

Green skills evidence synthesis

Background:

UK Government aims to be 'net zero' (where the same amount of greenhouse gases put into the environment are balanced by removal out of the atmosphere)¹ by 2050.² To achieve this, all sectors need to consider how they can become greener and equip the workforce with the necessary skills to make this transition.

Industries, governments, and education providers often use the terms 'green jobs' and 'green skills'. 'Green jobs' are roles that "contribute to preserving or restoring the environment and our planet"³ and focus on specific initiatives that aim to improve environmental outcomes.⁴ Examples of green jobs includes solar panel technicians and those working in electric vehicle manufacture and maintenance. 'Green skills' refers to the "technical skills, knowledge, behaviours and capabilities required to tackle environmental changes";⁵ it is likely that most jobs in the future will require some green skills, even if they are not entirely a 'green job'. It is, therefore, important that consideration is given to what skills the local population of Coventry should be equipped with as existing and new industries in the area make the green transition.

Three key industries have been highlighted as requiring an increase in green jobs and green skills in Coventry. These are: retrofitting of housing stock (such as making houses more energy efficient by installing improved insulation), electric vehicle maintenance, and battery manufacturing. This short report is a partial scoping review that sought to identify published reports covering three research questions:

1. What initiatives are there nationally (in local government) around 'green skills'?
2. What industry initiatives are there in getting people into green jobs?
3. What are the implications for health equity of 'green skills' initiatives?

Links with health:

They can impact individuals and communities both directly and indirectly. Direct impacts include injury, illness and death because of extreme weather events. Indirect

¹ <https://netzeroclimate.org/what-is-net-zero-2/>

² <https://assets.publishing.service.gov.uk/media/6194dfa4d3bf7f0555071b1b/net-zero-strategy-beis.pdf>

³ <https://educationhub.blog.gov.uk/2023/11/07/what-is-a-green-job-everything-you-need-to-know/>

⁴ <https://www2.deloitte.com/uk/en/pages/consulting/articles/green-skills-for-green-economy.html>

⁵ As 4

impacts include increases in respiratory and cardiovascular conditions because of worsening air pollution levels; increases in infectious disease because of temperature changes that alter the survival, behaviour and distribution of insects; and impacts upon mental health and wellbeing.⁶ Therefore, working towards increasing green jobs and green skills provides benefits to health.

As with other determinants of health, there are inequities in the health impacts of climate change. There are several factors that may make individuals more vulnerable to the health impacts of climate change including age, pre-existing medical conditions and social deprivation.⁷ Therefore, it is important to consider whether there are any health equity implications of green skills initiatives.

Rationale:

Locally, there is a desire to explore how Coventry City Council (CCC) can best lead future initiatives relating to green jobs and skills which includes learning from other's best practice. Overviews of research, usually through methods of evidence synthesis,⁸ provide decision makers with the best available information about a specific topic to allow them to make informed decisions about operational or strategic issues. Therefore, this review will utilise a structured approach to identify appropriate research and allow for decisions to be made based upon the best available evidence.

Methods:

Due to the broad scope of the research questions, an adapted scoping review approach to identifying and summarising relevant literature was taken. A scoping review aims to map the key concepts within a research area and the different types of evidence available.⁹ Whilst lighter touch than other types of evidence synthesis (e.g. systematic review), they still follow a structured approach to gathering and assessing evidence.

For the first two research questions, Google Advanced Search and [Carrot²](#) were searched using the terms in *Table 1* in the appendix of this document. For Google Advanced Search, 'Incognito' mode was used to reduce possible impact of previous search history on results. The first five pages of each search were scanned for relevant reports. For the third research question, PubMed was searched using the terms in *Table 1*.

High level information was extracted from each study / piece of evidence and collated in an evidence summary document.

⁶ https://www.niehs.nih.gov/research/programs/climatechange/health_impacts

⁷ <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-017-0328-z>

⁸ <https://www.nihr.ac.uk/explore-nihr/funding-programmes/evidence-synthesis.htm>

⁹ <https://libguides.exeter.ac.uk/c.php?g=702858&p=5054827>

Findings:

1. What initiatives are there nationally (in local government) around 'green skills'?

Resources from national and several local government organisations were identified that outlined 'green skills' initiatives.

Several UK Government reports were identified related to green skills initiatives. In 2011, the then coalition Government published [Skills for a Green Economy](#), which aimed to assist businesses and the agencies which support them by highlighting the skills needs related to the green economy.

More recently, in 2021 the [Green Jobs Taskforce](#) report was published and in 2023 the Department for Business & Trade published the [UK Battery Strategy](#). The *Green Jobs Taskforce* report focuses on three themes: 1) Driving investment in net zero to support good quality green jobs in the UK; 2) Building pathways into good green careers; and 3) A just transition for workers in the high carbon economy. The *UK Battery Strategy* proposes a UK approach to the design and building of batteries. The "Sustain" section of the strategy discusses the skills needed in the workforce to achieve this. We also identified the policy paper [The Ten Point Plan for a Green Industrial Revolution](#) from the Department for Business, Energy & Industrial Strategy, Department for Energy Security & Net Zero, and the Prime Minister's Office that was published in 2020.

The [Local Government Association released a report in 2023](#) that put forward a framework that "national government should co-design with the local government sector that would support delivering collective net zero ambitions with a dynamic and skilled workforce". In the report, they outline several characteristics that should underpin such working, including: green jobs and skills should be delivered with a "local first principle"; and that funding, qualifications, and training should be aligned to dynamically respond to green skills and jobs challenge.

Three Councils in London (Lambeth, Lewisham, and Southwark), together with London Southbank University and the Mayor of London, [launched a "green skills academy" in 2022](#). The academy supports direct employment, apprenticeships, traineeships, training, or self-employment into green construction and retrofit, green transport, energy, waste or recycling, green infrastructure, and transport sectors.

The research consultancy firm RAND Europe produced a report looking at [Green jobs and skills development for disadvantaged groups](#). They found that: 1) people with low qualifications have limited opportunities to benefit from the greening of economics and they may be more disadvantaged in future; 2) Investing in green skills among people with low qualifications may give them an advantage in an ever more competitive labour market; 3) There is a need for more targeted action from relevant stakeholders to make sure that people who face disadvantages, including those with low qualifications, do not miss out of the green transition; and 4) they identified nearly 200 interventions of which supported disadvantaged groups into green jobs through education and training, though the effectiveness of such interventions needs to be examined.

Examples of other green skills initiatives in local Government include:

- [West of England Combined Authority](#) have produced reports of a [Green Skills Market Analysis](#) and [Retrofit Skills Market Analysis](#)
- Hounslow [Green Skills Bootcamps](#)
- Manchester City Council resources on [green skills and careers](#)
- Surrey County Council green skills – [trades and construction training](#)
- Huntingdonshire District Council [Green Skills Projects](#)
- Essex Country Council [green skills infrastructure review](#)
- Preston City Council [Green skills fund](#)
- A report produced by the University of Warwick Institute for Employment Research for the South Yorkshire Mayoral Combined Authority on [Green Jobs and Skills in South Yorkshire](#)
- Trafford Council held a [Green Skills Job Fair](#)

Initiatives in specific domains: retrofitting, electric vehicle maintenance, and battery manufacturing

Retrofitting:

- Local Government Association [roundtable on upskilling young people with green skills](#) – partial focus on retrofitting
- Greater Manchester Combined Authority [initiative to give >1,000 people employable green skills](#)
- London Assembly – [training for retrofitting is a common topic](#)

Electric vehicle maintenance – there appeared to be a lack of information on how local councils are tackling training around electric vehicle maintenance. Two examples found are:

- London Assembly [questions on electrical vehicle maintenance training](#)
- Essex Country Council [electric vehicle training](#)

Battery manufacturing:

We could not find much information from local councils around training initiatives for battery manufacturing.

2. What industry initiatives are there in getting people into green jobs?

The [RAND Europe report highlighted in the previous section](#) also includes some examples of industry initiatives, as well as those of governments, of getting people into green jobs.

We searched websites of several organisations with a presence in Coventry (such as Jaguar Land Rover and UK Battery Industrialisation Centre. Searches of the Jaguar Land Rover website returned no information on how they are getting people into green jobs;

the main information returned was around their investment in initiatives such as electric autonomous vehicles. A search of the UK Battery Industrialisation Centre returned [training they are delivering](#) around working in battery manufacturing.¹⁰ Further searches of “retrofit training Coventry” and “battery training Coventry” did not retrieve further relevant information with the exception of the following:

- A partnership between [Citizen Housing, Coventry College, Dyson Energy Services, and Coventry City Council](#) around students being training in housing retrofit
- West Midlands Combined Authority highlighting [further retrofit skills bootcamps](#) for people to develop their green skills.

3. *What are the implications for health equity of ‘green skills’ initiatives?*

The literature surrounding green skills has very little reference to health. A small number of papers referred to the need for green jobs to have robust occupational health and safety measures in place.^{11,12} Whilst not focusing on green skills explicitly, Anderson et al conducted a Health Impact Assessment of green infrastructure such as green roofs, green walls, rooftop gardens, and community gardens.¹³ Findings illustrated that accessible green infrastructure provided benefits for vulnerable populations including increased social connectivity, skills development and food security.

Produced by Dr Jack Birch and Catherine Shuttleworth, Coventry Health Determinants Research Collaboration, April 2024

¹⁰ <https://www.ukbic.co.uk/courses>

¹¹ <https://pubmed.ncbi.nlm.nih.gov/29518663/>

¹² <https://pubmed.ncbi.nlm.nih.gov/19608508/>

¹³ <https://www.mdpi.com/1660-4601/18/11/5763>

Appendix

Table 1: Search terms and search results

Research question	Search term	Date searched (database/search engine)	Hits
1,2	“Green skills”	Google	~908,000
1,2	“Green skills”	Google (.gov.uk domains)	~9,560
1,2	“Green jobs”	Google	~4,910,000
1,2	“Green jobs”	Google (.gov.uk domains)	~17,000
1,2	“Electric vehicle maintenance”	Google (.gov.uk domains)	~2,060
1,2	“Electric vehicle production”	Google (.gov.uk domains)	557
1,2	“Electric vehicle repair”	Google (.gov.uk domains)	~1,980
1,2	“Retrofitting jobs”	Google (.gov.uk domains)	46
1,2	“Retrofitting skills”	Google (.gov.uk domains)	101
1,2	“Battery manufacturing”	Google (.gov.uk domains)	
1,2,3	(green skills[Title/Abstract]) OR (green jobs[Title/Abstract])	PubMed	58
2	Electric	Jaguar Land Rover website	Not shown
2	Training	UK Battery Industrialisation Centre	1
3	((gree* job[Title/Abstract]) OR (gree* jobs[Title/Abstract])) OR (gree* skills[Title/Abstract]) AND (((equit*[Title/Abstract]) OR (equalit*[Title/Abstract]) OR (inequit*[Title/Abstract]) OR (inequalit*[Title/Abstract]))	PubMed	108