



Green Jobs and Skills in West Yorkshire

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Green Jobs and Skills in West Yorkshire

Research questions

1. What is a green job?
2. How many green jobs are there in West Yorkshire now and will there be in the future?
3. What skills are in demand for these jobs, and what related further education / apprenticeship qualifications are being achieved in West Yorkshire?
4. What jobs are at most at risk from decarbonisation?
5. Implications / recommendations for employment and skills provision and wider green economy strategy

Green jobs in West Yorkshire now

What is the green economy / green jobs

- Range of definitions of the *environmental* or *low-carbon* sectors available; what definition should be used depends on the purpose:
 - i. Environmental Goods and Services Sector (EGSS)
 - ii. Low Carbon and Renewable Energy Economy (LCREE)
 - iii. Low Carbon and Environmental Goods and Services (LCEGS) Sector
 - iv. Task-based approaches.
 - v. International Labor Organisation definition.
 - vi. “Mission-based” definition following Green Jobs Taskforce
- The terms *green jobs* and *green economy* are directly linked to policy goals
- We therefore recommended a practical “mission-based” definition:

Green jobs are those jobs that facilitate meeting net zero and broader environmental goals
- For analytical purposes we split this into policy areas such as “Homes and Buildings” and “Green Professional and Research services”

Quantifying green jobs



We calculate the number of green jobs using the Low Carbon Environmental Goods and Services (LCEGS) sector dataset produced by kMatrix and commissioned regularly for London by the Greater London Authority. This dataset:

- includes a broader set of activities than official definitions and includes the supply chain for green activities
 - e.g. wind sector includes those companies which develop and install the systems integration software enabling the power generated through turbines to be integrated into the National Grid)
- includes all green jobs, including in firms that are not wholly part of the green economy
 - e.g. activity within large companies seeking to identify ways to reduce environmental impact, even where the company's activity itself is not part of the green economy)

We identify the top occupations in the green economy by combining a green economy taxonomy developed by WPI and The Data City with the Lightcast staffing matrix, based on official ONS data sources

Estimated green jobs in West Yorkshire, 2021

Green policy area	Number of jobs in West Yorkshire (2021)	Proportion of green jobs in West Yorkshire	Proportion of all jobs in West Yorkshire	Proportion of all jobs in England
Climate adaptation	2,300	3%	0.2%	0.2%
Green professional and research services	9,500	13%	0.9%	0.8%
Homes and buildings	20,800	28%	1.9%	1.7%
Industrial decarbonisation	8,500	12%	0.8%	0.7%
Low carbon transport	5,200	7%	0.5%	0.4%
Natural environment	700	1%	0.1%	0.1%
Power	21,100	29%	2.0%	1.8%
Reduce, reuse, recycle and repair	5,300	7%	0.5%	0.4%
Total	73,400	100%	6.9%	6.1%

Source: WPI Economics calculations based on data supplied by kMatrix on their Low Carbon Environmental Goods and Services methodology, and ONS Business Register and Employment Survey for total employment local authority area

Green occupations and skills – key findings

- Our occupational analysis suggests a broad spectrum of occupations are represented in the green economy in West Yorkshire. Many jobs are greening as the economy transitions – the trend is not solely focused on particular sectors.

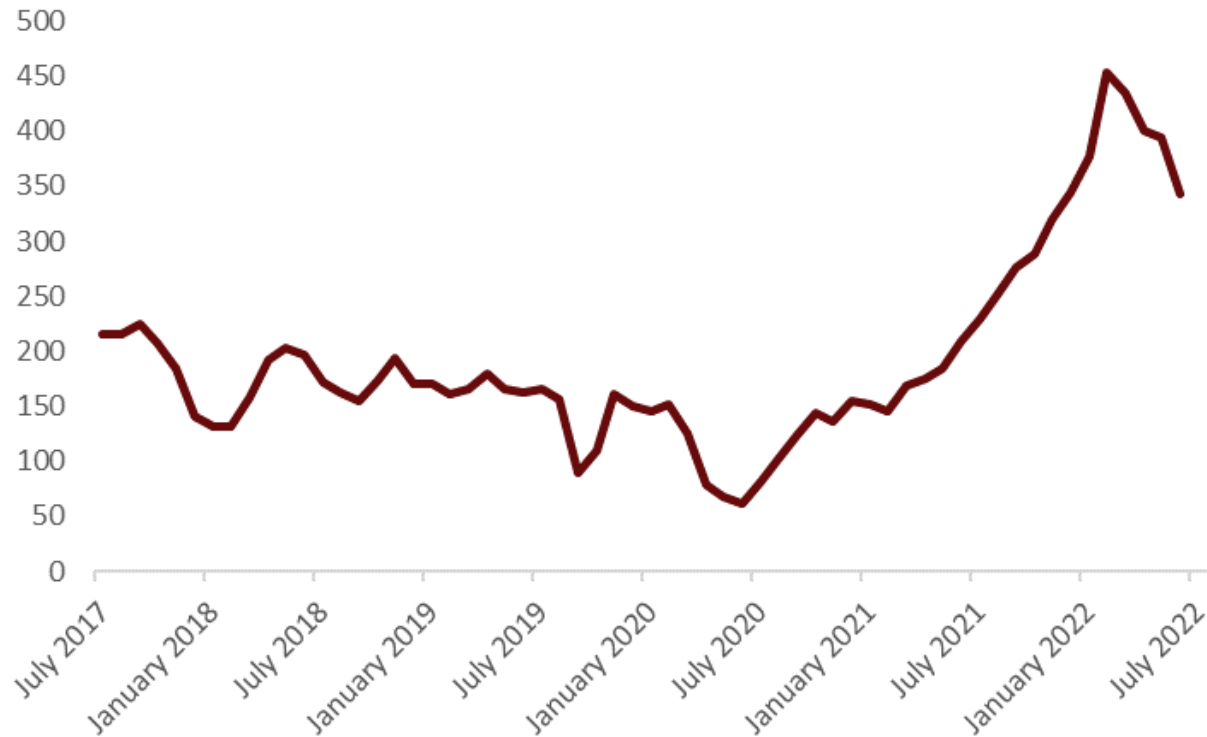
Occupations with highest shares of green jobs within the West Yorkshire green economy – top 10

	Occupation	Proportion of jobs that are green in each occupation	Number of green jobs in West Yorkshire
1	Conservation professionals	100%	426
2	Environment professionals	100%	1285
3	Conservation and environmental associate professionals	100%	410
4	Waste disposal and environmental services managers	62%	175
5	Refuse and salvage occupations	44%	874
6	Quality assurance technicians	15%	146
7	Scaffolders, staggers and riggers	12%	124
8	Chemical scientists	10%	69
9	Other skilled trades not elsewhere classified	8%	90
10	Printers	7%	107

Substantial growth in green job postings through pandemic

Total green job postings per month in West Yorkshire (based on Lightcast green job titles)

Unique job postings in month



Green occupations and skills – key findings

- Our occupational analysis suggests a broad spectrum of occupations are represented in the green economy in West Yorkshire. Many jobs are greening as the economy transitions – the trend is not solely focused on particular sectors.
- These green occupations tend to have a lower proportion of workers from BAME groups relative to other occupations – 7% versus 14% (although data only available at UK level)
- Our analysis of specialised, technical skills reveals that green jobs require a wide range of skills that go beyond and complement green skills, reflecting the broad nature of the green economy:
 - We find that environmental engineering and consulting are some of the most prominent “green skills” required in green jobs.
 - However, a wide range of other specialised skills feature prominently among green jobs, such as civil engineering, marketing and procurement.
- 5% of further education achievements in 2021 in West Yorkshire were directly related to the top 20 green occupations, with the majority of achievements in a range of construction, engineering, electrical and science-based courses.
- We identified a list of 147 apprenticeship courses registered in the UK that fall within our definition of the green economy, of which there was least one achievement in West Yorkshire for 22 of those courses last year.

Green jobs in West Yorkshire in the future

Projections for growth in jobs

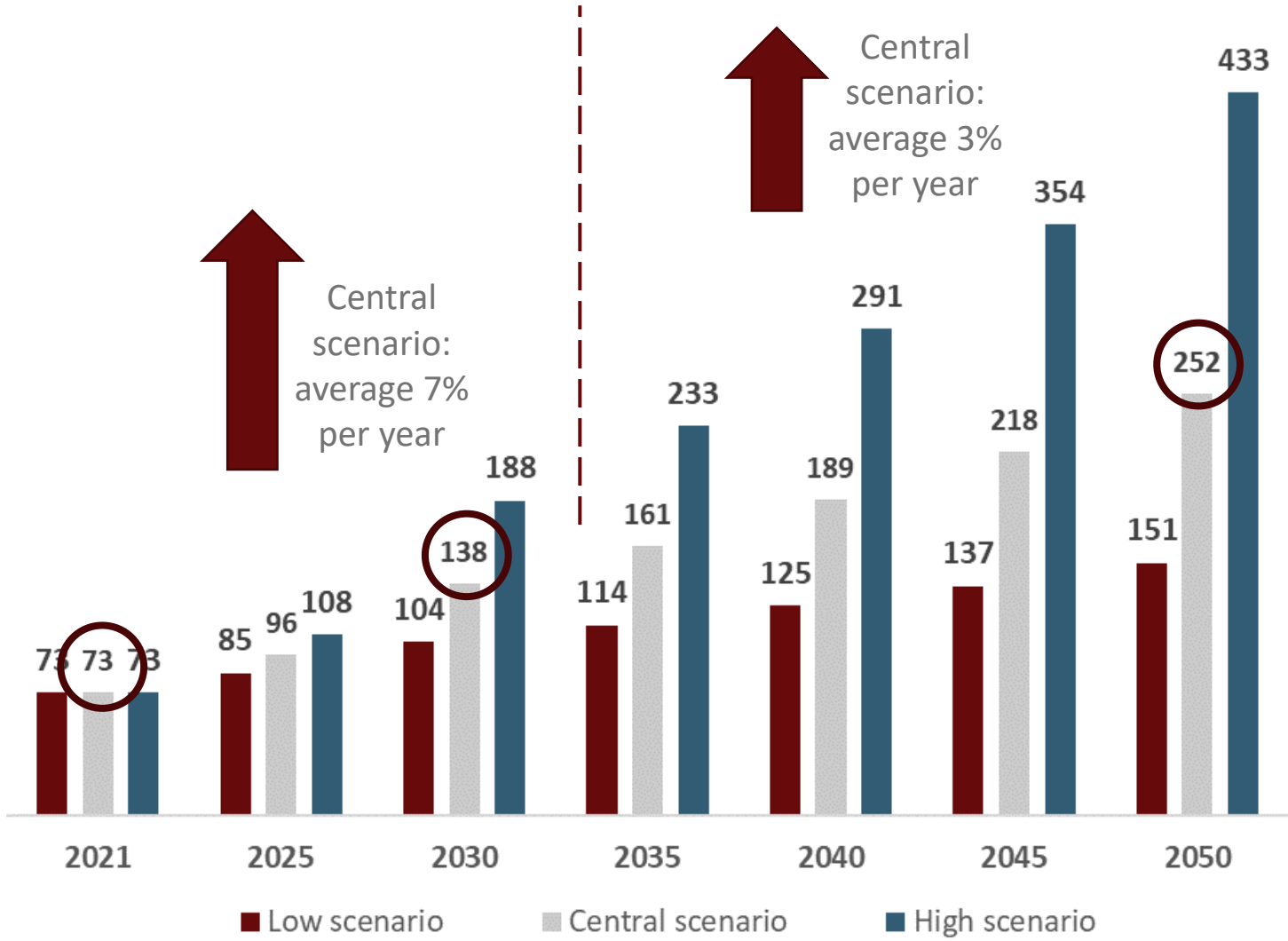
Wide range of sources for anticipated growth rates. Key sources:

- **CCC (2017):** UK business opportunities of moving to a low carbon economy
- **LGA / Ecuity (2020):** Local green jobs - accelerating a sustainable economic recovery (Modelling based on National Grid Future Energy Scenarios)
- **National Grid (2020):** Building the net zero energy workforce

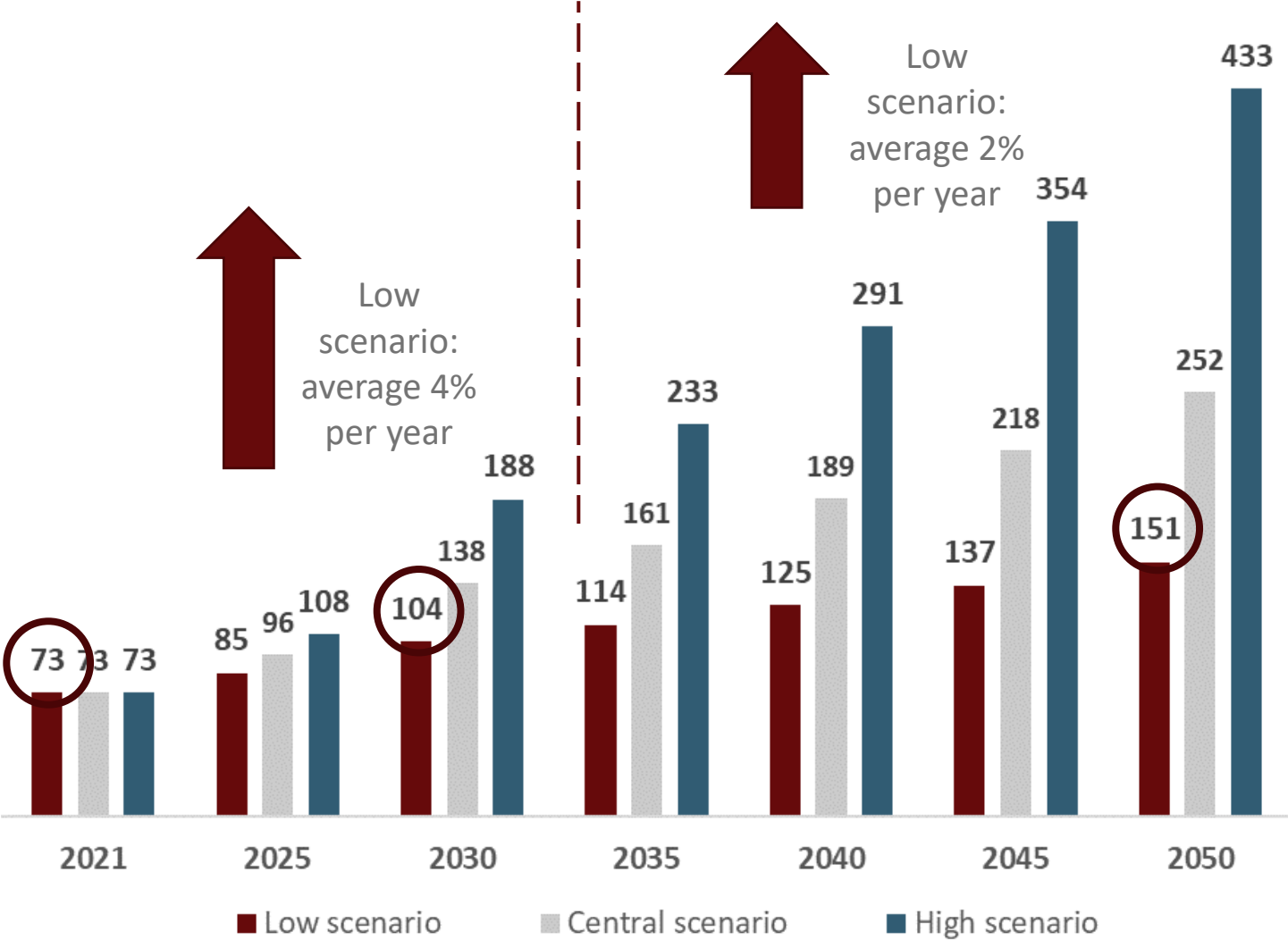
Three scenarios – central scenario and a low and high representing issues such as:

- **Low:** Skills shortages, lower uptake rates, less effective policy
- **High:** West Yorkshire capturing greater shares of domestic market for all sectors and international market for exportable green services

Scenarios for projections of total green jobs in West Yorkshire (thousands)



Scenarios for projections of total green jobs in West Yorkshire (thousands)



Impact on net jobs / jobs at risk from decarbonisation

Estimated impact of net zero policies on net employment in West Yorkshire

As well as additional jobs, non green jobs will become green jobs, while others will cease to exist; how will overall employment be affected?

Area	Total employments, 2020	Estimated jobs in West Yorkshire, 2030		
	Latest data	<i>Based on current policies</i>	<i>With net zero policies</i>	<i>Change due to net zero policies</i>
West Yorkshire	1,067,000	1,090,770	1,100,040	+9,270

Jobs in carbon intensive sectors, West Yorkshire

- We find that West Yorkshire has **98,275 jobs in carbon intensive sectors** that will need to change substantially due to the transition. NB/ we define carbon intensive sectors as ones that either have emissions over 100tCO₂e per job or which contribute more than 2% of annual total UK emissions.
- This represents **9.2% of employment** in West Yorkshire, and is lower than the national average of 10.5%
- **Construction, land transport and carbon intensive manufacturing** account for over 8 in 10 of these jobs.
- 13% of people in employment in West Yorkshire in the sectors highly exposed to transition are non-White versus 11% nationally.
- National data suggests that the carbon intensive industries have relatively more male employees, with female workers accounting for only 23% of the employees and the ratio is similar for West Yorkshire

Conclusions

Conclusions / Recommendations

In order to realise the potential of the green economy in West Yorkshire, we worked with a range of stakeholders to develop a series of practical recommendations designed to deliver positive labour market outcomes for West Yorkshire residents through the transition.

These recommendations fall under three key areas:

- **Strengthening current and potential West Yorkshire specialisms** – particularly around low carbon manufacturing, retrofit/construction and green finance.
- **Delivering a just transition** – supporting those currently in high carbon industries to prosper through the transition.
- **Supporting skills development and career promotion** – for both those leaving education as well as the current workforce.

Strengthening current and potential West Yorkshire specialisms

A thriving green workforce means we need *demand*, as well as *supply*, of green skills. Achieving this means **growing green industries in West Yorks**. This includes:

- **Manufacturing** – the Combined Authority should look to support a thriving green manufacturing sector in West Yorkshire through its business support services, driving greater innovation and adoption of technologies to reduce emissions.
- **Green finance** - the Combined Authority could leverage its existing strength here to bring more financial flows into other transition activities locally, particularly retrofit.
- **Retrofit** – local and sub national government have an important delivery and convening role to support retrofit at scale, if adequately funded by Government.

Developing the skills supply side

In addition to getting demand signals right, our stakeholder engagement also highlighted **the need for policy to help develop the skills supply side**, in order to **boost the supply of qualified individuals** across the sectors identified.

- **Adult Education Budget (AEB)** - Ensure green skills are addressed through commissioning of AEB and Free Courses for Jobs and are treated as a priority for responsiveness funds.
- **Better flexibility around capital and revenue spending** – to allow FE institutions to invest in the equipment they feel they require.
- **Local Skills Improvement Plans** – these need to adequately consider the importance of green skills.
- **Be flexible in face of fluid situation regarding national skills policy** - and lobby for greater stability and commitment to green skills at national level
- **Support integration and retention of required higher level skills in local businesses** - e.g. Yorkshire Universities, Mayoral SME Graduate Programme pilot

Just Transition

Supporting those currently in high carbon industries to prosper through the transition requires an increased level of **social partnership** and joining up of **local government, business, training providers and trade unions** and other civil society groups. We recommend the Combined Authority:

- **Support the establishment of local alliance groups within each of West Yorkshire's local areas** - to report and develop action on place-specific challenges.
- **Consider the establishment of a Just Transition Fund** – managed by the Green Jobs Taskforce – that would provide funding and standardisation for transitional training.
- **Coordinate with the Yorkshire & Humber Climate Commission** – an advisory body that supports regional climate action funded through the ESRC's Place-Based Climate Action Network

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