GREENWORKX

CRONFA GYMUNEDOL COMMUNITY FUND



Overcoming barriers to green energy jobs for historically underserved communities

Partnership Innovator in Residence

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Executive summary

Why this project matters

The green transition risks leaving people behind. Our project shows how to change that.

The UK's green transition is the economic opportunity of this generation, with up to 725,000 new clean energy jobs being created by public and private investment by 2030. But how do we ensure that these opportunities are accessible to all? Without deliberate action, historically underserved communities risk being excluded.

This report brings together the insights from a collaboration between The National Lottery Community Fund (the Fund) and Greenworkx that set out to explore and overcome barriers to green jobs, with a particular focus on the domestic retrofit sector and historically underserved communities.

Nearly 90 people responded to our survey: 45% from ethnic minority backgrounds, 43% women, and 20% with a long-term health condition. Two focus groups and employer conversations added depth, helping us validate lived experiences against sector data.

Our research confirmed that people face multiple, interconnected barriers when trying to enter green jobs.

Skills, experience and training

Candidates can struggle to access required training and develop the skills they need; but even after training, employers demand prior experience. As one candidate said: *"Nobody wants to hire you unless you have the experience - but where do you get the experience from if you don't get hired?"*

Perception and confidence

Internal and external attitudes can discourage people from pursuing green jobs; green jobs are often seen as low-paid or inaccessible, while women and ethnic minority candidates in particular report low confidence and lack of role models.

Resource and practical constraints

Financial pressures, health challenges, and other personal circumstances restrict the ability to train and work. One participant explained: *"To become a DEA, you've got to finance it yourself. Once the course is finished, you're left on your own."*

Structural and systemic factors

Factors rooted in green sectors and their recruitment systems, such as geography, transport, and discrimination can limit opportunities. Candidates with mobility challenges, or those new to the UK, find access especially difficult.

Policy and market stability

Unpredictable policy changes and fluctuating investment undermine employer confidence in recruiting and training, affect training availability, and deter workers from committing time and resources. As one respondent noted: *"I've applied for training programmes - one cancelled due to changes to funding."*

Knowledge and pathway clarity

Gaps in understanding the route into green jobs, progression, and employer expectations create uncertainty about how to enter, progress, and succeed in green careers. Nearly half of respondents have delayed training because they cannot see a clear route to employment.

Employer-related practices

Informal recruitment networks, lack of feedback, and limited HR capacity among SMEs make it hard for new entrants to access jobs, demonstrate fit, and progress once hired.

These barriers compound one another, disproportionately affecting those already underrepresented in the workforce.

Beyond green jobs, we would suggest that these barriers can also affect community involvement in environmental programmes more broadly, especially for historically underserved communities. High costs and practical constraints limit people's ability to volunteer or participate in local initiatives; low confidence, poor representation, and unclear routes deter engagement; and systemic issues such as transport, discrimination, and unstable policy undermine trust and long-term participation.

What we tested and found (pilots)

Retrofit Talent Accelerator
A job shadowing scheme giving newly qualified Retrofit Assessors two days of structured workplace exposure. Candidates described it as a “real eye opener” that gave them “confidence to do the job” and improved their technical competence. One former chef said the placement gave them the assurance they needed to continue in retrofit.

Assessor Readiness Scorecard
A competence framework defining what “job readiness” means in practice. Employers welcomed the clarity, highlighting the importance of not just technical competence but also “soft skills” like customer care and IT literacy. This forum also revealed that motivation and willingness to learn can be more decisive than technical skills.

What we recommend

This project showed that the barriers to green jobs, and engagement in environmental programmes more broadly, are not individual shortcomings but systemic issues that require systemic solutions. Key lessons include:

- **Simple, scalable ideas:** Alumni-led shadowing, short low-friction placements, and competence frameworks all show promise as innovative and replicable approaches for supporting people into employment and engagement opportunities across the green sector.

- **Employer engagement is essential**: Green jobs programmes must be co-designed with employers and ensure alignment with demand. Similarly, other environmental programmes must be co-designed with the wider sector (such as community organisations, organisations delivering environmental action, local authorities, and social housing providers), rather than in isolation.

- **Shift from individual to systemic interventions**: The barriers to green jobs are systemic issues that require systemic and scalable interventions. An example of this could be a collective impact project.

This project has uncovered insights that pave the way toward a more strategic and ambitious approach to building the green workforce and growing engagement in environmental programmes more broadly. The energy transition is not only an economic transformation but also a chance to create a more inclusive and resilient future, one where opportunity is shared and progress benefits everyone.

Introduction

The opportunity and risk

The UK's commitment to a legally binding net zero target necessitates a significant and rapid acceleration in the transition to a low-carbon economy. This transformation, while critical for environmental sustainability, also presents a substantial opportunity for economic growth and workforce development. There is a growing demand for a skilled workforce to deliver low-carbon technologies and services. The Climate Change Committee found that between 135,000 to 725,000 net new jobs could be created in low-carbon sectors by 2030, with the most significant growth projected in the energy efficiency and low-carbon heating sector.

However, a socially inclusive transition requires that these new employment opportunities are accessible to all communities, including those that have been historically underserved. This project was conceived to explore and address the critical need to make environmental programmes, and specifically the green economy, relevant and beneficial to communities on a local and personal level. By focusing on the intersection of climate action and social justice, the project seeks to ensure that the transition to a greener economy is equitable and does not leave individuals or communities behind.

The built environment is a key area for decarbonisation, accounting for nearly 20% of the UK's emissions. Domestic energy efficiency and retrofit, which includes measures such as insulation and low-carbon heating installations, are particularly important as they are not just about large-scale infrastructure change. They represent how everyday people directly engage with energy security and decarbonisation in their own homes and lives. This project had a specific focus on this sector.

The Fund and Greenworkx's partnership

The National Lottery Community Fund (the Fund) is committed to supporting community-led responses to the climate and ecological emergencies. The Fund's role extends beyond traditional grant-making to enabling innovation and pioneering new models of partnership that can generate valuable insights and scalable solutions. This project was a collaborative partnership between the Fund and Greenworkx, the climate edtech startup building the workforce for a resilient future. Since launching in 2022, we have recruited over 10,000 individuals into our community, delivered accredited Level 2 and 3 retrofit training to over 400

learners, and supported dozens of candidates into green careers. The insights and recommendations gathered from this project will inform the Fund's future programme design, contributing to its broader strategic goals of supporting communities and building partnerships for a more sustainable and equitable future.

The Greenworkx mission is to power 10 million people into green jobs within 10 years, driven by the belief that people are the key to solving the climate crisis. The growing green skills shortage is now the primary barrier to delivering net zero, but it also represents an enormous opportunity: to create millions of meaningful, sustainable careers. Greenworkx is committed to making these opportunities accessible to everyone, particularly communities who might otherwise be excluded from the green economy. Through this work, Greenworkx aims to demonstrate that the net zero transition can be a source of opportunity, resilience, and inclusion for communities.

Project objectives

The project was designed with three core objectives:

1

Understanding key barriers
To document and understand the real and perceived barriers that people, particularly those from historically underserved communities, face in accessing clean energy jobs, with a specific focus on the domestic energy efficiency sector.

2

Piloting interventions
To pilot small-scale interventions aimed at bridging the gap between qualification and job readiness for new entrants to the sector.

3

Actionable insights
To produce actionable insights and recommendations to inform the Fund's future programme development that also have relevance for wider policy and partnerships.

Methodology and project design

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The project was delivered through three interconnected workstreams.

Workstream 1: Understanding key barriers

We undertook a combination of research and direct engagement to validate the barriers faced by people entering green jobs. This included:

- A review of existing research and sector reports on barriers to green employment.
- Analysis of Greenworkx's existing data and insights from working with over 10,000 community members and 400 trained learners.
- Development and dissemination of a survey designed to capture experiences from people at different stages of their green jobs journey, with a particular effort to ensure diverse representation.
- Two focus groups with volunteers from the survey, allowing deeper exploration of the challenges people experience.
- Conversations with projects from the Fund's Sustainable Steps Wales – Green Careers programme, providing further insight into the barriers young people face in Wales.
- A joint insights session with the Fund, where emerging findings were shared and discussed.

Workstream 2: Piloting interventions

Two pilot initiatives were designed to address some of the most pressing barriers identified, focusing particularly on qualified jobseekers seeking to transition into work as Retrofit Assessors (RAs):

Retrofit Talent Accelerator (job shadowing)
A short, structured job shadowing placement for newly qualified candidates to gain direct workplace exposure, hosted by recent graduates of the Greenworkx DEA Academy who had secured roles as RAs.

Assessor Readiness Scorecard (competence framework)
A structured framework to define the knowledge, skills, and behaviours expected of job-ready DEAs and RAs, with an accompanying assessment process. The framework was piloted through self-assessment by candidates and validated through employer feedback.

Workstream 3: Actionable insights

The third workstream focused on drawing together the findings from the first two workstreams and distilling them into insights and recommendations for the Fund. These insights are intended to inform the Fund's future programming and to offer relevance to wider policy and partnerships focused on workforce development in the net zero transition.

Workstream 1: Understanding key barriers

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A central focus of this project was to deepen understanding of the barriers faced by jobseekers aspiring to enter clean energy roles. These barriers are multifaceted and often intersect, compounding challenges for individuals. Through a combination of research, data analysis, surveys, and focus groups, we mapped a set of interconnected barriers.

Who we heard from

We received almost 90 survey responses, with a strong representation from historically underserved communities, including 45% from ethnic minority backgrounds, 43% women, and 20% reporting a long-term physical or mental health condition. The insights gathered from this diverse group provided a rich understanding of the barriers faced by real communities at all stages of the green jobs journey, with the majority actively considering training (38%) or currently looking for a green job (30%), 16% already working in a green job, 6% in green skills training, and 11% not aware of, or interested in, green jobs.

Seven barriers that compound exclusion

Our research confirmed that people seeking to enter green jobs face multiple, interconnected barriers that compound one another and disproportionately affect underrepresented groups. The evidence gathered through surveys, focus groups, desktop research and sector reports demonstrates that these barriers are not isolated obstacles but form a complex system that deters and delays entry into meaningful employment. For example, financial challenges prevent individuals from investing in training, while lack of experience closes doors to entry-level jobs. In turn, unclear pathways and weak employer engagement reduce confidence and feed negative perceptions of the sector.

Beyond green jobs, we would suggest that these barriers can also affect community involvement in environmental programmes more broadly, especially for historically underserved communities. For example, a UK government report has identified that a number of these barriers prevent engagement in volunteering; these include practical barriers faced by people with disabilities, ethnic minorities experiencing a greater lack of information on opportunities, global majority volunteers being twice as likely to feel excluded, and evidence of racism and discrimination in the charity and volunteering sector.

The seven barrier categories validated through this project are:

1. Skills, experience and training
2. Perception and confidence
3. Resource and practical constraints
4. Structural and systemic factors
5. Policy and market stability
6. Knowledge and pathway clarity
7. Employer-related practices

Each category is explored in detail below, with supporting evidence from our survey, focus groups, and external research.

1. Skills, experience and training barriers

Gaps in practical experience and training emerged as the most consistent and pressing challenges for aspiring candidates. Employers frequently use prior experience as a proxy for competence, creating a "catch-22" situation where candidates cannot secure employment without experience, but cannot gain experience without employment. In our survey, 57% of green jobseekers identified employer demands for experience as the most difficult part of finding a job, rising to 88% among those not currently in work. A striking 83% of respondents said that shadowing or work experience would help them most at this stage in their journey. Focus group participants echoed this frustration:

> **"Nobody wants to hire you unless you have the experience - but where do you get the experience from if you don't get hired?"**

This entry-level "experience catch-22" exists in many sectors, however compliance- and safety-critical work (including domestic retrofit, heat pumps, rooftop solar, and grid / cabling roles) raises the "experience premium" and onboarding cost. This can make employers even more reluctant to hire new entrants.

Training gaps further exacerbate the problem. Almost half (48%) of our survey respondents cited insufficient training or qualifications as a key barrier, usually linked to financial or time constraints. One participant explained: *"I don't have much capacity alongside my full-time job to volunteer at a charity in order to gain the necessary experience to access paid work."*

When training is undertaken, it does not always provide jobseekers with all of the knowledge and skills they need for real-world application. Energy Systems Catapult research and industry articles highlight that existing retrofit training is often outdated, fragmented, or missing key competencies such as project management, customer care and whole-building assessment. Government assessments confirm that training capacity is constrained by shortages of instructors and inconsistent employer demand. Together, these dynamics undermine the readiness of new entrants and discourage investment in training pathways.

Similar to green jobs, many environmental volunteering roles or community action initiatives may require prior experience, specific skills or knowledge (or individuals may believe that to be the case). Individuals may therefore feel unable to engage or contribute without formal training, or clear communications about any pre-requisites.

2. Perception and confidence barriers

Negative perceptions of some green sectors (such as retrofit and trades) and low personal confidence discourage many people from pursuing green jobs.
Among those not currently exploring these careers:

> **70% said they believe green jobs are poorly paid, and 90% believed there were few opportunities available**

These misconceptions shape career decisions long before candidates engage with training or employment processes.

PwC's Green Jobs Barometer found that negative societal perceptions of construction and retrofit persist, with fewer than one in five people outside the industry viewing it as attractive. Women, in particular, report lower awareness of green jobs and lower self-assessed suitability (Nesta research), while both women and ethnic minority candidates often lack role models in the sector. These perception barriers are therefore deeply intertwined with wider issues of diversity, representation and social norms.

Low confidence is also a barrier for many jobseekers. Over half (52%) of our survey respondents said confidence coaching would help them most. As one focus group participant explained: *"If I had better English language, I would be much more confident to express myself and talk well about my experience and my knowledge."*

Others reported that lack of employer feedback undermined their confidence: *"I applied for green work training and never heard back despite contacting, which was disappointing and knocked my confidence."* While confidence barriers and lack of feedback affect all jobseekers, they're amplified in sectors like retrofit where role models are scarce and hiring is informal.

Negative perceptions of environmental action as a whole (e.g. seen as niche, technical, or "for experts") and low self-confidence can deter individuals from

engaging in environmental action more broadly. Misconceptions about accessibility or impact, alongside lack of role models, can reduce engagement. For example, a research study found that the motivation of people from ethnic minority groups to engage in nature was affected by perceptions of who protected landscapes were for and how safe and welcoming they were. These perceptions were sometimes informed by negative first-hand experiences, including racism.

3. Resource and practical constraints barriers

Practical constraints - particularly financial barriers - emerged as a significant obstacle.

> **Two-thirds (67%) of respondents considering green skills training said that cost was the primary factor preventing them from starting, rising to 89% among those currently unemployed**

Various green roles require specific cards and certifications due to safety regulations, and many employers do not fund this training themselves. As one focus group participant explained: *"To become a DEA, you've got to finance it yourself - it's between £1,000 and £1,500 and that's your own money. Then once a course is finished, you're left on your own."*

These financial challenges extend into employment itself, with 43% of jobseekers expressing concern about low starting salaries in green roles. Nesta found that the total cost of attending heat pump training can reach £2,500, including the opportunity cost for self-employed engineers i.e. loss in customer revenue.

Beyond finances, health and accessibility also limit opportunities. Thirty percent of respondents who are not exploring green jobs said the physical demands of roles put them off, while ELITE's *SustainAbility* project (funded within the *Sustainable Steps Wales - Green Careers* programme) found that young people with disabilities highlighted difficulties in navigating employer support. Carers and parents often struggle with training formats that demand long commutes or residential attendance.

Similarly, volunteering and other environmental engagement often require time, money, or physical capacity (e.g. attending events, travelling to community projects, or accessing digital tools). For example, research has found that the opportunities of people from ethnic minority groups to visit protected landscapes

were limited by how much time and money they had available, as well as the affordability and accessibility of transport options and facilities.

4. Structural and systemic barriers

Systemic issues in recruitment practices, diversity, and accessibility further restrict entry. While these barriers occur in many sectors, the local, on-site nature of much green work magnifies them.

Given many green roles, especially those in domestic energy efficiency, require workers to be in a physical location (e.g. on site in properties), job opportunities must be local. In particular, domestic energy efficiency and renewables are highly local and programme-led, limiting those opportunities to specific regions. Twenty-six percent of survey respondents cited inconvenient job locations as a key barrier, while almost half (48%) said that clearer lists of local employers would help them most. In rural areas with limited public transport, a lack of transportation can be especially restrictive for candidates - this was a key barrier highlighted by Foothold Cymru while planning their Sustainable Steps Wales - Green Careers project. Many candidates are unable to secure these types of roles due to not having a driving licence or their own vehicle.

One respondent new to the UK described the challenge: *"For jobseekers like me as a newcomer to the UK, there are some challenges to get jobs like no UK experience, language, not familiar with hiring system, Visa concerns."*

Discrimination was also evident. Both younger and older candidates were affected by age discrimination:

> **19% of survey respondents said that age had been a barrier**

Focus group participants highlighted gender barriers: *"I don't think there's a space for girls or women to do it because I feel like it's only men that do construction work."* This aligns with UK construction sector statistics: the Chartered Institute of Builders (CIOB) has found that only 15% of the workforce is female (with approximately 2% working on-site), BAME employees make up 6% of the workforce, and disabled employees also make up 6% of the workforce. Informal recruitment networks and implicit bias further exacerbate inequities, with women often ignored or assumed to be contacting employers on behalf of male relatives, as found by the Energy Systems Catapult.

Systemic barriers like location, transport, discrimination, and accessibility can affect volunteering and other environmental engagement just as they do paid roles. Local participation is constrained by geography and mobility, while social norms, gender, ethnicity, and language can affect confidence and inclusion. The London Wildlife Trust also found that safety is a significant barrier for young women and non-binary people of colour, with 77% of survey respondents saying that previous experiences of feeling unsafe in a green space has now made them less likely to engage in opportunities and nature conservation volunteering.

5. Policy and market stability barriers

Frequent changes in government policy and fluctuating investment undermine both employer confidence and candidate willingness to commit, especially as pipelines for green work are largely policy-driven (due to grants, standards and targets).

> **61% of survey respondents considering training worried there would be no jobs available afterwards, while 45% said it was unclear whether jobs would exist locally**

Over half (52%) of jobseekers said the lack of job adverts was the most difficult challenge they faced. Participants directly linked this uncertainty to government policy: *"Government keeps withdrawing funding."* Another reported: *"I've applied for two different training programmes – one cancelled due to changes to funding."*

The retrofit industry is in agreement about the negative impact of "stop-start" measures and short funding cycles. Without stable demand signals, employers are reluctant to invest in long-term recruitment or training pipelines, while training providers hesitate to expand provision. Nesta found that training and financial incentives weren't enough to get heating engineers working in retrofit, due to feeling uncertain about the future direction of the heating industry. This uncertainty perpetuates other barriers, discouraging individuals from spending money or time on training if job prospects seem insecure.

Uncertainty from changing funding, shifting priorities or programme cancellations can also affect volunteering and other community engagement initiatives. This can discourage long-term engagement or investment of time and energy.

6. Knowledge and pathway barriers

A lack of clear pathways into green jobs adds significant uncertainty. This particularly affects the green sector as it's a relatively new, fast evolving ecosystem with overlapping qualifications and inconsistent entry points.

Limited awareness, especially among young people, is a key barrier that prevents individuals from even considering green careers. WorldSkills UK found that 44% of young people don't understand what green jobs are available and 41% don't understand what green skills employers require. Foothold Cymru's engagement with young people in Wales between 15-30 years old, in anticipation for their Sustainable Steps Wales - Green Careers project, also found that young people lack awareness about the wide range of jobs that can be considered green. This limited awareness, and uncertainty about the long-term security and stability of green careers, also indirectly affects career choices, as friends, family, and career advisors - who all play a key role in influencing decisions - can lack knowledge and confidence on green career opportunities, or even dissuade people from pursuing green careers.

Unclear pathways affect green jobseekers at all stages in their journey: seventy percent of jobseekers in our survey said they had struggled with unclear pathways, while nearly one-third (32%) worried that employers would expect more skills than they had.

> **Almost half (45%) of those considering training delayed their decision because they could not see a clear route to employment afterwards**

As one participant described: *"There isn't necessarily a course I could have undertaken that would have prepared me for this role. The non-linear career path makes knowledge of these sector jobs more difficult to find out about."* Focus group discussions reinforced these issues: *"I thought I could start immediately as a retrofit assessor after my DEA and RA course, but in a recent interview I was told I need to also get the Level 3 in Energy Efficiency for Older and Traditional Buildings."* External research confirms that pathways are fragmented and confusing, with too many overlapping qualifications. For example, Energy Systems Catapult notes that routes into heat pump installation are lengthy, indirect, and discouraging for career changers.

Lack of clarity on “how to get involved” is a universal barrier, beyond employment. Many people do not know the range of environmental action opportunities or the steps needed to contribute meaningfully. A survey by Students Organising for Sustainability UK found that, while people of colour were more likely to report being concerned about climate change (82% vs. 76%), they were also more likely to say they would like to get involved with environmental charities but didn't know how (39% vs. 22%).

7. Employer-related barriers

Finally, the practices and behaviours of employers themselves present barriers. This is partly due to the predominance of SMEs and sole traders in the sector, with thin HR capacity.

In our survey, 35% of jobseekers said lack of employer feedback was their greatest challenge, while 43% said that employer introductions would help them most. A majority (57%) of those already in green jobs said they needed clearer progression opportunities to stay and advance in their careers. Focus group participants highlighted how heavily access relies on contacts: *“You’ve got to find companies that’ll take your services on. And there’s hundreds of EPC assessors already in the market. Unless you’ve got a contact, it becomes difficult. You might get odd jobs, but you can’t use that to live on.”*

External evidence underscores this. Nesta has found that many in the heat pump industry, particularly sole traders and SMEs, often avoid hiring apprentices due to cost and resource pressures, while PwC’s Green Jobs Barometer notes that construction workers are more likely to be in insecure or long-hour contracts compared to other sectors. The absence of structured employer engagement risks reinforcing other barriers, leaving candidates unable to demonstrate competence, secure roles, or see a long-term future in the sector.

UK Government research highlights that employer investment in training has declined over the past decade. However, where funding support is available, employers can be more willing to hire unqualified candidates and invest in their training. In anticipation of their Sustainable Steps Wales - Green Careers project, Foothold Cymru found that the majority of employers they engaged with would be happy to hire young people and provide them with the necessary training due to available government funding.

These kinds of barriers also apply to volunteering and other environmental action

organisers; organisations can deter potential volunteers or participants through opaque recruitment, lack of feedback, informal networks, or unclear progression.

Workstream 2: Piloting interventions

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From barriers to solutions

We tested two interventions to see how some of these barriers might be overcome in practice, focusing particularly on qualified jobseekers seeking to transition into work as Retrofit Assessors (RAs).

Retrofit Talent Accelerator: bridging the experience gap

Why?

The Retrofit Talent Accelerator was developed to provide newly qualified candidates with relevant work experience, employer exposure, and confidence in their practical abilities.

By placing newly qualified RAs alongside experienced practitioners, the pilot enabled candidates to gain direct insight into workplace expectations, observe live assessments, and engage with hosts in structured discussions. This not only gave candidates tangible experience and professional connections, but also built their confidence that they could translate their training into effective performance on the job.

What?

We identified potential hosts for placements by reaching out to candidates we had previously placed in RA roles. This approach leveraged the willingness of alumni to give back, while creating a relatively low-friction model for establishing placements. Despite the challenge of finding suitable matches in the same geographic locations, we secured four volunteer candidates (graduates of our DEA Academy) and three hosts. Two of the hosts came from the same employer in London, where we were able to place two candidates after obtaining company approval.

Placements lasted two days, with one day spent on-site and one day in the office. This structure allowed candidates to observe the full scope of an RA's work, from field-based assessments to office-based reporting. It also provided space for structured Q&A, tailored to each candidate's learning needs.

Outcomes

The Retrofit Talent Accelerator demonstrated that short, structured job shadowing placements can significantly enhance the confidence and practical readiness of newly qualified Retrofit Assessors. Candidates reported measurable improvements in their competence across key activities such as conducting property surveys, using software effectively, and engaging with customers (see appendix). One candidate described:

> **Seeing challenging situations that assessors experience (like hoarding and vegetation) was a real eye opener... I really gained confidence to do the job - especially as I'm changing careers"**

Transitioning from a career as a chef, they explained that they *"really gained confidence to do the job"*, highlighting the intervention's impact on individuals moving into the sector from unrelated backgrounds. Both candidates reported feeling more confident about the prospect of working as Retrofit Assessors thanks to their placements, and valued the support and opportunity to ask questions of their hosts.

Candidates also described the specific learning they gained from observing and, in some cases, assisting with tasks (which allowed them to practise their skills under the guidance of an experienced RA, rather than working in isolation as they had done for their DEA portfolio). Candidates learned what to say to residents, the order in which work should be carried out, which phone apps and tools are useful, and how to capture and organise the required information.

One explained, *"It was useful to see [the host] walk through some evidence gathering that I hadn't done before, in particular a cavity wall inspection using a borescope and a solar survey in the attic of a property."* This feedback underlines the value of bridging the gap between training and employment by providing real-world, guided experience.

Employer hosts expressed interest in interviewing the candidates when they have vacancies in the near future, demonstrating the impact of creating employer connections and providing candidates with an opportunity to demonstrate their technical knowledge, motivation and interpersonal skills.

Challenges and lessons learned

Delivering the Retrofit Talent Accelerator pilot surfaced a number of practical challenges that highlighted the limits of a purely volunteer-led approach. Matching candidates to suitable hosts was not always possible due to location and timing constraints: one graduate could not be matched with a host in his hometown, and was unable to travel to London when hosts there were available, while a host near Manchester faced delays in securing employer sign-off, ultimately preventing the placement from going ahead. These examples showed that while volunteer alumni were enthusiastic, reliance on personal goodwill created fragility and inconsistency. Employer-level engagement and commitment will be essential to scaling opportunities reliably, ensuring that hosts have both the organisational backing and workload capacity to accommodate placements.

The pilot also raised important questions about placement design. Shadowing extended survey times by 30-45 minutes, creating additional burden for hosts and limiting the number of placements that could be sustained without additional planning and support. There was mixed feedback about the ideal length of placements: while both candidates reported that the two-day structure was valuable, one host suggested that longer placements could deepen the experience. Candidates also noted that exposure to a wider range of property types and conversations with managers or design teams would enhance their understanding of recruitment expectations and project context.

These lessons underline that structured placements, backed by employer buy-in, are necessary to maximise impact while balancing the demands on hosts. They also reinforce the broader validation of demand for shadowing, with similar initiatives emerging in the market, and point towards the opportunity to develop a distinctive, sustainable model that complements existing schemes.

Assessor Readiness Scorecard: Redefining “job-ready”

Why?

The Assessor Readiness Scorecard was designed to tackle the widespread perception that qualified new entrants are not job-ready. Employers frequently cite a lack of practical experience and uncertainty about new entrants’ abilities as reasons for hesitancy in hiring. However, given the lack of experienced candidates in the market, the industry must move away from using experience as a proxy for competence. This lack of clarity on what constitutes “job readiness” also discourages candidates, who are uncertain about employer expectations and what they need to do in order to be ready for work.

What?

We drafted a framework outlining the knowledge, skills, and behaviours expected of newly qualified Domestic Energy Assessors (DEAs) and Retrofit Assessors (RAs). This was informed by our understanding of qualification content, the day-to-day demands of these roles, and feedback from employers engaged through our broader work. Four potential assessment approaches were developed to evaluate candidates against this framework.

As part of the Retrofit Talent Accelerator, participants self-assessed against the framework before and after their placement, providing insight into perceived growth in confidence and competence. To validate the framework, we invited employers to participate in a focus group or 1:1 discussion, incentivising them with gift vouchers. Three employers engaged through the focus group and provided valuable feedback.

Outcomes

The Assessor Readiness Scorecard pilot demonstrated that employers see real value in having a clear, structured definition of what job readiness means for DEAs and RAs. Those who engaged in validating the framework responded positively, and were keen to make the framework as useful as possible to them by sharing which attributes are most important such as customer engagement (*“you’re going to be spending half your working life in somebody else’s house”*) and computer literacy (*“if you’re not good on a computer, this job will kill you”*). This feedback not

only confirmed that the framework broadly aligned with employer expectations of new entrants but also showed strong support for its use in helping to clarify which skills and behaviours are most critical at the point of hiring. Employers also acknowledged that not all skills or behaviours needed to be mastered at the highest level immediately, recognising that new hires will require some onboarding and support rather than being expected to operate entirely independently from day one.

The pilot also yielded important insights into how competence should be evidenced in a way that inspires confidence and supports employers' decision-making when considering inexperienced candidates. Employers expressed scepticism about self-assessment alone, suggesting instead that portfolio evidence, the number of completed EPCs and scenario-based tests could serve as more credible indicators of readiness. They agreed that a simulated retrofit assessment would be unnecessarily time intensive and that other approaches could provide the same assurance more efficiently.

Challenges and lessons learned

Employers emphasised that while technical competence is essential, intangible traits such as motivation and willingness to learn can be just as decisive in recruitment. As one participant explained, *"for me, it's trying to find the person who loves buildings."* These attributes are harder to capture in a structured framework, which underlines the need to balance measurable skills with recognition of personal qualities that contribute to success, and to ensure candidates have opportunities to develop relevant soft skills in addition to technical skills.
Another challenge lay in employer capacity: even with incentive vouchers, confirming attendance and scheduling a short 30-minute focus group took longer than expected, with some employers not responding at all. This reflects the limited time and resource employers can dedicate to engagement activities, suggesting that wider adoption of frameworks will require streamlined processes and strong industry partnerships.

At the same time, the pilot revealed additional use cases for the competence framework beyond its original aims. We recognised that the framework can help Greenworkx and other organisations identify key areas for training development, as well as measure the effectiveness of job readiness interventions such as job shadowing. These multiple applications increase its potential value as a sector-wide tool. A further lesson, not anticipated at the outset, is that employer engagement in framework validation itself provides insights into hiring priorities

and recruitment challenges, which can be used to continually refine training and employment pathways.

Workstream 3: Actionable insights

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Based on the understanding we have gained of the barriers, and the lessons learned during our pilots, we have generated actionable insights and recommendations that can inform the Fund's future programmes as well as the wider sector.

Innovative approaches

Our small-scale pilots have highlighted innovative approaches that could be developed further, incorporated into the Fund's future programmes, and shared across the Fund's portfolio and the sector. These include:

Alumni-led hosting model

Leveraging graduates who have successfully transitioned into green roles as hosts for new entrants. This creates a peer-to-peer model of support, reduces reliance on new employer relationships, and builds a culture of giving back within the workforce.

Competence frameworks at transition points

Embedding competence frameworks into the step between training and employment, ensuring candidates, employers, and training providers share a common understanding of what job readiness means in practice.

Low-friction placements

Designing short, manageable opportunities such as two-day job shadowing placements, which are easier for employers to accommodate than longer work experience. This provides meaningful exposure for candidates without creating excessive burden on employers.

These practices demonstrate the potential to reduce barriers in practical, scalable ways. Importantly, they offer models that can be replicated across different roles and environmental engagement opportunities across the green sector.

Key recommendations for future programmes

Embed employer engagement from day one

Our project has shown the importance of employer engagement for initiatives related to supporting people into green careers. Employer buy-in and alignment with employer demand are essential for scaling opportunities reliably, therefore we would recommend that employer engagement is built into green job programmes from the outset (or even consider co-designing programmes with employers).

Similarly, other environmental programmes must be co-designed with the wider sector (including community organisations, organisations delivering environmental action, local authorities, and social housing providers), rather than in isolation.

Build systemic interventions to tackle all of the barriers

Rather than focusing solely on individual-led, bespoke support, the Fund should evolve its approach to workforce development by funding systemic, scalable interventions. While tailored support is valuable for individuals, it does not address the wider structural and systemic barriers that communities face in accessing green jobs.

Future programming should be designed to tackle these root causes collectively and be directly informed by employer demand, ensuring that jobseekers are prepared for roles that are actually needed for the UK's decarbonisation efforts. This shift from an individual to a systemic focus will help remove barriers for as many communities as possible in a lasting and impactful way.

One way to operationalise a systemic response to the barriers we identified, and develop programmes in alignment with employers and the wider sector, is through a collective impact framework. Collective impact is a structured, resource-intensive form of cross-sector working that goes beyond ordinary collaboration. Its distinguishing features are a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and critically, a funded backbone organisation that coordinates and sustains the effort. Unlike traditional collaboration, which often consists of ad-hoc partnerships or fragmented initiatives, collective impact establishes a shared framework and dedicated infrastructure to drive long-term, systemic change. This approach would therefore ensure that historically underserved communities are not just invited to participate in isolated programmes, but are embedded at the centre

of a coordinated system designed to remove barriers to engagement in the environmental sector.

For example, a collective impact initiative focused on home retrofit could bring together community organisations, tenant groups, local authorities, social housing providers, training providers and retrofit delivery organisations around a shared agenda of inclusive community engagement. This would address not only skills development and workforce pathways (to build the skilled workforce needed for retrofit delivery) but also issues such as energy affordability, housing quality, and local trust, ensuring that retrofit programmes are designed with and for historically underserved communities. Shared metrics would track community-level outcomes - such as reduced bills, improved housing conditions, local job creation, and stronger participation in the environmental sector - providing a holistic picture of progress. The Fund as the backbone organisation would provide the capacity and accountability that smaller isolated projects can lack, ensuring sustained communication and alignment across partners.

As opposed to fragmented projects, collective impact would provide the systemic structure needed to tackle the root causes of exclusion, making environmental programmes as a whole more relevant, credible, and accessible to historically underserved communities. Further, by closely involving sector stakeholders and aligning around a common agenda, solutions can be designed in a scalable and sustainable way that does not rely on grant funding in perpetuity.

Consider the green jobs impact potential in every project

Many environmental projects funded by the Fund have the potential to create green jobs and upskilling opportunities for the local community, even when this isn't the primary intention of the project. The Fund could incorporate this into their funding decisions by considering the local economic value and job creation potential of projects at the point of application and beyond.

Conclusion: Towards inclusive green jobs at scale

As this report has demonstrated, there are complex and interconnected barriers that prevent people, especially those from historically underserved communities, from accessing meaningful green careers. However, we can understand and overcome these barriers in order to build the skilled workforce needed to meet the UK's climate targets while building a more equitable and inclusive economy.

Through our research and small-scale pilots, we have gained a deeper understanding of the "experience catch-22" and other systemic challenges that disproportionately affect individuals at the point of entry. Our pilots, the Retrofit Talent Accelerator and the Assessor Readiness Scorecard, have proven that targeted, practical interventions can build candidate skills and confidence, plus help to provide employers with the assurance they need to hire new talent.

This project has produced practical insights that can inform a more coordinated and strategic approach to green workforce development. By systematically addressing the barriers identified, we can align the energy transition with broader economic, social, and environmental goals while moving from bespoke individual support to systemic, scalable interventions directly aligned with employer needs.

Although this project has explored barriers through the lens of work, the same dynamics shape wider engagement in environmental programmes. The insights and recommendations therefore have broader value, helping to make environmental programmes more inclusive and relevant beyond the green jobs context.

We are grateful for the Fund's partnership, which enabled us to rapidly design and deliver this innovative, evidence-based project. We are confident that our findings and the lessons learned from our pilots have relevance for the wider sector. Greenworkx is also committed to integrating these insights into our core activities; we will explore scaling the Retrofit Talent Accelerator to more candidates and roles, and will further develop and embed the Assessor Readiness Scorecard into our training and product roadmap.

We look forward to continuing our collaboration with the Fund to share these findings and contribute to a broader conversation about creating equitable and sustainable employment pathways in the energy transition. The transition to a greener economy is an enormous opportunity for growth, and by addressing these barriers, we can ensure it is a source of opportunity, resilience, and inclusion for all.

Appendices

Bibliography

Branford, Z., & Roberts, J. (2022). *The Installer Skills Gap in the UK Heat Pump Sector and the Impacts on a Just Transition to Net-Zero.*

Butt, B., Jones, R., & Fuertes, A. (2020). *Opportunities and Barriers to Business Engagement in the UK Domestic Retrofit Sector: An Industry Perspective.*

Butterfly Conservation. (2025). *Record numbers of environmental charities commit to racial diversity in bid to boost representation.*

Chartered Institute of Building (CIOB). (2025). *Equality, Diversity & Inclusion (EDI).*

CITB. (2024). *Improving the energy efficiency of Britain's homes: the opportunity.*

City & Guilds. (2025). *Foundations for the Future.*

City & Guilds Foundation. (2023). *Eliminating Barriers to Employment in the Green Sector.*

Collective Impact Forum. (n.d.). What is Collective Impact? https://collectiveimpactforum.org/what-is-collective-impact/

Czako, V. (2020). *Employment in the Energy Sector: Status Report 2020.*

Department for Culture, Media & Sport (DCMS). (2025). *Promoting equity, diversity and inclusion in volunteering.*

Department for Education. (2024). *Skills England: Driving Growth and Widening Opportunities.*

Department for Energy Security & Net Zero. (2025). *Assessment of the Clean Energy Skills Challenge.*

Department for Energy Security & Net Zero. (2025). *Domestic Energy Efficiency Retrofit Supply Chain: Final Report.*

Energy Security and Net Zero Committee. (2025). *Retrofitting Homes for Net Zero*.

Energy Systems Catapult. (2022). *Domestic Retrofit: Market Intelligence & Skills Assessment.*

Energy Systems Catapult. (2023). *Increasing Diversity in the Heating Sector to Address the Skills Shortage and Meet Net Zero.*

Gatsby. (2025). *Closing the Retrofit Skills Gap.*

Gazze, L. (2023). *Achieving Net-Zero Goals in Residential Buildings.*

Green Jobs Taskforce (Department for Energy Security & Net Zero, Department for Business & Trade, Department for Business, Energy & Industrial Strategy). (2021). *Green Jobs Taskforce Report.*

Hanna, R., Heptonstall, P., & Gross, R. (2024). *Job Creation in a Low Carbon Transition to Renewables and Energy Efficiency: A Review of International Evidence. Sustainability Science.*

Hillsdon, M. (for Reuters / Ethical Corporation Magazine). (2024). *Long on Ambition, Short on People: How the Skills Gap Could Scupper UK's Bid to Decarbonise Buildings.*

Her Retrofit Space (CIC). (2025). *Evidence to Parliament by a Women-in-Retrofit Charity.*

London Wildlife Trust. (2023). *Seeding Change Report: Shining a light on the barriers to nature conservation volunteering for young women and non-binary people of colour.*

M Broome, S Cellini, K Henehan, C McCurdy, C Riom, A Valero & G Ventura (for The Resolution Foundation). (2022). *Net zero jobs: The impact of the transition to net zero on the UK labour market.*

McQuaid, R. W., & Bergmann, A. (2016). *Employment Changes in the Sustainable Energy Sector in Scotland.*

Muro, M., Tomer, A., Shivaram, R., & Kane, J. (2019). *Advancing Inclusion Through Clean Energy Jobs.*

National Centre for Social Research (NatCen). (2024). *Exploring barriers to engagement with the environment for ethnic minority communities.*

Nesta. (2022). *How to Scale a Highly Skilled Heat Pump Industry.*

Nesta. (2024). *Overcoming Barriers for Newly Trained Heat Pump Installers.*

Nesta / BIT. (2024). *Understanding Barriers to Participation in the Green Labour Market.*

PwC. (2022). *Green Skills as an Enabler of UK Retrofit.*

Retrofit Information, Support and Expertise (RISE Knowledge Hub). (2025). *An Introduction to Social Value in Retrofit.*

Simmonds, P., & Lally, C. (2024). *POSTnote: Green Skills.*

The Installation Assurance Authority (IAA). (2023). *Career Pathways.*

Truitt, S., Williams, J., & Clarke, A. (2022). *Building a More Diverse, Equitable, and Inclusive Energy Efficiency Workforce.*

Wang, Y., Aminian, E., & Stewart, I. (2025). *Barriers Contributing to the Underrepresentation of Women in the Construction Industry.*

White, Y., Bradley, T., Packer, B., & Jones, E. (for WorldSkills UK and Learning and Work Institute). (2022). *Skills for a Net-Zero Economy: Insights From Employers and Young People.*

Young Energy Professionals (YEP) Forum / Energy UK. (2024). *Meeting the Challenge: Attracting and retaining future energy leaders.*

Retrofit Talent Accelerator: Improvement in candidate readiness levels

	Expected assessor activities	Before shadowing	After shadowing
Property assessment	Review background info and plan a site visit effectively.	4 - Practising	5 - Ready
	Conduct a methodical property survey, measure features, collect accurate data, and flag anything unusual or out of scope.	4 - Practising	5 - Ready
	Identify property construction, defects, insulation, heating, and ventilation systems.	4 - Practising	4 - Practising
	Assess for damp, condensation, mould, and recommend appropriate ventilation strategies.	4 - Practising	4 - Practising
	Identify common smart technologies and how they affect energy use and EPCs.	2 - Aware	4 - Practising
	Recognise safety risks (e.g. ACMs, working at height) and take appropriate precautions.	2 - Aware	4 - Practising
Technical analysis	Understand and use property data accurately to inform assessment outcomes	4 - Practising	4 - Practising
	Input property data accurately into software and understand how it affects the outcome.	4 - Practising	5 - Ready
	Estimate energy use, carbon emissions, and cost impacts using recognised methods.	2 - Aware	4 - Practising
	Factor in occupant behaviour, tariffs, and vulnerabilities into analysis and recommendations.	2 - Aware	4 - Practising
	Assess building suitability for retrofit and identify appropriate upgrade options.	2 - Aware	4 - Practising
	Use RdSAP/SAP correctly and explain how assessment models influence outcomes.	4 - Practising	4 - Practising
Reporting	Complete and submit EPCs or retrofit reports with clear, accurate, and justified data.	4 - Practising	5 - Ready
	Maintain detailed records of findings, decisions, and evidence to support audit and future use.	4 - Practising	5 - Ready
	Provide data and insight effectively to Retrofit Coordinators or others in the supply chain.	4 - Practising	4 - Practising
Customer engagement	Explain findings, processes and recommendations clearly. Adapt to vulnerable clients or complex situations.	2 - Aware	4 - Practising
	Provide lifestyle, ventilation, heating, or tariff advice where appropriate.	2 - Aware	4 - Practising
	Act ethically, respond professionally to enquiries, and manage complaints or disputes constructively.	4 - Practising	4 - Practising

	Expected assessor activities	Before shadowing	After shadowing
Property assessment	Review background info and plan a site visit effectively.	2 - Aware	5 - Ready
	Conduct a methodical property survey, measure features, collect accurate data, and flag anything unusual or out of scope.	2 - Aware	5 - Ready
	Identify property construction, defects, insulation, heating, and ventilation systems.	2 - Aware	4 - Practising
	Assess for damp, condensation, mould, and recommend appropriate ventilation strategies.	2 - Aware	4 - Practising
	Identify common smart technologies and how they affect energy use and EPCs.	2 - Aware	3 - Observed
	Recognise safety risks (e.g. ACMs, working at height) and take appropriate precautions.	4 - Practising	3 - Observed
Technical analysis	Understand and use property data accurately to inform assessment outcomes	4 - Practising	3 - Observed
	Input property data accurately into software and understand how it affects the outcome.	4 - Practising	5 - Ready
	Estimate energy use, carbon emissions, and cost impacts using recognised methods.	2 - Aware	3 - Observed
	Factor in occupant behaviour, tariffs, and vulnerabilities into analysis and recommendations.	2 - Aware	4 - Practising
	Assess building suitability for retrofit and identify appropriate upgrade options.	2 - Aware	3 - Observed
	Use RdSAP/SAP correctly and explain how assessment models influence outcomes.	2 - Aware	4 - Practising
Reporting	Complete and submit EPCs or retrofit reports with clear, accurate, and justified data.	3 - Observed	4 - Practising
	Maintain detailed records of findings, decisions, and evidence to support audit and future use.	4 - Practising	4 - Practising
	Provide data and insight effectively to Retrofit Coordinators or others in the supply chain.	2 - Aware	5 - Ready
Customer engagement	Explain findings, processes and recommendations clearly. Adapt to vulnerable clients or complex situations.	2 - Aware	4 - Practising
	Provide lifestyle, ventilation, heating, or tariff advice where appropriate.	2 - Aware	3 - Observed
	Act ethically, respond professionally to enquiries, and manage complaints or disputes constructively.	4 - Practising	4 - Practising