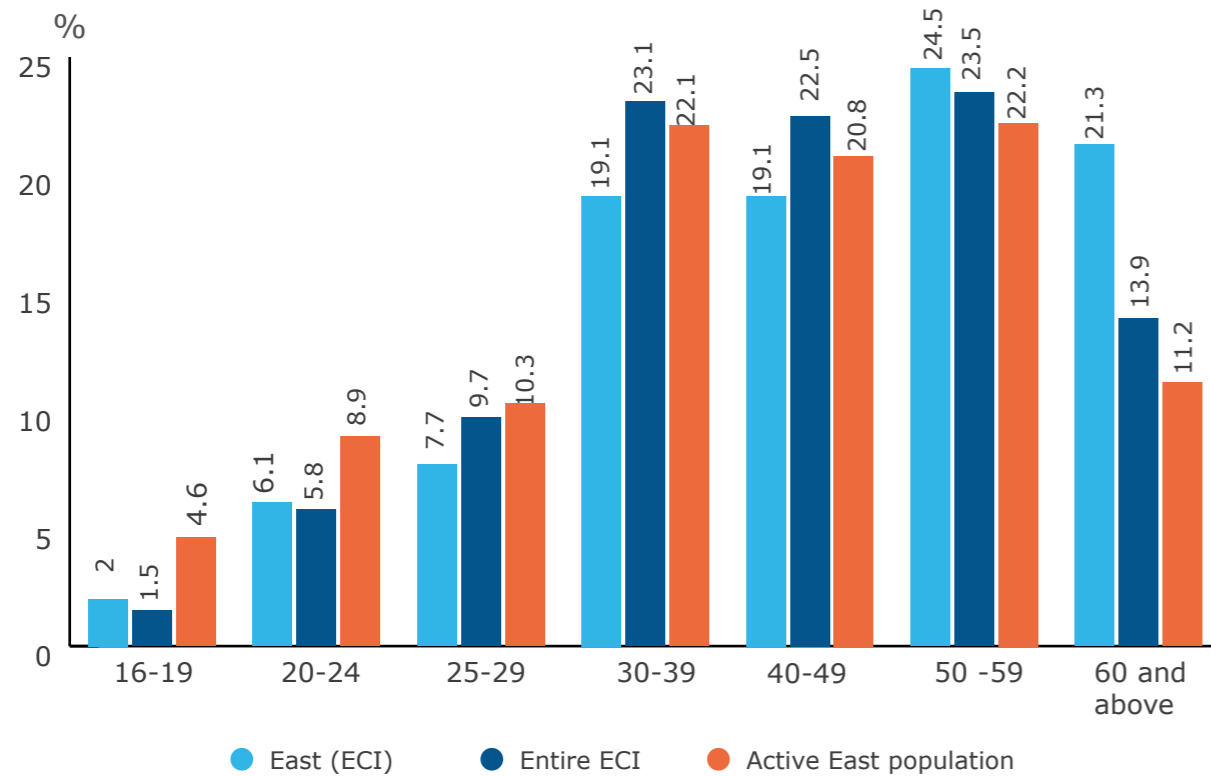
**Maps 7 and 8: Location of workers in East Scotland (data points and heatmap)**



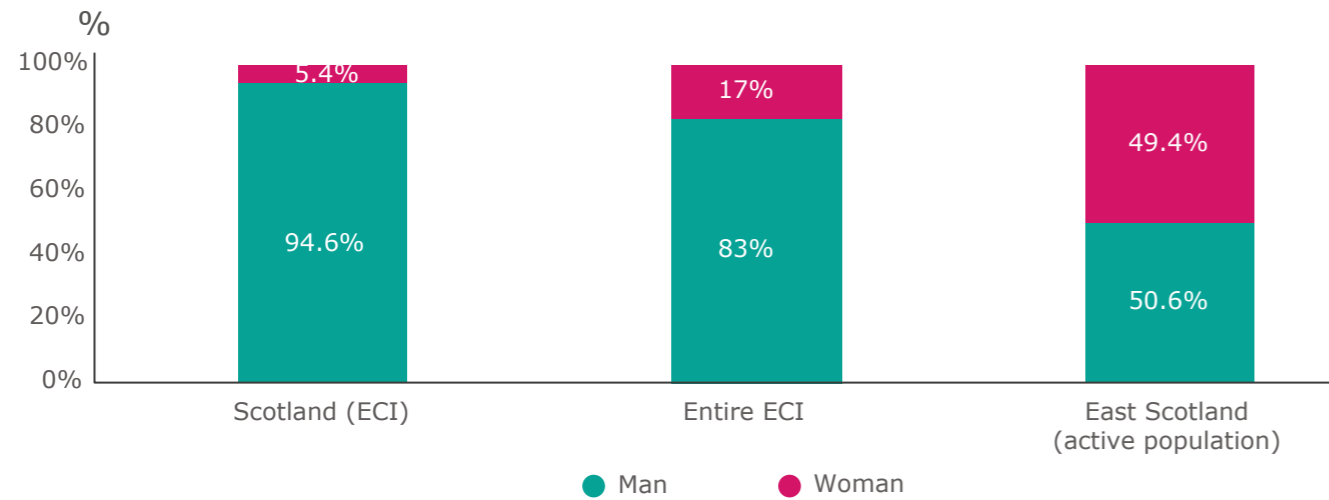
**Table 3: Workforce in East Scotland by occupation**

<b>Apprentices and trainees</b>	<b>103</b>	<b>Professionals</b>	<b>116</b>
Pipefitting apprentices and trainees	20	Planning professionals	29
Welding apprentices and trainees	15	Project controls professionals	19
Production technicians apprentices and trainees	13	Health and safety professionals	15
Other apprentices and trainees	55	Quality assurance/quality controls professionals	13
<b>Craft</b>	<b>787</b>	Other professionals	40
Scaffolding craft	334	Semi-skilled	440
Pipefitting craft	105	Scaffolding semi-skilled	170
Blasters and painters craft	62	Labourers semi-skilled	84
Welding craft	60	Operators semi-skilled	51
Steel erecting craft	48	General operatives semi-skilled	32
Rigging craft	38	Asbestos removal semi-skilled	24
Mechanical fitting craft	32	Insulation semi-skilled	24
Plating craft	24	Cleaning semi-skilled	16
Grinders craft	16	Drivers semi-skilled	15
Other craft	68	Other semi-skilled	23
<b>Engineers</b>	<b>513</b>	<b>Supervisors</b>	<b>347</b>
Insulation engineers	166	Insulation supervisors	43
Project engineers	52	General supervisors	40
Structural engineers	49	Facilities management supervisors	35
Electrical engineers	36	Scaffolding supervisors	31
Process engineers	34	Welding supervisors	27
Mechanical engineers	27	Pipefitting supervisors	25
Instrumentation and control engineers	15	Electrical supervisors	20
Design engineers	15	Mechanical fitting supervisors	17
Other engineers	118	Steel erecting supervisors	13
Managers	231	Blasters and painters supervisors	11
Project managers	62	Plating supervisors	11
General managers	28	Other supervisors	74
Site management managers	27	<b>Support</b>	<b>84</b>
Commercial managers	16	Administrative support	50
Operations managers	13	Other support	35
Construction managers	11	<b>Technicians</b>	<b>169</b>
Engineering managers	11	Non-destructing testing technicians	33
Health and safety managers	11	Electrical technicians	32
Other managers	53	Quality assurance/quality controls technicians	29
		General technicians	23
		Other technicians	51
		<b>Other</b>	<b>7</b>

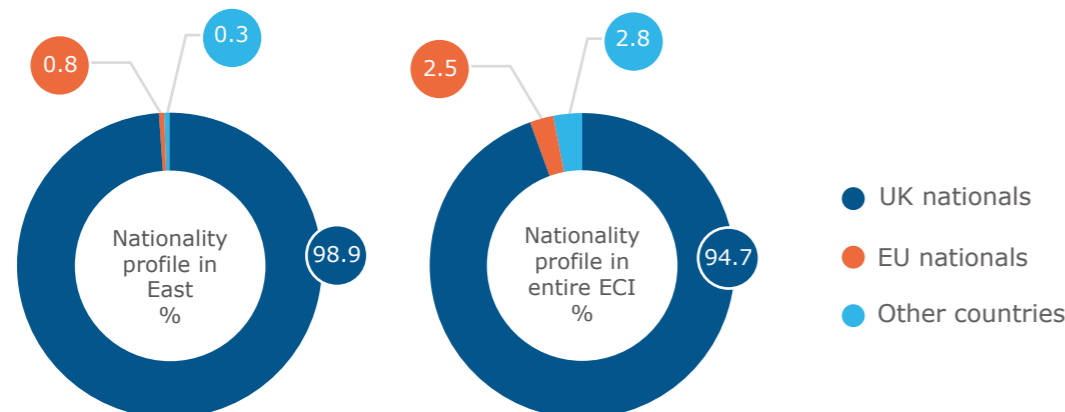
**Figure 16: Age profile of the ECI workforce in East Scotland**



**Figure 17: Gender profile of the ECI workforce in East Scotland**



**Figure 18: Nationality profile of the ECI workforce in East Scotland**



**West and South West Scotland (3.8% - 3,600 workers)**

The nuclear sector is the primary employer in the engineering construction industry in West and South West<sup>7</sup> Scotland (54%), followed by oil and gas (23%). The renewables, food and drink and water and waste treatment sectors each account for 7% of the workforce, while they represent 6.2%, 1.8% and 2.9% of the workforce across Great Britain, respectively. Key workforce hotspots in the region include Glasgow and surrounding areas, including the towns of West Kilbride, Kilmarnock and Annan. The regional workforce is significantly concentrated in engineering roles, with mechanical, process, project and electrical engineers being among the most common roles.

Employers face several hiring challenges, with lack of experience being the most frequently cited issue. Additional challenges include lack of qualifications, the niche nature of some roles and limited resources to offer competitive wages. Hard-to-fill roles include planners, risk managers, pipefitters, welders, electrical craft and civil engineers.

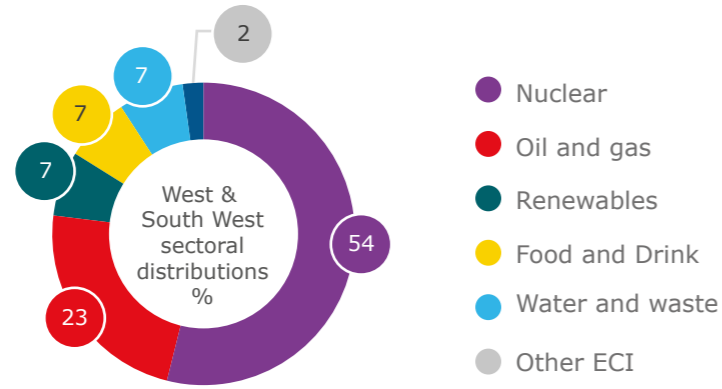
The nuclear sector is considered a major growth opportunity in the region. Other promising sectors include biofuels, biomass and defence. Hydrogen has also sparked some interest, though most employers see only a limited likelihood of expanding in this sector. Employers in the Southwest project a headcount increase of 15%, slightly above the national average of 12%.

The regional ECI workforce aligns well with the local active population in age groups 25 to 59. However, only 5.7% of the workforce is under 25, compared to 7.3% across the entire ECI and 13.7% in the regional active population. Workers aged 60 and over are overrepresented at 15.7%, compared to 13.9% for the ECI and 11.3% for the local active population. The workforce is also less ethnically diverse than both the entire ECI and the local population. With 80.8% of the workforce being male, the region shows slightly better gender representation than the overall industry (83%). The ECI workforce in the Southwest has a somewhat greater reliance on foreign workers compared to the ECI as a whole. Although the region employs fewer EU nationals than average, 6.1% of the workforce holds nationalities outside of the UK and EU.

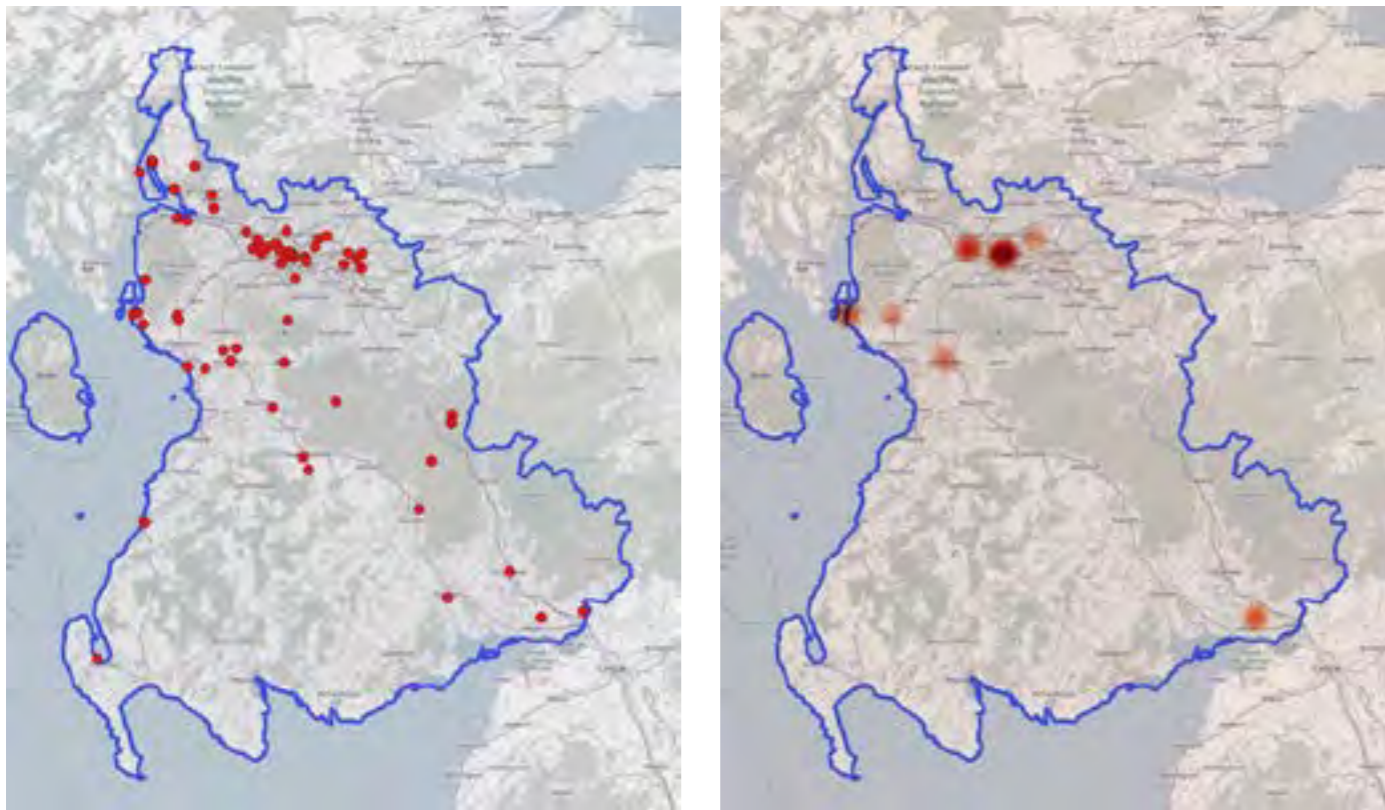
<sup>7</sup> West and South West Scotland is defined as the area encompassed by the local authority regions of Dunbartonshire, Dumfriesshire and Wigtownshire, forming a triangular boundary. Exact borders are illustrated in maps 9 and 10. The ECITB welcomes requests for alternative geographical delineations and will evaluate them on a case-by-case basis.



**Figure 19: Sectoral distribution of the workforce in West and South West Scotland**



**Maps 9 and 10: Location of workers in West and South West Scotland (data points and heatmap)**



**Table 4: Workforce in West and South West Scotland by occupation**

<b>Apprentices and trainees</b>	<b>71</b>	<b>Managers</b>	<b>721</b>
Health physics apprentices and trainees	11	Project managers	189
Other apprentices and trainees	60	Other directors	48
<b>Craft</b>	<b>276</b>	Operations managers	45
Scaffolding craft	88	Commercial managers	37
Pipefitting craft	54	Process managers	27
Welding craft	32	Health and safety managers	25
Mechanical fitting craft	32	Engineering managers	25
Electrical craft	14	Finance managers	23
Welding and fabricators craft	10	General managers	23
Other craft	46	Site management managers	21
<b>Engineers</b>	<b>1,064</b>	Project controls managers	17
Mechanical engineers	168	Technical management managers	17
Project engineers	154	Human resources managers	16
Process engineers	132	Quality assurance/quality controls managers	16
Electrical engineers	78	Planning managers	15
Systems engineers	50	Construction managers	13
Civil engineering engineers	49	Presidents	11
Instrumentation and control engineers	45	Proposals managers	11
Piping engineers	41	Other managers	141
Civil and structural engineers	29	<b>Professionals</b>	<b>446</b>
Health and safety engineers	26	Electrical professionals	58
Cost engineers	24	Planning professionals	49
Site engineers	21	Data and analysis professionals	40
Structural engineers	21	Health physics professionals	33
Radiological protection engineers	20	Project controls professionals	28
Insulation engineers	19	Document controls professionals	25
Safety case engineers	18	Environmental professionals	22
Waste engineers	17	Health and safety professionals	20
Commissioning engineers	15	Quantity surveyors professionals	18
Maintenance engineers	14	Technologists professionals	18
Operations engineers	13	Other consultants professionals	15
Electrical, instrumentation and control engineers	11	Procurement professionals	14
Automation engineers	10	Quality assurance/quality controls professionals	13
Other engineers	89	Other professionals	93

Semi-skilled		Technicians	
General operatives semi-skilled	44	Design technicians	73
Scaffolding semi-skilled	17	General technicians	56
Security semi-skilled	17	Radiological protection technicians	25
Labourers semi-skilled	13	Design (piping) technicians	22
Other semi-skilled	28	Safety technicians	21
Supervisors		Other	
Scaffolding supervisors	28	Electrical technicians	19
General supervisors	16	Production technicians	13
Security supervisors	11	Commissioning technicians	12
Other supervisors	76	Production (operations) technicians	12
Waste technicians	11	Design (electrical) technicians	11
Other technicians	96	Other technicians	96
Support		Other	
Administrative support	74	Other	96
Commercial support	40		
Health and safety support	36		
Finance support	35		
Facilities management support	11		
Other support	75		

Figure 20: Age profile of the ECI workforce in West and South West Scotland

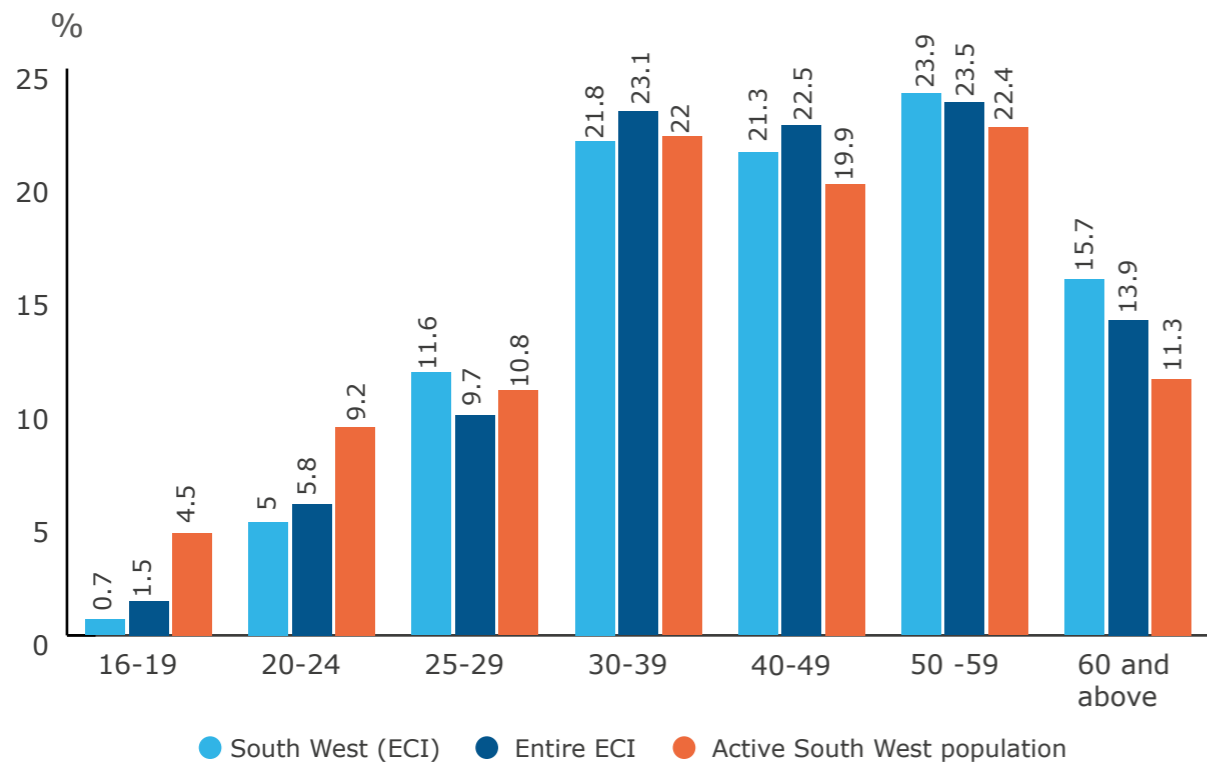


Figure 21: Ethnicity profile of the ECI workforce in West and South West Scotland (scale in y-axis 85 to 100)

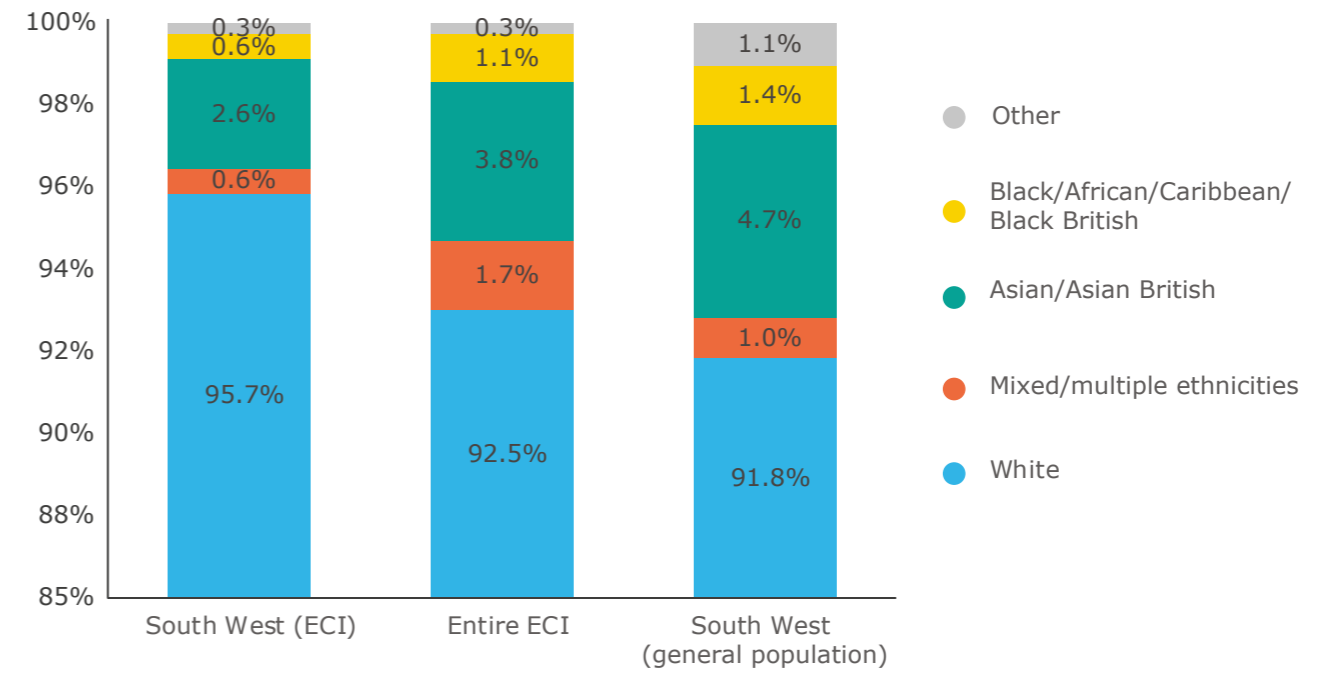


Figure 22: Gender profile of the ECI workforce in West and South West Scotland

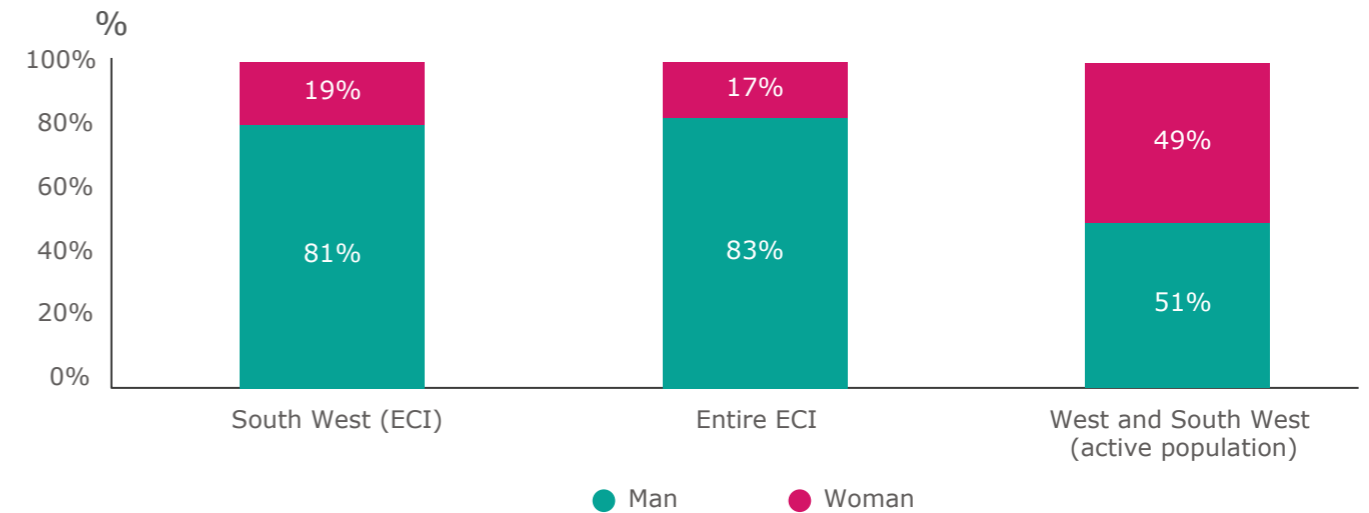
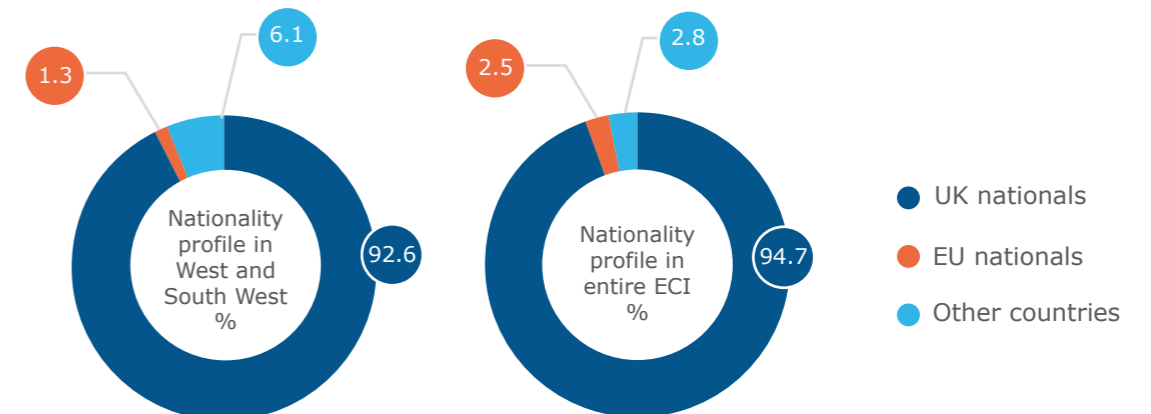


Figure 23: Nationality profile of the ECI workforce in West and South West Scotland



## England (70.7% - 67,050 workers)

The change of government at Westminster in May 2024 ushered in a series of policy interventions. Among these, Skills England<sup>8</sup> stands out as a flagship initiative aimed at addressing critical regional and sectoral skills shortages across the country. This policy highlights the urgent need to develop technical and vocational skills to support industries essential to England's economic and environmental objectives, such as clean energy, advanced manufacturing and infrastructure development. A key focus of Skills England is workforce readiness for emerging sectors, including hydrogen, carbon capture and nuclear energy. This framework underscores the importance of cross-industry collaboration, substantial investment in reskilling and modernised training pathways to bridge the skills gap and position England as a leader in green technology and industrial innovation.

This initiative aligns with the Government's broader industrial strategy, as outlined in the Invest 2035<sup>9</sup> green paper. The green paper sets out a roadmap for economic growth, emphasising innovation, sustainable infrastructure and the resilience of supply chains. Both Skills England and Invest 2035 underscore the vital role of the engineering construction industry in achieving these ambitions, with a particular focus on preparing the workforce for large-scale projects, such as hydrogen hubs, advanced nuclear facilities and expanded offshore wind capacity.

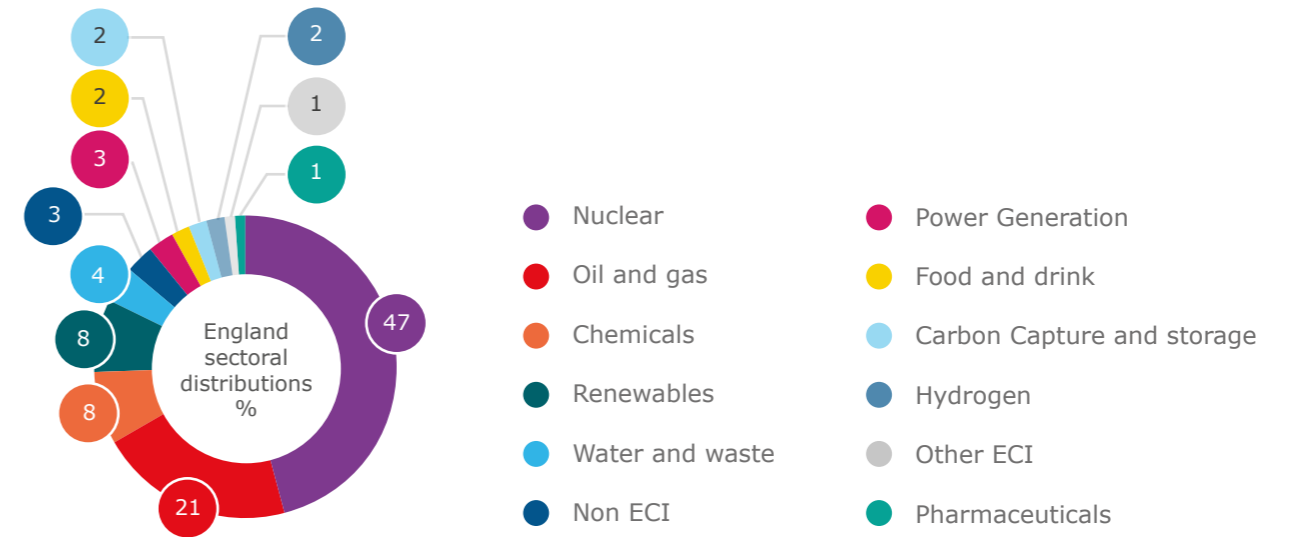
A central theme of these policies is the transition of workers from traditional, carbon-intensive industries to emerging green sectors. The documents also highlight the importance of fostering a more diverse and inclusive workforce, recognising that societal expectations and a competitive labour market necessitate proactive measures to attract underrepresented groups.

England employs 70.7% of the ECI workforce in Great Britain. The nuclear sector is the largest employer, representing 47% of the workforce, followed by oil and gas (21%), chemicals (8%) and renewables (8%). Within the renewables sector, biomass employs 26% of the workforce, followed by energy from waste (19%), biofuels (16%), offshore wind (16%), onshore wind (15%) and solar (9%). Major workforce hotspots include Cumbria, London, Reading, the Ellesmere Port-Warrington axis, Bridgwater, Bristol, the Humber estuary and Middlesbrough.

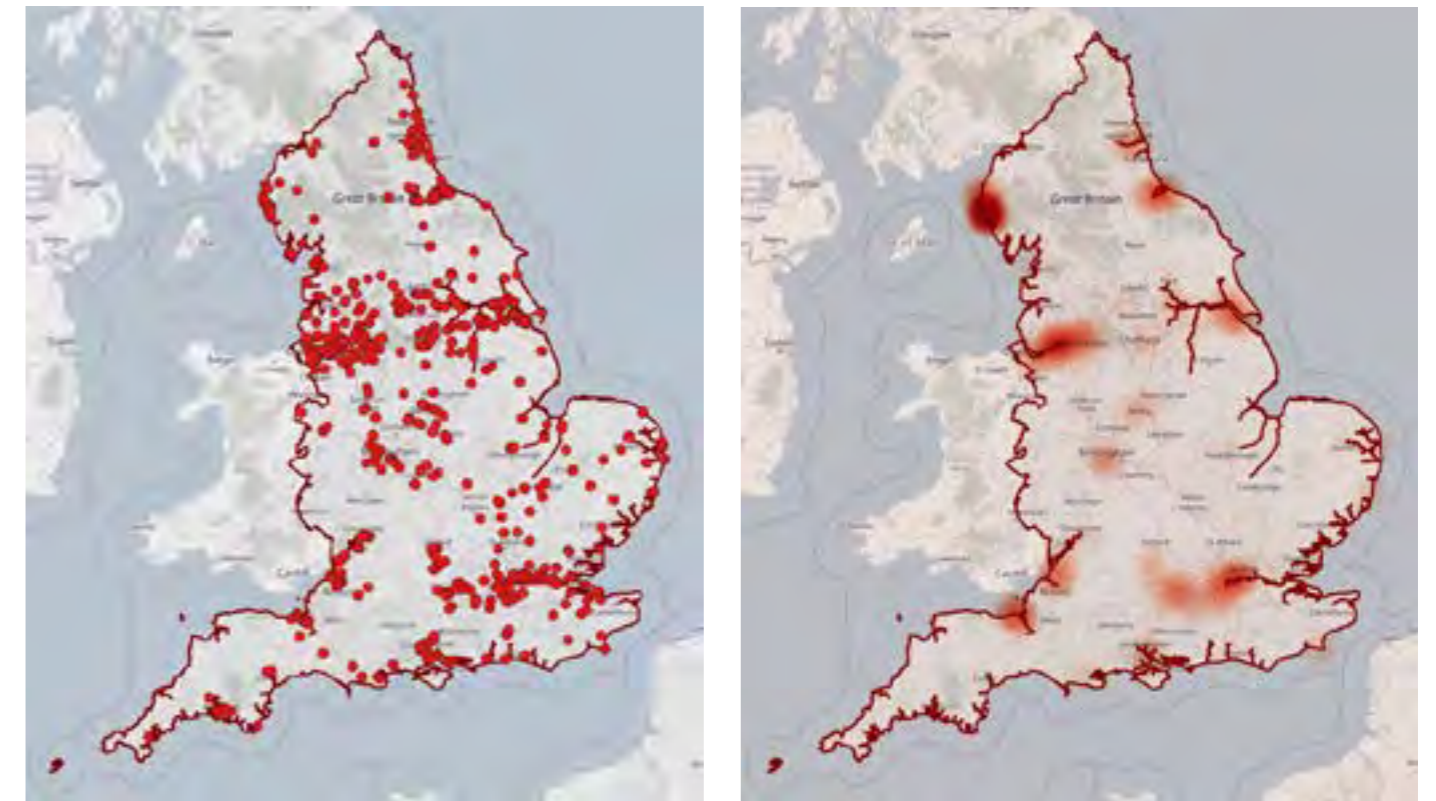
The share of ECI workers above 50 is 36.5%, higher than the active population in England (32.3%). Conversely, 18.8% of the ECI workforce in England is under 30, compared to 22% in the active population. The ECI workforce is less diverse than the general population, and 18% of the workforce are women.

The following pages provide a detailed analysis of regional differences across nine regions in England, covering sectoral and geographical distributions, occupations, demographics, business opportunities, hiring challenges and projected workforce growth.

Figure 24: Sectoral distribution of the workforce in England



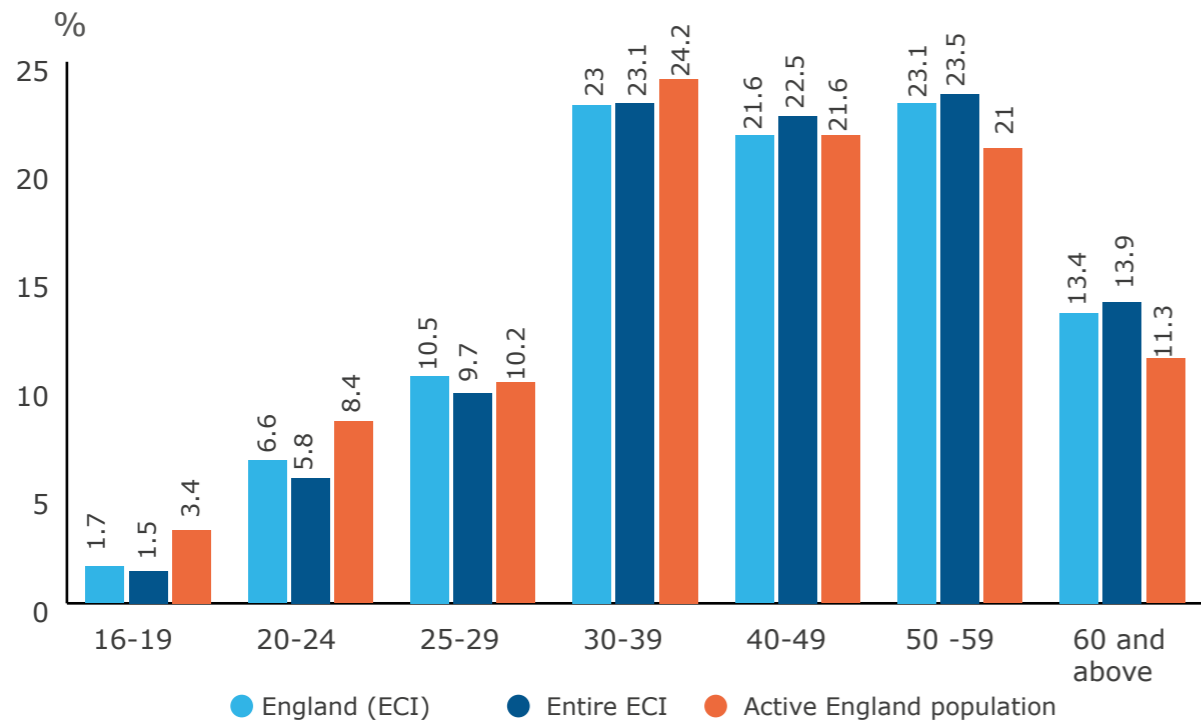
Maps 11 and 12: Location of workers in England (data points and heatmap)



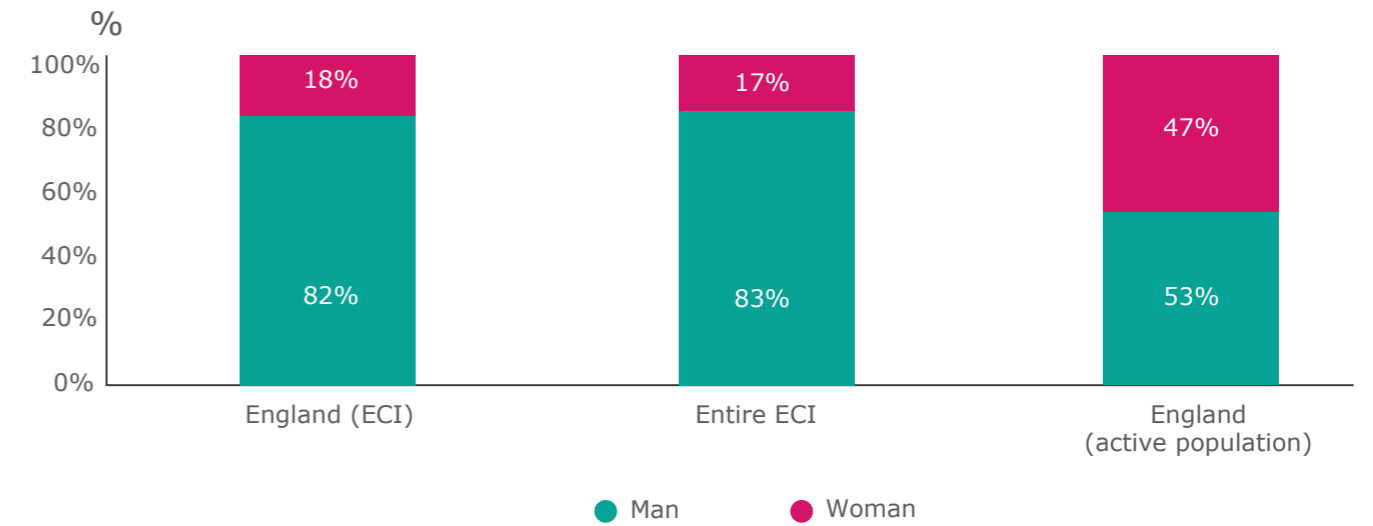
<sup>8</sup> Skills England: Driving growth and widening opportunities (Department for Education - 2024)

<sup>9</sup> Invest 2035: the UK's modern industrial strategy (Department for Business & Trade - 2024)

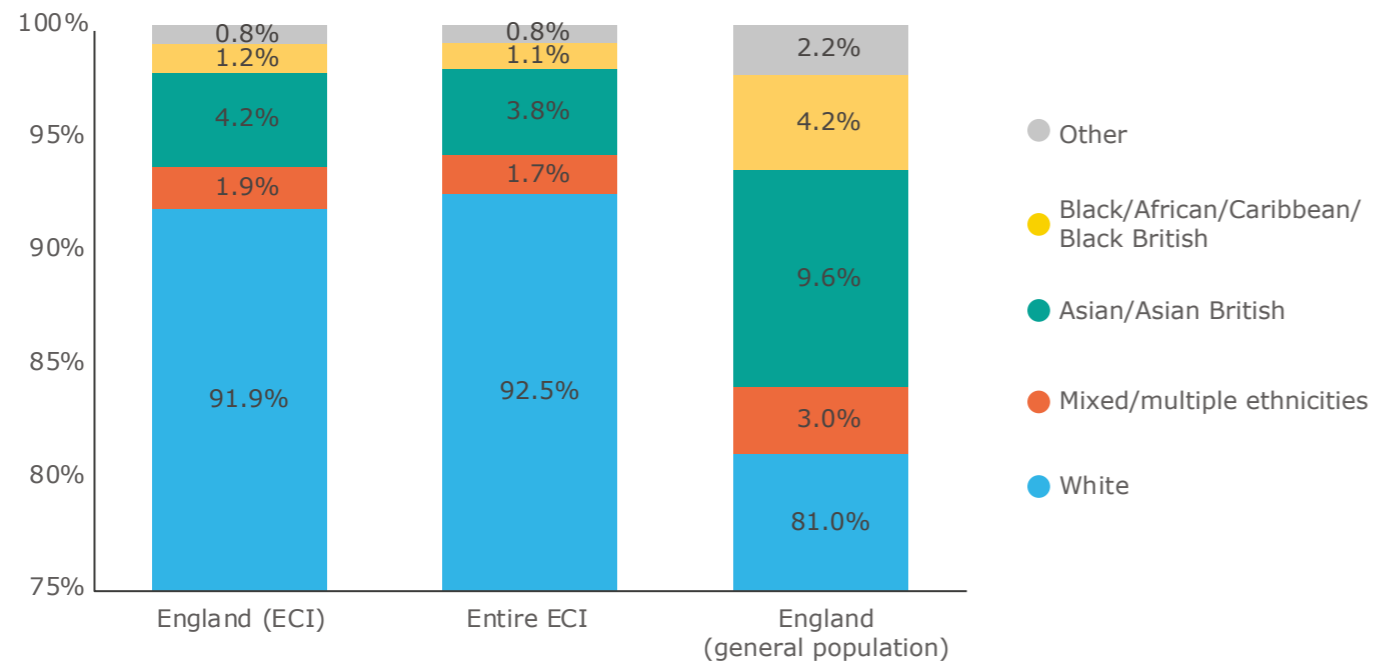
**Figure 25: Age profile of the ECI workforce in England**



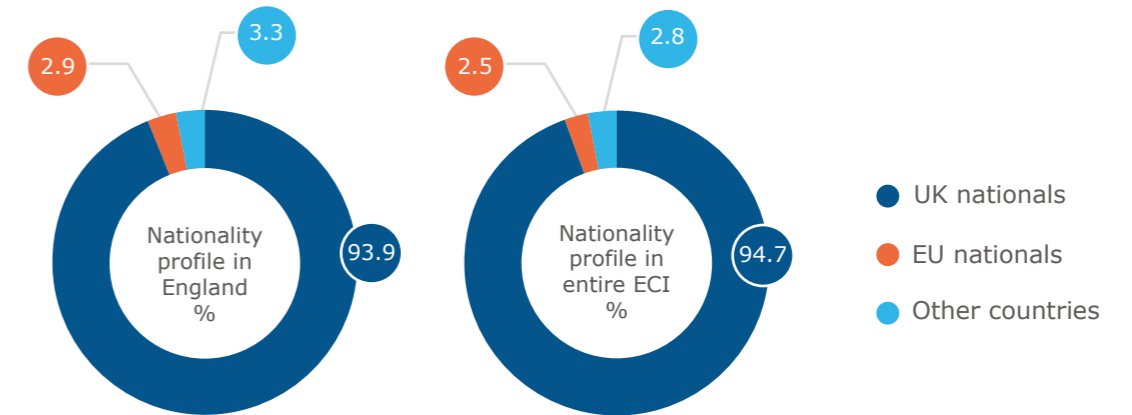
**Figure 27: Gender profile of the ECI workforce in England**



**Figure 26: Ethnicity profile of the ECI workforce in England (scale in y-axis 75 to 100)**



**Figure 28: Nationality profile of the ECI workforce in England**



## North West England (28.1% - 26,650 workers)

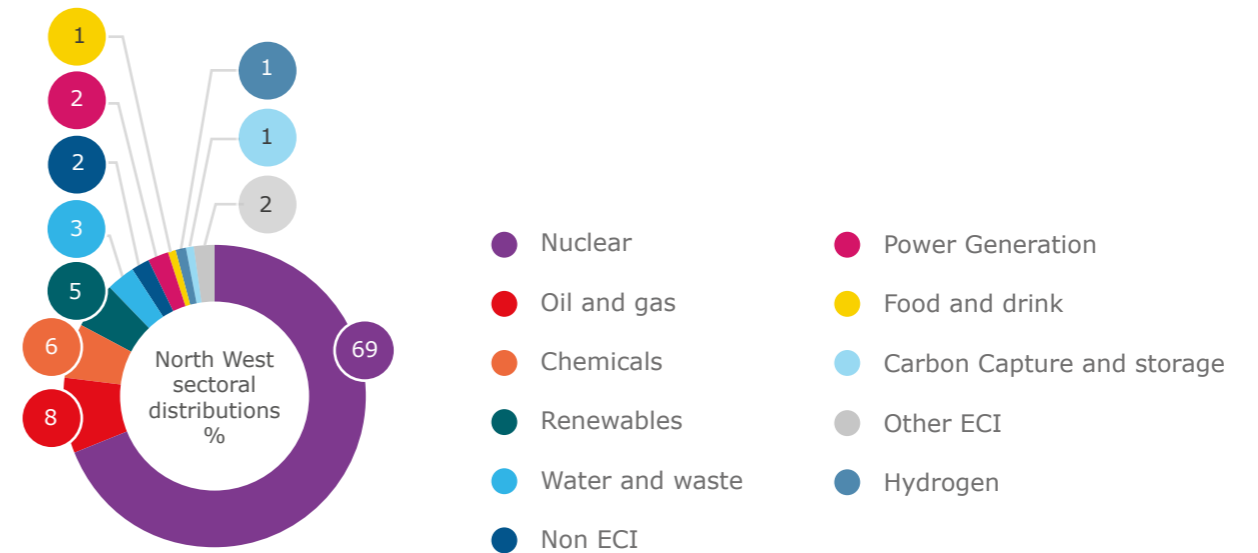
North West England has the largest ECI workforce across Great Britain by a significant margin. This workforce primarily operates in the nuclear sector (69%), with oil and gas (8%) and chemicals (6%) as secondary sectors. A closer look at the maps reveals that the hotspot in and around Warrington extends from Ellesmere Port up to Manchester, while Cumbria's hotspot is mainly concentrated near Seascale and along the coast up to Workington. The regional workforce has a higher proportion of professionals, managers and support roles compared to the wider ECI, reflecting the key role of off-site activities in the area. Key occupations among professionals include planning, data and analysis, quality assurance and control and waste management. Project managers, project engineers, general operatives and scaffolders are also prominent in the region.

Employers in the region who report recruitment challenges cite competition from other companies and a lack of qualifications as primary issues, with location and a lack of experience among applicants also posing challenges. Some employers note difficulties in meeting the expectations of potential new entrants. Roles such as design technicians and engineers, mechanical fitters and engineers, electricians, process engineers, structural and civil engineers, welders, pipefitters, riggers and health and safety specialists are particularly challenging to fill.

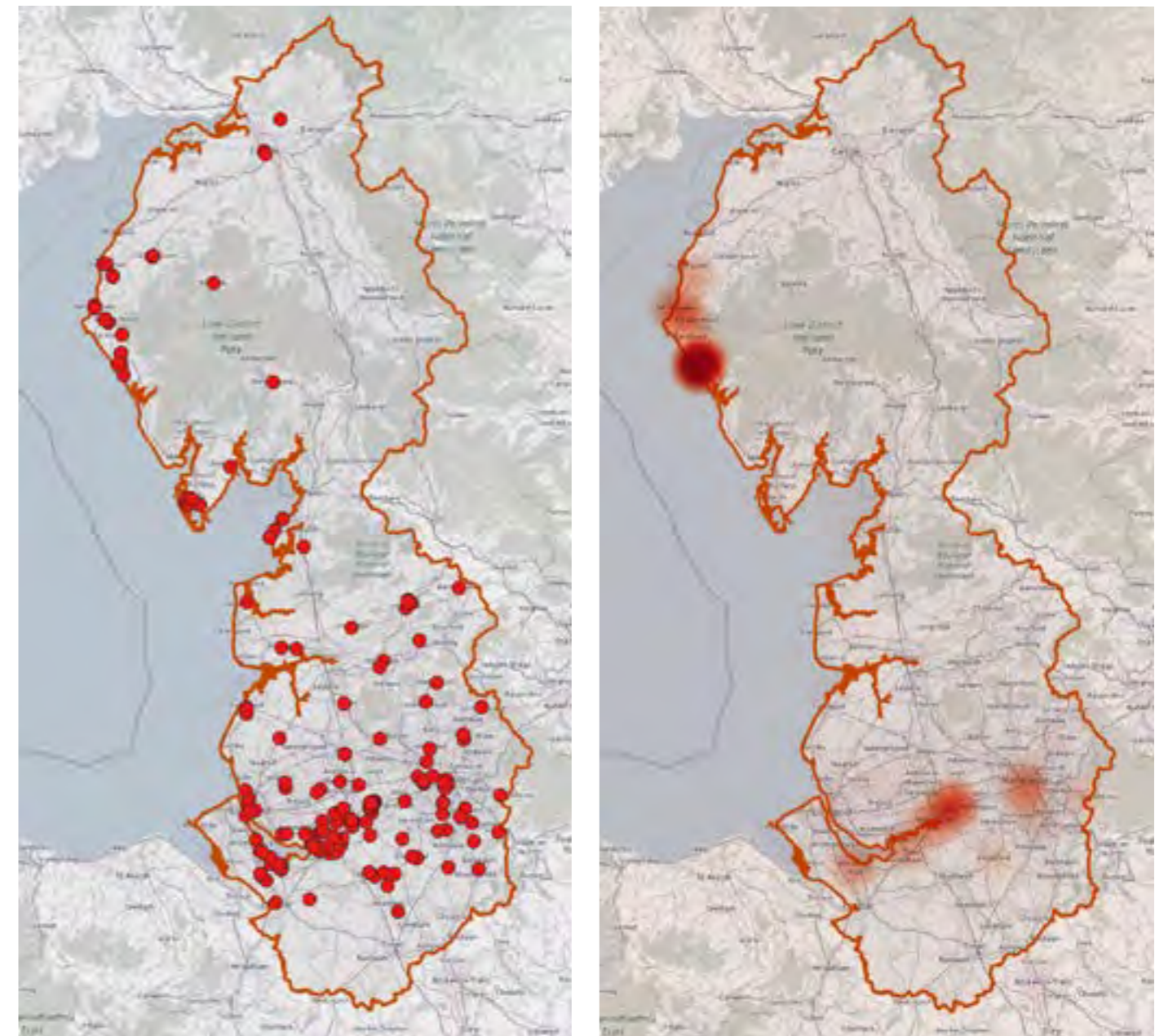
The nuclear sector is regarded as the primary growth opportunity, followed by hydrogen, oil and gas, petrochemicals, energy from waste and conventional power or heat generation. Opportunities in the latter may also involve carbon capture. The region anticipates an 8% aggregated growth in headcount by 2027, which, though one of the lowest projected growth rates, represents a significant increase in absolute numbers given that the North West accounts for 28% of the ECI workforce.

With 21.8% of the workforce under 30, compared to 17% for the wider ECI and 23.4% for the regional active population, the North West has one of the youngest ECI workforces. Additionally, only 10.3% of the workforce is above 60, aligning closely with the regional active population (and lower than the 13.9% in the wider ECI). The North West's ECI workforce is somewhat less ethnically diverse than the broader ECI and notably less diverse than the active population in the region. However, it is important to note that Cumbria – one of the main ECI hotspots – is 97.6% White, while the southern part of the region is more diverse. With 19% of the workforce being women, the gender distribution nearly mirrors that of the broader ECI. Finally, 97.6% of the workforce holds British nationality, compared to 94.7% in the wider ECI.

Figure 29: Sectoral distribution of the workforce in North West England



Maps 13 and 14: Location of workers in North West England (data points and heatmap)



**Table 5: Workforce in North West England by occupation**

<b>Apprentices and trainees</b>	<b>819</b>	<b>Craft</b>	<b>2,227</b>	Maintenance engineers	105	Finance managers	110
Electrical apprentices and trainees	93	Scaffolding craft	706	Civil engineering engineers	78	Supply chain managers	108
Maintenance apprentices and trainees	57	Pipefitting craft	312	Instrumentation and control engineers	74	Construction managers	96
Scaffolding apprentices and trainees	38	Blasters and painters craft	167	Structural engineers	72	Waste managers	96
IT apprentices and trainees	29	Mechanical fitting craft	146	Piping engineers	69	Quality assurance/quality controls managers	86
Project management apprentices and trainees	29	Electrical craft	134	Quality assurance/quality controls engineers	58	Project (IT) managers	75
Pipefitting apprentices and trainees	26	Welding craft	130	Nuclear engineers	56	Process managers	72
Instrumentation and control apprentices and trainees	26	Rigging craft	122	Construction engineers	56	Radiological protection managers	65
Health physics apprentices and trainees	24	Electrical fitters craft	93	Environmental engineers	55	Safety case managers	61
Welding apprentices and trainees	23	Steel erecting craft	72	Commissioning (mechanical) engineers	55	Maintenance managers	61
Nuclear apprentices and trainees	23	Joiners craft	64	Civil, structural and architectural engineers	50	Technologists managers	58
Other apprentices and trainees	19	Plating craft	55	Civil and structural engineers	49	Facilities management managers	57
Project controls apprentices and trainees	19	Welding and fabricators craft	21	IT engineers	39	Risk managers	56
Maintenance (mechanical) apprentices and trainees	18	Electrical fitting craft	20	Proposals engineers	29	Environmental managers	55
Radiological protection apprentices and trainees	18	Rigging (steel erectors) craft	19	Robotics engineers	26	Communications managers	55
Quantity surveyors apprentices and trainees	16	Welding and pipefitting craft	17	Asset management engineers	24	Testing managers	54
Health and safety apprentices and trainees	16	Blasters and painters (rope access) craft	16	Design (mechanical) engineers	23	Contracts managers	53
Electrical, instrumentation and control apprentices and trainees	14	Instrument pipefitters craft	12	HVAC engineers	23	Integration managers	50
Unidentified engineers apprentices and trainees	14	Fabrication craft	11	Compliance engineers	22	Design managers	46
Design apprentices and trainees	13	Other craft	109	Planning engineers	17	Procurement managers	41
Maintenance (electrical) apprentices and trainees	12	<b>Engineers</b>	<b>5,140</b>	Design (electrical) engineers	17	Legal and compliance managers	41
Quality assurance/quality controls apprentices and trainees	12	Project engineers	860	Materials engineers	16	Security managers	38
Production technicians apprentices and trainees	11	Mechanical engineers	405	Piping and mechanical engineers	14	Asset management managers	36
Civil engineering apprentices and trainees	11	Systems engineers	364	Testing engineers	11	Project (civil) managers	32
Mechanical fitting apprentices and trainees	11	Process engineers	255	Integration engineers	11	Project (commercial) managers	29
Other apprentices and trainees	247	Waste engineers	233	Non-destructing testing engineers	11	Administrative managers	26
		Electrical, instrumentation and control engineers	229	Project (mechanical) engineers	11	Strategy managers	26
		Site engineers	213	Other engineers	154	Cost controls managers	25
		Cost engineers	192	<b>Managers</b>	<b>5,647</b>	Commissioning managers	24
		Commissioning engineers	179	Project managers	1,407	Estimating managers	24
		Operations engineers	171	General managers	282	Technical management managers	22
		Design engineers	157	Other directors	250	Learning and development managers	20
		Radiological protection engineers	154	Operations managers	238	Systems managers	19
		Electrical engineers	141	Health and safety managers	216	IT (cybersecurity) managers	19
		Safety case engineers	131	Human resources managers	202	Marketing managers	18
		Insulation engineers	122	Commercial managers	198	Civil engineering managers	18
		Health and safety engineers	112	Engineering managers	190	Project (EPC) managers	17
				Planning managers	148	Project engineering managers	17
				Site management managers	143	Decommissioning managers	16
				Project controls managers	121	Waste (supply chain) managers	16
				IT managers	111	Document controls managers	14
						Presidents	14

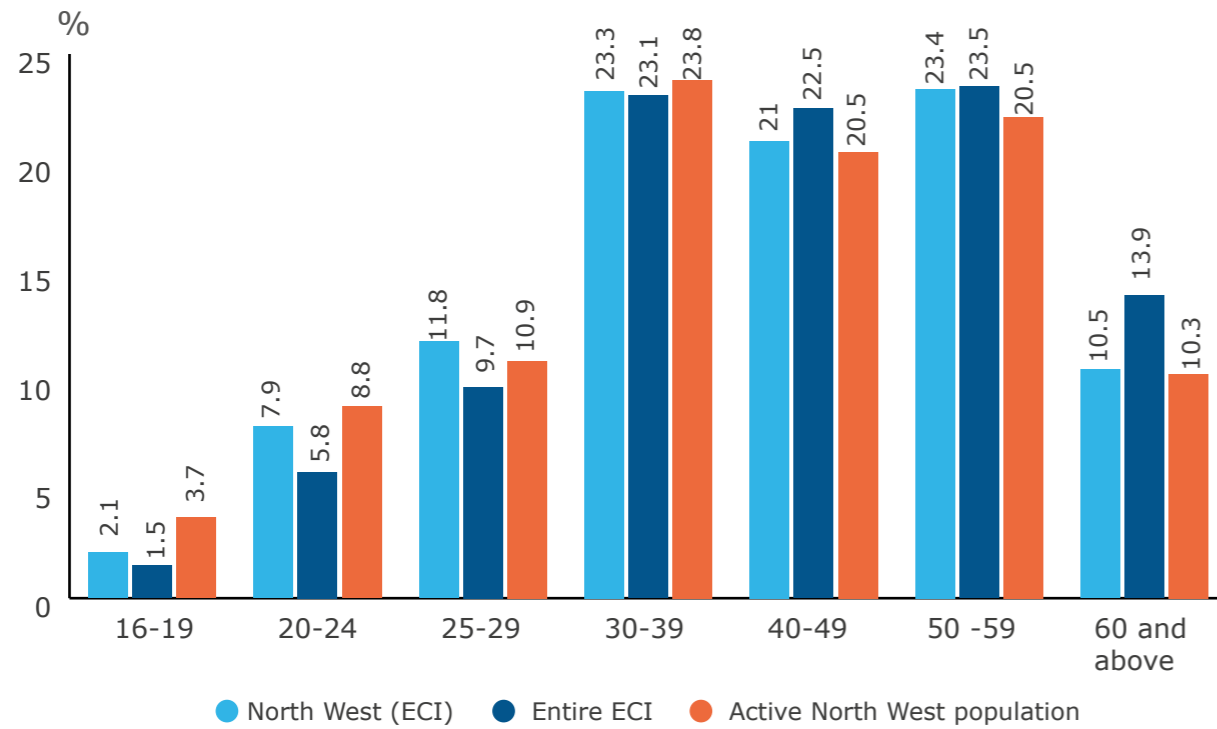
Project (waste) managers	13
Compliance managers	12
Proposals managers	11
Electrical, instrumentation and control managers	11
Materials managers	11
Project (health and safety) managers	10
Mechanical managers	10
Other managers	191
<b>Professionals</b>	<b>3,894</b>
Planning professionals	499
Data and analysis professionals	363
Waste professionals	342
Quality assurance/quality controls professionals	306
Quantity surveyors professionals	277
Other consultants professionals	273
Health and safety professionals	236
Technologists professionals	179
Procurement professionals	154
IT professionals	125
Document controls professionals	122
Estimating professionals	91
Project controls professionals	79
Health physics professionals	73
Radiological protection professionals	49
Environmental professionals	47
Legal and compliance professionals	43
Supply chain professionals	40
Risk professionals	39
Human resources professionals	31
Physicists professionals	31
Cost controls professionals	25
Process professionals	24
Chemicals professionals	24
Materials professionals	23
Products professionals	21
Communications professionals	21
Construction professionals	20
Electrical professionals	19
Commercial professionals	17
Compliance professionals	16
Corrosion professionals	16

Learning and development professionals	14
Other professionals	14
IT (cybersecurity) professionals	13
Logistics professionals	12
Surveyors professionals	12
Decommissioning professionals	10
Other professionals	193
<b>Semi-skilled</b>	<b>1,433</b>
General operatives semi-skilled	543
Labourers semi-skilled	224
Security semi-skilled	156
Operators semi-skilled	103
Scaffolding semi-skilled	75
Asbestos removal semi-skilled	43
Drivers semi-skilled	39
Cleaning semi-skilled	20
Radiological protection semi-skilled	18
Waste semi-skilled	14
Electrical semi-skilled	12
Insulation semi-skilled	12
Other semi-skilled	175
Supervisors	1,535
General supervisors	263
Security supervisors	141
Scaffolding supervisors	109
Electrical supervisors	91
Mechanical fitting supervisors	91
Waste supervisors	70
Maintenance supervisors	56
Operations supervisors	55
Radiological protection supervisors	41
Blasters and painters supervisors	32
Pipefitting supervisors	28
Site supervisors	28
Asbestos removal supervisors	27
Commissioning supervisors	23
Insulation supervisors	23
Rigging supervisors	20
Civil engineering supervisors	18
Architectural supervisors	18
Piping supervisors	16
Welding supervisors	16
Safety supervisors	15

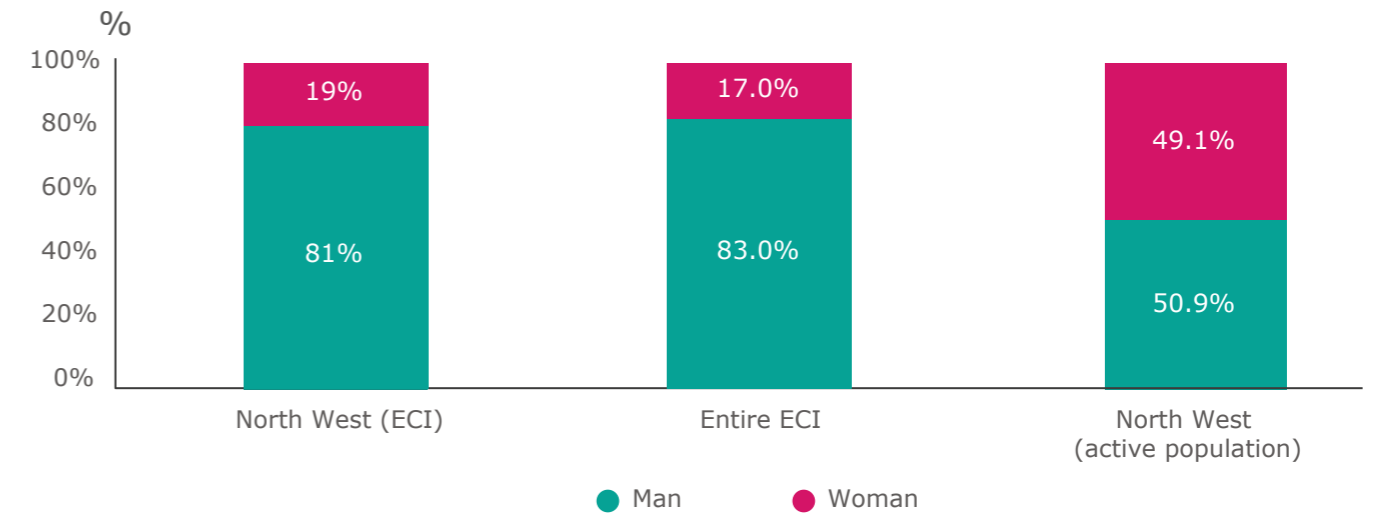
General supervisors (rope access) supervisors	15
Electrical fitters supervisors	15
Other supervisors	325
<b>Support</b>	<b>2,320</b>
Administrative support	753
Finance support	328
Commercial support	149
Human resources support	145
Project management support	140
Health and safety support	128
Personal assistants support	120
IT support	67
Facilities management support	61
Radiological protection support	61
Operations support	56
Training support	44
Communications support	34
Project controls support	34
Compliance support	31
Logistics support	23
Legal and compliance support	19
Other support	19
Security support	13
Supply chain support	12
Asset management support	10
Site support	10
Other support	63
<b>Technicians</b>	<b>3,089</b>
Production technicians	444
Radiological protection technicians	347
Design technicians	303
Electrical technicians	257
General technicians	172
Decommissioning (waste) technicians	163
Production (operations) technicians	143
Production (maintenance) technicians	125
Safety technicians	105
Quality assurance/quality controls technicians	93
Design (mechanical) technicians	84

Waste technicians	65
Design (piping) technicians	60
Architectural technicians	53
Commissioning technicians	52
Non-destructing testing technicians	48
Mechanics technicians	41
Maintenance (electrical) technicians	38
Design (electrical, instrumentation and control) technicians	36
Design (electrical) technicians	35
Maintenance technicians	29
Operations technicians	25
Materials technicians	24
Production (waste) technicians	20
Mechanical technicians	19
Maintenance (mechanical) technicians	18
Commissioning (mechanical) technicians	17
Insulation technicians	17
Design (civil, structural and architectural) technicians	16
Production (electrical, instrumentation and control) technicians	15
General technicians (rope access) technicians	13
Quality assurance/quality controls (welding) technicians	13
IT technicians	13
Process technicians	12
Water technicians	12
Laboratory technicians	11
Design (civil) technicians	11
Other technicians	141
<b>Other</b>	<b>526</b>

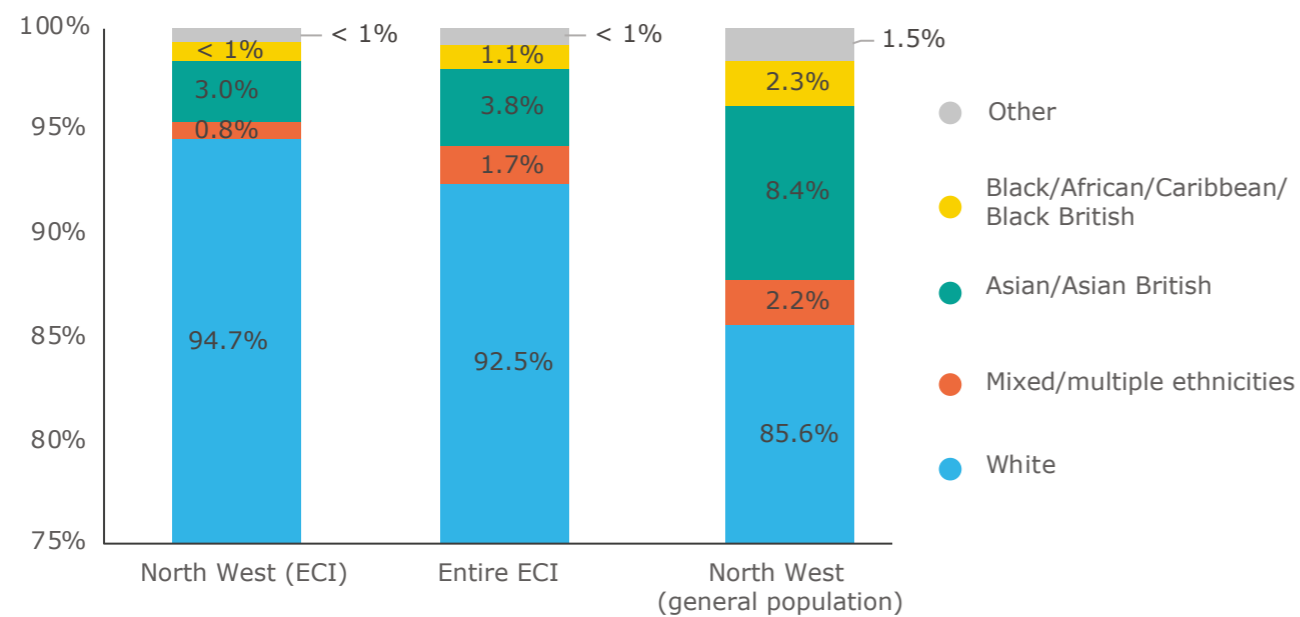
**Figure 30: Age profile of the ECI workforce in North West England**



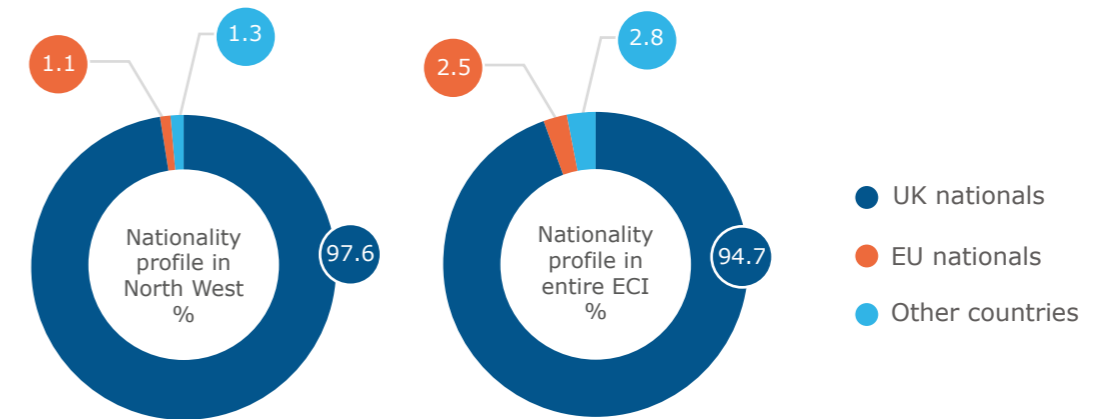
**Figure 32: Gender profile of the ECI workforce in North West England**



**Figure 31: Ethnicity profile of the ECI workforce in North West England (scale in y-axis 75 to 100)**



**Figure 33: Nationality profile of the ECI workforce in North West England**





## North East England (6.3% - 6,000 workers)

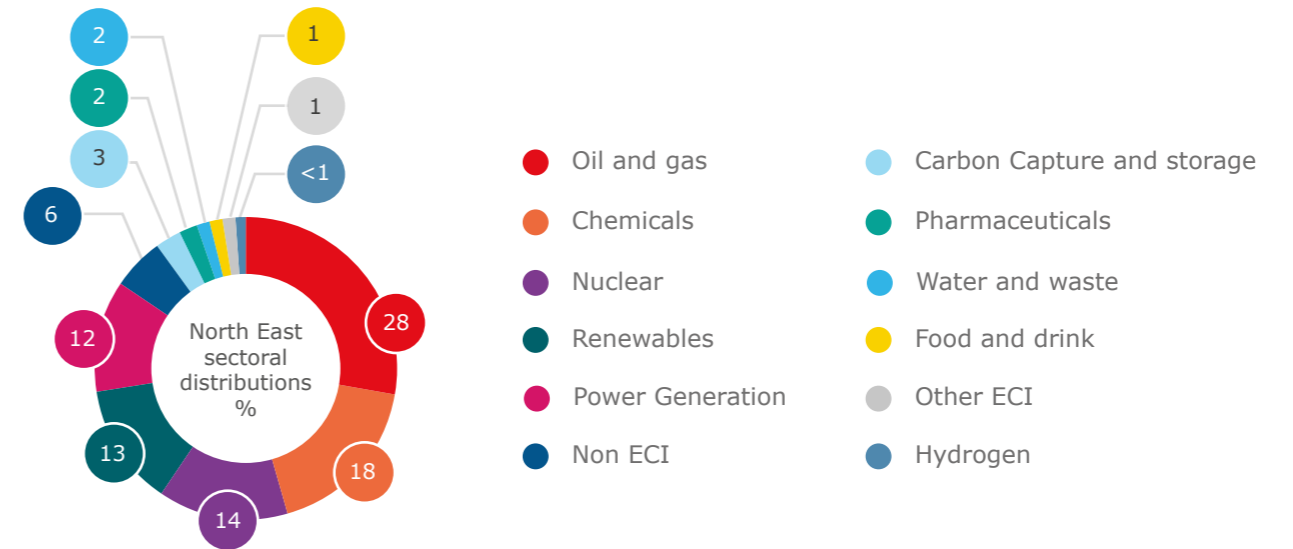
The ECI workforce in the North East of England is spread across multiple sectors, without one or two sectors heavily dominating, unlike in many other regions. The oil and gas sector employs the largest share of the workforce (28%), followed by chemicals (18%), nuclear (14%), renewables (13%) and conventional power generation (12%). Within renewables, biofuels account for 26% of the workforce, followed by onshore wind (21%), biomass (20%), offshore wind (13%), solar (13%) and energy from waste (8%). Most of the workforce is concentrated around Middlesbrough and Newcastle-Upon-Tyne.

The region has a higher proportion of craft roles (19.4%) compared to the wider ECI (13.5%), with scaffolders, pipefitters, mechanical fitters, electricians and welders being well represented. Other key occupations include project, process, electrical and mechanical engineers, as well as project managers. Employers in the region who report recruitment challenges primarily cite the volume of the talent pool as their main issue. A lack of qualifications and challenges in meeting new entrants' expectations are also noted. Pipefitters, welders, electricians, instrumentation technicians, designers and engineers in piping, mechanical, civil, structural and process, planners and quantity surveyors are all occupations that prove difficult to recruit.

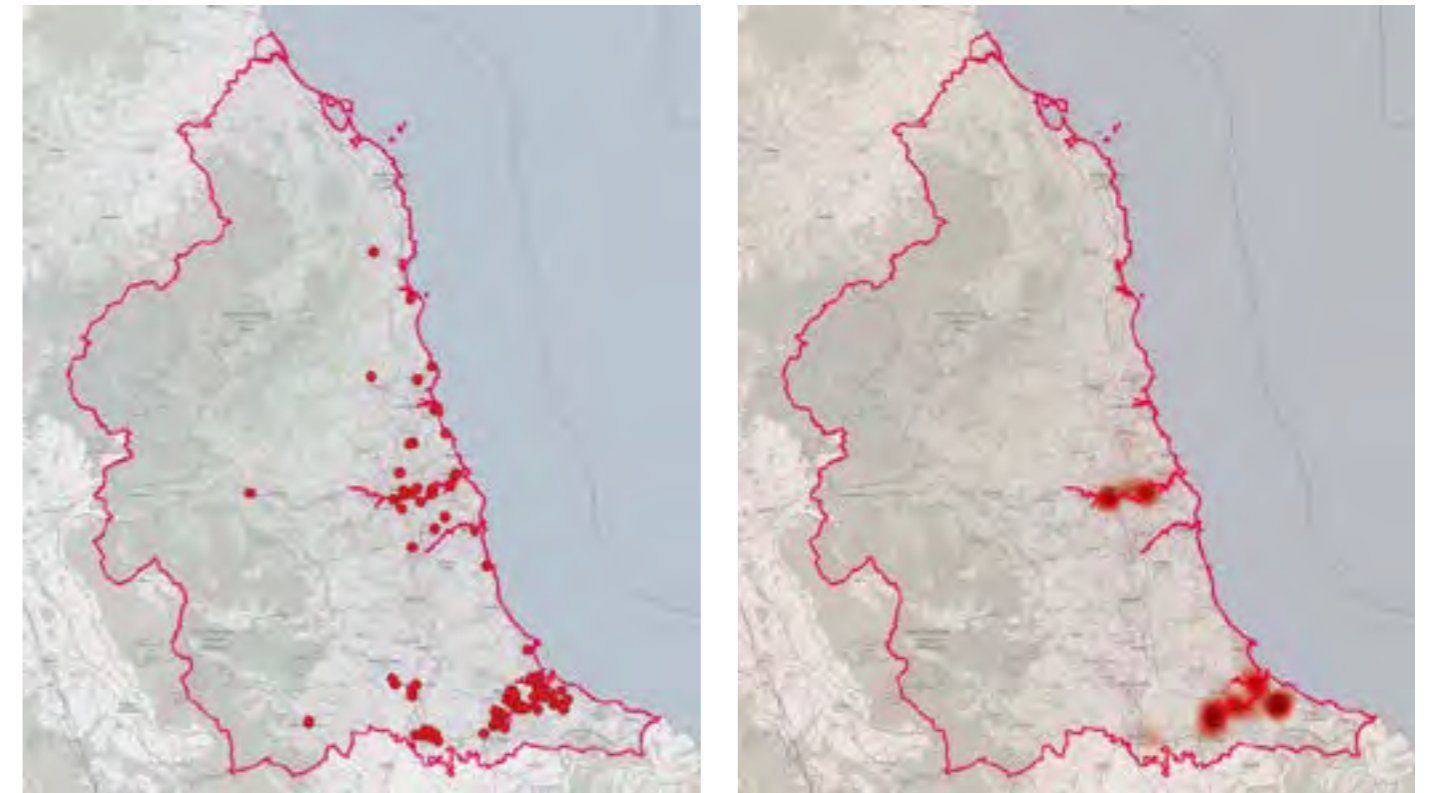
Sectors such as oil and gas, carbon capture and storage, petrochemicals and conventional power generation are seen as representing significant business opportunities. Nuclear, hydrogen, biofuels and biomass are also viewed positively, though to a lesser degree. Employers estimate a potential 18% increase in headcount by 2027, ranking the region fourth among all regions covered in this report.

In terms of age demographics, the 60+ age group is more represented in the North East (16.5%) than in the wider ECI (13.9%) or the regional active population (10.5%). On the other side of the spectrum, 18.7% of the ECI workforce in the North East is under 30, which is slightly above the wider ECI (17%) but significantly below the regional active population (24.1%). The proportion of workers from Non-White ethnic backgrounds is higher than in both the wider ECI and the local population, partly due to the concentration of ECI activities in or near large urban areas; for instance, 82.4% of Middlesbrough's population identified as White in 2021. Lastly, men comprise a slightly larger share of the workforce than in the broader ECI, with a difference of about two percentage points.

Figure 34: Sectoral distribution of the workforce in North East England



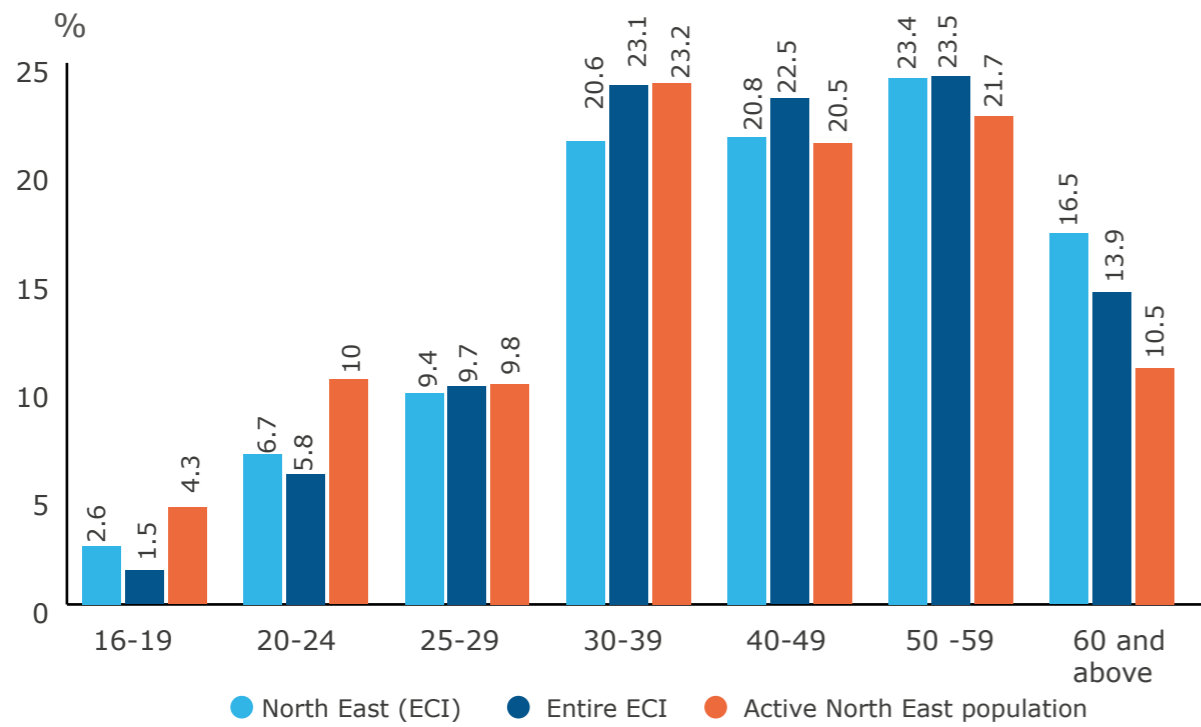
Maps 15 and 16: Location of workers in North East England (data points and heatmap)



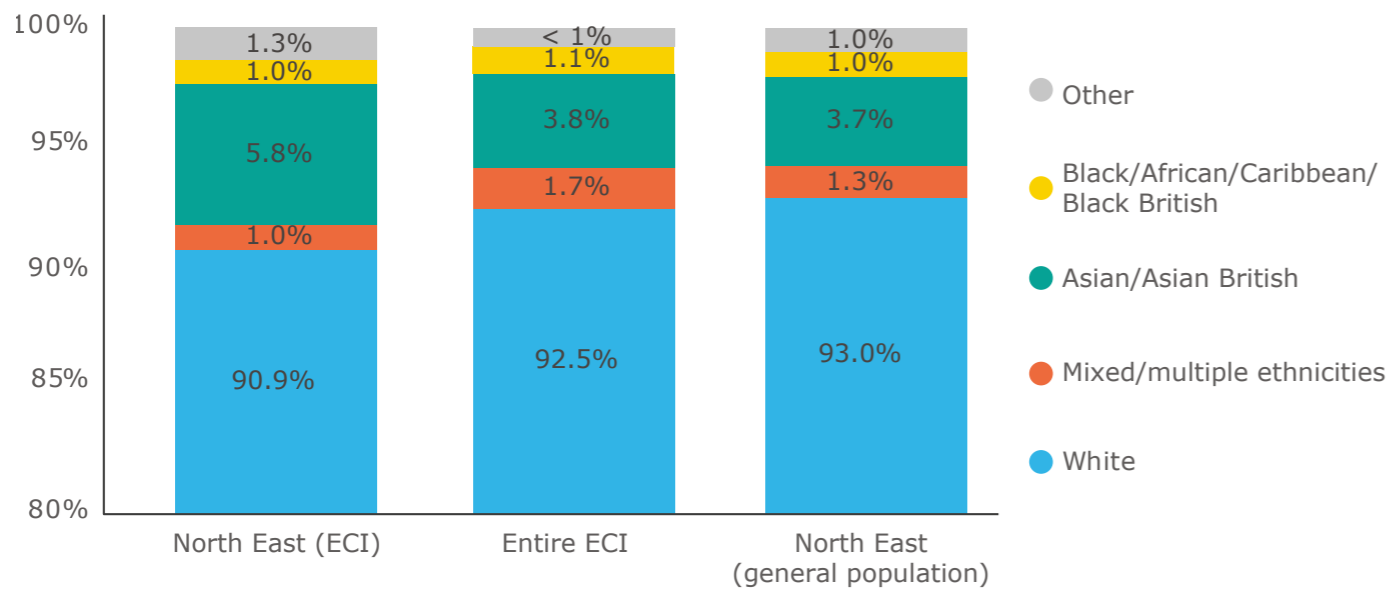
**Table 6: Workforce in North East England by occupation**

<b>Apprentices and trainees</b>	<b>211</b>	Systems engineers	19	<b>Professionals</b>	<b>575</b>	<b>Support</b>	<b>345</b>
Electrical apprentices and trainees	13	Health and safety engineers	15	Planning professionals	96	Administrative support	119
Design apprentices and trainees	12	Maintenance engineers	14	Health and safety professionals	62	Finance support	55
Other apprentices and trainees	186	HVAC engineers	11	Procurement professionals	62	Commercial support	43
<b>Craft</b>	<b>1,162</b>	Quality assurance/quality controls engineers	11	Data and analysis professionals	51	Project management support	19
Scaffolding craft	383	Civil, structural and architectural engineers	11	Document controls professionals	48	Personal assistants support	18
Pipefitting craft	167	Other engineers	132	Quality assurance/quality controls professionals	36	Health and safety support	18
Mechanical fitting craft	138	<b>Managers</b>	<b>1,049</b>	Estimating professionals	29	IT support	16
Electrical craft	114	Project managers	249	Quantity surveyors professionals	27	Human resources support	12
Welding craft	94	Commercial managers	112	Project controls professionals	23	Other support	46
Plating craft	72	Other directors	66	Technologists professionals	19	<b>Technicians</b>	<b>613</b>
Rigging craft	46	Operations managers	51	Environmental professionals	15	Electrical technicians	86
Steel erecting craft	45	Site management managers	47	Other consultants professionals	15	Design technicians	74
Blasters and painters craft	32	General managers	43	Other professionals	93	General technicians	64
Electrical fitters craft	17	Engineering managers	37	<b>Semi-skilled</b>	<b>321</b>	Non-destructing testing technicians	42
Instrument pipefitters craft	12	Process managers	36	General operatives semi-skilled	84	Quality assurance/quality controls technicians	38
Other craft	40	Construction managers	35	Labourers semi-skilled	72	Operations technicians	29
<b>Engineers</b>	<b>1,249</b>	Quality assurance/quality controls managers	25	Scaffolding semi-skilled	51	Design (piping) technicians	28
Project engineers	181	Health and safety managers	24	Drivers semi-skilled	21	Commissioning technicians	24
Process engineers	143	Project (commercial) managers	21	Electrical semi-skilled	19	Instrumentation and control technicians	23
Mechanical engineers	125	Planning managers	17	Insulation semi-skilled	15	Design (mechanical) technicians	19
Electrical engineers	107	Project controls managers	17	Maintenance semi-skilled	13	Mechanical technicians	19
Insulation engineers	73	IT managers	15	Operators semi-skilled	13	General technicians (rope access) technicians	13
Instrumentation and control engineers	68	Technologists managers	14	Other semi-skilled	32	Design (electrical) technicians	12
Electrical, instrumentation and control engineers	61	Asset management managers	12	<b>Supervisors</b>	<b>394</b>	Design (civil) technicians	11
Design engineers	45	Finance managers	12	General supervisors	92	Design (instrumentation) technicians	11
Piping engineers	44	Maintenance managers	11	Scaffolding supervisors	29	Maintenance technicians	11
Integration engineers	43	Commissioning managers	11	Mechanical fitting supervisors	24	Material control technicians	11
Commissioning engineers	30	Human resources managers	11	Welding supervisors	19	Production technicians	11
Cost engineers	30	Legal and compliance managers	11	Site supervisors	15	Other technicians	88
Structural engineers	23	Procurement managers	11	Electrical supervisors	13	<b>Other</b>	<b>83</b>
Civil engineering engineers	22	Supply chain managers	11	Rigging supervisors	12		
Civil and structural engineers	21	Other managers	150	Operations supervisors	11		
Construction engineers	21			Other supervisors	178		

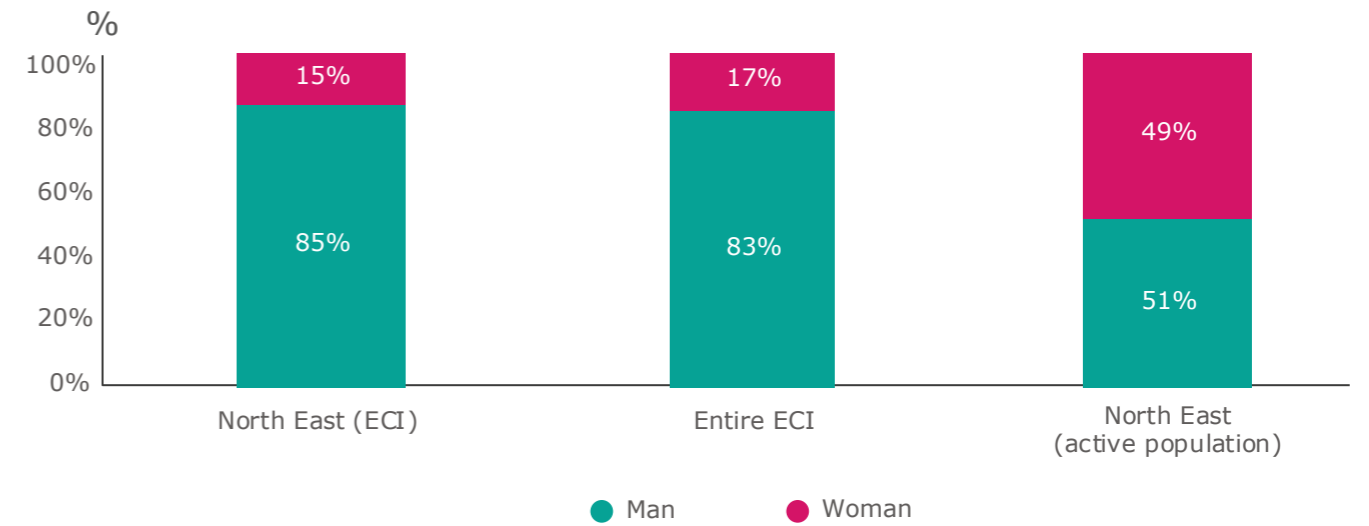
**Figure 35: Age profile of the ECI workforce in North East England**



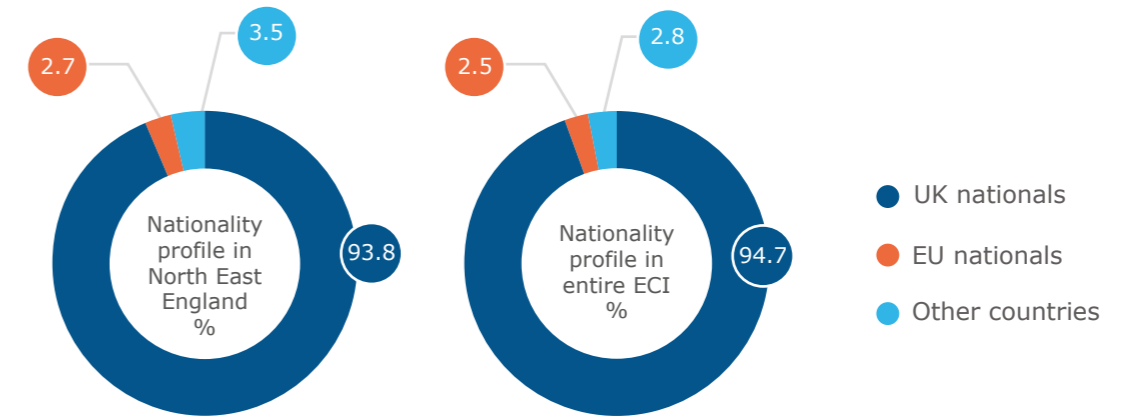
**Figure 36: Ethnicity profile of the ECI workforce in North East England (scale in y-axis 80 to 100)**



**Figure 37: Gender profile of the ECI workforce in North East England**



**Figure 38: Nationality profile of the ECI workforce in North East England**



## Yorkshire and the Humber (6.8% - 6,450 workers)

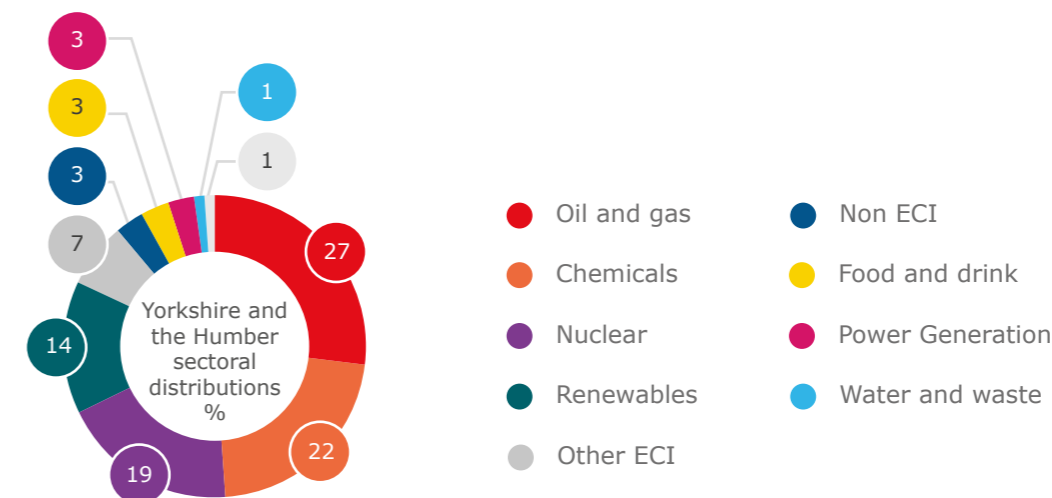
Similar to the North East of England, the main sectors employing ECI workers in Yorkshire and the Humber are oil and gas (27%), chemicals (22%), nuclear (19%) and renewables (14%). Sectors in the 'Other ECI' category make up 7% of the workforce, largely in steel fabrication. Within renewables, the majority operate in biomass (86%). Key regional hotspots are located near Drax, Hull, Immingham and Grimsby.

Compared to the wider ECI, the region has a relatively small share of engineers, professionals and managers. However, semi-skilled and craft workers represent 13.8% and 28.3% of the workforce, compared to 6.3% and 13.5% respectively across Great Britain. This makes scaffolders, mechanical fitters, riggers, pipefitters, welders, platers, general operatives and labourers essential roles in the region, alongside electrical and design technicians, mechanical and project engineers and project managers.

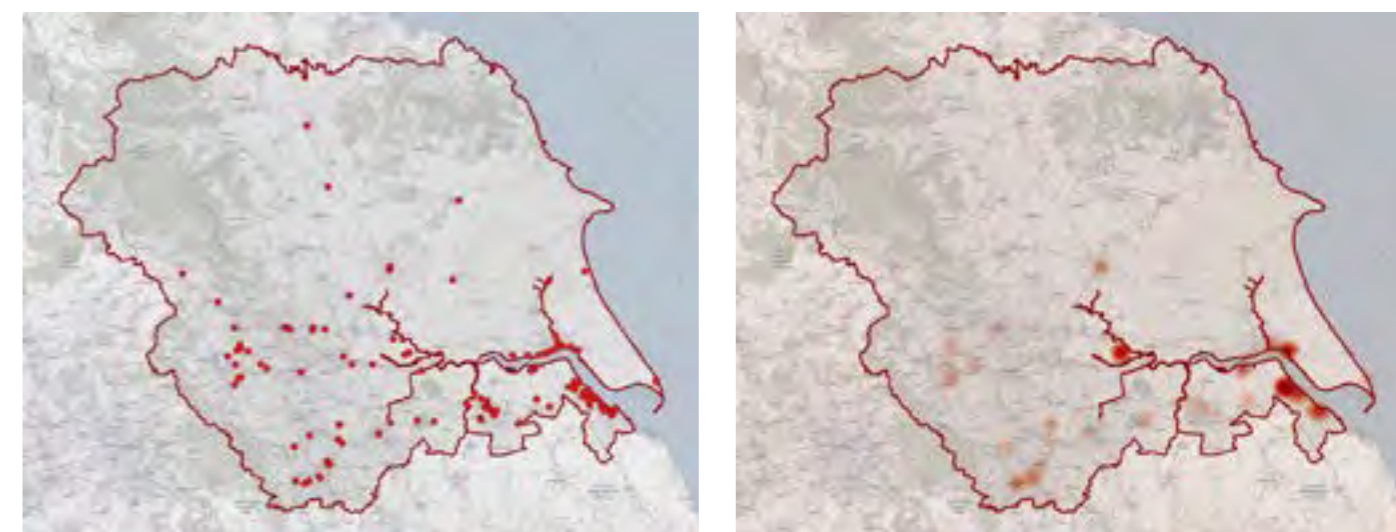
Employers facing recruitment difficulties attribute them mainly to a lack of qualifications, skills and training. Mechanical fitters, pipefitters, process engineers, project managers, designers, riggers, non-destructive testing technicians and site managers are especially challenging to recruit. In assessing potential business opportunities, employers are optimistic about many sectors, though wind (onshore and offshore), nuclear, defence and solar are noted absences. The region anticipates a 10% headcount increase by 2027, slightly below the ECI average growth of 11.7%.

The regional workforce has a larger share of workers under 30 (19.1%) than the wider ECI (17%), although still below the regional active population (23.2%). Workers over 50 represent 41.1%, higher than both the ECI overall (37.4%) and the regional active population (32.7%). The ECI workforce in Yorkshire and the Humber is less ethnically diverse than the national ECI and significantly less diverse than the local population. Gender balance is particularly skewed, with only 10% women in the workforce, compared to 17% in the wider ECI.

Figure 39: Sectoral distribution of the workforce in Yorkshire and the Humber



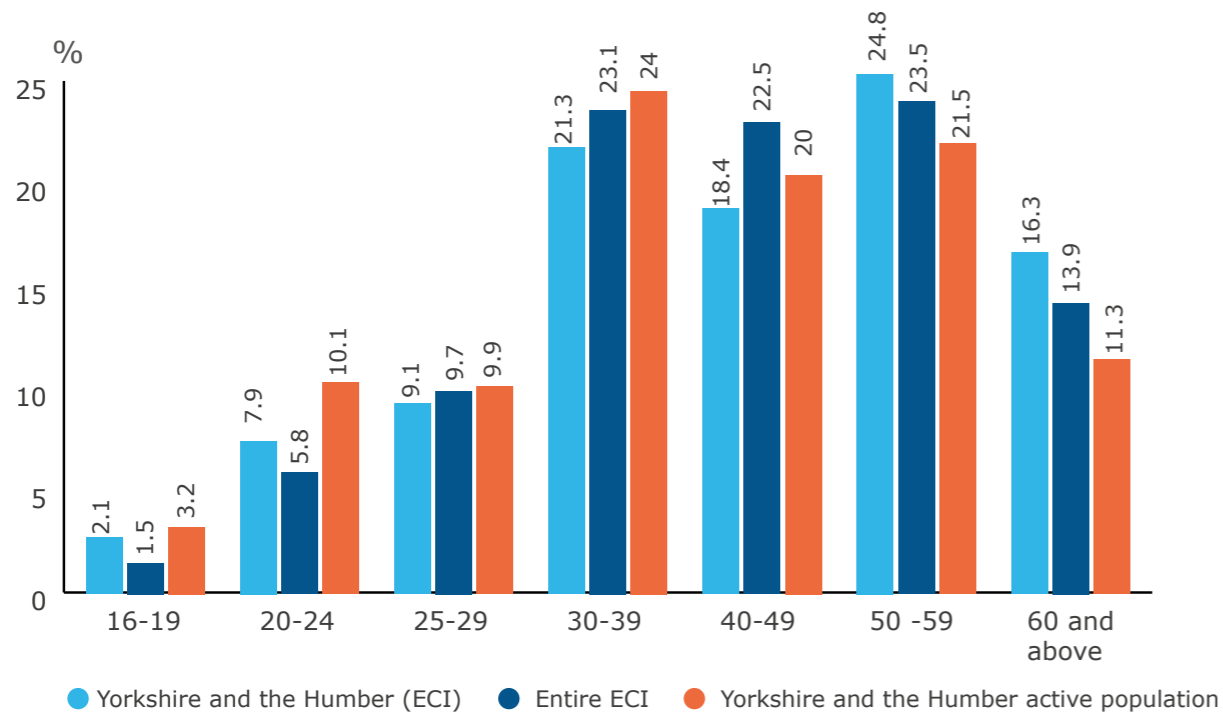
Maps 17 and 18: Location of workers in Yorkshire and the Humber (data points and heatmap)



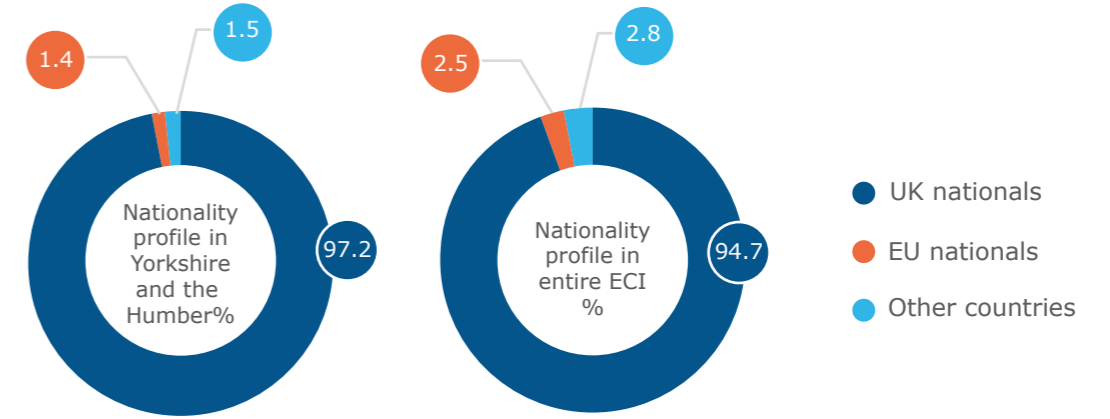
**Table 7: Workforce in Yorkshire and the Humber by occupation**

<b>Apprentices and trainees</b>	<b>242</b>	Civil and structural engineers	20	<b>Semi-skilled</b>	<b>885</b>	<b>Support</b>	<b>494</b>
Pipefitting apprentices and trainees	31	Instrumentation and control engineers	20	General operatives semi-skilled	336	Administrative support	187
Scaffolding apprentices and trainees	31	Stress engineers	14	Cleaning semi-skilled	181	Commercial support	50
Welding apprentices and trainees	24	Commissioning engineers	12	Labourers semi-skilled	122	Contracts support	35
Other apprentices and trainees	23	IT engineers	11	Scaffolding semi-skilled	78	Finance support	35
Mechanical fitting apprentices and trainees	15	Maintenance engineers	11	Drivers semi-skilled	39	Health and safety support	26
Electrical apprentices and trainees	15	Other engineers	114	Operators semi-skilled	28	Human resources support	20
Project controls apprentices and trainees	13	<b>Managers</b>	<b>565</b>	Insulation semi-skilled	23	IT support	12
Design apprentices and trainees	12	Project managers	133	Electrical semi-skilled	20	Personal assistants support	11
Other apprentices and trainees	79	Other directors	42	Asbestos removal semi-skilled	16	Facilities management support	10
<b>Craft</b>	<b>1,810</b>	General managers	41	Blasters and painters semi-skilled	12	Other support	109
Mechanical fitting craft	379	Operations managers	36	Materials semi-skilled	11	<b>Technicians</b>	<b>568</b>
Scaffolding craft	370	Site management managers	33	Other semi-skilled	20	Electrical technicians	161
Rigging craft	224	Commercial managers	29	<b>Supervisors</b>	<b>672</b>	Design technicians	114
Pipefitting craft	151	Construction managers	23	General supervisors	87	Quality assurance/quality controls technicians	40
Welding craft	127	Human resources managers	23	Site supervisors	80	Mechanical technicians	32
Plating craft	114	Quality assurance/quality controls managers	23	Scaffolding supervisors	71	General technicians (rope access) technicians	28
Blasters and painters craft	86	Legal and compliance managers	19	Pipefitting supervisors	39	Maintenance technicians	23
Steel erecting craft	68	Health and safety managers	17	Electrical supervisors	37	Instrumentation and control technicians	23
Electrical craft	66	Contracts managers	12	Mechanical fitting supervisors	32	Operations technicians	21
Fabrication craft	50	Engineering managers	12	Welding supervisors	31	Non-destructing testing technicians	15
Electrical fitters craft	21	Other managers	121	Plating supervisors	25	General technicians	12
Grinders craft	20	<b>Professionals</b>	<b>321</b>	Insulation supervisors	21	Material control technicians	12
Instrumentation and control craft	20	Planning professionals	68	Cleaning supervisors	16	Quality assurance/quality controls (electrical) technicians	12
Insulation craft	17	Procurement professionals	41	Labourers supervisors	16	Design (piping) technicians	11
Welding and plating craft	17	Health and safety professionals	36	Rigging supervisors	12	Other technicians	63
Welding and fabricators craft	12	Quality assurance/quality controls professionals	23	Steel erecting supervisors	11	<b>Other</b>	<b>96</b>
Other craft	68	Document controls professionals	21	Other supervisors	193		
<b>Engineers</b>	<b>779</b>	Commercial professionals	17				
Mechanical engineers	171	Technologists professionals	15				
Project engineers	111	Estimating professionals	13				
Insulation engineers	92	Data and analysis professionals	12				
Process engineers	73	Quantity surveyors professionals	12				
Design engineers	30	Electrical professionals	11				
Electrical engineers	28	Project controls professionals	10				
Electrical, instrumentation and control engineers	27	Other professionals	40				
Piping engineers	25						
Systems engineers	20						

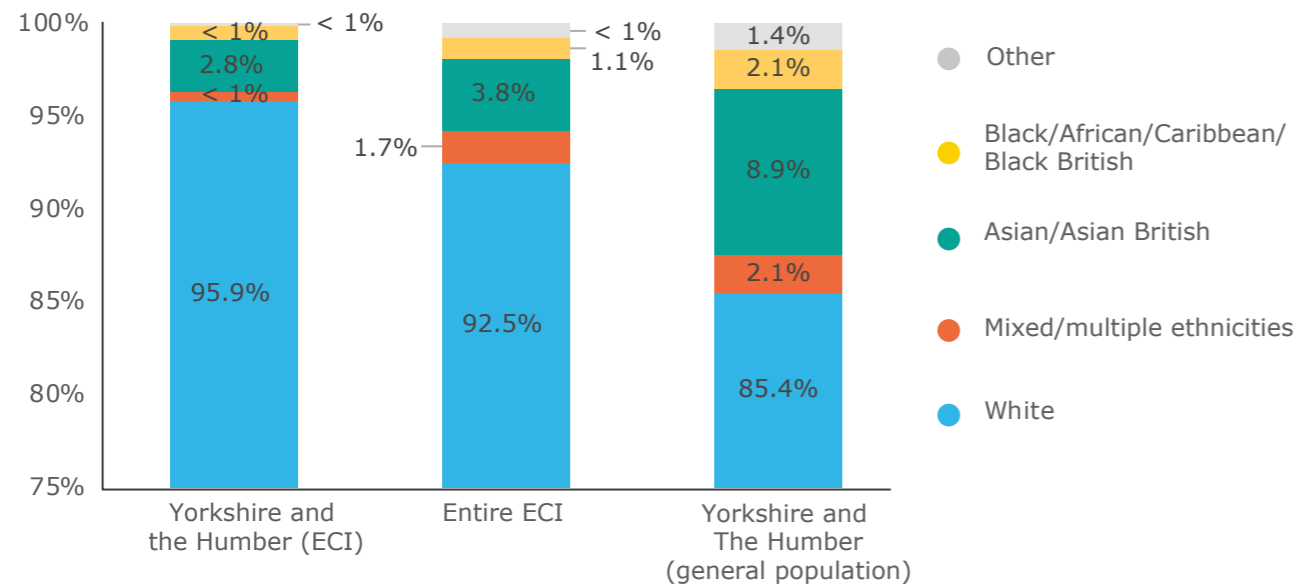
**Figure 40: Age profile of the ECI workforce in Yorkshire and the Humber**



**Figure 42: Gender profile of the ECI workforce in Yorkshire and the Humber**



**Figure 41: Ethnicity profile of the ECI workforce in Yorkshire and the Humber (scale in y-axis 75 to 100)**



## West Midlands (2.2% - 2,050 workers)

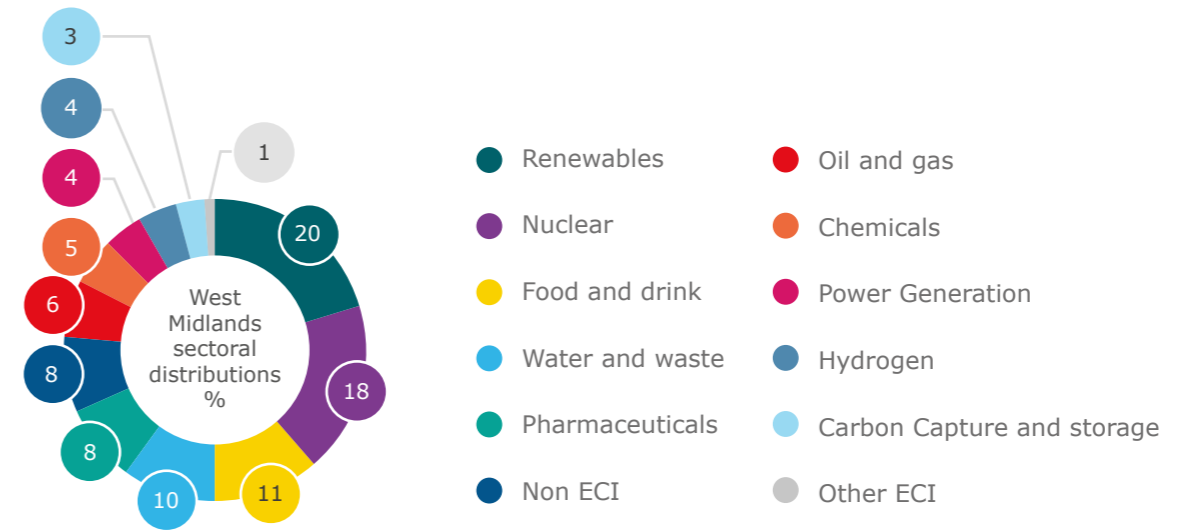
The workforce in West Midlands is predominantly office-based (92%), which can make it challenging to accurately represent the sectoral distribution of the workforce. It is estimated, however, that 20% of this workforce operates within the renewables sector. Other significant employers include the nuclear (18%), food and drink (11%), water and waste (10%) and pharmaceuticals (8%) sectors. Within renewables, energy from waste is the largest subsector (21%), followed by biofuels (19%), with biomass, offshore wind and solar each comprising approximately 15% of the renewables workforce. Defence and rail are notable sectors within the 'Non-ECI' category. It is also worth mentioning that hydrogen and carbon capture represent a higher workforce share in the West Midlands than across the ECI as a whole, reflecting early-stage investments in these technologies as they await final investment decisions in the coming years. Birmingham is the primary workforce hub, with Burton-on-Trent as a secondary hotspot.

Approximately a third of the regional workforce is categorized as engineers (32.4%), compared to 19.6% in the broader ECI, with project, process, mechanical, electrical and design engineers as key roles. Project managers are also numerous. Recruitment challenges often stem from a lack of qualifications, skills and training, along with competition from other companies and limited resources to offer competitive salaries and working conditions. Electrical and mechanical engineers, design engineers, fabricators, welders and pipefitters are particularly difficult roles to fill. Engineering specialists in some new technologies like

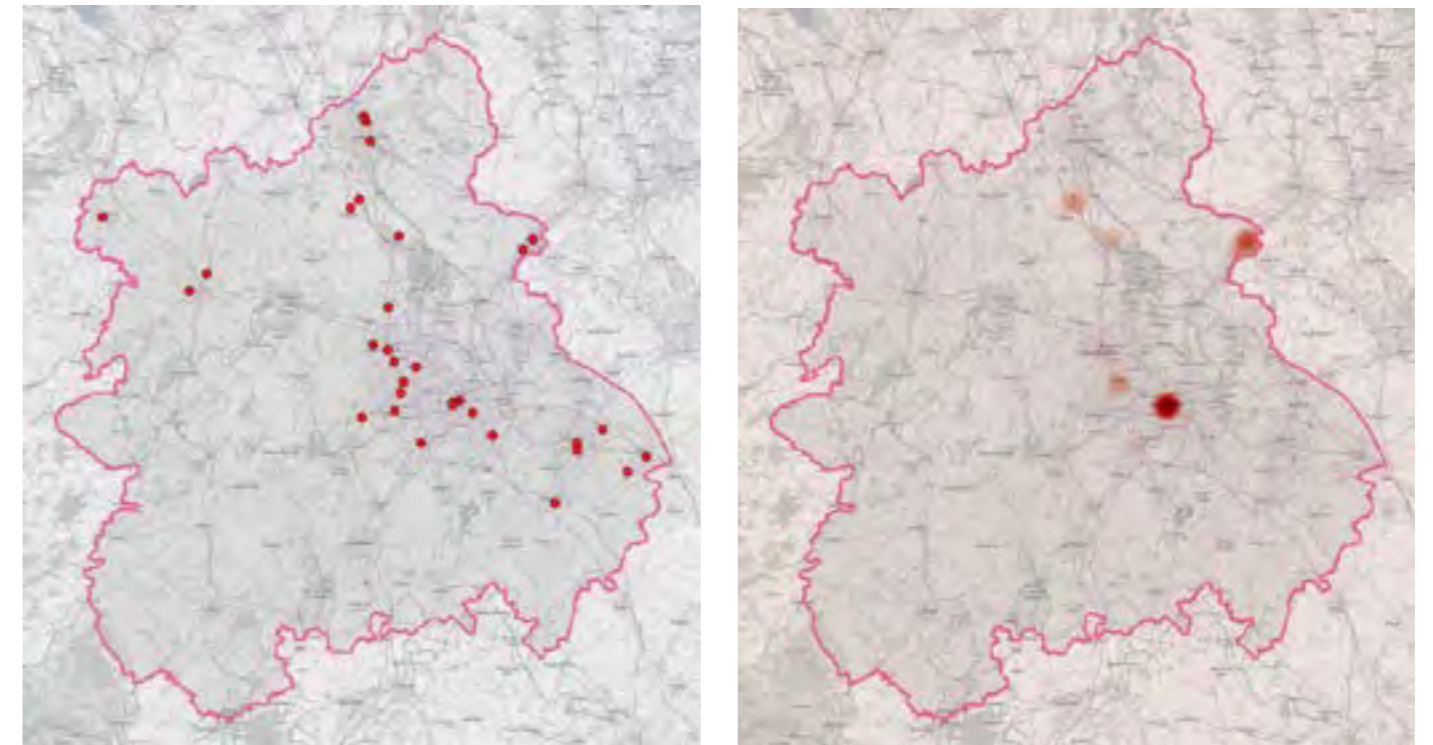
carbon capture and hydrogen can also pose specific recruitment challenges. Employers in the region see potential business opportunities across several sectors – e.g. defence, biofuels, oil and gas, petrochemicals and conventional power generation - though they often express low confidence in significantly expanding operations in any specific sector. The anticipated 25% increase in headcount reflects the most optimistic growth expectation among all regions covered in this report. While this may initially seem paradoxical, it likely reflects the flexibility of an office-based workforce, enabling it to pursue opportunities across multiple sectors without placing significant emphasis on any single one. This versatility is already apparent in the diverse sectors in which offices in the West Midlands already operate.

The West Midlands workforce has a relatively high share of workers under 30 (26.2%), compared to 17% across the ECI as a whole and 22.5% in the regional active population. Conversely, only 27.4% of the regional ECI workforce is over 50, lower than both the overall ECI (37.4%) and the local active population (32.4%). The ethnic diversity of the workforce closely aligns with the general population. Women constitute 25% of the workforce, compared to 17% in the ECI overall. Finally, the region's ECI workforce relies more heavily on foreign labour, especially from outside the EU (8.1% versus 2.8% across the ECI).

Figure 43: Sectoral distribution of the workforce in West Midlands



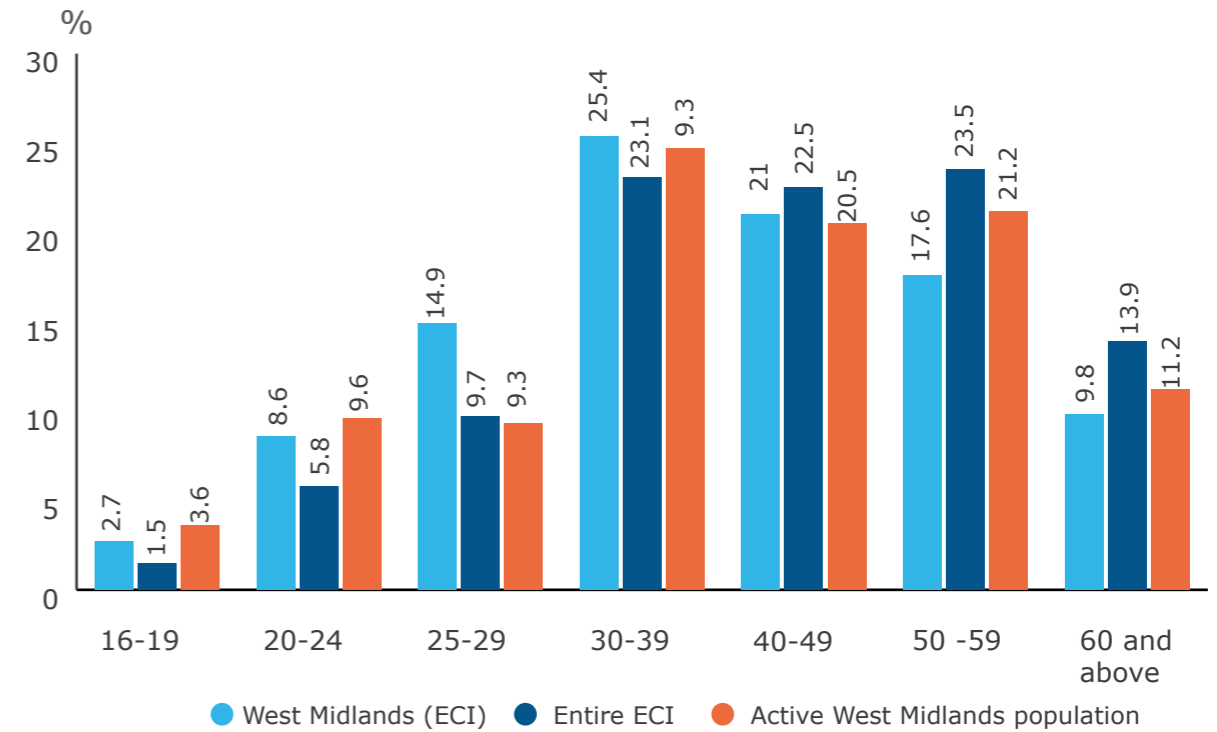
Maps 19 and 20: Location of workers in West Midlands (data points and heatmap)



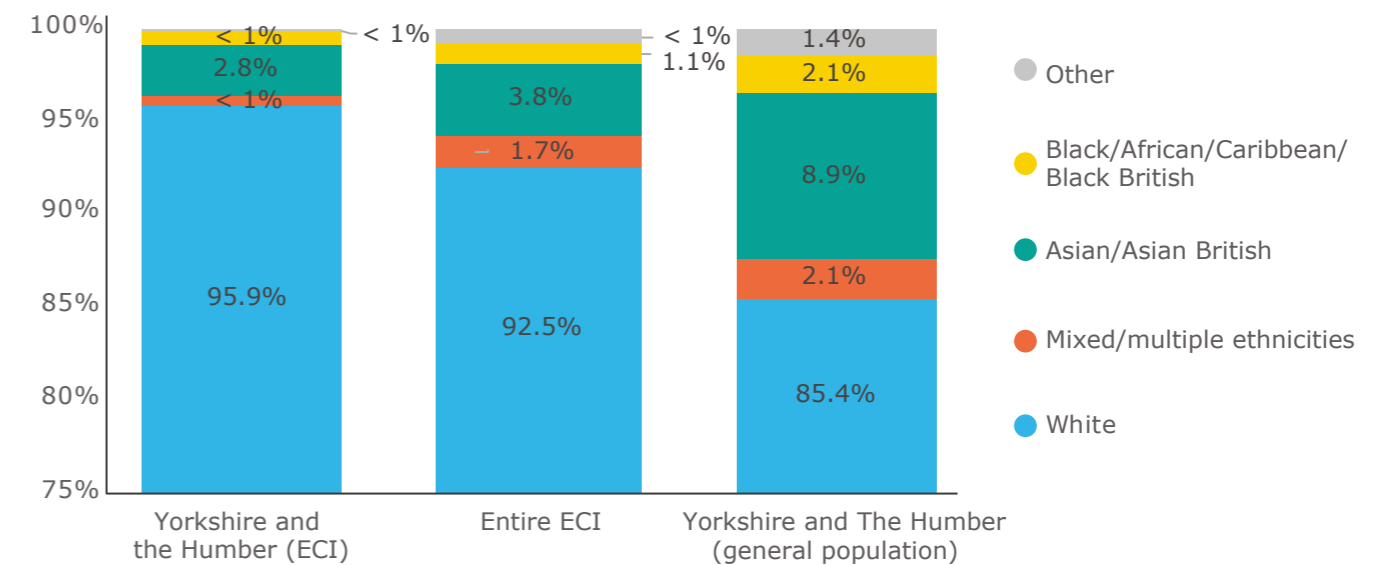
**Table 8: Workforce in West Midlands by occupation**

<b>Apprentices and trainees</b>	<b>85</b>	<b>Managers</b>	<b>424</b>
Welding apprentices and trainees	23	Project managers	155
Electrical apprentices and trainees	20	Commercial managers	29
Project controls apprentices and trainees	15	Process managers	24
Other apprentices and trainees	27	Operations managers	21
<b>Craft</b>	<b>156</b>	Other directors	18
Fabrication craft	27	Engineering managers	18
Steel erecting craft	24	Site management managers	17
Mechanical fitting craft	16	General managers	14
Pipefitting craft	16	Human resources managers	11
Welding craft	14	Health and safety managers	11
Scaffolding craft	13	Other managers	105
Other craft	46	<b>Professionals</b>	<b>238</b>
<b>Engineers</b>	<b>668</b>	Planning professionals	33
Project engineers	93	Procurement professionals	32
Process engineers	86	Other consultants professionals	20
Mechanical engineers	78	Technologists professionals	17
Electrical engineers	68	Document controls professionals	15
Design (mechanical) engineers	35	Project controls professionals	13
Construction engineers	27	Quantity surveyors professionals	13
Design engineers	25	Data and analysis professionals	12
Structural engineers	24	Waste professionals	12
Electrical, instrumentation and control engineers	20	Electrical professionals	11
Commissioning engineers	19	Estimating professionals	11
Insulation engineers	18	Other professionals	48
Systems engineers	16	Semi-skilled	63
Instrumentation and control engineers	16	General operatives semi-skilled	27
Automation engineers	16	Other semi-skilled	36
Civil engineering engineers	16	Supervisors	67
Cost engineers	15	General supervisors	19
Piping engineers	14	Other supervisors	48
IT engineers	13	<b>Support</b>	<b>171</b>
Proposals engineers	11	Administrative support	56
Other engineers	57	Finance support	38
		Commercial support	25
		Other support	51
		<b>Technicians</b>	<b>133</b>
		Design technicians	38
		General technicians	20
		Electrical technicians	19
		Design (piping) technicians	15
		Other technicians	42
		<b>Other</b>	<b>57</b>

**Figure 44: Age profile of the ECI workforce in West Midlands**

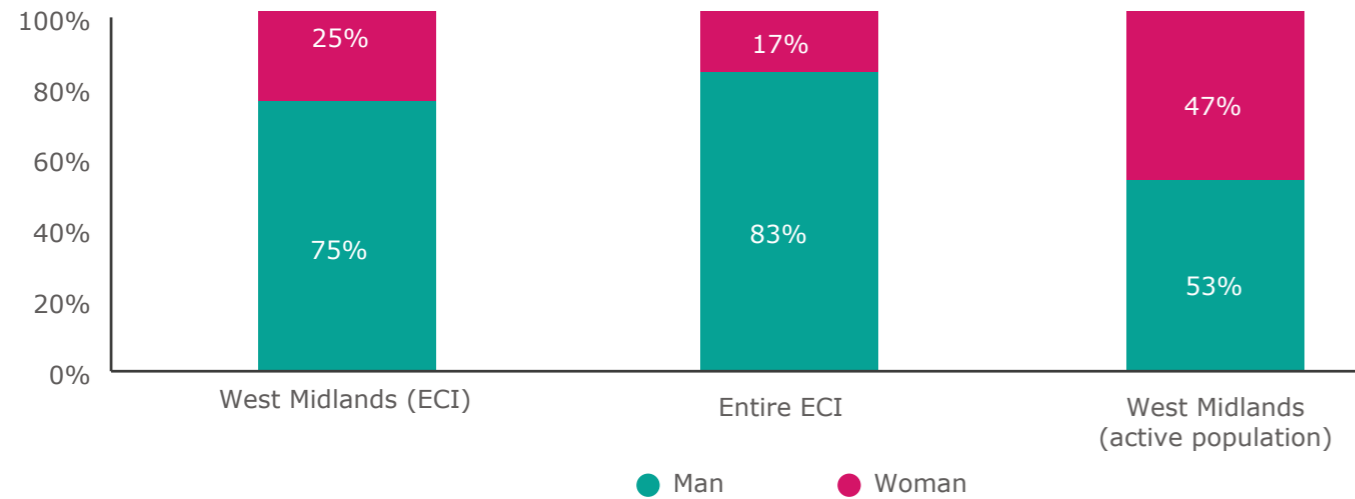


**Figure 45: Ethnicity profile of the ECI workforce in West Midlands (scale in y-axis 75 to 100)**

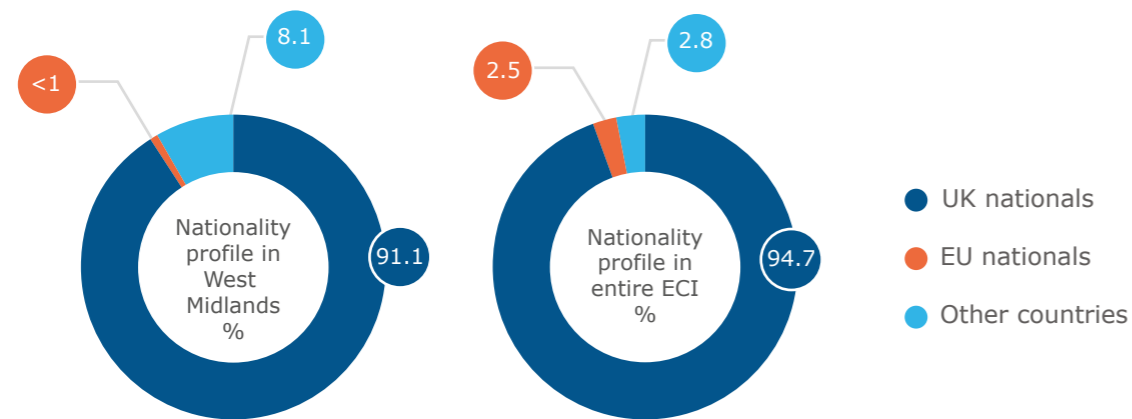




**Figure 46: Gender profile of the ECI workforce in West Midlands**



**Figure 47: Nationality profile of the ECI workforce in West Midlands**



**East Midlands (1.3% - 1,250 workers)**

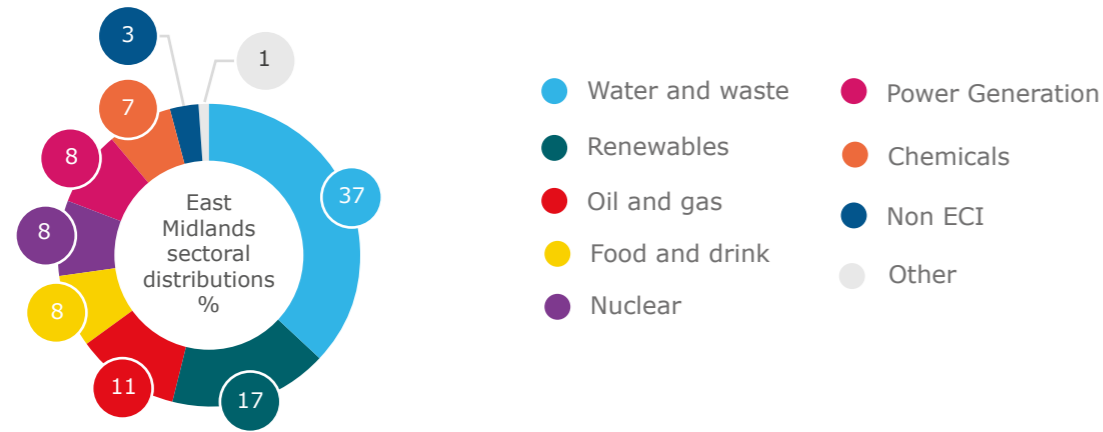
The water and waste treatment sector is relatively small within the national engineering construction industry, representing just 2.9% of the entire ECI workforce. However, it constitutes 37% of the workforce in East Midlands. The renewables sector is also a significant employer in the region (17%), followed by oil and gas (11%). Within renewables, energy from waste is the main subsector, accounting for 69% of the renewables workforce. The largest concentration of workers is in Derby, with secondary hotspots near Long Eaton and Gainsborough.

Craft workers make up 27.2% of the regional workforce, compared to 13.5% in the entire ECI, with roles such as mechanical fitters, scaffolders and pipefitters being key parts of the workforce. Design technicians, project managers and mechanical engineers are also prominent in the region. Employers facing recruitment challenges cite the inability to meet salary and working condition expectations, competition from other companies and a lack of qualifications, skills and training as significant barriers. Welders, pipefitters, non-destructive testing technicians, electricians and inspectors are particularly difficult to recruit.

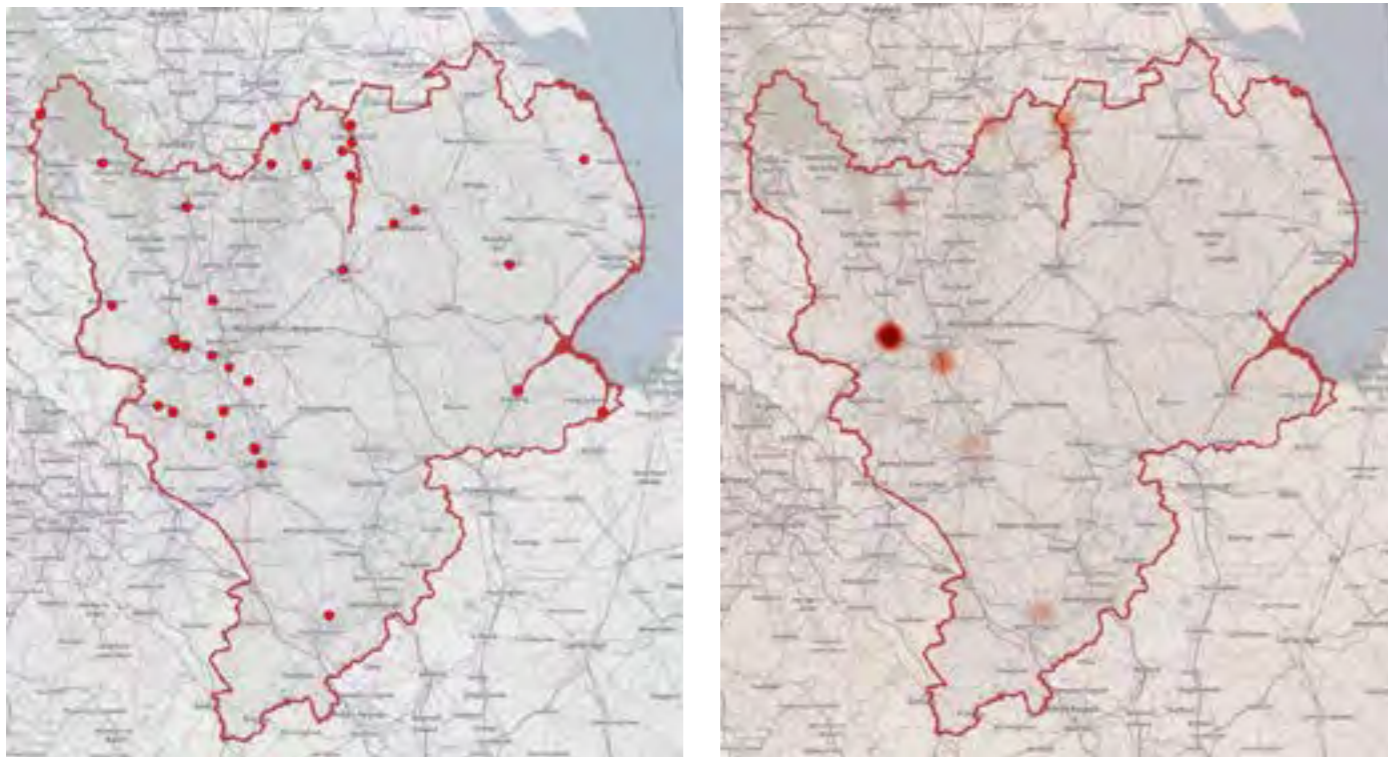
Energy from waste, biomass and conventional power generation are seen as promising business opportunities. Employers in East Midlands expect a collective headcount increase of 4% by 2027, the lowest anticipated growth of all regions covered in this report.

The proportion of workers under 30 in the East Midlands is slightly below that of the regional active population (21% versus 22.4%) but above the ECI average (17%). Workers over 50 represent 40.5% of the workforce, compared to 37.4% in the wider ECI and 33.7% in the regional active population. The region's ECI workforce has an ethnic distribution somewhat aligned with the wider ECI but not with the general population in the region. Men constitute 85% of the ECI workforce in East Midlands, compared to 83% in the entire ECI. Finally, with 99.4% of the workforce holding UK citizenship, the ECI in the East Midlands has minimal reliance on foreign workers.

**Figure 48: Sectoral distribution of the workforce in East Midlands**



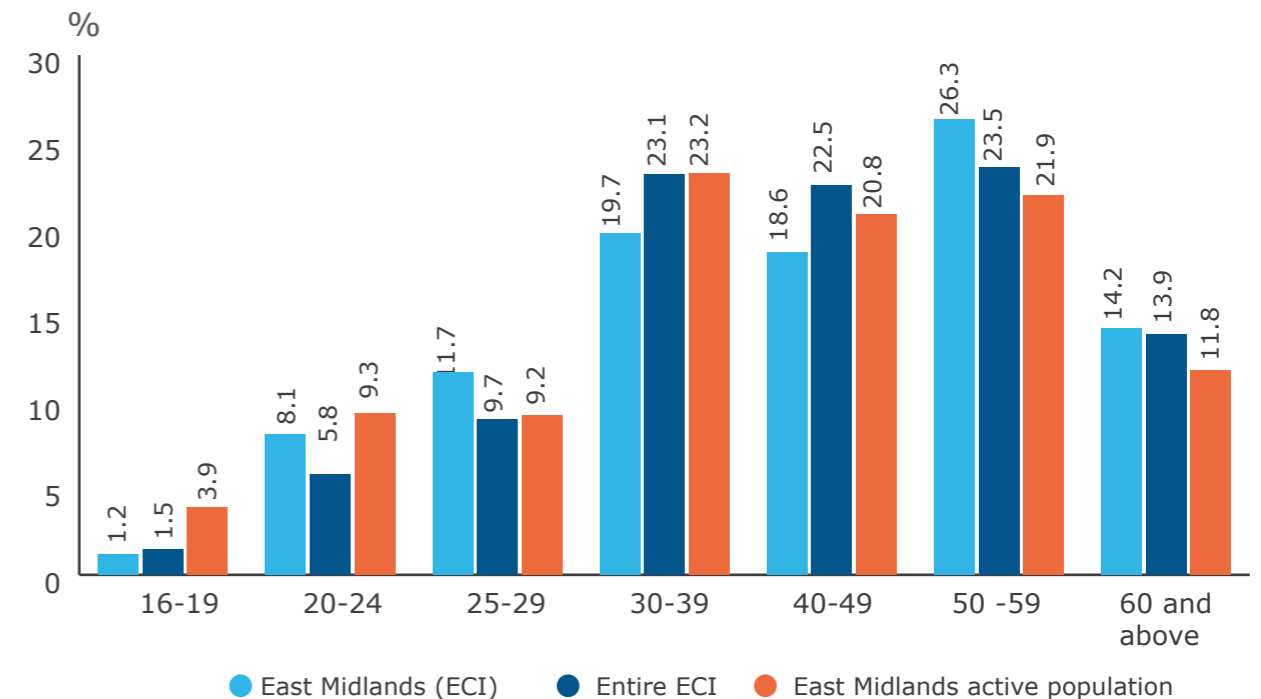
**Maps 21 and 22: Location of workers in East Midlands (data points and heatmap)**



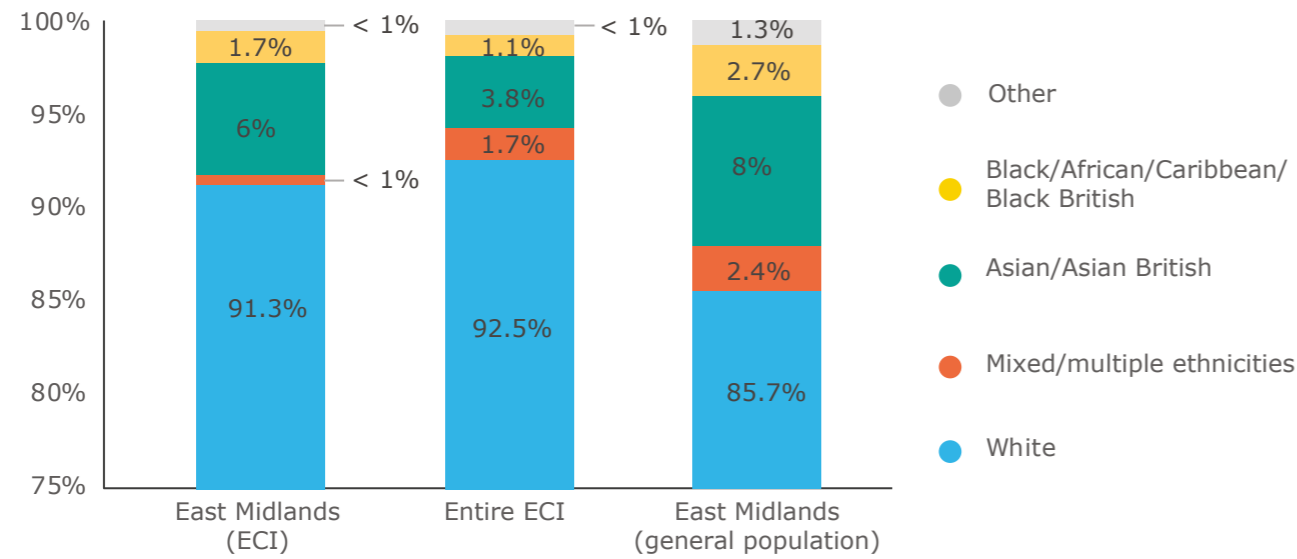
**Table 9: Workforce in East Midlands by occupation**

<b>Apprentices and trainees</b>	<b>31</b>	<b>Professionals</b>	<b>44</b>
Scaffolding apprentices and trainees	11	Planning professionals	15
Other apprentices and trainees	20	Other professionals	29
<b>Craft</b>	<b>340</b>	Semi-skilled	72
Mechanical fitting craft	87	Cleaning semi-skilled	23
Scaffolding craft	55	General operatives semi-skilled	23
Pipefitting craft	50	Labourers semi-skilled	11
Electrical craft	38	Other semi-skilled	16
Fabrication craft	20	<b>Supervisors</b>	<b>67</b>
Electrical fitters craft	19	Site supervisors	15
Plating craft	16	Other supervisors	52
Steel erecting craft	13	Support	135
Other craft	42	Commercial support	46
<b>Engineers</b>	<b>201</b>	Administrative support	43
Mechanical engineers	80	Health and safety support	21
Systems engineers	25	Finance support	12
Project engineers	19	Other support	13
Commissioning engineers	12	<b>Technicians</b>	<b>111</b>
Other engineers	65	Design technicians	79
<b>Managers</b>	<b>181</b>	Non-destructing testing technicians	11
Project managers	118	Other technicians	21
Site management managers	12	<b>Other</b>	<b>66</b>
Other managers	51		

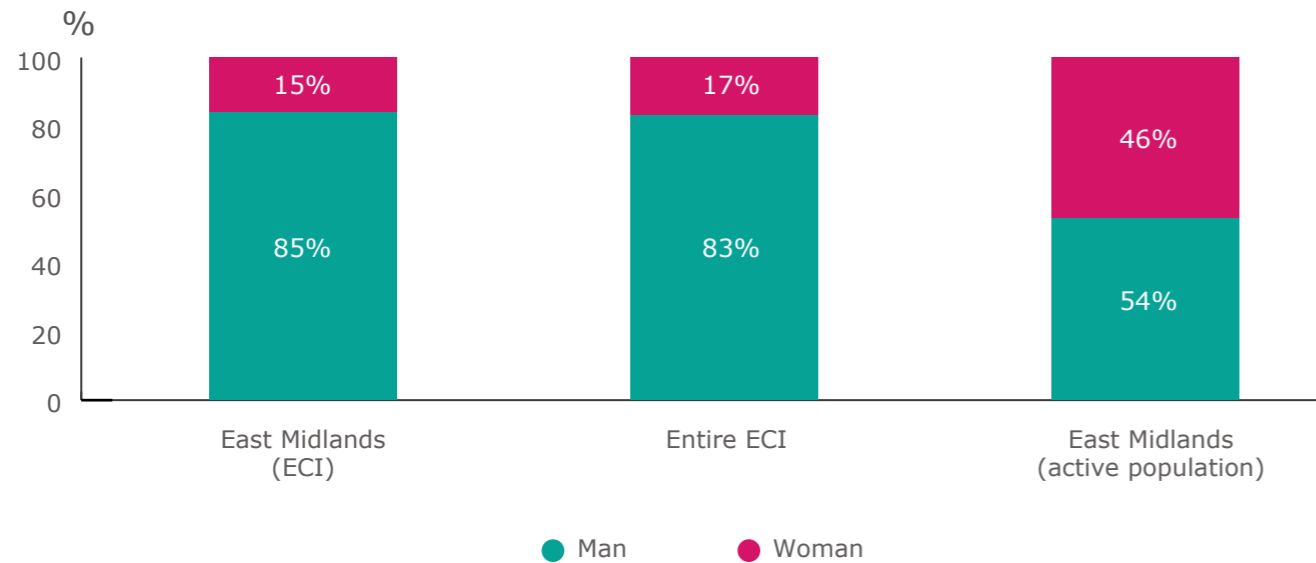
**Figure 49: Age profile of the ECI workforce in East Midlands**



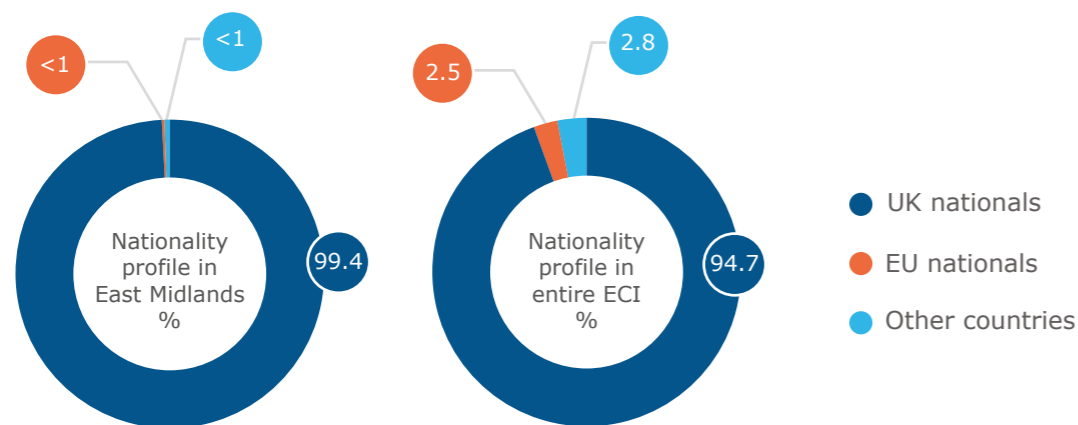
**Figure 50: Ethnicity profile of the ECI workforce in East Midlands (scale in y-axis 75 to 100)**



**Figure 51: Gender profile of the ECI workforce in East Midlands**



**Figure 52: Nationality profile of the ECI workforce in East Midlands**



## East England (2.6% - 2,450 workers)

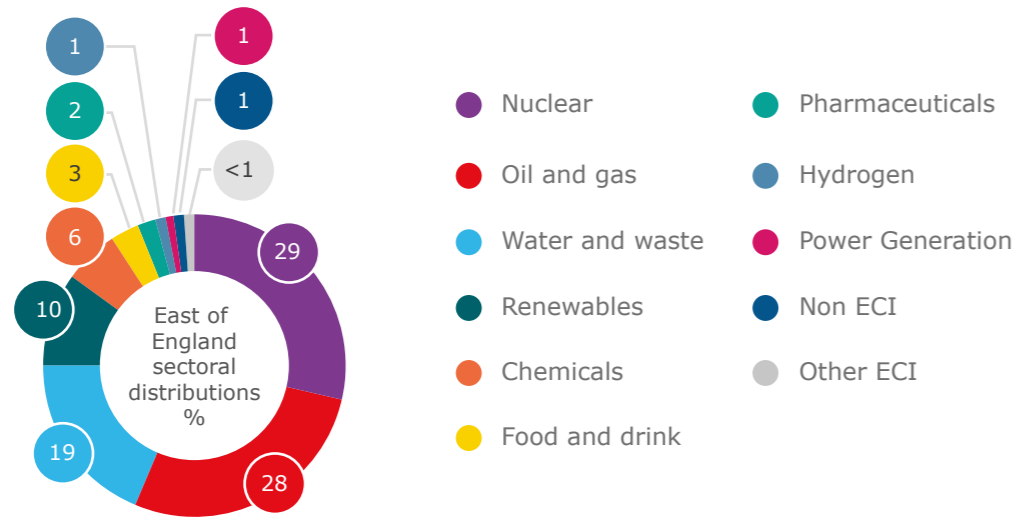
The three largest engineering construction sectors by headcount in East England are nuclear (29%), oil and gas (28%) and water and waste (19%). Workforce hotspots include Great Yarmouth, Peterborough and Leiston, though the workforce is also distributed across several smaller hotspots, as shown in map 24.

Key occupations in the region include scaffolders, project managers, project engineers, design technicians, general operators and planners. When employers in East England encounter recruitment challenges, they primarily attribute these to a lack of qualifications, skills and training, as well as competition from other companies. This particularly affects the recruitment of project managers, field service engineers, radiographers, non-destructive testing technicians and inspectors.

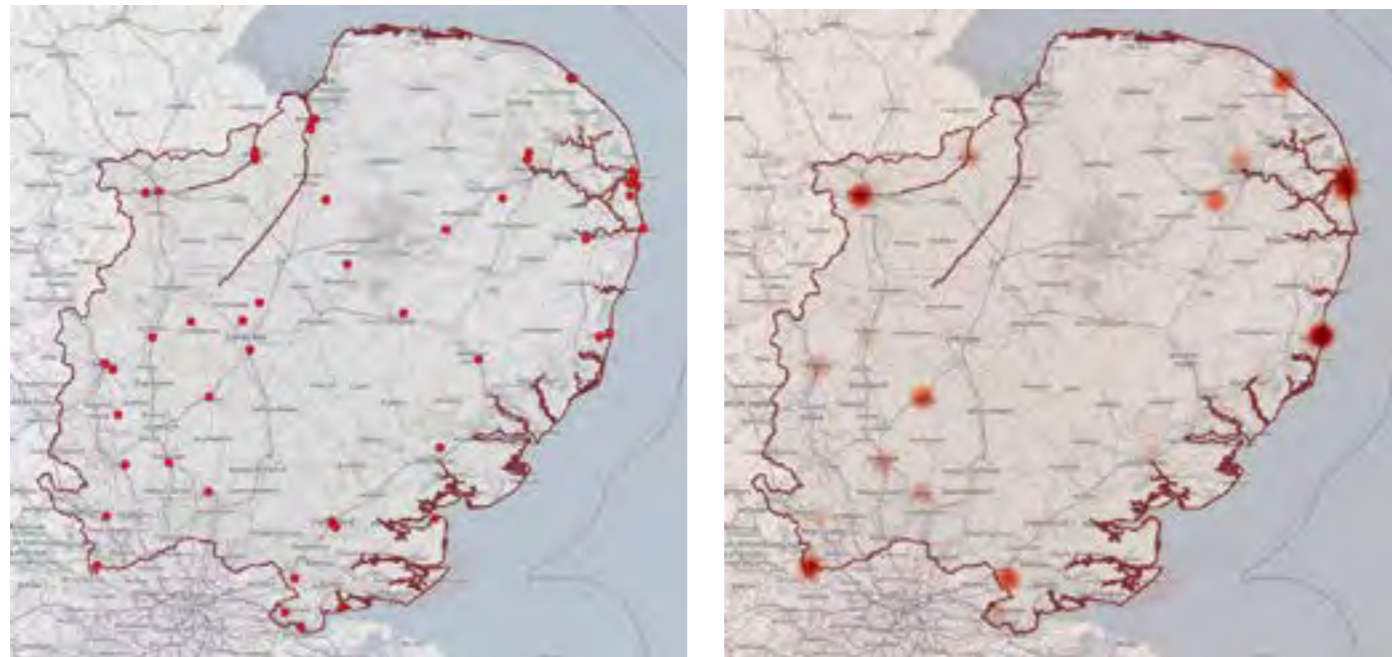
Employers in the region identify significant business opportunities in the oil and gas, nuclear, offshore wind and energy-from-waste sectors. East England ranks third in projected workforce growth expectations up to 2027 among all regions covered in this report, with an expected 19% increase.

The age profile of the ECI workforce in East England aligns closely with that of the wider ECI, although it is slightly older than the regional active population. Only 16.5% of the ECI workforce in the East of England is under 30, compared to 20.2% of the active population. The percentage of workers in the White ethnic group is 3.7 percentage points higher in the ECI workforce in the East than in the entire ECI and 9.7 percentage points higher than in the general regional population. The gender distribution is nearly identical to that of the wider ECI.

**Figure 53: Sectoral distribution of the workforce in East England**



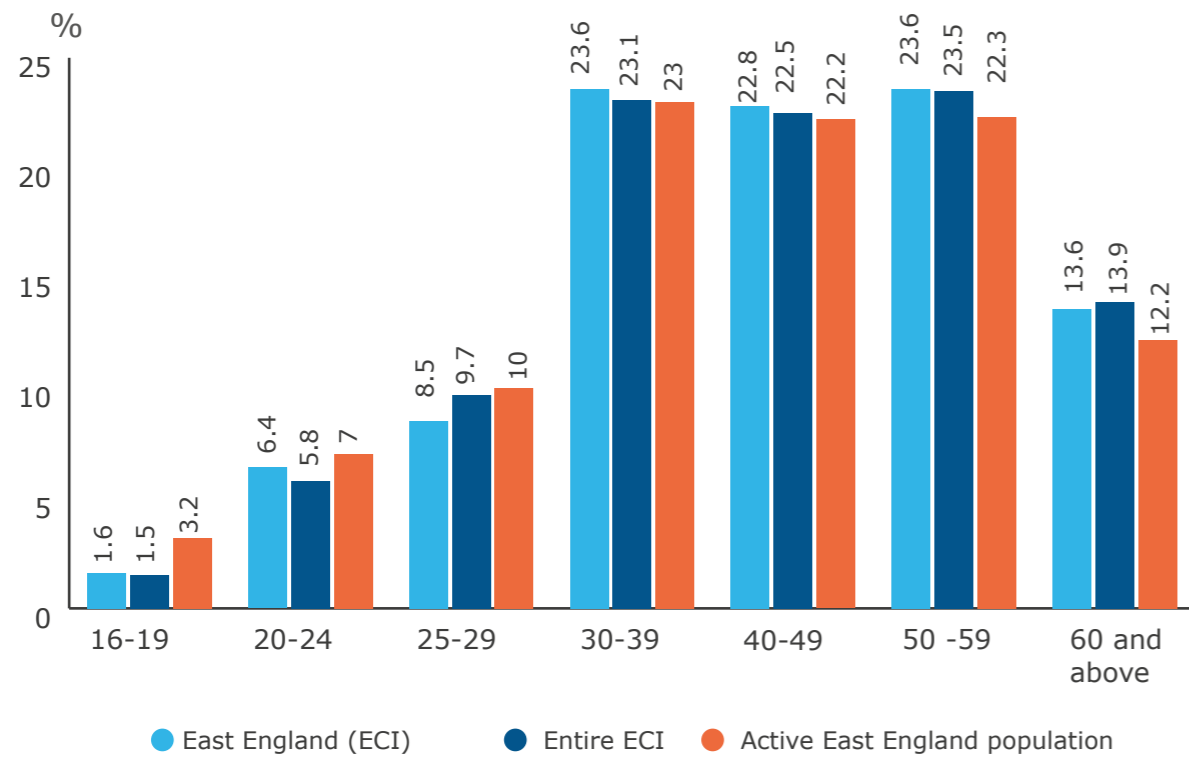
**Maps 23 and 24: Location of workers in East England (data points and heatmap)**



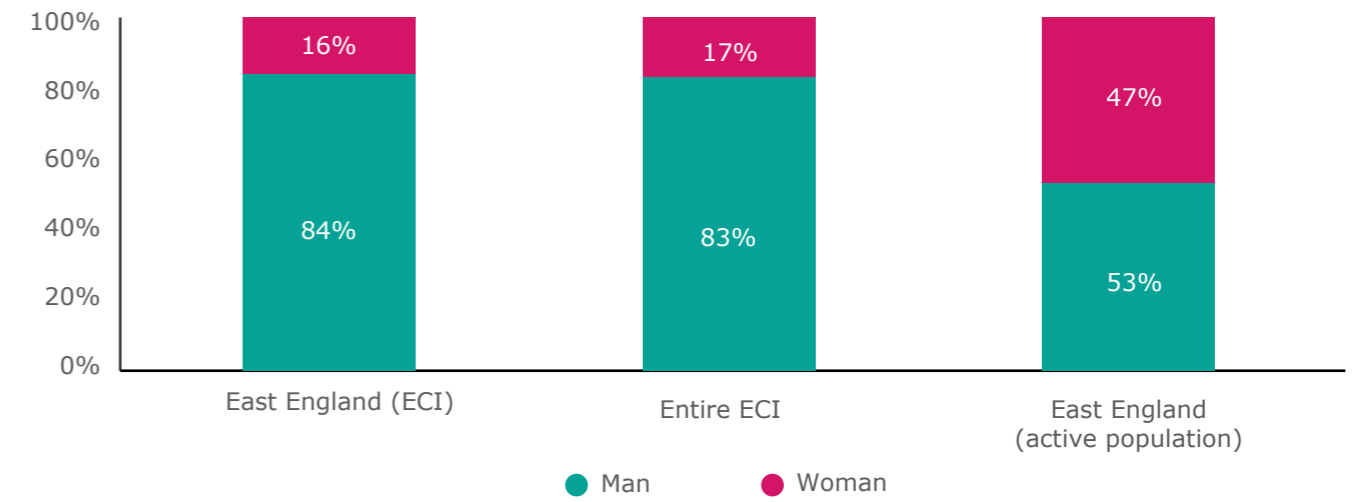
**Table 10: Workforce in East England by occupation**

<b>Apprentices and trainees</b>	<b>67</b>	<b>Professionals</b>	<b>258</b>
Electrical apprentices and trainees	17	Planning professionals	47
Scaffolding apprentices and trainees	13	Data and analysis professionals	33
Other apprentices and trainees	36	Other consultants professionals	21
<b>Craft</b>	<b>385</b>	Procurement professionals	21
Scaffolding craft	117	Health and safety professionals	20
Pipefitting craft	70	Quality assurance/quality controls professionals	19
Mechanical fitting craft	37	Project controls professionals	16
Blasters and painters craft	33	Health physics professionals	12
Plating craft	29	Quantity surveyors professionals	12
Rigging craft	27	Technologists professionals	11
Welding craft	20	Other professionals	45
Electrical craft	16	<b>Semi-skilled</b>	<b>165</b>
Welding and fabricators craft	11	General operatives semi-skilled	86
Other craft	25	Logistics semi-skilled	13
<b>Engineers</b>	<b>418</b>	Materials semi-skilled	11
Project engineers	91	Other semi-skilled	56
Design engineers	48	<b>Supervisors</b>	<b>106</b>
Process engineers	31	Security supervisors	24
Insulation engineers	19	Scaffolding supervisors	15
Mechanical engineers	15	General supervisors	11
Commissioning engineers	14	Other supervisors	56
Integration engineers	14	<b>Support</b>	<b>239</b>
Electrical engineers	14	Administrative support	76
Systems engineers	14	Commercial support	66
Civil, structural and architectural engineers	13	Health and safety support	23
Integrity engineers	11	Finance support	20
Site engineers	10	Logistics support	13
Cost engineers	10	Other support	42
Other engineers	113	<b>Technicians</b>	<b>371</b>
<b>Managers</b>	<b>403</b>	Design technicians	105
Project managers	170	General technicians	74
Operations managers	23	Electrical technicians	35
General managers	20	Operations technicians	25
Other directors	20	Design (piping) technicians	21
Technologists managers	20	Radiological protection technicians	17
Contracts managers	17	Decommissioning (waste) technicians	13
Health and safety managers	12	Commissioning technicians	11
Planning managers	11	Production technicians	11
Other managers	110	Other technicians	59
		<b>Other</b>	<b>41</b>

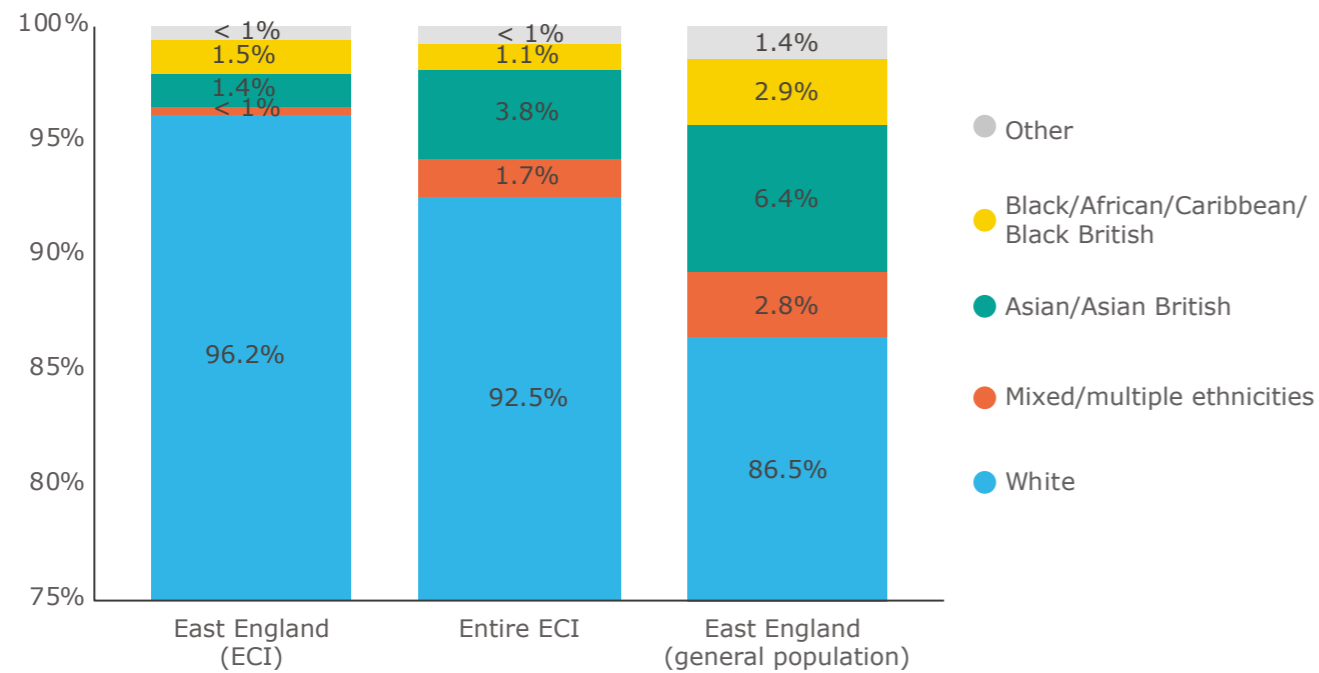
**Figure 54: Age profile of the ECI workforce in East England**



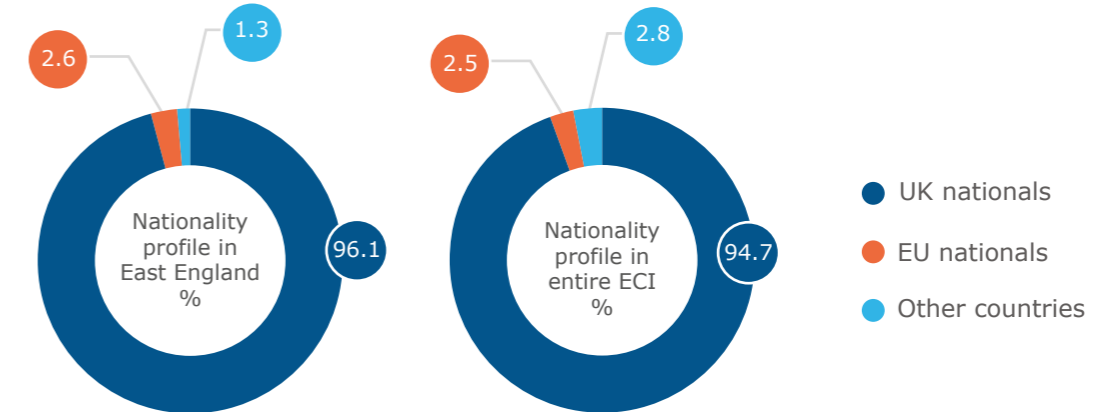
**Figure 56: Gender profile of the ECI workforce in East England**



**Figure 55: Ethnicity profile of the ECI workforce in East England (scale in y-axis 75 to 100)**



**Figure 57: Nationality profile of the ECI workforce in East England**



## South West England (8.2% - 7,750 workers)

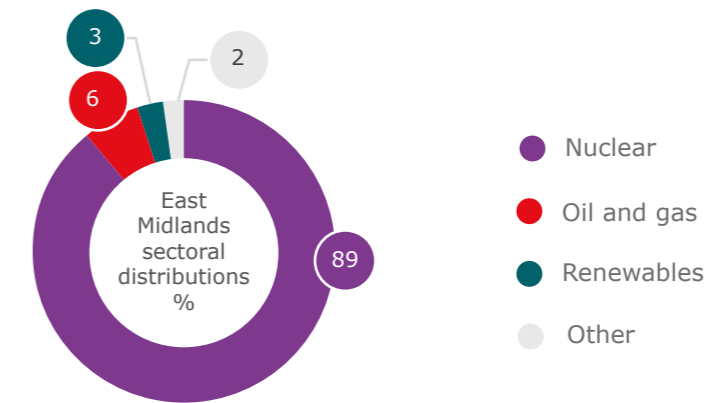
The nuclear sector is by far the largest ECI employer in the South West, accounting for 89% of the workforce. Major workforce hotspots include Hinkley and Bristol. Key occupations in the region are project, commercial and construction managers; operations and production technicians; general operators; mechanical, project, civil, commissioning and systems engineers; as well as scaffolders and planners.

A primary recruitment challenge is the lack of qualified candidates, skills and training. Employers report difficulties in hiring electricians, civil engineers, mechanical engineers, electrical engineers, safety case specialists, project controls professionals and project managers.

The nuclear sector is viewed as the main business opportunity by employers in the South West. Additionally, biofuels, energy from waste and defence generate some interest, though to a lesser extent. Employers collectively expect a 17% increase in headcount over the next three years.

The workforce in the South West has a smaller proportion of workers over 50 than the national ECI average and the regional active population, reducing concerns about an aging workforce relative to other regions. However, workers under 30 make up only 15.8% of the workforce, which is lower than the active population's 20.9%. The ECI workforce in the South West is more ethnically diverse than both the national ECI and the regional population. Women constitute a slightly higher percentage of the workforce than at the national level. Additionally, the region relies more heavily on foreign workers, with 16.7% of the workforce being non-UK nationals, compared to 5.3% nationally.

Figure 58: Sectoral distribution of the workforce in South West England



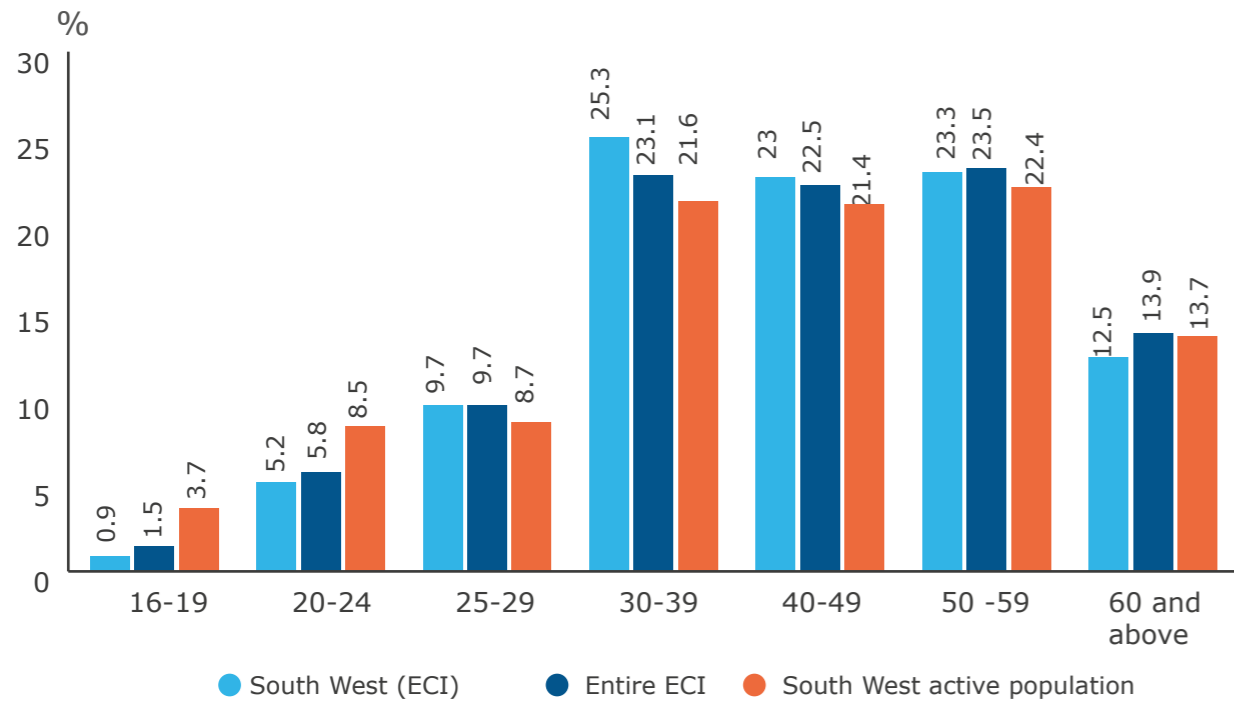
Maps 25 and 26: Location of workers in South West England (data points and heatmap)



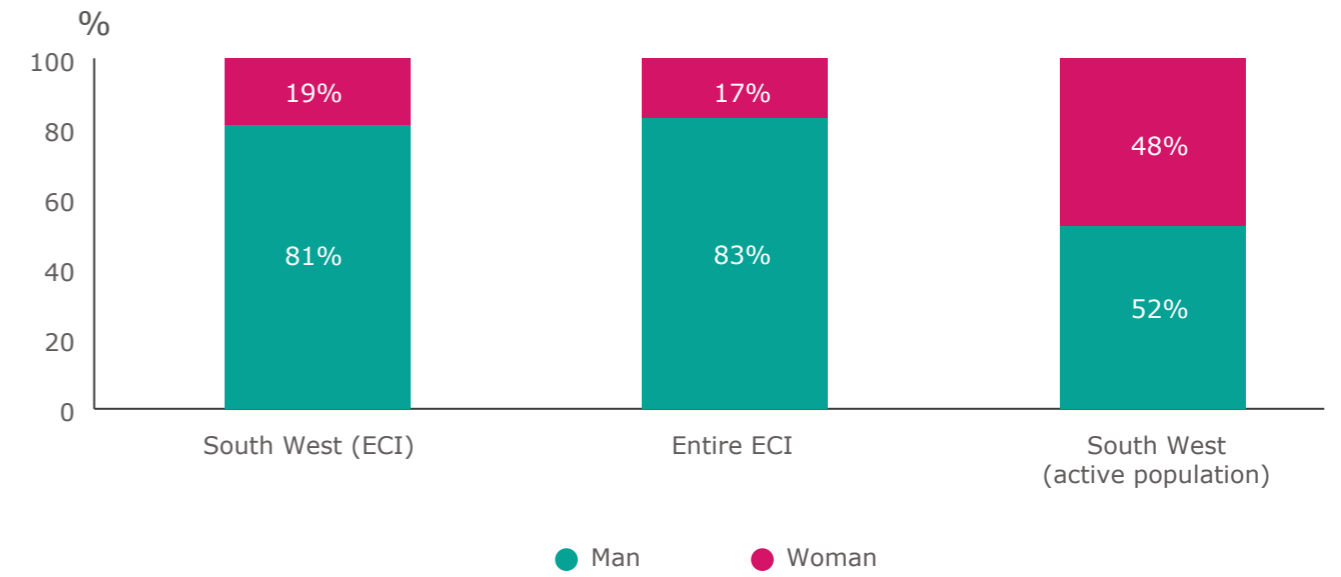
**Table 11: Workforce in South West England by occupation**

<b>Apprentices and trainees</b>	<b>118</b>	Civil and structural engineers	15	Compliance managers	11	Construction supervisors	19
Non-destructing testing apprentices and trainees	12	Instrumentation and control engineers	14	Procurement managers	11	Security supervisors	19
Planning apprentices and trainees	12	Piping engineers	14	Project (IT) managers	11	Mechanical fitting supervisors	17
Other apprentices and trainees	94	Maintenance engineers	13	Other managers	149	Operations supervisors	16
<b>Craft</b>	<b>750</b>	HVAC engineers	10	<b>Professionals</b>	<b>946</b>	Welding supervisors	16
Scaffolding craft	234	Welding engineers	10	Planning professionals	142	Health physics supervisors	12
Pipefitting craft	86	Other engineers	95	Health and safety professionals	71	Steel erecting supervisors	12
Rigging craft	86	<b>Managers</b>	<b>2,584</b>	Quality assurance/quality controls professionals	70	Architectural supervisors	11
Welding craft	75	Project managers	936	Data and analysis professionals	69	Health and safety supervisors	11
Plating craft	67	Commercial managers	255	Document controls professionals	54	Insulation supervisors	11
Mechanical fitting craft	58	Construction managers	159	Project controls professionals	53	Maintenance supervisors	11
Carpentry craft	43	Quality assurance/quality controls managers	102	Other consultants professionals	51	Rigging supervisors	11
Blasters and painters craft	40	Operations managers	74	Waste professionals	42	Other supervisors	107
Steel erecting craft	40	Other directors	72	Quantity surveyors professionals	36	<b>Support</b>	<b>345</b>
Other craft	21	General managers	71	Environmental professionals	34	Administrative support	85
<b>Engineers</b>	<b>1,548</b>	Human resources managers	70	Health physics professionals	31	Project management support	48
Mechanical engineers	254	Engineering managers	58	Technologists professionals	31	Finance support	35
Project engineers	155	Site management managers	56	Electrical professionals	19	Commercial support	31
Civil engineering engineers	113	Integration managers	49	Surveyors professionals	17	Personal assistants support	22
Commissioning engineers	101	Commissioning managers	47	Learning and development professionals	16	Compliance support	21
Systems engineers	99	Project controls managers	35	IT professionals	15	Facilities management support	11
Process engineers	82	Planning managers	33	Logistics professionals	15	Health and safety support	11
Operations engineers	67	Learning and development managers	31	Human resources professionals	14	Human resources support	11
Cost engineers	57	Finance managers	29	Estimating professionals	13	IT support	11
Structural engineers	54	Supply chain managers	27	Radiological protection professionals	13	Other support	60
Safety case engineers	46	Legal and compliance managers	25	Physicists professionals	12	<b>Technicians</b>	<b>566</b>
Nuclear engineers	38	IT managers	24	Procurement professionals	11	Operations technicians	94
Waste engineers	36	Civil engineering managers	21	Legal and compliance professionals	11	Production technicians	88
Health and safety engineers	34	Environmental managers	21	Other professionals	105	General technicians	38
Environmental engineers	34	Maintenance managers	20	<b>Semi-skilled</b>	<b>276</b>	Radiological protection technicians	36
Site engineers	33	Risk managers	20	General operatives semi-skilled	100	Architectural technicians	27
Electrical engineers	32	Technologists managers	19	Labourers semi-skilled	43	Production (maintenance) technicians	27
Radiological protection engineers	30	Document controls managers	15	Asbestos removal semi-skilled	38	Decommissioning (waste) technicians	26
Insulation engineers	25	Logistics managers	15	Insulation semi-skilled	35	Design technicians	25
Integration engineers	21	Security managers	13	Operators semi-skilled	22	Production (operations) technicians	21
Quality assurance/quality controls engineers	17	Safety case managers	13	Security semi-skilled	11	Quality assurance/quality controls technicians	21
Automation engineers	17	Waste managers	13	Other semi-skilled	27	Maintenance technicians	17
Design engineers	17	Design managers	11	<b>Supervisors</b>	<b>438</b>	Electrical technicians	16
Electrical, instrumentation and control engineers	16			General supervisors	92	Non-destructing testing technicians	16
				Scaffolding supervisors	33	Waste technicians	11
				Asbestos removal supervisors	21	Other technicians	102
				Waste supervisors	20	<b>Other</b>	<b>174</b>

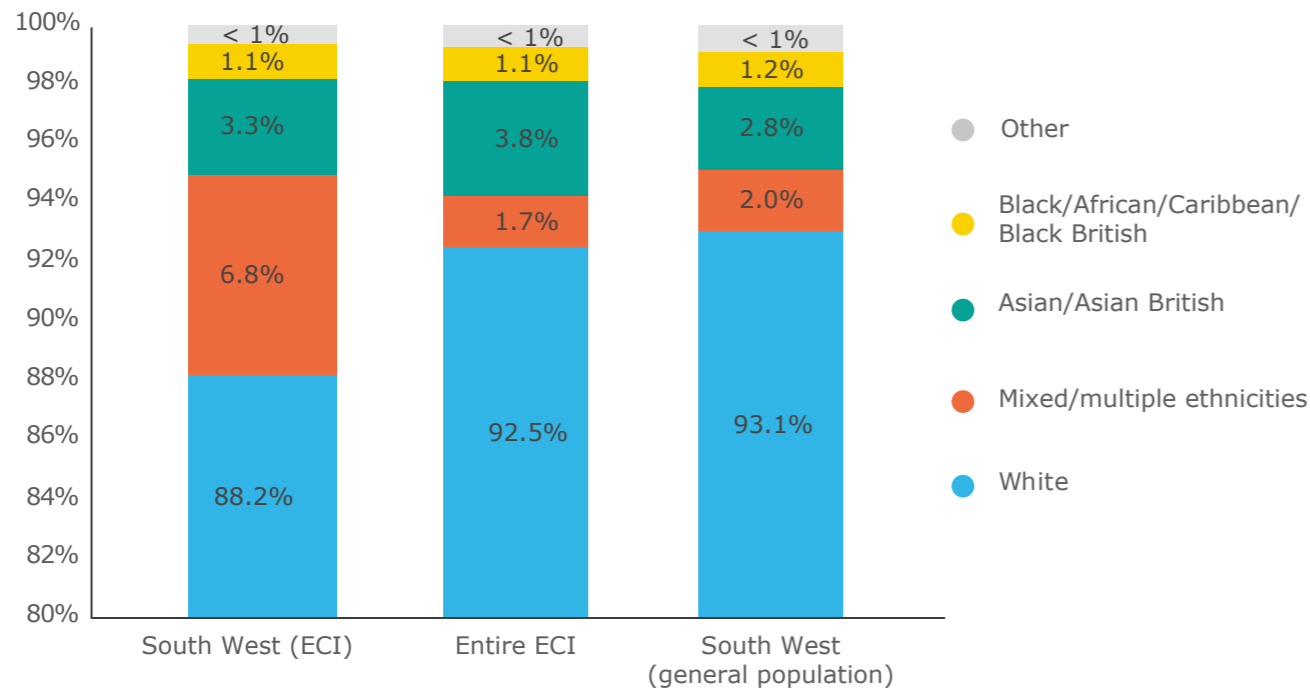
**Figure 59: Age profile of the ECI workforce in South West England**



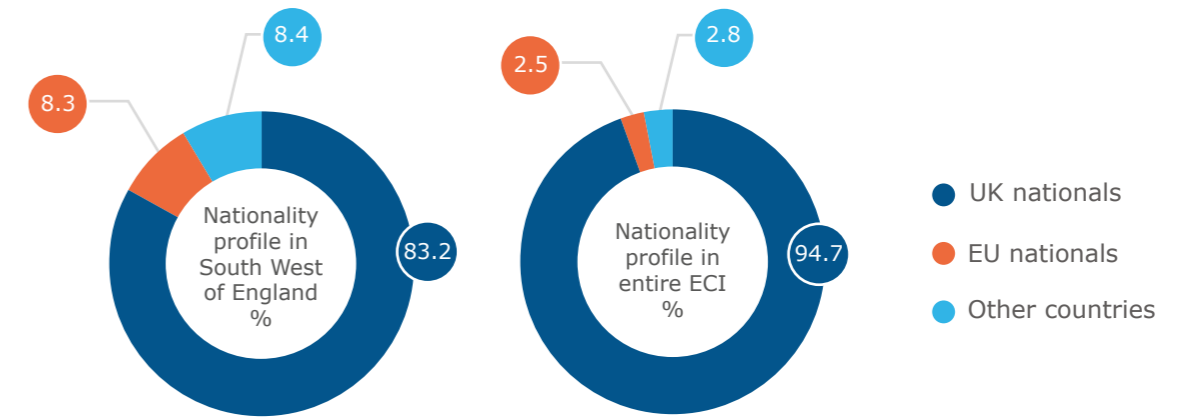
**Figure 61: Gender profile of the ECI workforce in South West England**



**Figure 60: Ethnicity profile of the ECI workforce in South West England (scale in y-axis 80 to 100)**



**Figure 62: Nationality profile of the ECI workforce in South West England**





## South East England (10% - 9,500 workers)

The ECI workforce in the South East primarily operates in the oil and gas (47%), nuclear (25%) and chemicals (9%) sectors. Reading and Fawley are the main workforce hotspots, with additional distribution across smaller secondary hotspots, as illustrated in map 28.

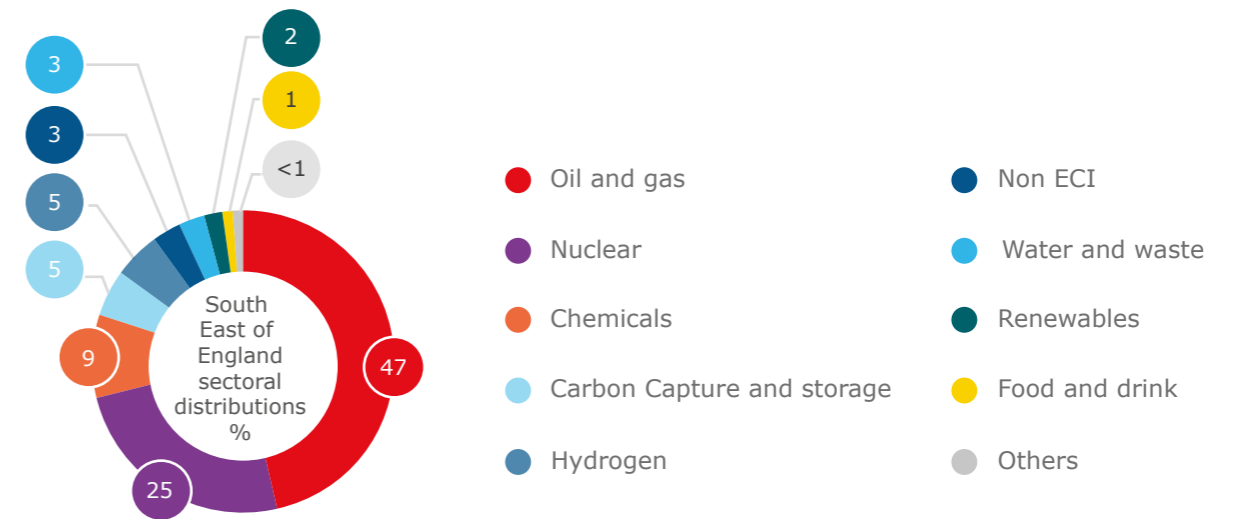
The engineers occupational category is overrepresented in the region's ECI workforce, accounting for 29.2% compared to 19.6% across the entire ECI. Consequently, a substantial portion of the workforce comprises process, project, mechanical, electrical, instrumentation and control, cost, design, structural and piping engineers. Other central roles include planners, scaffolders, general operatives, project managers, process managers, engineering managers, procurement professionals and quality assurance and quality control professionals.

Employers in the region who struggle to hire new staff face challenges primarily due to a shortage of applicants. Other notable challenges include a lack of qualifications, training and skills, as well as a misalignment between candidate expectations and what employers can offer. Positions impacted include safety engineers, project managers, project controllers, instrumentation and control engineers, welders, process engineers, pipefitters, mechanical fitters, platers, mechanical engineers, electrical engineers and subsea engineers.

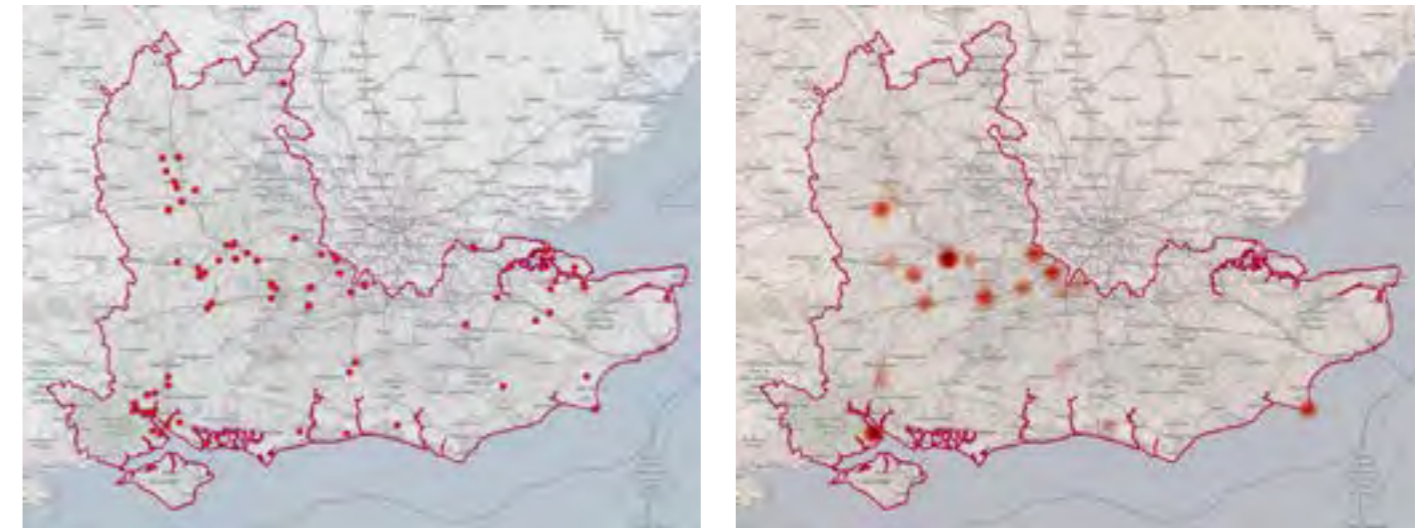
Carbon capture and storage represents the most significant business opportunity in the South East, followed by hydrogen, oil and gas and offshore wind. Approximately 10% of the regional workforce is already involved in CCS and hydrogen projects. Employers anticipate a 10% increase in headcount by 2027.

The south-east ECI workforce has a higher proportion of workers over 60 than the regional active population (23.2% versus 12.4%), highlighting concerns around an aging workforce. At the other end, workers under 30 make up only 11.8% of the south-east ECI workforce, compared to 14.9% across the ECI and 20.1% in the regional active population. Ethnic groups in the south-east ECI workforce closely aligns with that of the general population in the region. With an 81%/19% split between men and women, the regional ECI workforce is two percentage points less skewed towards men compared to the wider ECI. The workforce in the South East also has a relatively high proportion of foreign workers, with 6.2% from the EU and 10.2% from non-EU countries, compared to national averages of 2.5% and 2.8%, respectively.

Figure 63: Sectoral distribution of the workforce in South East England



Maps 27 and 28: Location of workers in the South East England (data points and heatmap)

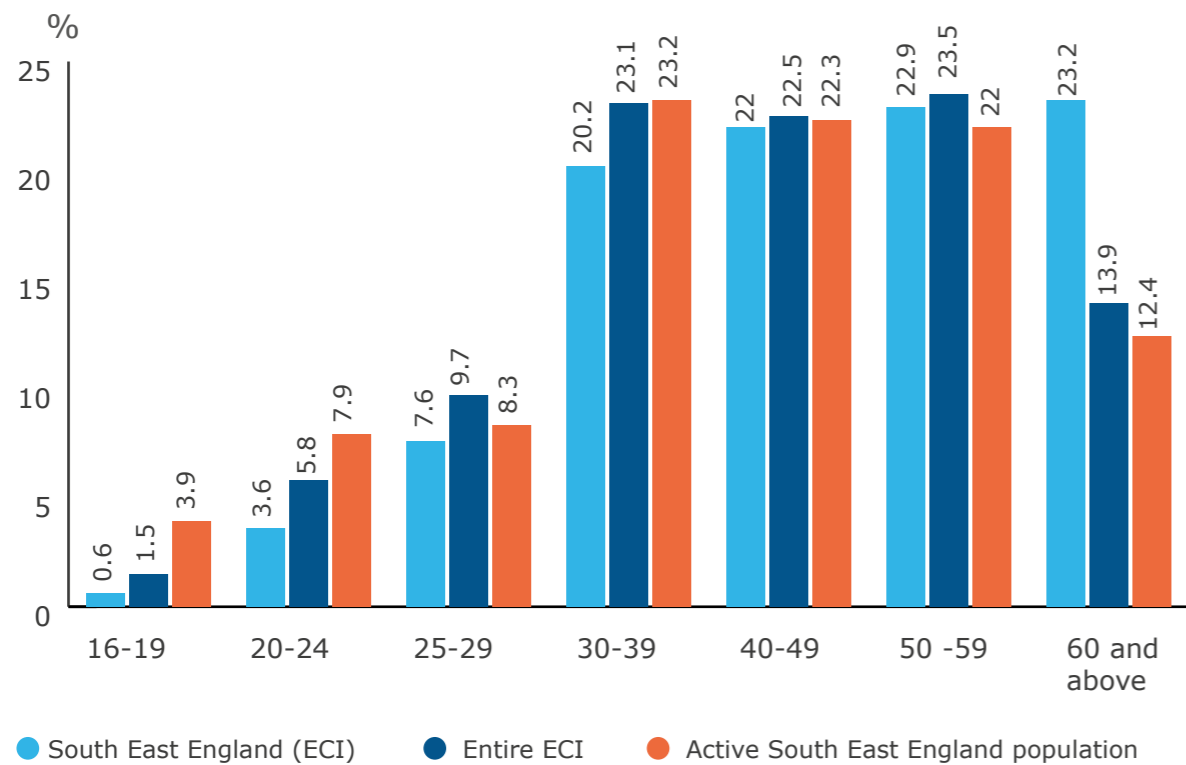


**Table 12: Workforce in South East England by occupation**

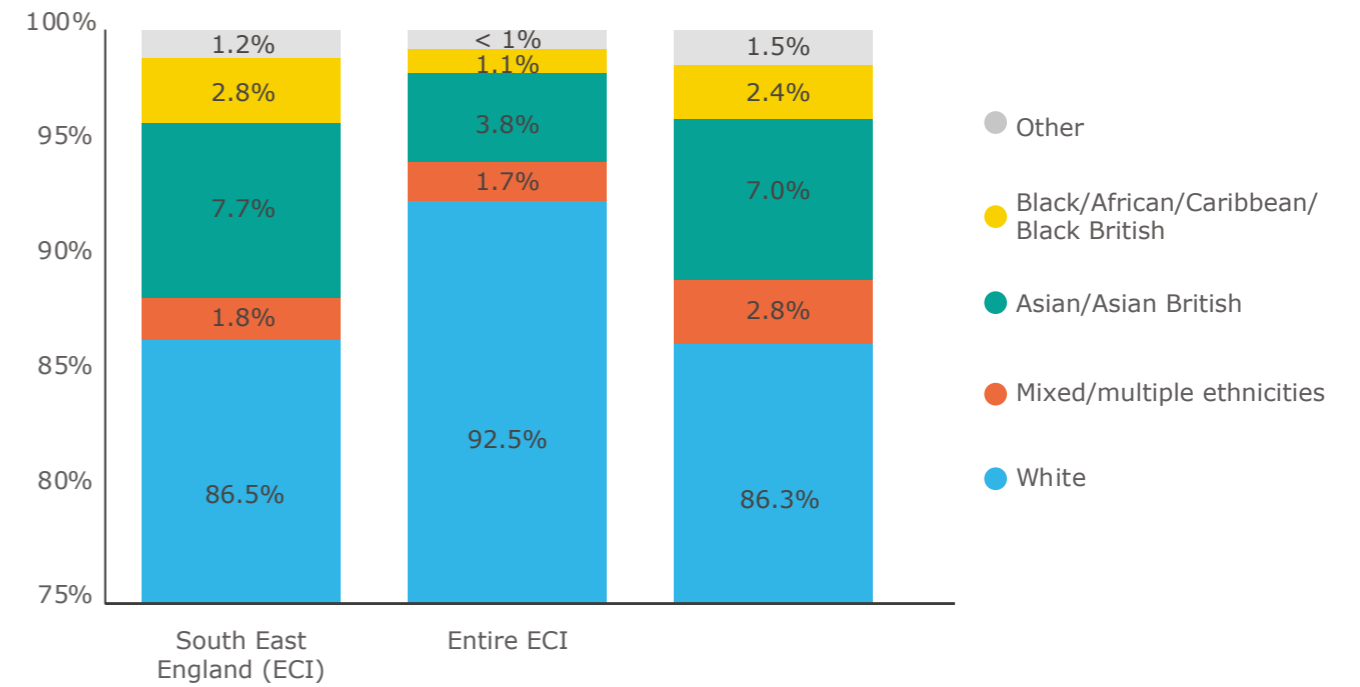
<b>Apprentices and trainees</b>	<b>166</b>	Civil, structural and architectural engineers	38	Systems managers	17	Drivers semi-skilled	29
Scaffolding apprentices and trainees	31	Electrical, instrumentation and control engineers	31	Project (EPC) managers	15	Operators semi-skilled	21
Health physics apprentices and trainees	23	Civil and structural engineers	29	Commissioning managers	13	Cleaning semi-skilled	12
Pipefitting apprentices and trainees	20	Quality assurance/quality controls engineers	26	Civil engineering managers	13	Other semi-skilled	36
Other apprentices and trainees	92	Construction engineers	23	Waste managers	13	<b>Supervisors</b>	<b>520</b>
<b>Craft</b>	<b>792</b>	Waste engineers	21	Estimating managers	12	General supervisors	84
Scaffolding craft	280	Site engineers	18	Proposals managers	12	Scaffolding supervisors	71
Pipefitting craft	88	Environmental engineers	18	Risk managers	12	Mechanical fitting supervisors	39
Mechanical fitting craft	76	Estimating engineers	17	Technologists managers	12	Site supervisors	29
Electrical fitters craft	58	Operations engineers	15	Legal and compliance managers	11	Pipefitting supervisors	27
Plating craft	51	Corrosion engineers	14	Cost controls managers	10	Electrical supervisors	23
Rigging craft	41	Design (safety) engineers	14	Other managers	152	Insulation supervisors	23
Welding craft	39	Radiological protection engineers	13	<b>Professionals</b>	<b>1,197</b>	Health physics supervisors	16
Steel erecting craft	35	Planning engineers	12	Planning professionals	137	Piping supervisors	12
Rigging (steel erectors) craft	32	Safety case engineers	11	Procurement professionals	98	Welding supervisors	11
Electrical craft	28	Other engineers	173	Quality assurance/quality controls professionals	94	Other supervisors	185
Fabrication craft	13	<b>Managers</b>	<b>1,813</b>	Other consultants professionals	92	<b>Support</b>	<b>561</b>
Other craft	50	Project managers	507	Health physics professionals	87	Administrative support	163
<b>Engineers</b>	<b>2,770</b>	Process managers	143	Project controls professionals	87	Finance support	77
Process engineers	432	Engineering managers	109	Estimating professionals	72	Project management support	45
Project engineers	269	Commercial managers	96	Document controls professionals	68	Personal assistants support	44
Mechanical engineers	201	General managers	81	Health and safety professionals	47	Commercial support	42
Electrical engineers	136	Other directors	68	Data and analysis professionals	41	IT support	39
Instrumentation and control engineers	135	Construction managers	62	Quantity surveyors professionals	33	Human resources support	33
Cost engineers	117	Project controls managers	48	Supply chain professionals	24	Health and safety support	23
Design engineers	112	Operations managers	41	Technologists professionals	24	Logistics support	19
Structural engineers	100	Finance managers	40	IT professionals	23	Radiological protection support	13
Piping engineers	92	Planning managers	39	Waste professionals	22	Other support	11
Health and safety engineers	79	Lifting managers	38	Electrical professionals	20	Facilities management support	10
Systems engineers	78	Contracts managers	32	Physicists professionals	17	Other support	42
Commissioning engineers	77	Health and safety managers	32	Geotechnical professionals	15	<b>Technicians</b>	<b>901</b>
Insulation engineers	75	Site management managers	30	Radiological protection professionals	11	Design (piping) technicians	127
Automation engineers	67	Supply chain managers	28	Cost controls professionals	11	Electrical technicians	96
Design (mechanical) engineers	66	Quality assurance/quality controls managers	27	Other professionals	171	Commissioning technicians	94
Pipeline engineers	61	Presidents managers	23	<b>Semi-skilled</b>	<b>445</b>	Design technicians	84
Civil engineering engineers	58	Design managers	20	General operatives semi-skilled	106	Radiological protection technicians	38
Maintenance engineers	55	IT managers	20	Labourers semi-skilled	58	General technicians	33
Subsea engineers	49	Project engineering managers	19	Environmental semi-skilled	40	Quality assurance/quality controls technicians	28
IT engineers	40	Human resources managers	19	Materials semi-skilled	38	Non-destructing testing (rope access) technicians	25
				Construction semi-skilled	36	Non-destructing testing technicians	24
				Asbestos removal semi-skilled	35		
				Scaffolding semi-skilled	35		

Quality assurance/quality controls (electrical) technicians	23	Design (instrumentation) technicians	15
Architectural technicians	22	Design (structural) technicians	15
Design (electrical) technicians	19	Design (instrumentation and control) technicians	13
Design (civil) technicians	19	General technicians (rope access) technicians	13
Instrumentation and control technicians	19	Electrical maintenance technicians	12
Production (maintenance) technicians	19	Production technicians	11
Operations technicians	17	Production (operations) technicians	11
Decommissioning (waste) technicians	16	Design (architectural) technicians	10
Safety technicians	16	Other technicians	82
		<b>Other</b>	<b>326</b>

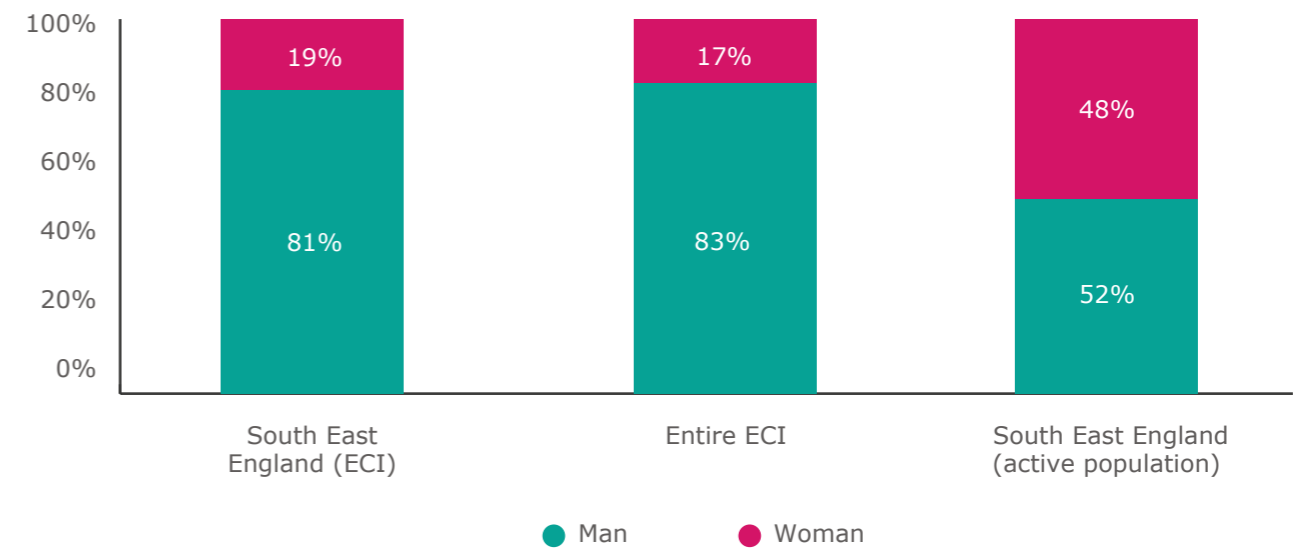
**Figure 64: Age profile of the ECI workforce in South East England**



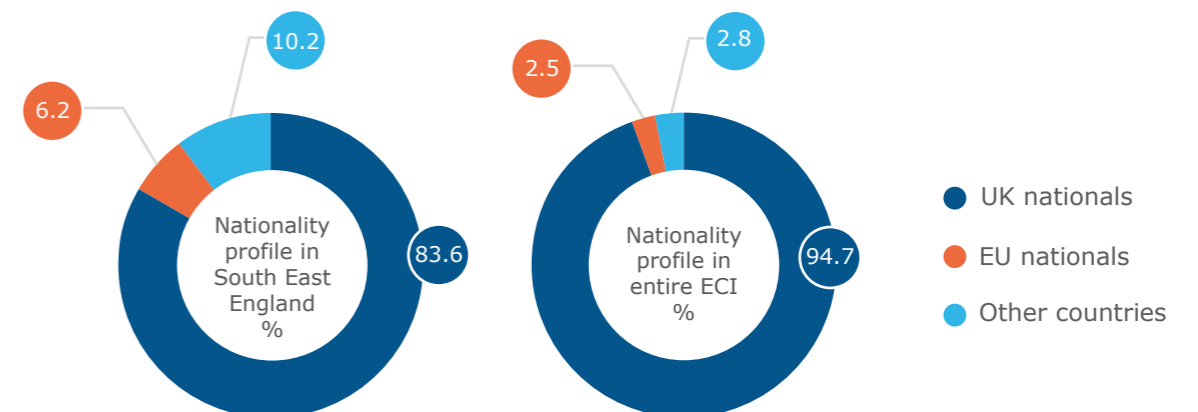
**Figure 65: Ethnicity profile of the ECI workforce in South East England (scale in y-axis 75 to 100)**



**Figure 66: Gender profile of the ECI workforce in South East England**



**Figure 67: Nationality profile of the ECI workforce in South East England**



## Greater London (5.2% - 4,950 workers)

Half of the ECI workforce in Greater London operates within the oil and gas sector, followed by renewables (18%) and nuclear (9%). Within the renewables sector, offshore wind accounts for 36% of the workforce, energy from waste projects 16% and biofuels 13%. Biomass, onshore wind and solar each make up around 12% of the renewables workforce. Occupational categories such as engineers, professionals and managers are overrepresented in Greater London compared to the wider ECI, resulting in high proportions of project managers, consultants, planners, project engineers, process engineers, mechanical engineers, structural engineers, instrumentation and control engineers and electrical engineers.

Recruitment difficulties in the region arise from various factors, including competition from other companies, challenges in meeting expectations of potential new entrants, limited resources to meet salary demands, the niche nature of certain roles and a lack of qualifications, training and skills. Occupations with significant recruitment challenges include project managers, engineering managers, electrical engineers, design engineers, mechanical engineers, subsea specialists and welders and pipefitters – particularly for companies sending workers on site in other regions.

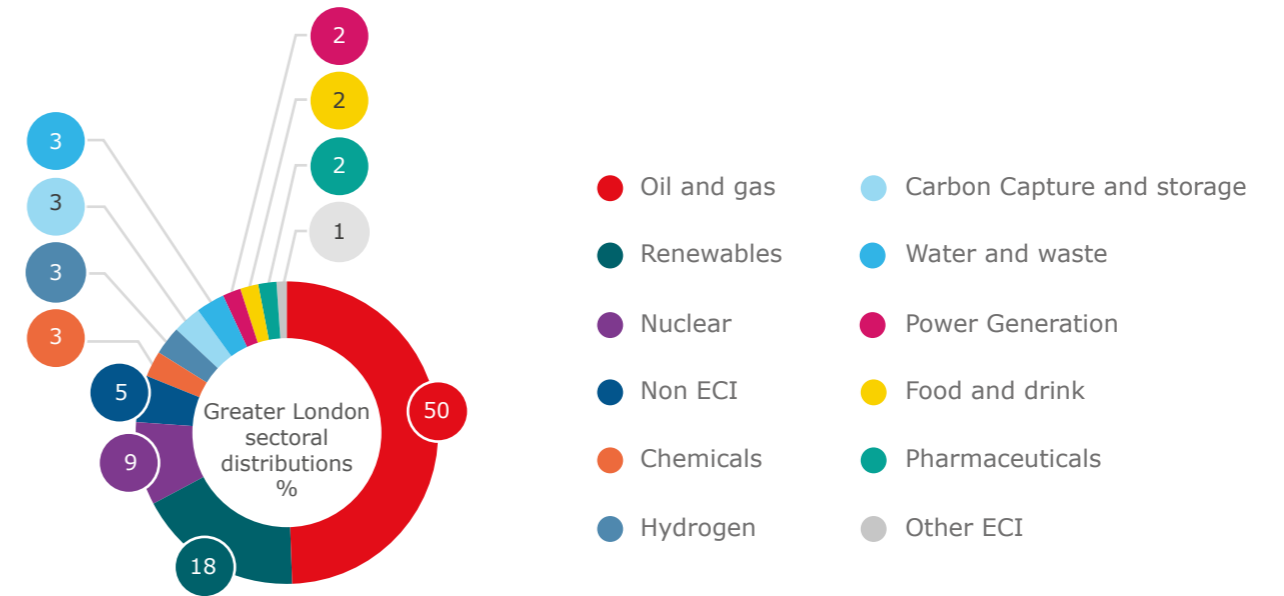
Hydrogen and oil and gas are viewed as substantial business opportunities in Greater London, with some additional interest in biofuels and biomass, though to a lesser extent. Employers in the region expect their headcount to grow by approximately 17% by 2027, exceeding the ECI average growth expectation of around 12%.

The proportion of ECI workers under 30 in Greater London (17.7%) is close to that of the wider ECI (17%) but lower than the regional active population (22.7%). The share of workers above 60 is lower in Greater London (9.5%) than across the entire ECI (13.9%), aligning more closely with the local active population.

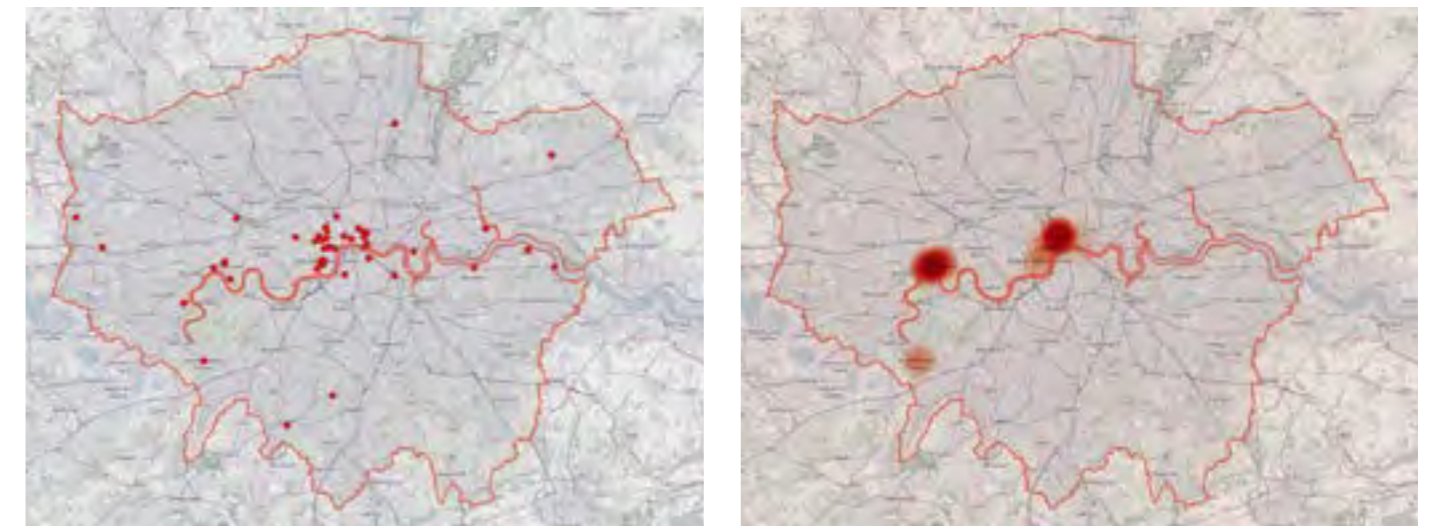
The ECI workforce in Greater London is more ethnically diverse than the overall ECI but remains less diverse than the broader Greater London population. For instance, workers in the Black, African, Caribbean and Black British category represent 3.5% of the Greater London ECI workforce, compared to 13.5% in the general population. Similarly, there is a 10-percentage-point gap in the representation of Asian and Asian British individuals between the Greater London ECI workforce and the general population of the region.

Regarding gender, women make up 27% of the ECI workforce in Greater London, a 10-percentage-point increase compared to the wider ECI. Additionally, the share of non-UK nationals in the Greater London workforce is relatively high at 16.6%, compared to 5.3% across the entire ECI.

Figure 68: Sectoral distribution of the workforce in Greater London



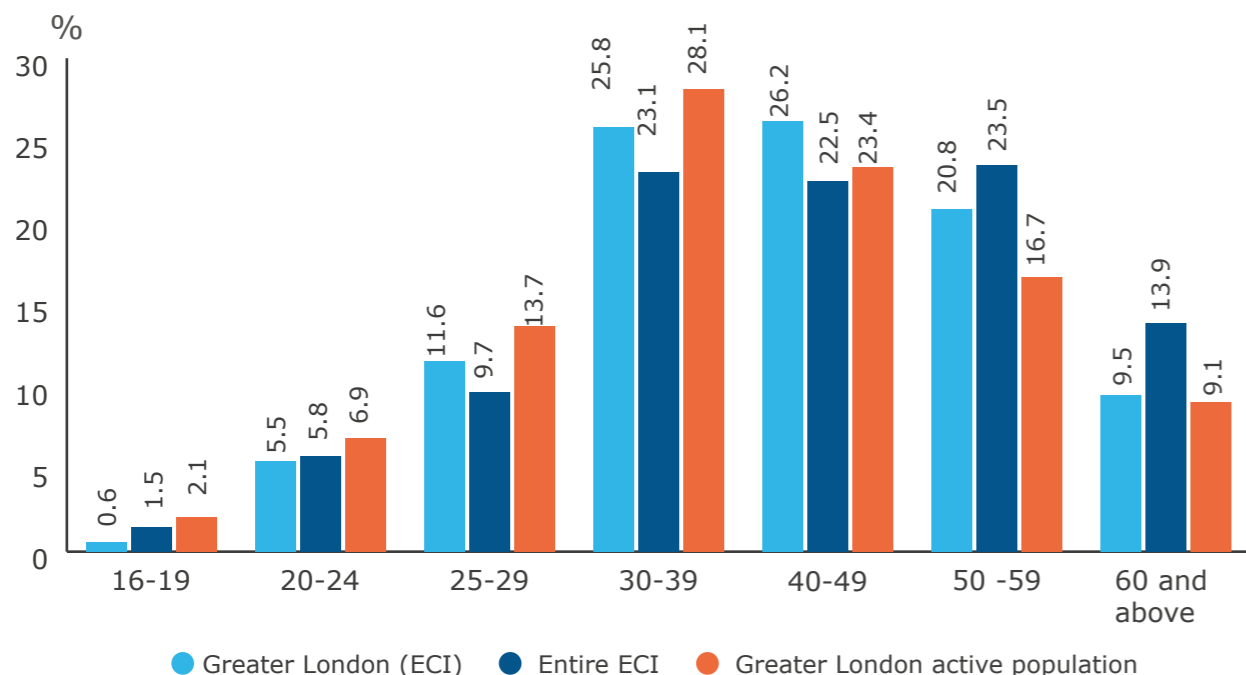
Maps 29 and 30: Location of workers in Greater London (data points and heatmap)



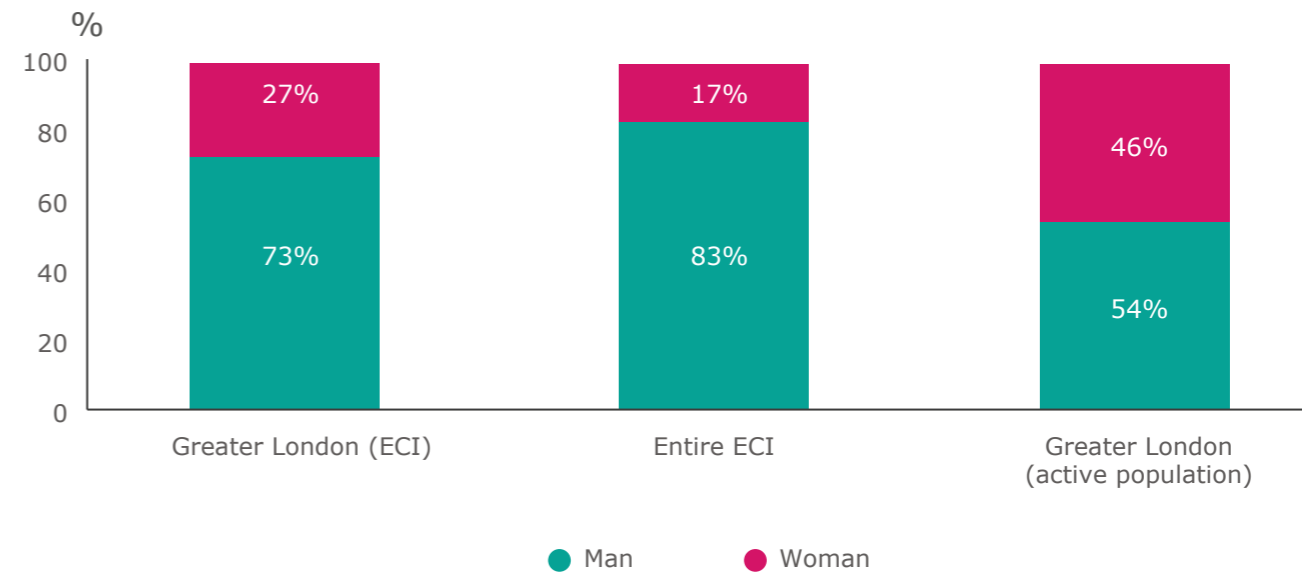
**Table 13: Workforce in Greater London by occupation**

<b>Apprentices and trainees</b>	<b>30</b>	<b>Managers</b>	<b>1,209</b>	<b>Professionals</b>	<b>816</b>	<b>Supervisors</b>	<b>42</b>
Other apprentices and trainees	30	Project managers	315	Other consultants professionals	102	General supervisors	23
<b>Craft</b>	<b>200</b>	Other directors	98	Planning professionals	98	Other supervisors	19
Steel erecting craft	55	Commercial managers	90	Data and analysis professionals	72	<b>Support</b>	<b>395</b>
Mechanical fitting craft	40	Process managers	70	Procurement professionals	63	Administrative support	111
Pipefitting craft	15	General managers	54	Project controls professionals	56	Finance support	73
Welding craft	12	Operations managers	46	Technologists professionals	40	Commercial support	50
Other craft	78	Project controls managers	39	Document controls professionals	36	Human resources support	39
<b>Engineers</b>	<b>1,693</b>	Finance managers	37	Human resources professionals	33	Personal assistants support	24
Project engineers	227	Engineering managers	36	IT professionals	24	Health and safety support	14
Process engineers	217	Human resources managers	33	Estimating professionals	23	IT support	11
Mechanical engineers	204	Legal and compliance managers	33	Environmental professionals	21	Project management support	11
Structural engineers	142	Presidents managers	24	Waste professionals	21	Other support	62
Instrumentation and control engineers	113	Supply chain managers	24	Commissioning professionals	20	<b>Technicians</b>	<b>341</b>
Electrical engineers	108	IT managers	24	IT (cybersecurity) professionals	17	Design technicians	79
Piping engineers	86	Construction managers	23	Health and safety professionals	16	Commissioning technicians	60
Civil and structural engineers	50	Health and safety managers	19	Legal and compliance professionals	16	Design (piping) technicians	46
Civil engineering engineers	46	Quality assurance/quality controls managers	19	Quantity surveyors professionals	16	General technicians	25
Construction engineers	45	Logistics managers	15	Electrical professionals	15	Operations technicians	16
Health and safety engineers	40	Strategy managers	15	Quality assurance/quality controls professionals	15	Design (instrumentation) technicians	15
Systems engineers	37	Contracts managers	13	Cost controls professionals	12	Design (structural) technicians	15
Design engineers	36	Civil engineering managers	12	Commercial professionals	11	Electrical technicians	13
Cost engineers	26	Commissioning managers	12	Risk professionals	11	Non-destructing testing technicians	12
Electrical, instrumentation and control engineers	23	Planning managers	12	Other professionals	78	Other technicians	60
Pipeline engineers	23	Procurement managers	12	<b>Semi-skilled</b>	<b>81</b>	<b>Other</b>	<b>140</b>
Integrity engineers	20	Estimating managers	11	General operatives semi-skilled	27		
Commissioning engineers	20	Other managers	125	Deck crew semi-skilled	12		
Corrosion engineers	19			Other semi-skilled	42		
Telecommunications engineers	19						
Environmental engineers	17						
Insulation engineers	14						
Architectural engineers	14						
Systems (subsea) engineers	12						
Safety case engineers	11						
Subsea engineers	10						
Other engineers	114						

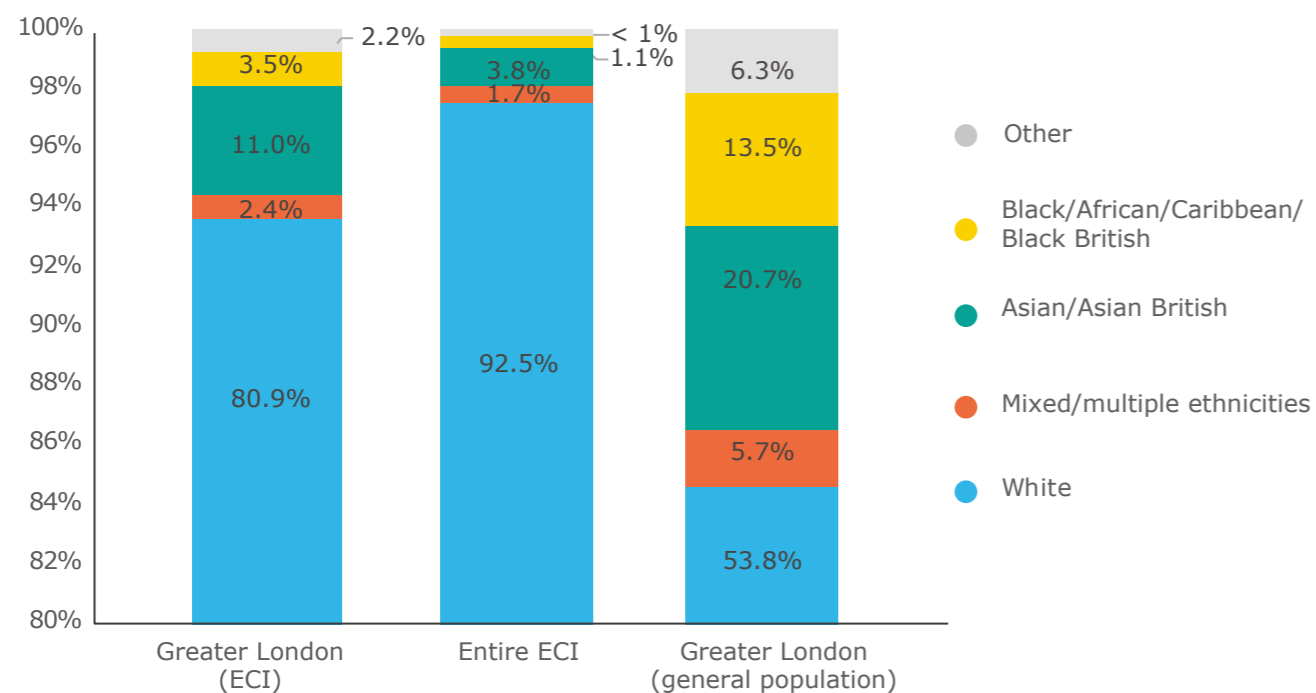
**Figure 69: Age profile of the ECI workforce in Greater London**



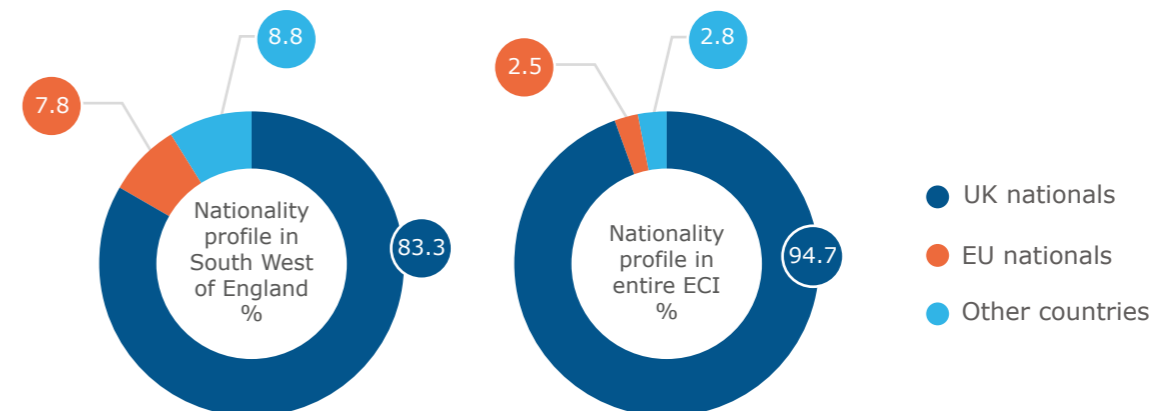
**Figure 71: Gender profile of the ECI workforce in Greater London**



**Figure 70: Ethnicity profile of the ECI workforce in Greater London (scale in y-axis 80 to 100)**



**Figure 72: Nationality profile of the ECI workforce in Greater London**



## Wales (2.3% - 2,200 workers)

The Welsh Government's *Economic Action Plan*<sup>10</sup> emphasises that Wales has strong foundations to build a robust economy but also acknowledges significant challenges that need to be addressed. These include deeply entrenched, long-term and structural issues, such as generational economic inactivity, which are particularly difficult to resolve. Strategic challenges, including global trends like artificial intelligence, digitalisation, decarbonisation and skills shortages, also pose significant obstacles. These challenges exist within the context of financial constraints, where opportunities for economic growth are weighed against the limitations of available resources.

Recognising the importance of fostering inward investment in key areas such as renewable energy, the Welsh Government has identified the need to expedite the consenting process for major infrastructure projects. In response, the *Infrastructure (Wales) Bill 2023*<sup>11</sup> aims to establish a streamlined 'one-stop-shop' approach, allowing consents and other permissions to be obtained through a unified application and decision-making process.

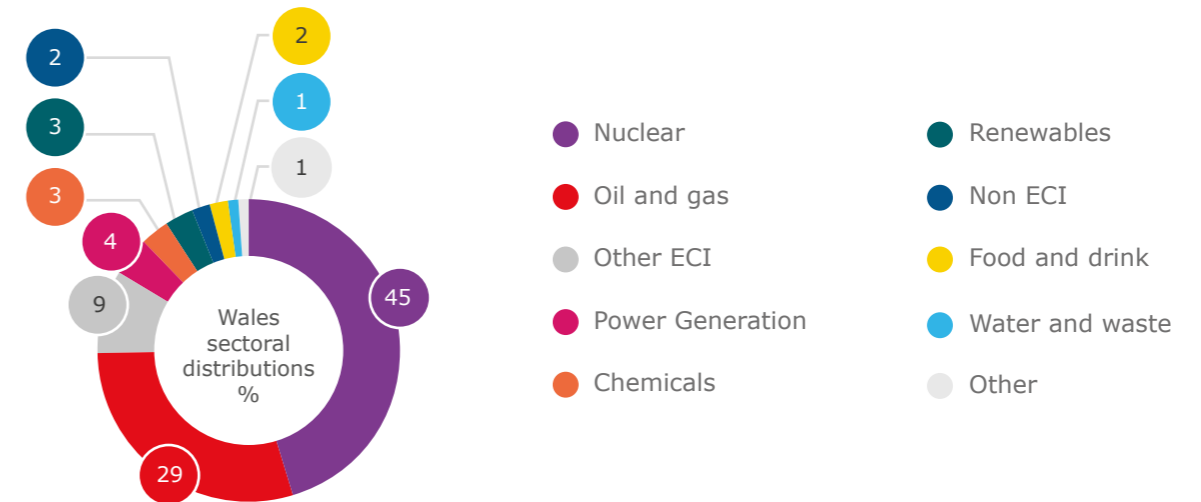
The ECI workforce in Wales primarily works in the nuclear (45%) and oil and gas (29%) sectors, with the steel sector also serving as a significant employer (approximately 9%). Most of the workforce is concentrated near Pembroke, Port-Talbot, Cemaes and Trawsfynydd.

In terms of ethnic diversity, the ECI workforce is less diverse than the general population in Wales, partly due to the location of two major workforce hotspots in areas that are initially less diverse. The share of women in the Welsh ECI workforce is also lower than in the wider ECI (11% versus 17%). Reliance on foreign workers is minimal, with just 2.1% of the workforce being non-UK nationals.

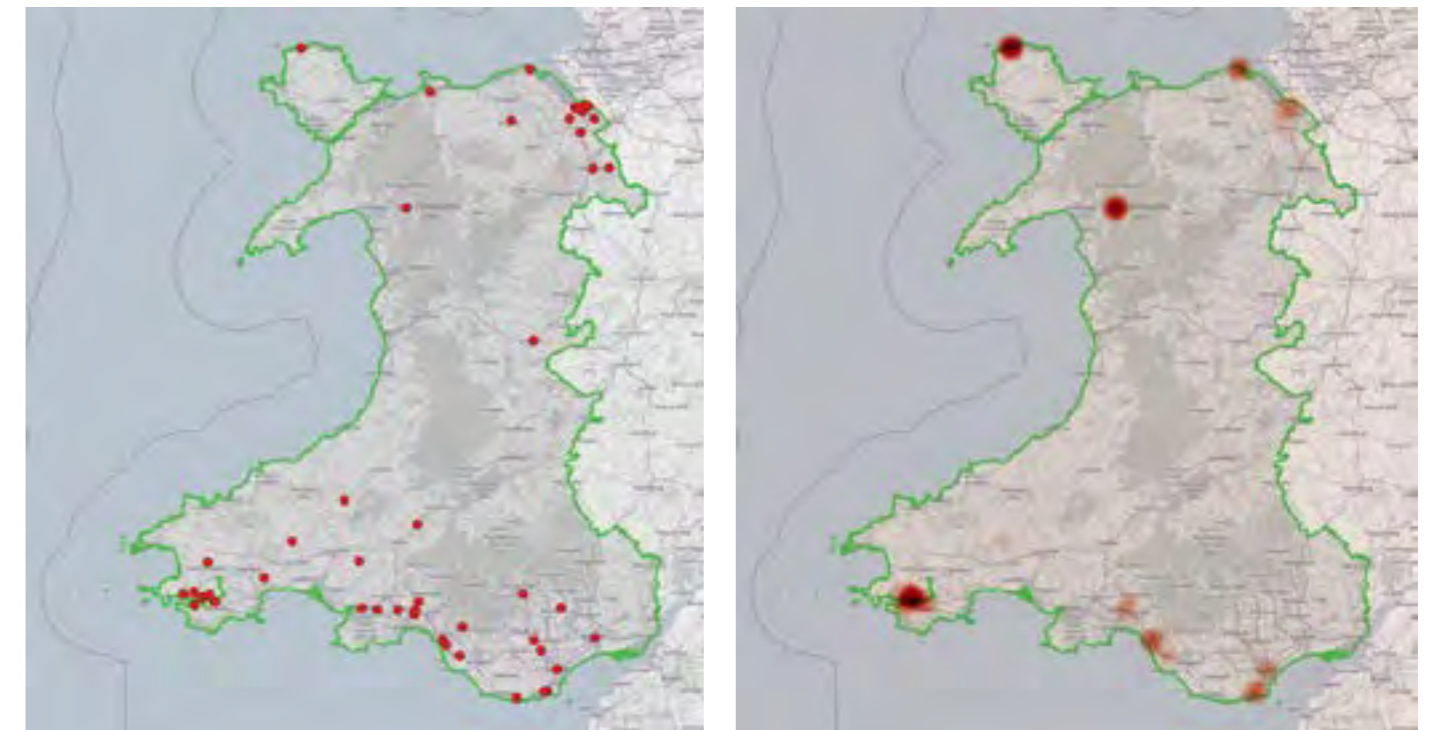
The age data at constituency level in Wales is not structured in such a way that would allow direct comparison with ECITB statistics. The unavailability of more detailed age data means that age groups differ. For comparisons purposes, figures 83 and 88 should be compared with figure 77 and 78. The 50–59 age group is significantly overrepresented in the Welsh ECI workforce (30.3%) compared to the entire ECI (23.5%) and the active population in Wales (21.2%). In 2021, this share was 35%. Over the past three years, the share of workers above 60 has increased from 11% to 14.6%. The share of workers below 30 is notably lower, at 12.1%, compared to 17% in the entire ECI and 22.5% in Wales's active population. In 2021, the share of ECI workers in Wales below 30 was 18%.

The following pages provide a more detailed analysis of regional differences between North and South Wales, covering sectoral and geographical distributions, occupations, demographics, as well as business opportunities, hiring challenges and projected workforce growth.

Figure 73: Sectoral distribution of the workforce in Wales



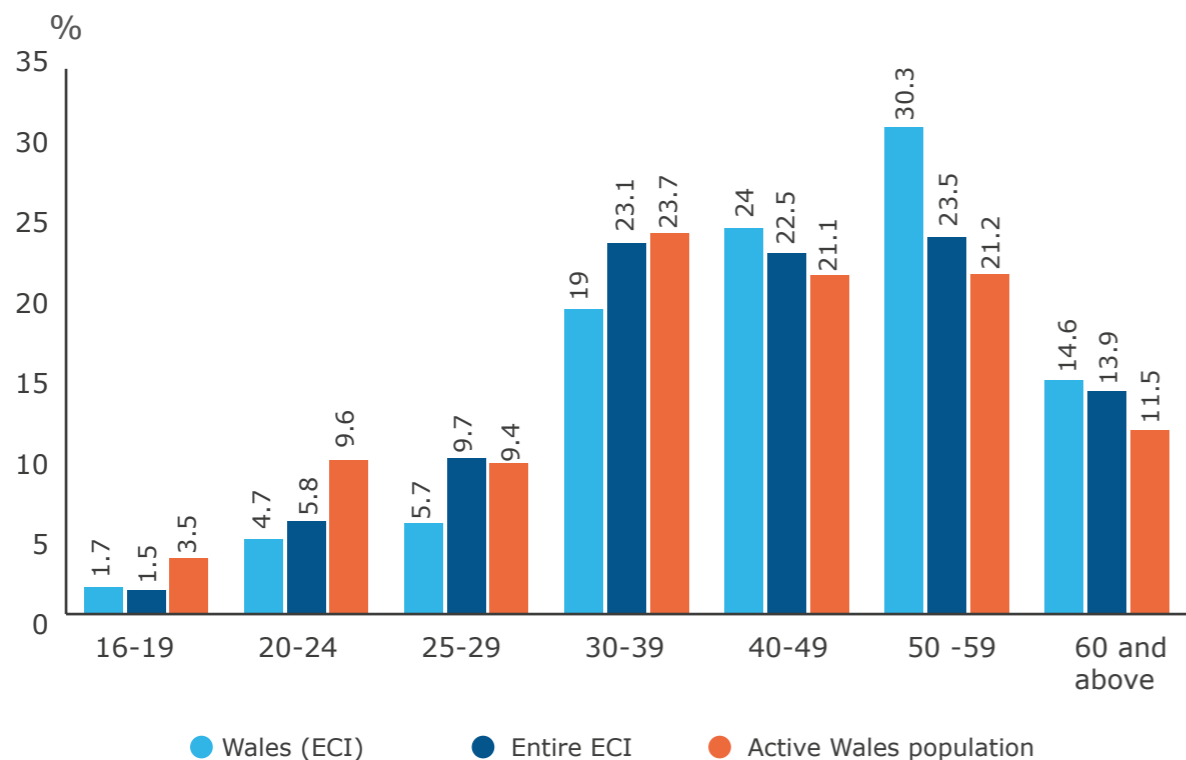
Maps 31 and 32: Location of workers in Wales (data points and heatmap)



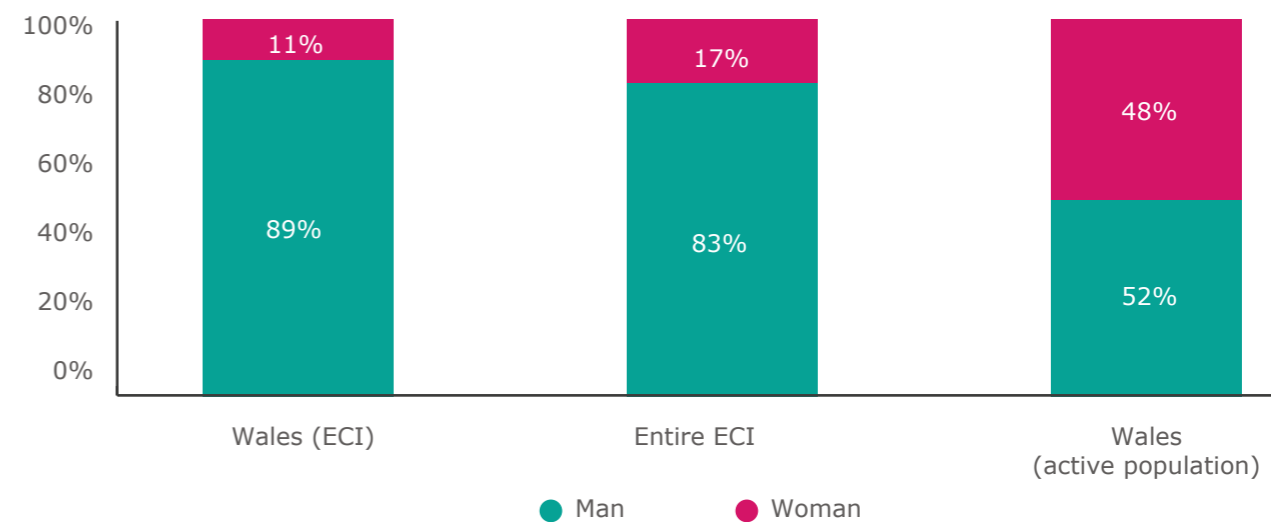
<sup>10</sup> Prosperity for All: Economic action plan (2017 – Welsh Government)

<sup>11</sup> Infrastructure (Wales) Bill 2023 (2023 – Welsh Government)

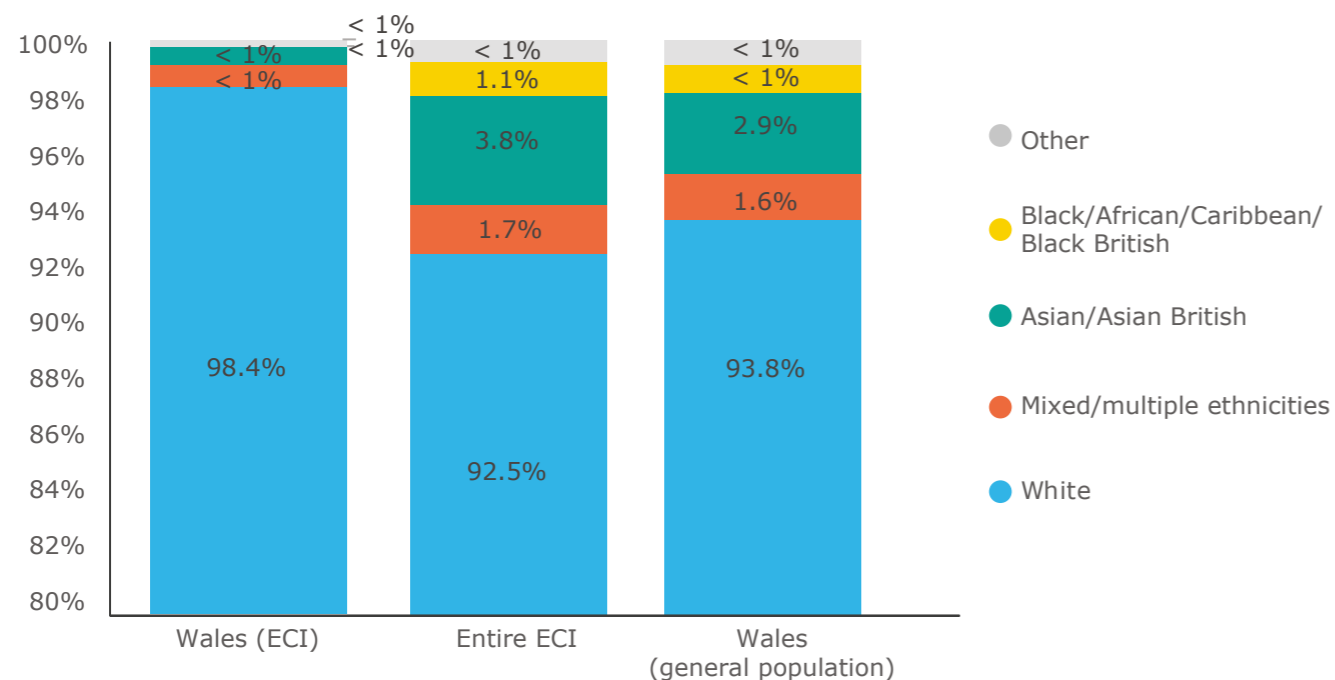
**Figure 74: Age profile of the ECI workforce in Wales**



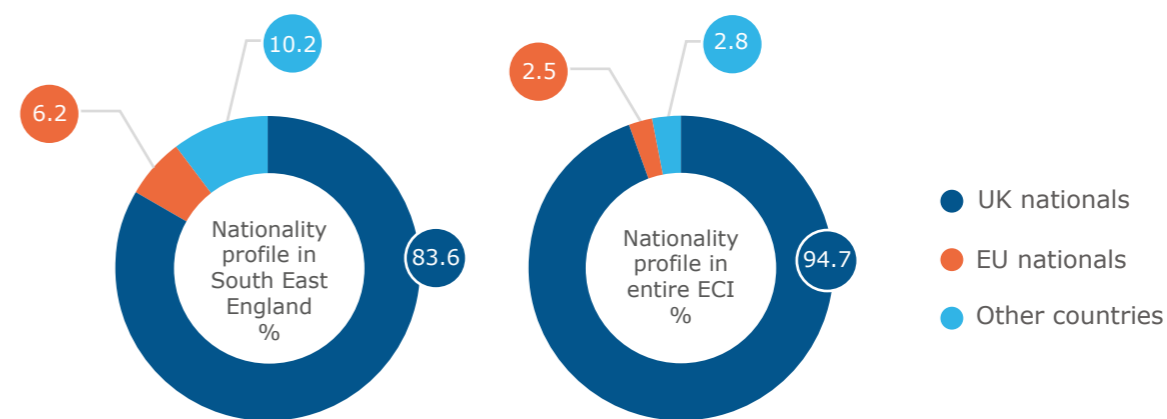
**Figure 76: Gender profile of the ECI workforce in Wales**



**Figure 75: Ethnicity profile of the ECI workforce in Wales (scale in y-axis 80 to 100)**



**Figure 77: Nationality profile of the ECI workforce in Wales**





## North Wales (1.1% - 1,050 workers)

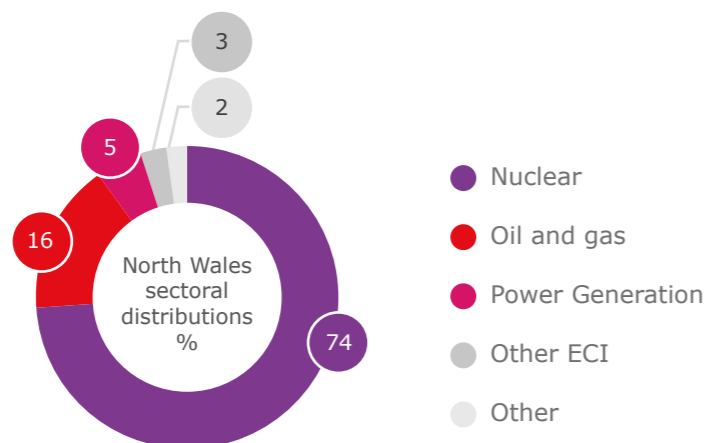
Nearly three-quarters of the ECI workforce in the North of Wales is employed in the nuclear sector, primarily in decommissioning activities. Another 16% works in oil and gas. The major workforce hotspots are near Cemaes and Trawsfynydd. Technicians make up the largest occupational category in the region, accounting for 21.7% of the workforce compared to 12.5% across the wider ECI. Key roles include production technicians, radiological protection technicians and electrical technicians, along with project engineers and project managers, who are also integral to the workforce.

While no single employer in the dataset is predominantly based in the North, those operating in the region note recruitment challenges due to the remote locations of sites and offices, the niche nature of some specialist roles, competition from larger employers and a general shortage of applicants, especially for construction roles. This makes it particularly challenging to recruit steel erectors, crane operators, general operators, welders, pipefitters and project engineers.

Employers see nuclear, construction (e.g., houses, hospitals, schools), rail and hydrogen as promising business opportunities. Employers in the North of Wales expect their workforce to grow by 15% by 2027. It is important to note that many employers also have a significant portion of their workforce in the North West and South West of England, South Wales and the West Midlands.

The share of ECI workers below 30 is significantly lower than in the entire ECI (8% compared to 17%). In the 16 to 24 age group, 11.3% of the active population falls into this range, compared to just 4.3% of the ECI workforce. Nearly half of the ECI workforce in North Wales is aged 50 or older, compared to 38.5% in the active population. The ECI workforce in North Wales is slightly less ethnically diverse than the general population, which may be impacted by the demographics of the two major hotspots located in areas with a different ethnic profile compared to more populated urban regions. The percentage of women in the workforce is similar to that in the wider ECI. Reliance on foreign workers is minimal, especially those from non-EU countries.

Figure 78: Sectoral distribution of the workforce in North Wales



Maps 33 and 34: Location of workers in North Wales (data points and heatmap)

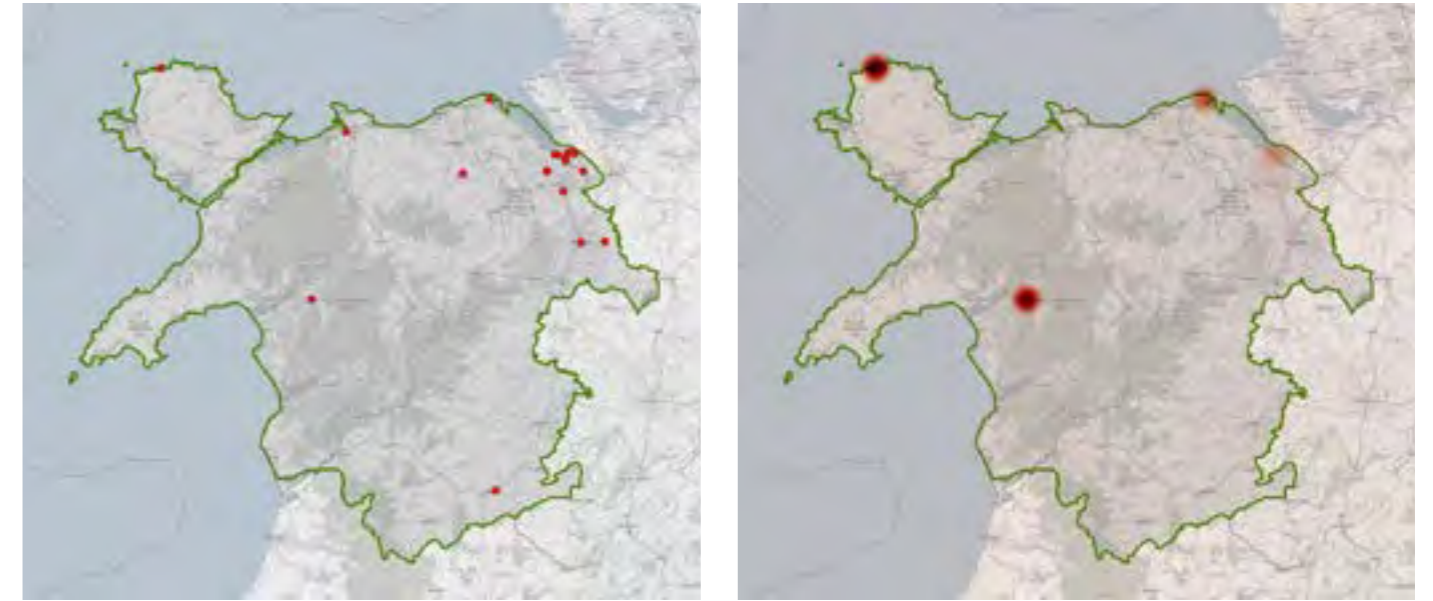
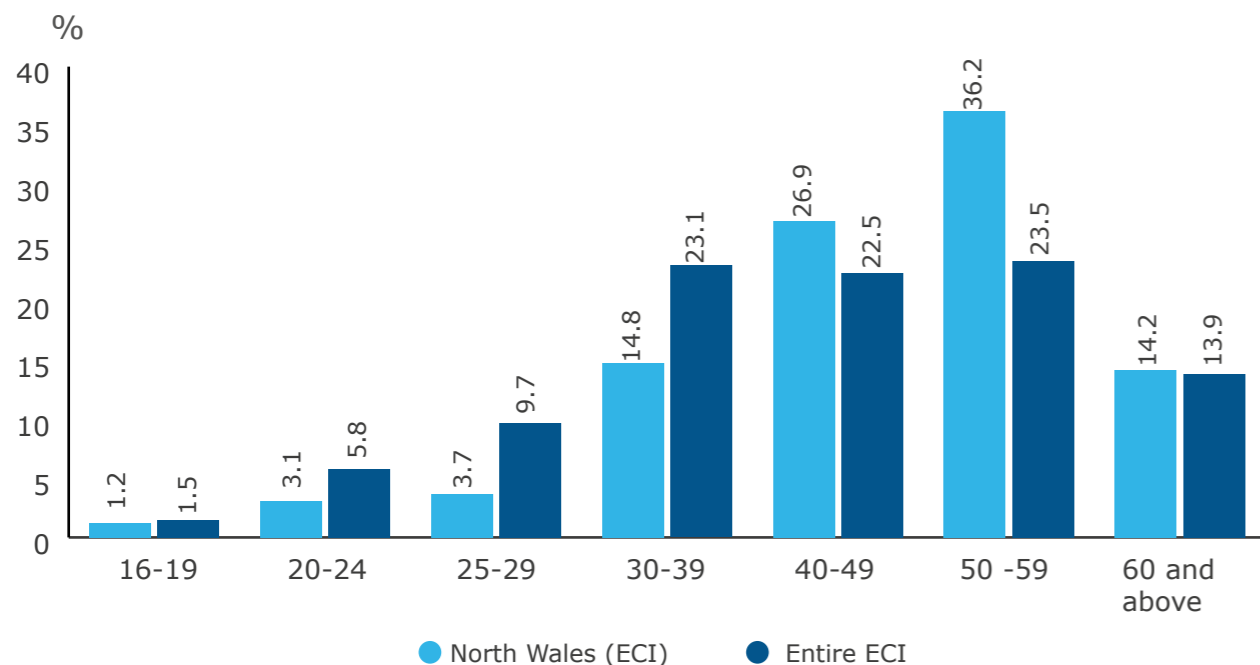


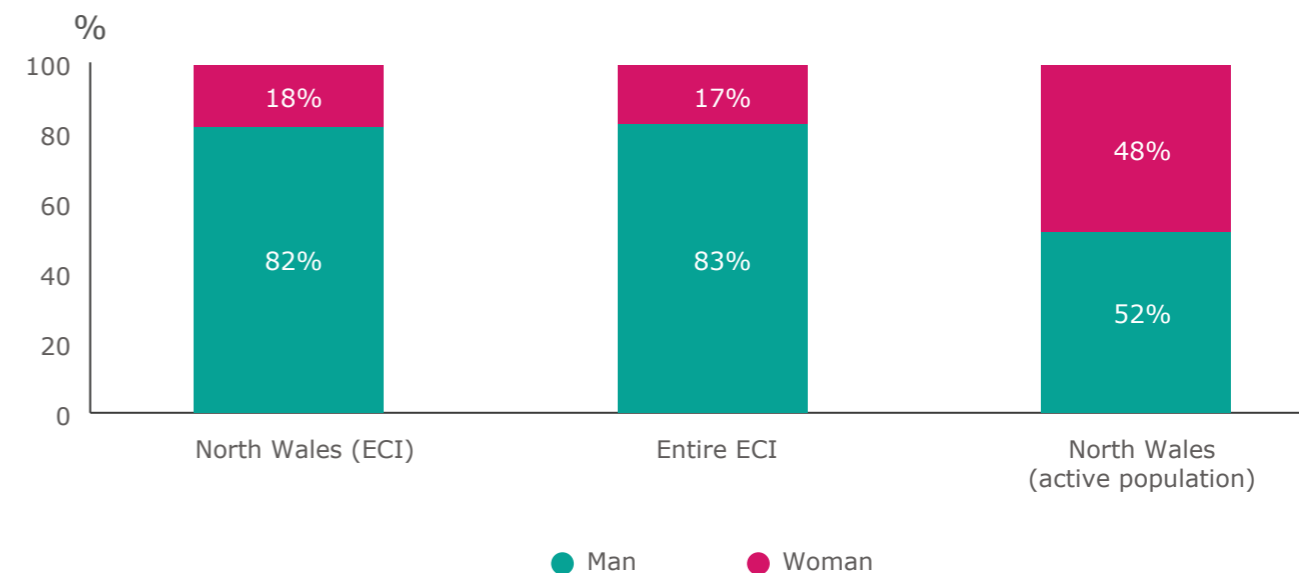
Table 14: Workforce in North Wales by occupation

<b>Apprentices and trainees</b>	<b>35</b>	<b>Professionals</b>	<b>91</b>
Maintenance apprentices and trainees	13	Planning professionals	13
Other apprentices and trainees	22	Quality assurance/quality controls professionals	11
<b>Craft</b>	<b>121</b>	Waste professionals	11
Scaffolding craft	29	Other professionals	57
Steel erecting craft	24	<b>Semi-skilled</b>	<b>72</b>
Plating craft	17	Security semi-skilled	33
Mechanical fitting craft	14	General operatives semi-skilled	21
Grinders craft	11	Other semi-skilled	17
Other craft	26	<b>Supervisors</b>	<b>87</b>
<b>Engineers</b>	<b>177</b>	Security supervisors	13
Project engineers	41	Other supervisors	74
Systems engineers	24	Support	68
Site engineers	23	Administrative support	24
Operations engineers	18	Other support	44
Waste engineers	16	<b>Technicians</b>	<b>224</b>
Radiological protection engineers	15	Production technicians	63
Other engineers	41	Radiological protection technicians	40
<b>Managers</b>	<b>133</b>	Electrical technicians	20
Project managers	32	Health and safety technicians	15
Planning managers	16	Production (operations) technicians	13
Other managers	85	Other technicians	72
		<b>Other</b>	<b>26</b>

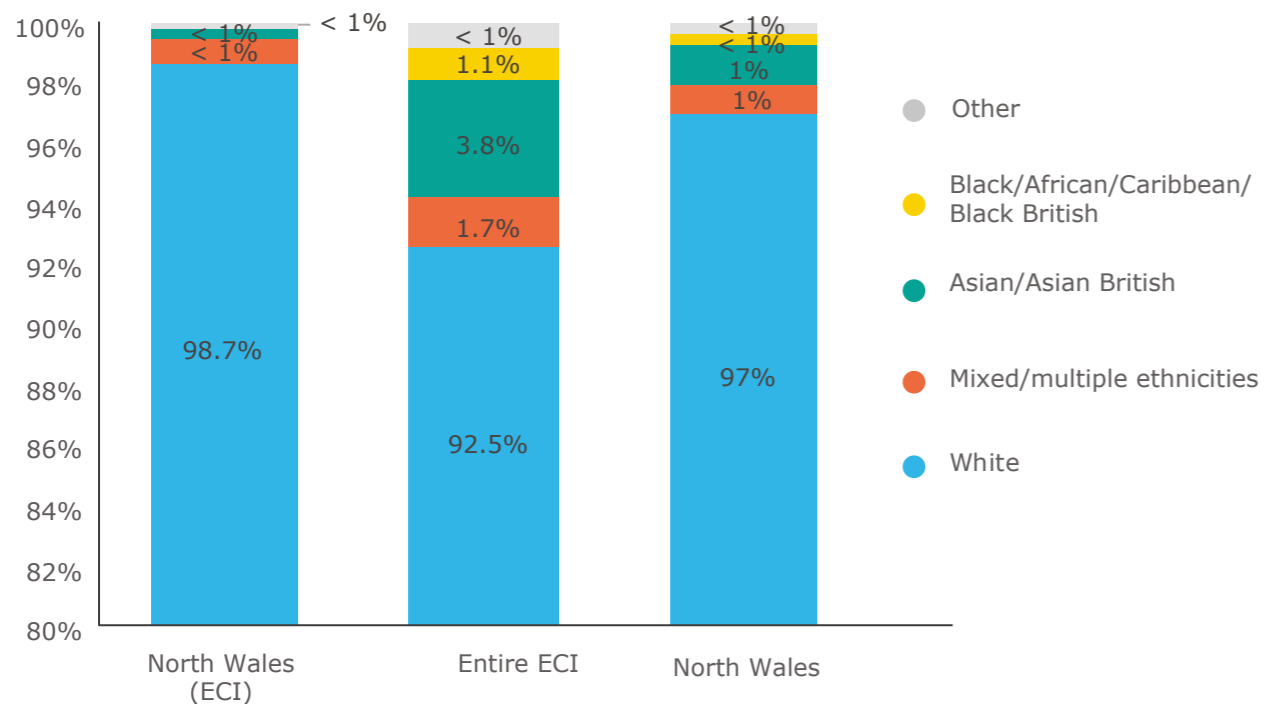
**Figure 79: Age profile of the ECI workforce North Wales**



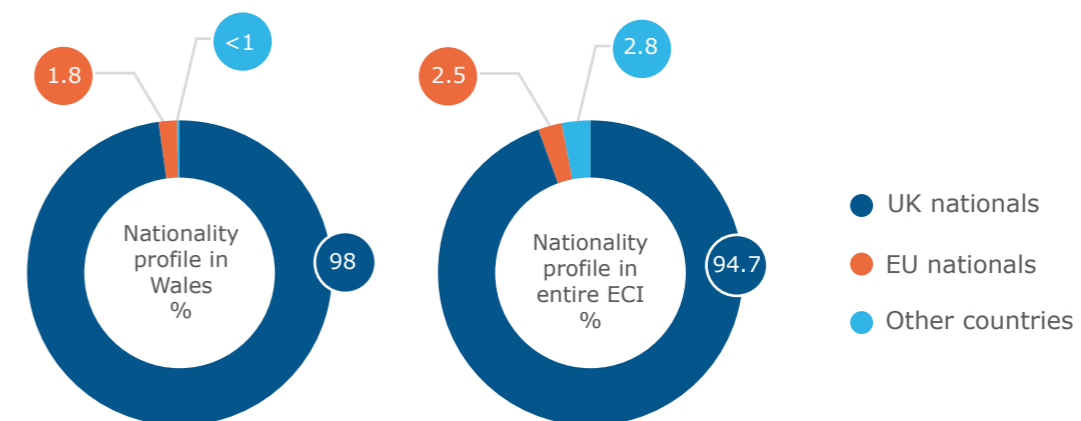
**Figure 81: Gender profile of the ECI workforce in North Wales**



**Figure 80: Ethnicity profile of the ECI workforce in North Wales (scale in y-axis 80 to 100)**



**Figure 82: Nationality profile of the ECI workforce in North Wales**



## South Wales (1.2% - 1,150 workers)

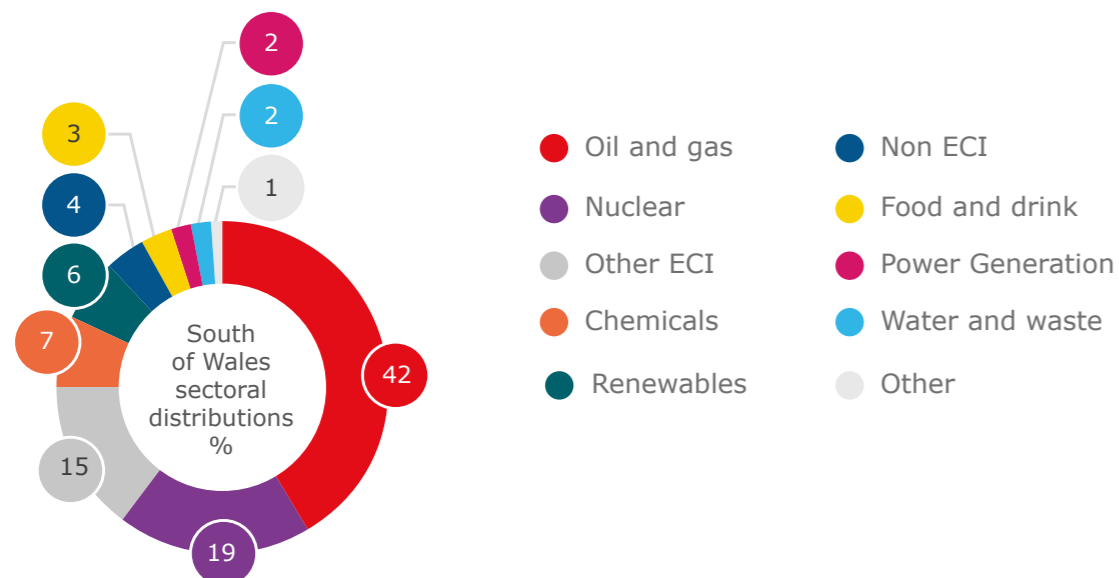
The oil and gas sector employs 42% of the workforce in the South, with nuclear coming next at 19%, which is almost entirely focused on decommissioning. The 15% of the workforce grouped into the 'Other ECI' category almost exclusively work in the steel sector. Pembroke is the primary workforce hotspot in the region, with Port Talbot and Barry as secondary hotspots. Thirty-one percent of the workers in the region are craft workers, mostly in scaffolding, mechanical fitting, pipefitting, welding and plating roles. General operatives, insulation engineers and electrical technicians are also key parts of the workforce.

Employers in the region that face difficulties to hire new workers attribute them to general lack of new entrants, especially impacting the recruitment of steel erectors, supervisors, crane operators and general operators. Although data on business opportunities is limited for South Wales, employers in the region mention onshore wind and solar as interesting opportunities.

Rail also sparks some interest, although to a lesser extent. Employers collectively expect their headcount to grow by 14% by 2027, although the closure of Tata Steel's blast furnaces in October 2024 strongly impacts the viability of these expectations that were set out in May and June 2024.

The share of ECI workers below 30 is nearly equal to that of the entire ECI. However, the 16 to 24 age group represents 12.3% of the active population, compared to 8.8% of the ECI workforce. The proportion of workers above 60 is just one percentage point higher in South Wales than in the entire ECI. A comparison with the active population in South Wales shows that the 50-and-above age group is overrepresented in the ECI workforce (38.5% versus 34.1%). Women only represent 3% of the regional ECI workforce.

**Figure 83: Sectoral distribution of the workforce in South Wales**



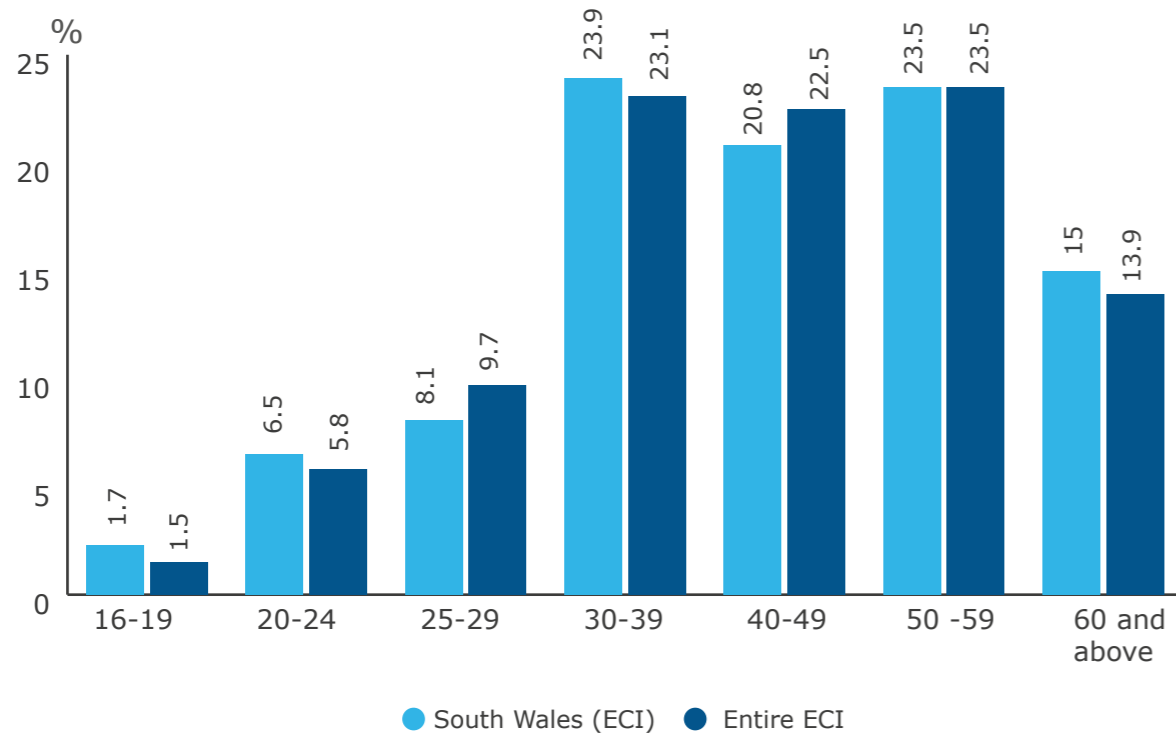
**Maps 35 and 36: Location of workers in South Wales (data points and heatmap)**



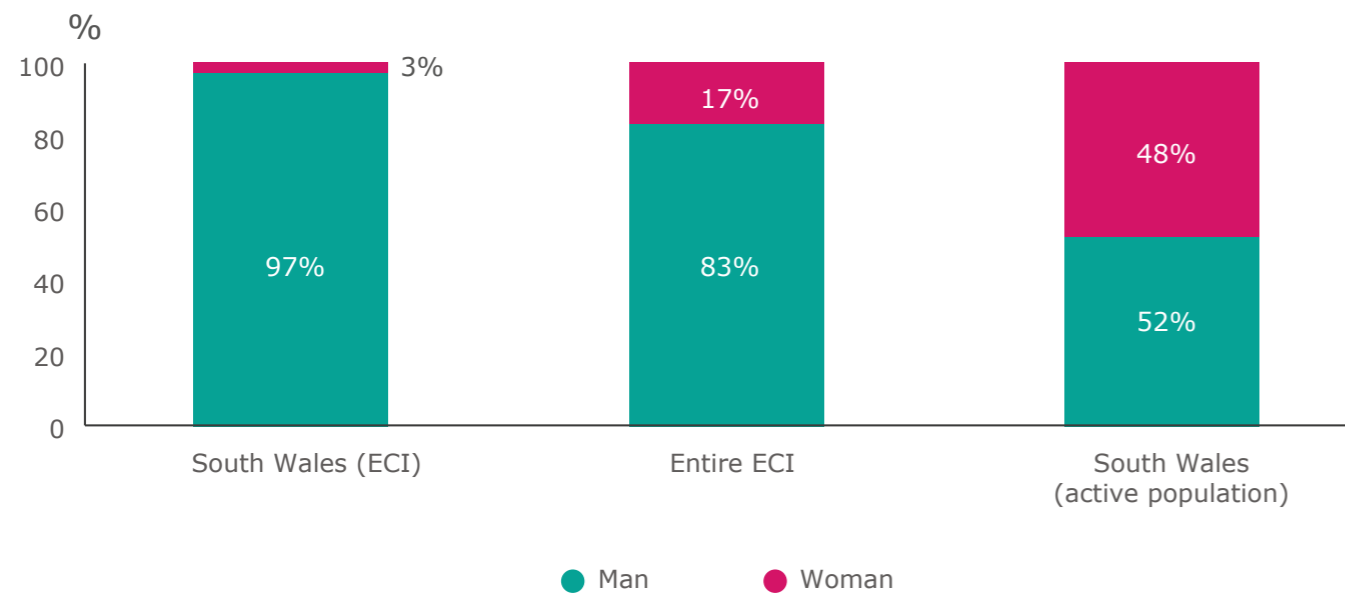
**Table 15: Workforce in South Wales by occupation**

<b>Apprentices and trainees</b>	<b>59</b>	<b>Semi-skilled</b>	<b>157</b>
Other apprentices and trainees	59	General operatives semi-skilled	58
<b>Craft</b>	<b>352</b>	Scaffolding semi-skilled	54
Scaffolding craft	100	Drivers semi-skilled	17
Mechanical fitting craft	91	Labourers semi-skilled	16
Pipefitting craft	40	Other semi-skilled	12
Plating craft	29	<b>Supervisors</b>	<b>138</b>
Welding craft	27	General supervisors	47
Rigging craft	16	Scaffolding supervisors	19
Welding and fabricators craft	16	Other supervisors	72
Rigging (steel erectors) craft	12	<b>Support</b>	<b>36</b>
Other craft	20	Administrative support	15
<b>Engineers</b>	<b>68</b>	Other support	21
Insulation engineers	34	<b>Technicians</b>	<b>115</b>
Other engineers	35	Electrical technicians	33
<b>Managers</b>	<b>110</b>	General technicians	25
General managers	25	Instrumentation and control technicians	13
Other directors	25	Other technicians	43
Other managers	59	<b>Other</b>	<b>38</b>
<b>Professionals</b>	<b>53</b>		
Planning professionals	20		
Other professionals	32		

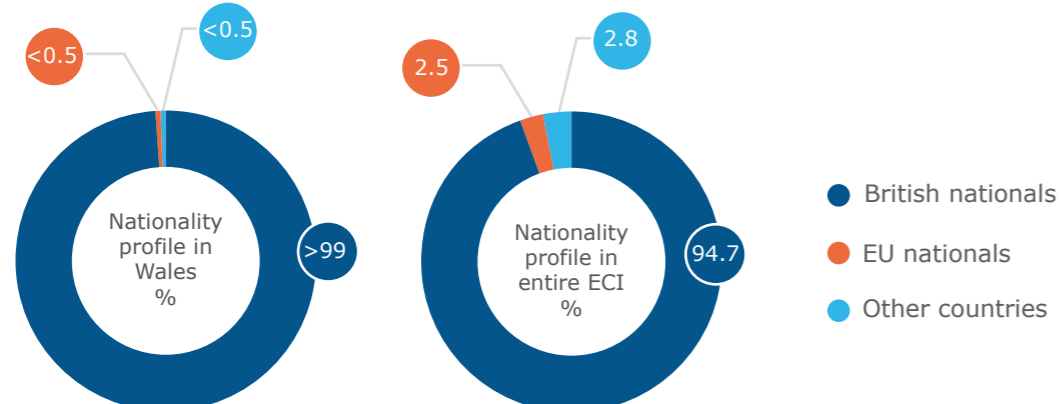
**Figure 84: Age profile of the ECI workforce in South Wales**



**Figure 85: Gender profile of the ECI workforce in South Wales**



**Figure 86: Nationality profile of the ECI workforce in South Wales**



**Offshore (9.9% - 9,350 workers)**

The share of offshore workers in the ECI decreased from 12% to 9.9% between 2021 and 2024. The vast majority of engineering construction workers deployed offshore work in oil and gas (99%). Although several ECI employers are active in the offshore wind sector (cf. section on Greater London), most of the actual offshore activity falls outside the ECITB’s definition of principal engineering construction activity<sup>12</sup>. Most offshore workers are deployed in the Northern North Sea (42.7%) and the Central North Sea (31.5%)<sup>13</sup>.

Offshore workers are primarily either technicians (33.4%), craft workers (29.6%), or supervisors (16.7%). Common occupations include scaffolders, riggers, blasters and painters, general supervisors, lifting supervisors, mechanical technicians, electrical technicians, instrument and control technicians and production technicians. Rope access-qualified personnel are also prevalent across various disciplines in the offshore workforce.

With only 7.4% of the workforce below 30, the offshore ECI workforce is nearly 10 percentage points behind the entire ECI workforce in this age group; however, the share of workers over 60 is similar across the two workforces. Women make up only 3% of the offshore ECI workforce, reflecting in part the predominance of craft roles in this workforce (see the Demographics section of the overarching 2024 Census report). Additionally, a recent study by the ECITB highlighted factors that may contribute to why offshore work is less attractive to women<sup>14</sup>. Finally, the offshore workforce is less reliant on foreign workers than the broader ECI, with only 1.5% of the workforce holding non-UK citizenship.<sup>15</sup>

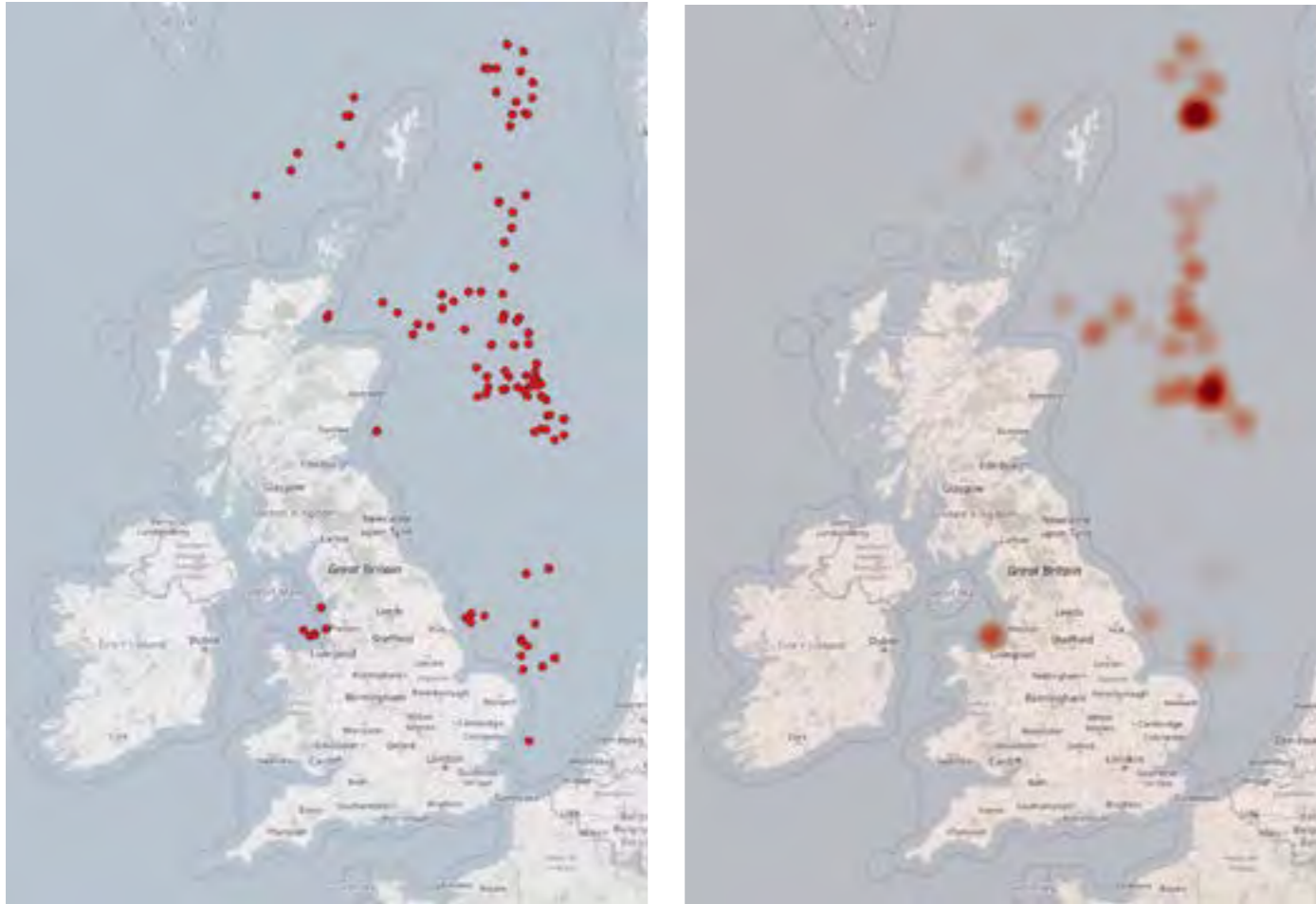
<sup>12</sup> According to the Industrial Training Act and the supporting legislation, in relation to the offshore wind sector, the ECITB’s scope is limited to activities carried out within GB Territorial Waters. Consequently, the vast majority of offshore ECI workers operate in the oil and gas sector. Please note the ECITB Labour Forecasting Tool includes the entire offshore wind sector, using data from external sources.

<sup>13</sup> A complete definition of offshore regions used in this report can be found in annex C of the overarching 2024 Census report.

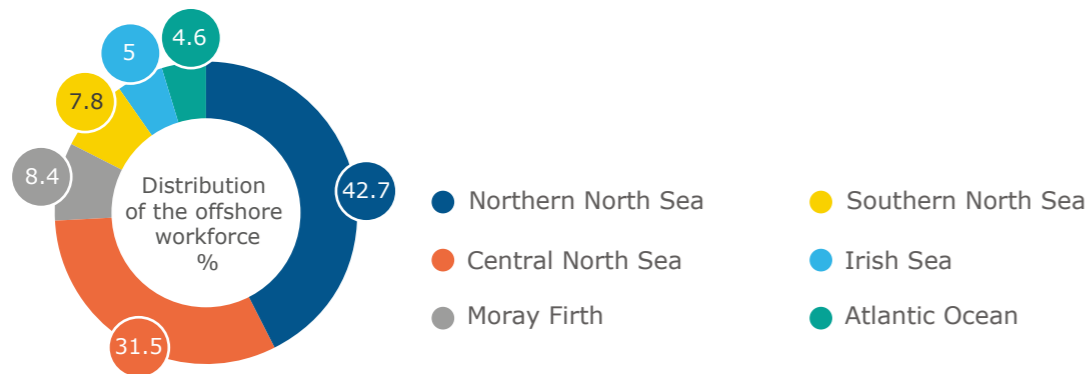
<sup>14</sup> Inspiring Directions (ECITB – 2024)

<sup>15</sup> Ethnicity information for the offshore region pertains specifically to the Southern North Sea, as no data was provided for other regions on this aspect. Ethnicity data for the offshore workforce is based on very limited information and is therefore not reported in detail. Limited findings, which should be interpreted with caution, suggest that ethnicity profile of the ECI offshore workforce may be fairly similar to that of the wider ECI.

**Maps 37 and 38: Location of offshore workers (data points and heatmap)**



**Figure 87: Distribution of the offshore workforce**

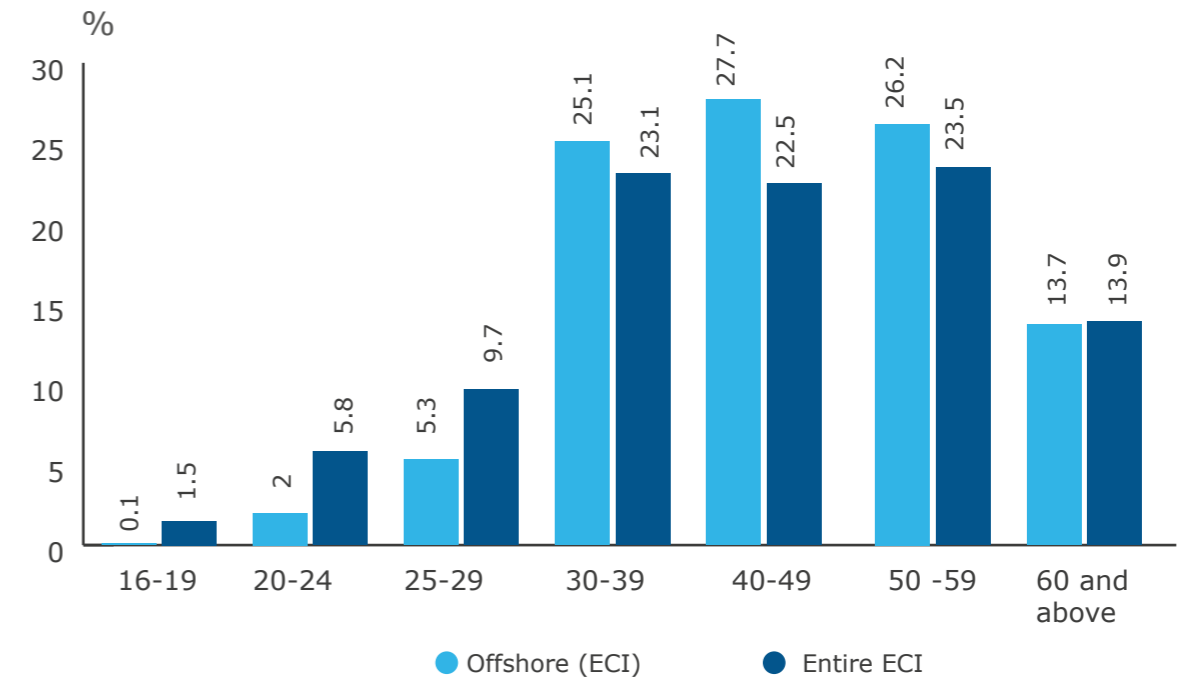


**Table 16: Offshore workforce by occupation**

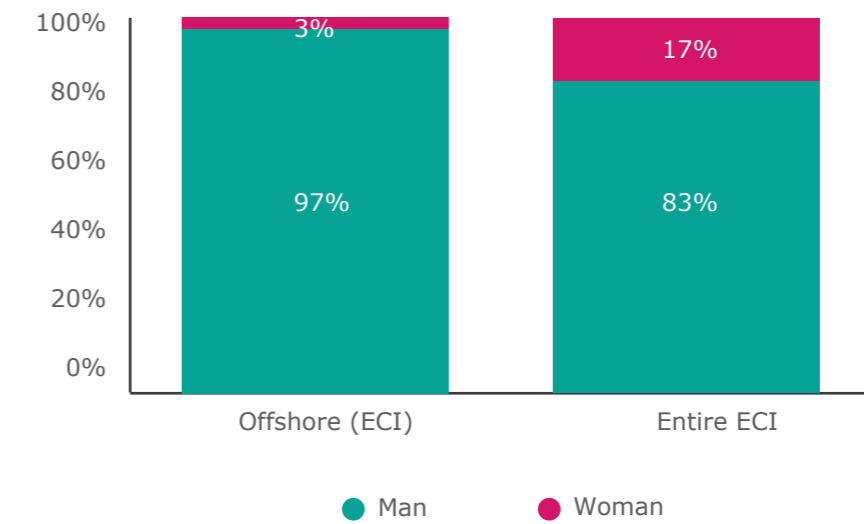
<b>Apprentices and trainees</b>	<b>55</b>	<b>Managers</b>	<b>252</b>
Production technicians apprentices and trainees	11	Site management managers	32
Other apprentices and trainees	44	Project managers	31
<b>Craft</b>	<b>2,774</b>	Construction managers	29
Scaffolding craft	1,214	Maintenance managers	20
Rigging craft	431	Commercial managers	15
Blasters and painters (rope access) craft	239	Process managers	15
Pipefitting craft	218	General managers	11
Blasters and painters craft	131	Other managers	99
Rigging (deck crew) craft	102	<b>Professionals</b>	<b>252</b>
Insulation (rope access) craft	100	Health and safety professionals	54
Plating craft	100	Planning professionals	40
Plating (rope access) craft	67	Radiological protection professionals	31
Insulation craft	32	Data and analysis professionals	19
Pipefitting (rope access) craft	31	Construction professionals	13
Instrument pipefitters craft	28	Other consultants professionals	13
Fabrication craft	22	Procurement professionals	13
Welding craft	21	Document controls professionals	12
Instrumentation and control craft	15	Other professionals	56
Scaffolding (rope access) craft	11	<b>Semi-skilled</b>	<b>693</b>
Other craft	11	Deck crew semi-skilled	335
<b>Engineers</b>	<b>370</b>	Blasters and painters (rope access) semi-skilled	103
Pipeline engineers	32	General operatives semi-skilled	99
Instrumentation and control engineers	29	Crane semi-skilled	54
Process engineers	28	Blasters and painters semi-skilled	32
Project engineers	27	Helicopter crew semi-skilled	28
Health and safety engineers	21	Cleaning semi-skilled	23
Mechanical engineers	21	Other semi-skilled	19
Quality assurance/quality controls (rope access) engineers	19		
Structural engineers	17		
Electrical engineers	17		
Piping engineers	16		
Quality assurance/quality controls engineers	15		
Non-destructing testing engineers	15		
Integrity engineers	13		
Insulation engineers	13		
Civil and structural engineers	11		
Other engineers	76		

<b>Supervisors</b>		<b>Technicians</b>	
General supervisors	217	Mechanical technicians	557
Lifting supervisors	169	Electrical technicians	556
General supervisors (rope access) supervisors	126	Instrumentation and control technicians	504
Deck crew supervisors	121	Production technicians	470
Construction supervisors	100	Non-destructing testing (rope access) technicians	119
Scaffolding supervisors	96	General technicians (rope access) technicians	111
Blasters and painters (rope access) supervisors	79	Operations technicians	109
Electrical supervisors	75	Material control technicians	109
Rigging supervisors	72	Production (operations) technicians	87
Helicopter crew supervisors	46	Electrical (rope access) technicians	64
Instrumentation and control supervisors	43	Health and safety technicians	40
Non-destructing testing (rope access) supervisors	40	Quality assurance/quality controls technicians	40
Mechanical fitting supervisors	39	Telecommunications technicians	38
Maintenance supervisors	38	General technicians	33
Electrical technicians supervisors	36	Safety technicians	33
Pipefitting supervisors	33	Logistics technicians	32
Operations supervisors	31	Maintenance technicians	29
Insulation (rope access) supervisors	23	Design (piping) technicians	23
Production technicians supervisors	20	Commissioning (instrumentation) technicians	15
Site supervisors	20	Laboratory technicians	15
Integrity supervisors	19	Cleaning technicians	13
Mechanical supervisors	17	Design (structural) technicians	12
Naval supervisors	13	Other technicians	107
Pipefitters and mechanical fitting supervisors	12		
Plating supervisors	12		
Electrical (rope access) supervisors	11		
Other supervisors	58		
<b>Support</b>	<b>130</b>	<b>Other</b>	<b>162</b>
Logistics support	21		
Commercial support	20		
IT support	20		
Compliance support	15		
Facilities management support	15		
Other support	39		

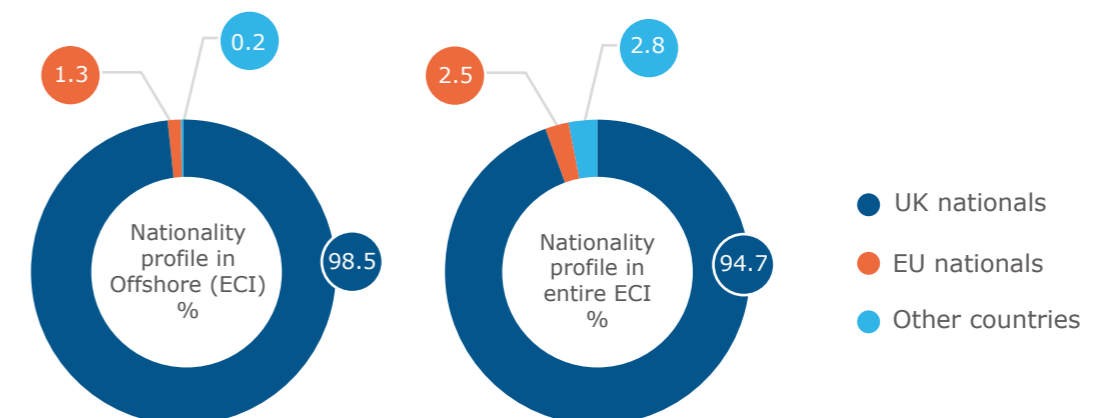
**Figure 88: Age profile of the offshore ECI workforce**



**Figure 89: Gender profile of the offshore ECI workforce**



**Figure 90: Nationality profile of the offshore ECI workforce**



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