



GLASGOW

A case study on green jobs and skills development for people with low qualifications

Glasgow is one of the 32 council areas of Scotland. With a population of 635,640 in mid-2020, Glasgow is Scotland's most populous city and the third-most populous city in the United Kingdom.¹ Between October 2020 and September 2021, the employment rate for people aged 16 to 64 in Glasgow was 69.7 per cent and the unemployment rate was 5.5 per cent.²

Context

The Scottish government has proposed a legally binding target of net zero emissions by 2045.³ Glasgow aims to be the first circular city in Scotland and carbon neutral by 2030.⁴ Glasgow's Climate Plan,^{5,6} called for a New Green Deal for Glasgow,⁷ aims to transform the city's economy to combat the climate emergency. The Deal aims to: (i) eliminate poverty and deliver justice through inclusion and equality; (ii) reduce emissions and build climate resilience; and (iii) create prosperity, sustainable jobs and high-quality places. The Deal focuses on: (i) maximising energy efficiency; (ii) increasing renewables deployment; (iii) clean, safe and connected mobility; (iv) tackling residual emissions; (v) infrastructure and connectivity; (vi) conservation, restoration and valuing of nature; (vii) competitive industry and circular economy; and (viii) adaptation and resilience. The Deal anticipates the creation of 14,500 more jobs and aims to identify priorities for skills development needed for net zero transition, focusing in particular on the most vulnerable groups and the unemployed.⁸

Glasgow aims to be
**carbon neutral
by 2030**

Green job opportunities

National-level data for green job opportunities in Scotland

According to estimates from the Office of National Statistics (ONS),⁹ there were **20,500 green jobs in Scotland** in 2020, representing close to 10 per cent of all jobs in the **low carbon and renewable energy economy** across the UK.^{10, 11} Most of these (64 per cent) jobs were concentrated in four sectors:



Regional-level data for green job opportunities in West Scotland

In **south-western Scotland, there were 82,181 jobs related to the circular economy¹² in 2020** (almost 8 per cent of all jobs in the region).^{13, 14} The region had more core circular jobs¹⁵ than any other region in Scotland (15,464 or almost 19 per cent of all circular jobs in the region).¹⁶ **The majority of these were in the city of Glasgow.** Some 32,217 jobs were generated in enabling circular sectors (39 per cent of all circular jobs). **A large proportion of the enabling jobs were generated in design and technology,** which together accounted for **almost 35 per cent of all circular jobs in the region.** Most circular jobs in this region were generated by **sectors indirectly supporting the circular economy** (34,500 jobs or 42 per cent of all circular jobs in the region). These jobs were mainly generated through demand for circular products or services by the **healthcare and social work, public administration, manufacturing, and wholesale and retail trade sectors.**¹⁷ No data was identified about availability of green jobs at the city level.

The Skills-OVATE¹⁸ data gives insights to job opportunities advertised online without distinction to green jobs but allows the filtering of vacancies suitable for people with low qualifications if we exclude occupations such as professionals, managers or researchers, which likely require a university degree. The analysis of 85,610 online job advertisements (OJAs) found in Glasgow and West Central Scotland (see Annex A) shows that common occupations in OJAs that would be suitable for people with low qualifications were science and engineering technicians (2,951), machine and plant operators (2,936), office clerks (2,542), sales workers (2,330), metal and machinery workers (2,057), care workers (1,894), ICT technicians (1,827), drivers and vehicle operators (1,428), and accounting clerks (1,343)¹⁹ (see **Annex A**).

Local-level data on green jobs in Glasgow

The specific search for green jobs carried out by RAND Europe (see **Methods**) identified 160 jobs in the UK, including 39 in Glasgow. All of the Glasgow jobs were in the private sector and were offered either by regular employers (23) or employers from green industries (such as waste management) (16). While only a minority of adverts (7) provided salary indications, the average annual salary in Glasgow amounted to £39,177. Key sectors included professional, scientific and technical activities (26), electricity, gas, steam and air conditioning supply (4), architectural and engineering (2) and construction (2). Among the main occupations were science and engineering professionals (21), science and engineering associate professionals (9), business and administration professionals (4) and health professionals (3). Most of these opportunities would not be suitable for people with low qualifications, as most required tertiary education (see **Skills needed for green jobs**).

Future projections for green jobs in Scotland



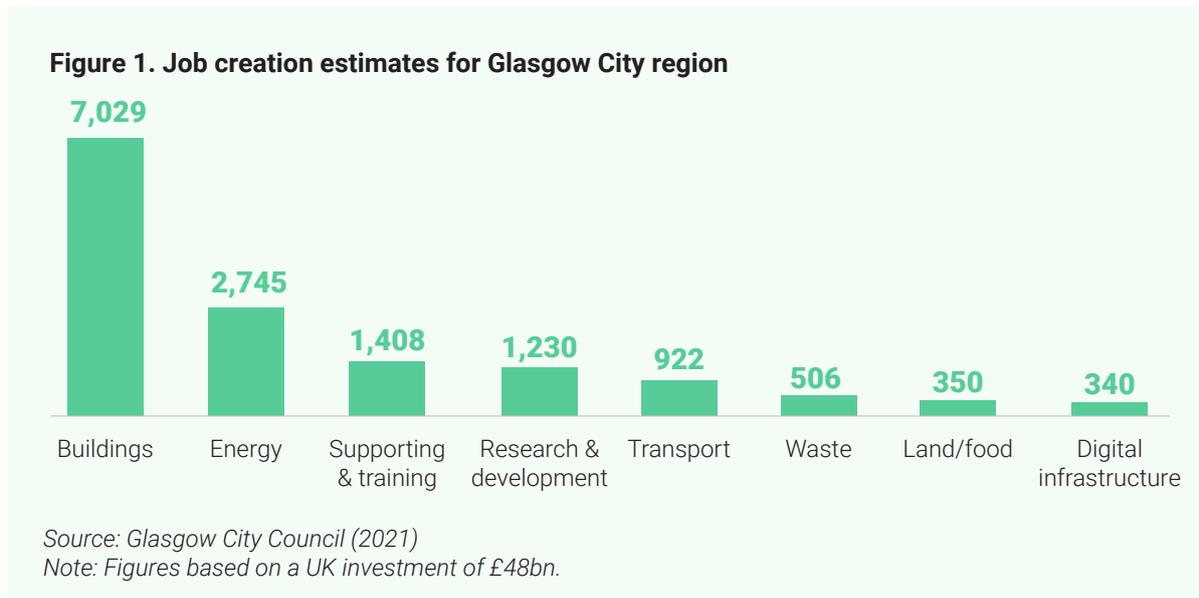
Anticipating that green jobs will be more present across all sectors of economy and across all occupations in future, Cedefop's EU Skills Panorama forecasts for employment growth are used to identify where more or fewer jobs are expected in general. These projections are available at the UK level for the 2020–2030 period. Occupations suitable for people without tertiary education (i.e. excluding managers, professionals, etc.) with the highest employment growth by 2030 are expected to be farm and related workers, elementary workers, and service and sales workers (see **Annex B**).²⁰

Considering Scotland's decarbonisation needs on the way to meet its 2045 net zero objective, a number of occupations were projected to require a significant expansion in the region's trained workforce.^{21, 22} The largest potential for green jobs for people with low qualifications in Scotland existed in the buildings sector, where skills shortages were likely to occur in: trades such as **plastering, drylining, glazing, plumbing** and **heating**; the transport sector, where a surge in demand for **plant mechanics/fitters** was expected; as well as in waste management, where the anticipated ban on 'non-recyclable' single-use plastic packaging and the continued need for **compostable or reusable packaging** created opportunities for bioplastics made with timber pulp, kelp or other organic materials.²³

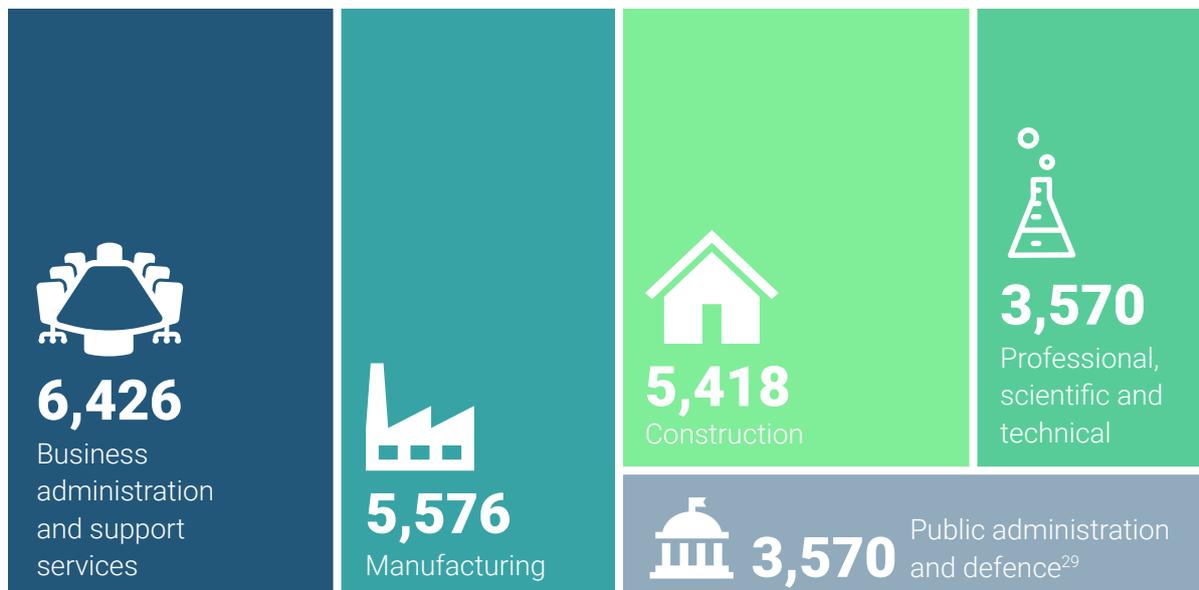
Future projections for green jobs in Glasgow

Local forecasts for 2024–2031 highlight that future employment growth in Glasgow College region²⁴ is expected to be concentrated in a few sectors, with four of these accounting for 104,900 jobs (65 per cent of the total): administrative and support services (32,400 jobs, 20 per cent), wholesale and retail trade (29,900, 18 per cent), human health and social work (26,300, 16 per cent), and education (16,300, 10 per cent). Occupations with the highest employment growth between 2024 and 2031 are expected to be caring personal services, health professionals, culture, media and sports occupations, business and public service professionals, corporate managers, and business and public service associate professionals.²⁵

The 14,500 additional jobs estimated in Glasgow in relation to the shift towards net zero by 2030 are expected to be concentrated in a few sectors (see **Figure 1**).²⁶



Finally, according to the Just Transition Jobs Tracker,²⁷ there were about **37,239 jobs** in Glasgow that were **expected to be in high demand in future** due to their **important role in the net zero economy**, representing 16 per cent of the demand across Scotland.²⁸ These included specialised positions in the green economy, such as wind turbine installers, but also the skills and expertise of welders, builders and engineers already working to build the infrastructure of a green economy. Most of these jobs (63 per cent) were concentrated in five sectors:



Skills needed for green jobs



Future demand for green skills in south-western Scotland, particularly Glasgow and North Lanarkshire, is expected to concentrate around the five sectors that are forecast to provide the vast majority of green job opportunities in the region: **zero carbon energy** (primarily **offshore wind**), **buildings, transport, manufacturing and industry** (primarily **remanufacturing** and **decarbonising steel production**), and **waste management** (primarily **reusing packaging**).^{30,31} While technical skills in the occupations listed above (plastering, drylining, glazing, plumbing and heating, plant mechanics) will be key, soft skills such as **teamworking** and **team living** will also play an important role in driving behavioural change.³²

Existing gaps that are likely to be exacerbated by the transition to net zero in south-western Scotland, along with sector-specific skills challenges that are anticipated to occur on the back of the expansion in activities required to meet the net zero targets, are provided below:



Zero carbon energy (offshore wind)

- Technical skills – mechanical, electrical, and control and instrumentation, blade and turbine technicians, including ICT skills.
- Offshore skills – working in confined spaces and at heights.
- Advanced first aid and rescue.
- Asset management, project management, leadership skills.
- Scientists – marine biology, geophysics, hydrography, oceanography.³³



Buildings

- Building envelope specialism.
- Plastering and drylining skills.
- Technical knowledge related to glazing.
- Construction site management skills.
- Plumbing and heating, ventilation and air conditioning expertise.³⁴



Transport

- Specialist building skills.
- Non-construction professional, technical, IT, and other office-based skills (excluding management).
- Knowledge of plant maintenance and repair.
- Expertise in smart meters, electric vehicles (EVs) and batteries.
- EV maintenance skills.³⁵



Manufacturing and industry (remanufacturing and decarbonising steel production)

- Furnace operation ability
- Disassembly skills
- Test engineering expertise
- Knowledge of fabrication
- Technician skills
- Knowledge of procurement
- Capacity to manage logistics.³⁶



Waste management (reusing packaging)

- Knowledge of waste collection
- Knowledge of waste sorting
- Skills related to processing of waste for re-use.³⁷

The analysis of skills in the Skills-OVATE³⁸ data for Glasgow and West Central Scotland shows that the most frequently sought characteristics were soft skills, namely attitudes, communication, collaboration and creativity, generic programmes and qualifications,³⁹ or assisting and caring. This is not surprising as these skills are applicable across sectors and occupations that would require different technical or sector-specific skills. Employers also often looked for management skills, knowledge of business, administration and law, ability to work with computers, ICT skills, information skills, skills needed in engineering, manufacturing and construction, knowledge of health and welfare, social sciences, journalism and information, as well as natural sciences, mathematics and statistics (see **Annex B**).⁴⁰

The analysis of green jobs identified by RAND Europe shows that most green job adverts in Glasgow (32 of 39) did not indicate the minimum years of required experience. The average was about two years of experience required. In terms of qualifications needed, 30 adverts indicated either a bachelor's or master's degree and five indicated other specialised technical qualifications. This reflects both the employment structure in Glasgow and the overrepresentation of some sectors in OJAs. In relation to skills, very few advertisements (6 of 39) explicitly required green skills and those that did asked for knowledge of renewable energy and resources (43), knowledge of environmental topics and issues (1), or knowledge of climate change and protection (1). Other skills sought after by employers included information skills (21 of 39), communication, collaboration and creativity (19), management skills (19), ICT skills (18), knowledge related to natural sciences, mathematics or statistics (18), and teamwork skills (18).



Overall, the long-term (2024–2031) employment growth in Glasgow College region is expected to be greatest for jobs that require high-level qualifications (Scottish Credit and Qualifications Framework (SCQF)⁴¹ 7–10, i.e. from a higher education certificate to an honours degree).⁴² This includes occupations that have historically required lower-level qualifications. However, there is still going

to be a need for individuals with qualifications at lower levels to meet the requirement in the region.^{43,44} Specifically, out of the 162,400 job openings forecasted from 2024 to 2031, 34,600 (21 per cent) are expected to be open to individuals qualified at SCQF Level 5 (e.g. who have completed an apprenticeship or a vocational qualification), while a further 17,800 (11 per cent) will range from requiring an SCQF Level 4 (e.g. a vocational qualification at that level or a national certificate with a total credit value of 72 credit points) to having no qualification requirements. For instance, 3,300 jobs are expected to open in caring personal service occupations, which are expected to account for the greatest expansion demand across the entire human health and social work in the region. These jobs are expected to have no formal credential requirements.⁴⁵

Overall, the number of jobs requiring a high-level qualification (Regulated Qualifications Framework Level 4 and above or RQF4+⁴⁶ or SCQF Level 7 and above)⁴⁷ in the UK as a whole is expected to grow and the number of workers with qualifications at RQF Level 1 or below (entry level) will fall⁴⁸ (see also **Annex B**).

Training and education provision for green skills

Training and education provisions for green skills in Scotland



The Climate Emergency Skills Action Plan (CESAP) 2020–2025⁴⁹ sets out the Scottish government's plan to maximise the transition to net zero for the country, ensuring that Scotland's workforce has the required skills. The CESAP focuses on both immediate action as well as the longer-term systemic change that will need to take place by 2045. It therefore recognises the need to mitigate potential risks and provide targeted support to communities and groups who are most likely to lose out from structural changes in employment.

The Green Jobs Workforce Academy^{50,51} launched in August 2021 aims to help guide existing employees, and those who are facing redundancy, to assess their existing skills and undertake the necessary upskilling and reskilling they need to secure green job opportunities as they emerge. Developed on behalf of the Scottish government by Skills Development Scotland (SDS),^{52,53} the Academy aims to make it easier for people from a broad range of backgrounds to consider how their skills and experience can be built upon to launch a green career. This is underpinned by nationwide access to career advisers who support individuals of all ages interested in these jobs access the right training to help their career progress.⁵⁴

Other measures in the Plan include establishing a Green Jobs Skills Hub that will cascade intelligence into the skills system on the numbers and types of green jobs that will be needed over the next 25 years and maximising the uptake of apprenticeships in green jobs, while also developing new work-based learning pathways.^{55,56} At the time of writing this, work to establish such a hub is still ongoing.⁵⁷

Overall, agile and responsive work-based learning, including foundation, modern and graduate apprenticeships, represents a powerful lever for realising the transition to net zero by equipping individuals with in-demand green skills.⁵⁸ In addition to direct skills and education provision, the roles of the Energy Skills Partnership (ESP)⁵⁹ in engaging with the college sector to establish a responsive, flexible approach to emerging priorities, and of the Scottish Funding Council (SFC)⁶⁰ in supporting the Innovation Centres programme,⁶¹ are both key in this regard.

A leading voice in green skills development in 2021, Dumfries and Galloway College⁶² officially launched its Green Skills Academy.⁶³ The Academy offers a range of education and training opportunities to allow students to learn new skills, upskill existing knowledge or reskill to a more sustainable future and career path.⁶⁴

In June 2021, the Scottish government launched nine new Renewable and Energy Efficiency Training Centres⁶⁵ for Scotland, including two new centres in the south-western region (Ayrshire College^{66, 67} and Glasgow Kelvin College)^{68, 69} and upgrades to two existing centres in South Lanarkshire College^{70, 71} and West College Scotland.^{72, 73, 74} Supported by a £500,000 investment by the Scottish Power Energy Networks Green Economy Fund^{75, 76} and managed by the ESP,⁷⁷ the initiative also established two centres of excellence for insulation in South Lanarkshire College⁷⁸ and West College Scotland.⁷⁹ In addition, the investment will support staff training and continuous professional development in current and emerging technologies, as well as support overall curriculum development.⁸⁰

Training and education provisions in Glasgow

Finally, Zero Waste Scotland,^{81, 82} in partnership with the City of Glasgow College,⁸³ has developed a series of circular economy net zero modules that are designed for small- to medium-sized businesses to develop an understanding of net zero and the circular economy. The modules help businesses achieve net zero through improved resource efficiency and environmental performance via workplace training, policy implementation, and sustainable procurement and supply chains.⁸⁴

Relevant stakeholders and interventions

Within Glasgow, 23 key stakeholders were identified in relation to green jobs and green skills. These can be grouped into **education and training providers** (e.g. the Verdancy Group),⁸⁵ **employment services** and **local authorities** (e.g. Developing the Young Workforce Glasgow (DYW Glasgow),⁸⁶ the Glasgow City Council),⁸⁷ **civil society organisations** or **social enterprises** (e.g. Arkbound Foundation,⁸⁸ Construction Scotland Innovation Centre,⁸⁹ Bike for Good),⁹⁰ and private sectors **employers** such as the NWH Group⁹¹ or environmental consultancies like Sweco⁹² and Jacobs⁹³.



When it comes to green interventions, very few were specifically dedicated to people with low qualifications. They mostly focus on young people with the aim of building a green workforce for

the future. Many of the interventions seemed to be related to COP26, which took place in Glasgow in 2021. The most relevant interventions are outlined below.



Glasgow Wood Volunteering programme

This initiative is delivered by Glasgow Wood, a charity and social enterprise, whose mission is to contribute towards a more healthy and sustainable population and planet. The programme aims to provide training and employability support to the local community.

- All volunteering opportunities have a sustainability focus, with placements taking place in various settings: at workshops with woodworkers; in warehouses (moving timber using trolleys and pallet trucks); in delivering orders and collecting waste wood; and in retail spaces working with customers.⁹⁴



Low Carbon Learning programme

This programme is implemented by the Construction Scotland Innovation Centre (CSIC). Low Carbon Learning aims to create a training course to equip construction workers with the skills to retrofit buildings for a low carbon future.

The course is aimed at construction workers who are out of work or facing the prospect of redundancy. Low Carbon Learning plans to upskill and reskill over 700 people between September 2021 and July 2022.

Face-to-face training is expected to be delivered to 200 people, with 100 of them going on to become certified practitioners.

Another 500 participants will have the opportunity to train online, of which 200 people will be trained in-person and can gain limited accreditation.^{95, 96}



Rags to Riches

Rags to Riches is an upcycling (i.e. making new furniture, objects, etc. out of old or used things or waste material) social enterprise delivered by Govanhill Baths, a grassroots organisation.

Rags to Riches offers workshops to support the development of new skills across sewing and textiles, woodwork, craft and mixed media. The programme is aimed for people from a broad range of backgrounds, ages and abilities.

The initiative also provides outreach programmes to organisations around Glasgow to upskill, train and empower local groups and support vulnerable communities.⁹⁷



Build Your Own Bike course

Build Your Own Bike courses are week-long training opportunities for people who face barriers to employment. These courses are designed to support people in building aspiration, motivation and self-confidence, while also providing a transport option to facilitate their journey towards work. The courses are available for free to:

- Young people not in education, employment or training (16–24 years old).
- Individuals with experience in homelessness.
- Those with long-term physical and mental health conditions.
- Refugees and asylum seekers.

Over five days, participants build up a bicycle while learning practical techniques for maintaining and repairing their bikes. The bicycle is then theirs to keep at the end of the week.

Build Your Own Bike courses run throughout the year and cover travel costs where this is a barrier to participation.⁹⁸

Summary conclusion

- In Glasgow, green jobs for people with low qualifications are present primarily in the construction, energy, manufacturing, transport and waste management sectors. Main occupations in which green employment can be found by people with low qualifications include plasterers, dryliners, glazers, plumbers and heating technicians, plant mechanics, fitters, machine and plant operators, and metal and machinery workers. However, in general future employment opportunities for workers with low qualifications are expected to fall.
- Green skills needed in Glasgow include technical skills, such as mechanical, electrical, and control and instrumentation skills, blade and turbine knowledge, as well as offshore capabilities, such as working in confined spaces and at heights, and knowledge related to waste management (e.g. collection, sorting and processing of waste for reuse). Knowledge of renewable energy and resources, environmental topics and issues, as well as climate change and protection were also sought by employers. Among other skills in demand were information skills, communication, collaboration and creativity, management skills, ICT skills, knowledge related to natural sciences, mathematics or statistics, and ability to work in a team.
- There are many recent initiatives for developing green skills in Scotland (e.g. Green Jobs Workforce Academy, Green Jobs Skills Hub, Renewable and Energy Efficiency Training Centres) and a few started operating in Glasgow and the south-western region offering short vocational courses and apprenticeships. Standalone circular economy and net zero modules offered in Glasgow aim to help small- to medium-sized businesses to develop an understanding of improved resource efficiency and environmental performance through workplace training, policy implementation and sustainable procurement and supply chains.

- Several interventions that aimed at developing green skills and helping people into green jobs were identified but only a few explicitly focused on people with low qualifications. Others were open to people who were of work or faced redundancy, had long-term physical and mental health conditions, or were refugees and asylum seekers.

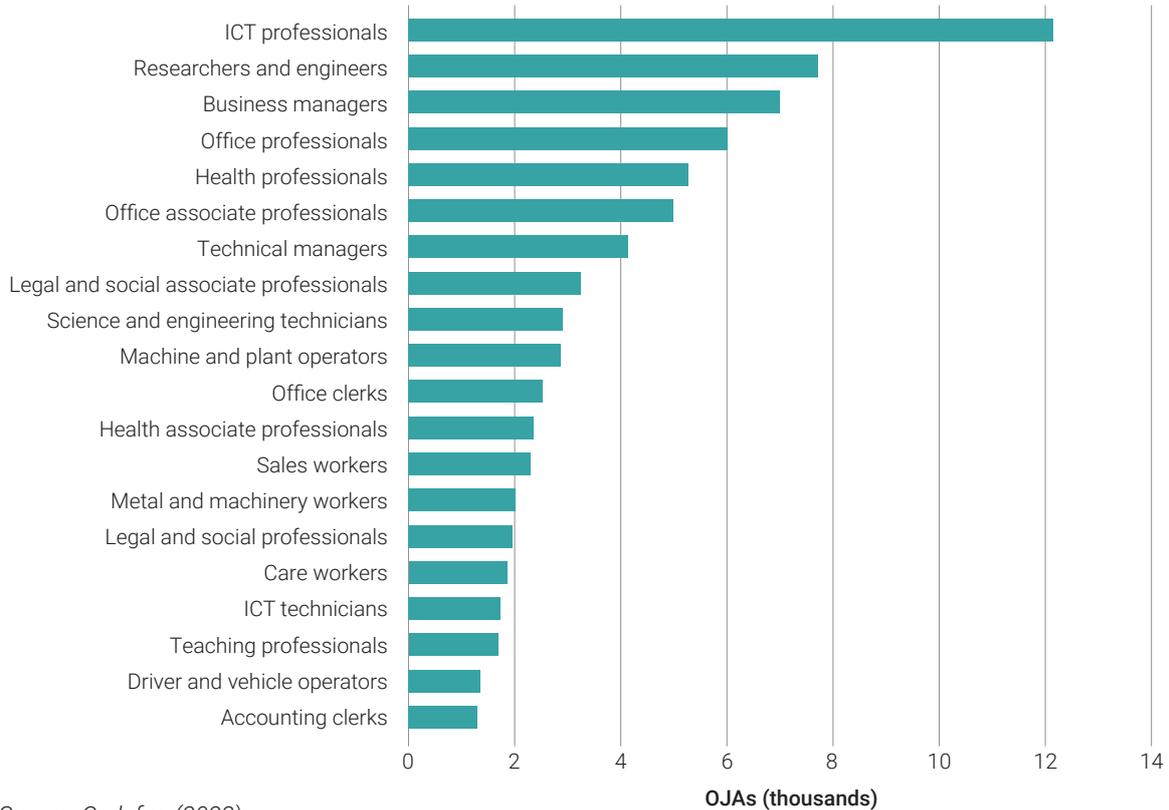
Methods

- 1. Targeted documentation review:** The review followed a protocol that spelled out the search terms, inclusion and exclusion criteria (see details in the final report).⁹⁹ The full list of sources consulted is presented in **Notes and References**.
- 2. Analysis of EU Skills Panorama data:** The analysis included Cedefop projections of future employment growth across all sectors and occupations, as well as the changes in the level of education expected in the UK by 2030. The analysis used UK data based on research conducted by Cedefop before the UK's exit from the European Union on 31 January 2020. The dataset uses NACE Rev. 2 (statistical classification of economic activities) and International Standard Classification of Occupations (ISCO-08).
- 3. Analysis of Skills-OVATE data:** The database provided by Cedefop collates OJAs from multiple sources, including private job portals, public employment service portals, recruitment agencies, online newspapers and corporate websites. The dataset uses NACE Rev. 2 (statistical classification of economic activities) and classification of European Skills, Competences, Qualifications and Occupations (ESCO). In December 2021, there were 85,610 OJAs in the Skills-OVATE database for Glasgow and West Central Scotland covering the period from the third quarter of 2020 to the second quarter of 2021. The database does not allow filtering out green job vacancies or opportunities only for people with low qualifications. OJAs do not reflect the market demand for jobs across all occupations and sectors equally well: some sectors or professions are overrepresented if they are more likely to advertise online, while others are underrepresented.
- 4. Online search for green jobs and data analysis:** The search of www.greenjobs.co.uk and uk.indeed.com conducted on 23 September 2021 identified 39 green job advertisements in Glasgow and West Central Scotland. Data were extracted, coded and cleaned. Descriptive statistics was used to analyse the results.

Annex

Annex A. Analysis of Skills-OVATE data (Q3 2020–Q2 2021)

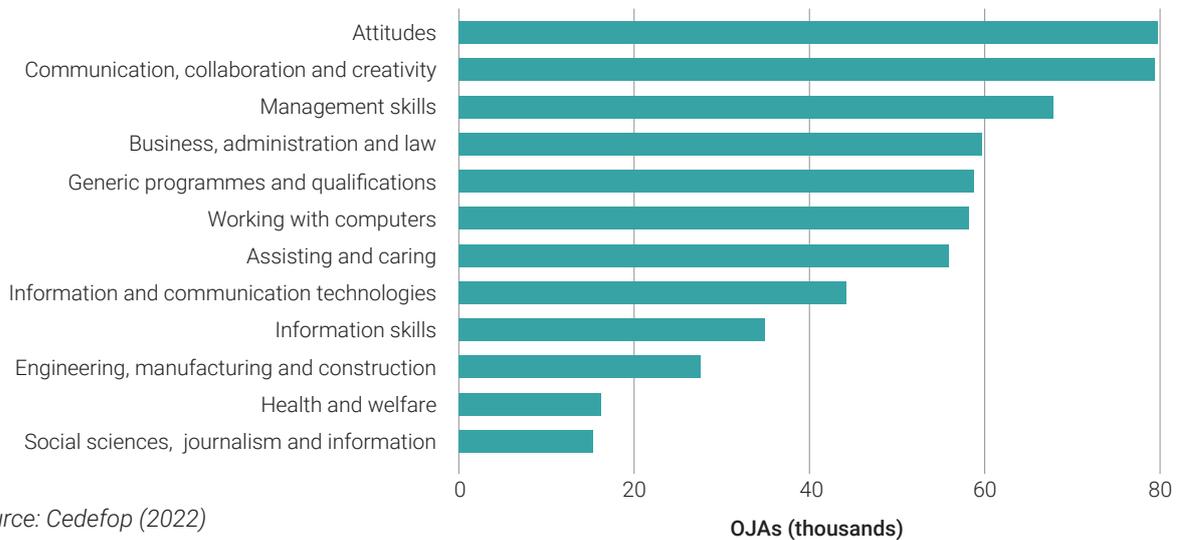
Figure 2. Online job advertisements (OJAs) per occupation (Glasgow)



Source: Cedefop (2022)

Note: Cut-off point is the median of OJAs per occupation (1,343).

Figure 3. Most requested skills – level 2 ESCO (Glasgow)

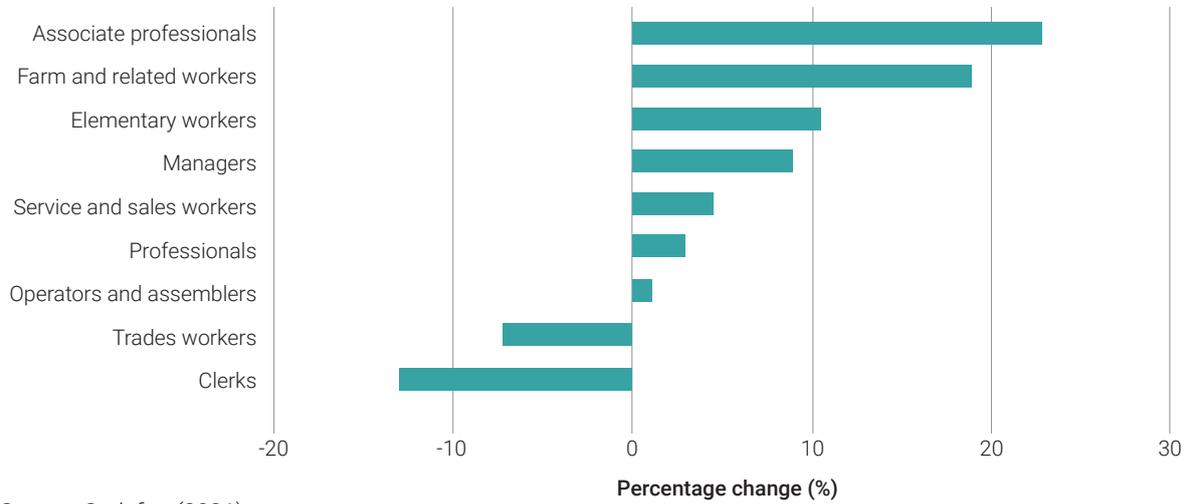


Source: Cedefop (2022)

Note: Cut-off point is the median of OJAs per skill (15,550).

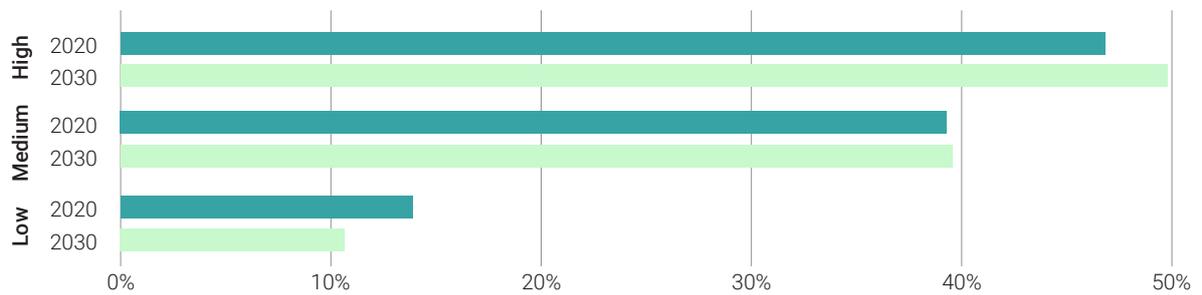
Annex B. Analysis of EU Skills Panorama data

Figure 4. Future employment growth (% change) across occupations in the UK in 2020–2030



Source: Cedefop (2021)

Figure 5. Current and future employment for educational level possessed in the UK



Source: Cedefop (2021)

Notes and References

- 1 Office for National Statistics. 2021. 'Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland, Mid-2020.' As of 7 June 2022: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>
- 2 Nomis, Office for National Statistics. 2022. 'Labour Market Profile – Glasgow City.' As of 7 June 2022: <https://www.nomisweb.co.uk/reports/lmp/la/1946157420/report.aspx>
- 3 Scottish Government. 2021. 'Reaching Net Zero.' As of 7 June 2022: <https://www.gov.scot/news/reaching-net-zero-1/>
- 4 OECD. 2021. 'The Circular Economy in Glasgow, United Kingdom.' As of 7 June 2022: <https://www.oecd-ilibrary.org/docserver/7717a310-en.pdf?expires=1646151504&id=id&accname=ocid56013842&checksum=27B71995DF79BE1D0A63D04D8C0092E9>
- 5 OECD. 2021. 'The Circular Economy in Glasgow, United Kingdom.' As of 7 June 2022: <https://www.oecd-ilibrary.org/docserver/7717a310-en.pdf?expires=1646151504&id=id&accname=ocid56013842&checksum=27B71995DF79BE1D0A63D04D8C0092E9>
- 6 Glasgow City Council. 2021. 'Glasgow's Climate Plan.' As of 7 June 2022: <https://www.glasgow.gov.uk/CHttpHandler.ashx?id=50623&p=0>
- 7 Glasgow City Council. 2021. 'Glasgow Green Deal.' As of 7 June 2022: <https://www.glasgow.gov.uk/councillorsandcommittees/viewSelectedDocument.asp?c=P62AFQDNZLDNNTDNDN>
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- 11 Office for National Statistics. 2022. 'Low carbon and renewable energy economy estimates.' As of 7 June 2022: <https://www.ons.gov.uk/economy/environmentalaccounts/datasets/lowcarbonandrenewableenergyeconomyfirstestimatesdataset>
- 12 The circular economy is an economic and industrial development model based on the principles of reducing consumption of natural resources, designing out waste and pollution, keeping products and materials in use for as long as possible and extracting maximum value from them while in use, and recycling the materials at the end of each service life. It is a restorative and regenerative system underpinned by innovative technologies and integrated services, strengthened local and regional supply chains, and the decarbonisation of energy supply. See Zero Waste Scotland & Circle Economy. 2020. 'The Future of Work: Baseline Employment Analysis and Skills Pathways for the Circular Economy in Scotland.' As of 7 June 2022: https://assets.website-files.com/5d26d80e8836af2d12ed1269/602f9914a0d4b61b91af1d2e_ZWS1543%20Future%20of%20Work%20-%20Emp%20%26%20Skills%20report%20FINAL%20compressed.pdf
- 13 OECD. 2021. 'The Circular Economy in Glasgow, United Kingdom.' As of 7 June 2022: <https://www.oecd-ilibrary.org/docserver/7717a310-en.pdf?expires=1646151504&id=id&accname=ocid56013842&checksum=27B71995DF79BE1D0A63D04D8C0092E9>
- 14 Zero Waste Scotland & Circle Economy. 2020. 'The Future of Work: Baseline Employment Analysis and Skills Pathways for the Circular Economy in Scotland.' As of 7 June 2022: https://assets.website-files.com/5d26d80e8836af2d12ed1269/602f9914a0d4b61b91af1d2e_ZWS1543%20Future%20of%20Work%20-%20Emp%20%26%20Skills%20report%20FINAL%20compressed.pdf

- 15 Jobs in the circular economy, shortly 'circular jobs', include: (i) core circular jobs (i.e. jobs which ensure that raw material cycles are closed and thus form the core of the circular economy, such as those in renewable energy, repair and waste and resource management sectors); (ii) enabling circular jobs (i.e. jobs that enable the acceleration and upscaling of core circular activities and thus form the supporting shell, such as jobs in leasing, engineering and digital technology - albeit only those that actually contribute to circularity); and (iii) indirectly circular jobs (i.e. jobs that provide services to the primary circular activities above and thus form the activities that indirectly uphold the circular economy, for example, jobs in education, logistics and the public sector). For more information on how 'circular' jobs differ from 'green' jobs, see Zero Waste Scotland & Circle Economy. 2020. 'The Future of Work: Baseline Employment Analysis and Skills Pathways for the Circular Economy in Scotland.' As of 7 June 2022:
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- 18 Skills-OVATE database by Cedefop collates online job advertisements (OJAs) from multiple sources, including private job portals, public employment service portals, recruitment agencies, online newspapers and corporate websites. In December 2021, there were 85,610 online job advertisements (OJAs) found in Glasgow and the West Central Scotland region. The database does not allow filtering out green job vacancies only. OJAs do not reflect the market demand for jobs across all occupations and sectors equally well: some sectors or professions are overrepresented if they are more likely to advertise online, while others are underrepresented.
- 19 Cedefop. 2022. Skills-OVATE data. Occupations such as professionals, managers or researchers, were excluded, as these likely required a university degree. Cut-off point was the median of OJAs per occupation (1,343).
- 20 Cedefop. 2021.
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