Written evidence submitted by Ashden and the National Retrofit Hub (WFP0026)

Summary

This is a joint response from Ashden and the National Retrofit Hub. We have written this response with a specific focus on the skills needed to decarbonise homes.

Estimates of the additional roles to decarbonise homes range from 200,000 to 500,000, depending on assumptions made about which roles are included, and different pathways to homes decarbonisation. A retrofit workforce strategy is urgently needed to address skills shortages across different retrofit and retrofit-aligned roles particularly construction trades but also retrofit co-ordinators, resident engagement officers, surveyors, architects, planners and conservation officers.

Both the existing workforce and new entrants will be required. One third of the construction trades' workforce is over 50 and beyond retrofit there are significant demands for workers including the delivery of 1.5m new homes over the next five years. There is a real need to expand and upskill the workforce and alongside an opportunity to increase its diversity.

Private sector investment in retrofit skills has been inadequate due to a lack of certainty over policy direction combined with short term funding for government retrofit programmes. We welcome the forthcoming Warm Homes Plan, which should send clear signals around the phase out of gas for home heating, a negligible role for hydrogen and should also include policy drivers to stimulate the retrofit market and reward upskilling such as a Warm Homes Stamp Duty Incentive and low interest loans for householders.

The plan should also set out a vision for the role of local and regional authorities in delivering mass home decarbonisation. We welcome the proposed inclusion of retrofit in the integrated settlements of Established Mayoral Combined Authorities set out in the English Devolution Whitepaper (December 2024). Support will also be required for local areas that are not yet part of an Established MCA.

Such regional support would allow a place-based approach to the development of retrofit skills, with regional and local government convening housing providers, education providers and retrofit contractors.

We also recommend that all operatives in the retrofit supply chain for publicly-procured work have mandatory training.

The Office for Clean Energy Jobs could encourage delivery of local retrofit skills and jobs by:

1. Providing training and advice for the commissioners of large retrofit programmes to help them achieve jobs and skills targets, use social value effectively and monitor delivery against these targets.
2. Helping to share best practice between regional level jobs and skills initiatives.
3. Setting up and administering a new long-term Green Skills Fund, as suggested by CIOB and others, enabling fully or partly subsidised training in key retrofitting and net zero roles.

Further recommendations on what government can do include:

A stronger focus on renovation/retrofit in mainstream construction training:

- Embed **compulsory retrofit units (including building physics)** in all existing construction courses to ensure new entrants to the industry are equipped with essential knowledge.

More consistent training quality

- Long term stable funding via a new 'green skills fund' to training providers and local authorities to facilitate the development and delivery of retrofit training programmes
- Targeted funding for training providers for recruitment and retention of trainers
- Occupational standards aligned with clear expectations of competence for all retrofit-related roles
- a national 'train the trainer' programme with a fast track for mature /pre-retirees to train as trainers.
- Better performance evaluation of homes retrofitted through government schemes

Easier access to the skills system for SMEs

- Long-term funding to subsidise retrofit training for SME's (including cover for loss of earnings)
- New standards for privately-purchased retrofit work

Greater awareness of retrofit jobs and career opportunities

- National campaign to attract talent from diverse backgrounds, raise awareness and improve the image of the sector, working with careers advisors, schools and colleges and job centres
- More funding to connect employers with diverse local jobseekers, including those who've struggled to access employment.

Apprenticeship reform

- Reform the apprenticeship levy to reverse decline in intermediate apprenticeships
- Support SMEs to raise the first year apprenticeship wage, at no additional cost to the SME
- Support SMEs to take on apprentices, including through shared apprenticeship schemes, and a possible uplift to the Apprenticeship Incentive Payment.

About Ashden

Ashden is a climate solutions charity whose mission is to accelerate the work of climate innovators creating a fairer, greener, zero carbon world; and to secure the policy, finance and market conditions needed for these innovators and others like them to achieve transformative scale. Rapid acceleration of buildings retrofit at scale is one of our strategic aims for 2025-2030. Cara Jenkinson, Cities Manager at Ashden, who has written this response, has authored several policy briefings on retrofit, run many learning events for local authorities and

colleges and is co-Chair of the National Retrofit Hub's Workforce growth and skills development working group.

About the National Retrofit Hub

The National Retrofit Hub (the Hub) is a nonprofit collaborative organisation working with the industry to enable the delivery of housing retrofit across the UK.

Signatories

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Does the Government have an appropriate understanding of the skill needs to deliver the Clean Energy Mission by 2030 as well as decarbonise homes and businesses?

The previous government made a good start on understanding the skills implications of the clean energy transition through the work of the Green Jobs Taskforce and the Green Jobs Delivery Group. However, in relation to retrofit, this did not turn into a coherent skills and jobs strategy. We welcome the recent Skills England report that identifies closing the retrofit skills gap as a clear priority.

Estimates of the additional roles to decarbonise homes range from 200,000 to 500,000, depending on assumptions made about which roles are included, and different pathways to homes decarbonisation.

There has been an assumption by government that demand from funded retrofit schemes such as the Social Housing Decarbonisation Fund combined with an investment in homes decarbonisation skills training competitions would be sufficient to drive training and job creation. However, success in building relevant skills has been patchy.

Mandating use of the PAS2035 standard for government-funded programmes has resulted in the training of 'PAS roles' such as retrofit co-ordinators and assessors. Retrofit Academy, the biggest trainer in PAS roles, reports that 2000 retrofit coordinators have been trained over the last 8 years. The Heat Training Competition has increased heat pump training significantly, with the Heat Pump Association reporting[1] that 17,000 people have received training in heat pump installation since 2022.

But there are still consistent reports of shortages in construction trades, for example from Northern Housing Consortium[2] and London Homes Coalition[3]. The cost of labour remains

[1] Projecting the future heat pump workforce, The Heat Pump Association, 2024
[2] Warm Homes Green Jobs, Northern Housing Consortium 2024
[3] Building Skills from the Future, London Homes Coalition 2024

high, particularly for insulation installers. The construction skills shortage has been compounded by the government's focus on enabling the delivery of 1.5m new homes over the course of this Parliament. There is a danger that low skills levels could result in poor quality retrofits with impacts to the health of buildings and their occupants.

Beyond trades, there are many other retrofit-related roles where there are skills gaps. Recent experience of retrofit programme delivery shows that resident engagement – handholding people through the retrofit process - is essential, requiring engagement officers with excellent interpersonal skills to build trust. Site managers are also required where multiple measures are being installed as part of a whole house retrofit. Commissioners of retrofit programmes – housing providers and councils - must also be upskilled to ensure delivery of programme and social value objectives such as new local jobs. Professional roles such as architects, architectural technologists and surveyors will also need to be upskilled. Planning and conservation officers also need a better knowledge of retrofit.

In summary, the government must now develop a sector-approved **retrofit workforce plan** that aligns national objectives with local needs and prioritises the creation of good inclusive local jobs.

To what extent can the Clean Energy Mission and the retrofitting of homes and businesses be carried out by the existing workforce and to what extent will it require new entrants to the workforce?

Both the existing workforce and new entrants will be required. Between 150,000 and 250,000 people currently work in the Repairs, Maintenance and Improvement (RMI) sector, according to estimates from Parity Projects and Retrofit Academy. Between 200,000 – 500,000 new retrofit roles are needed. The existing workforce is busy - industry surveys[4] as well as focus groups of tradespeople undertaken by Public First[5] and FMB/CREDS[6] suggest that existing businesses already have full pipelines. So hundreds of thousands of extra people will be needed.

According to the UK Trade Skills Index 2023[7], a third of the current trades workforce is over 50 so there is an urgent need to bring new entrants to the workforce.

In relation to heat pump installers, the picture may be more promising. The Heat Pump Association suggests that 41,000 individuals will be required to reach 600,000 installations per year by 2028, and at a current training rate of 8000 people per year this target should be met.

There are opportunities to combine renovation with retrofit work allowing more efficient use of the existing workforce. For example, if roofing works are undertaken, roofing installers can also undertake solar panel installation and loft insulation. This would also reduce the need for scaffolders. To achieve these efficiencies, government funding must be flexible – short term delivery timescales and limited measures eligibility have limited the ability for housing providers to combine retrofit with regular asset maintenance.

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[4] Travis Perkins RMI Index (2023)
[5] Upgrade, how to deliver better homes by 2030, Public First (2024)
[6] Building on our strengths, Killip et al (2021)
[7] UK Trade Skills Index, About Apprenticeships (2023)

It is essential that the existing workforce is sufficiently trained to avoid unintended consequences from poor retrofit. We recommend that all operatives installing measures (including those in subcontractor organisations) receive mandatory training.

There is a big opportunity to increase the diversity of the current workforce. Women make up 15% of the current construction workforce with just 1% in manual roles. Yet with the right culture and support, many more women can be recruited and retained. At B4Box, a social enterprise based in Stockport that provides training and construction services, and was awarded an Ashden Award in 2022, 15% of the current construction workforce is female.

Around 10% of the construction workforce[8] are migrant workers, with a concentration in London (46.1%). The proportion is slowly falling but the government's stated intention to reduce net migration provides further incentives to train UK workers.

How might the Government ensure that the job market in clean energy roles is sustainable enough to incentivise private sector investment in training for 2030 and beyond?

Private sector investment has been inadequate, with different reasons for this in publicly-procured and privately-purchased (owner-occupiers and private landlords) retrofit programmes.

Since 2021 the government has invested in home retrofit through schemes such as the Local Authority Delivery Scheme and the Social Housing Decarbonisation Fund, now the Warm Homes Local and Social Housing Fund. But this investment has not resulted in a major uplift in training. Councils and housing associations report that contractors are competing for the same pool of skilled labour, resulting in price rises.

Whilst there may be some commercial advantage to contractors in having greater demand than supply, there are valid reasons for underinvestment in training. The competitive nature of government funding and lack of long-term policy certainty has not given local contractors the confidence to invest, with peaks and troughs in the funded pipeline. Delivery timescales have been short which preclude apprenticeships. There is also the nature of modern construction work, with multiple layers of sub-contracting so that the Tier 1 contractor rarely employs those who do the retrofit work. Whilst it is a requirement for the installation firm to be PAS2030-accredited, operatives within the sub-contractor supply chain may not have received training.

Tradespeople who work in the private sector are also not getting trained up. Surveys and focus groups of tradespeople undertaken by Public First and others report multiple obstacles including full pipelines, perceptions that "green is just a trend" and the absence of mandatory accreditation for private work.

Clear policy direction on warm homes is essential to incentivise private sector investment in training. A 10 year Warm Homes strategy is required which sets out a comprehensive plan for upgrading homes. This new strategy should be agreed at cabinet level with multiple departments committed to delivery in a joined-up way. It should also address the need for a

[8] Migration and Construction, CITB (2023)

proper retrofit workforce plan which delivers the skills required and maintains high levels of competence and working conditions in the sector.

The Warm Homes plan should send clear signals around the phase out of gas for home heating, and a negligible role for hydrogen. It should also include policy drivers to stimulate the retrofit market & reward upskilling such as a Warm Homes Stamp Duty Incentive as recommended by the UK Green Building Council and low interest loans for householders. Better, more detailed recommendations and signposting in EPC reports would also drive uptake. In relation to private rented homes, the government should complete its consultation on raising MEES standards as soon as possible.

The plan should also set out a vision for the role of local and regional authorities in delivering mass home decarbonisation, including a long-term move towards needs-based funding allocation. We welcome the proposed inclusion of retrofit in the integrated settlements of Established Mayoral Combined Authorities set out in the English Devolution Whitepaper (December 2024). Support will also be required for local areas that are not yet part of an Established MCA.

Such regional support would allow a place-based approach to the development of retrofit skills, with regional and local government convening housing providers, education providers and retrofit contractors.

We recommend that all operatives in the retrofit supply chain for publicly-procured work have mandatory training, for example Level 2 NVQs in insulation and building treatments. A key role for regional authorities would be to support local SMEs by helping them with upskilling and accreditation, along with bidding for tenders.

Climate Emergency UK's Action Scorecards showed that 52% of UK councils convene or are members of a local retrofit partnership, which focuses on developing the skills and training needed for retrofit or sharing knowledge around retrofitting. These partnerships are crucial to enable action across the councils' area involving the Local Enterprise Partnership, business groups, FE colleges and training providers and the relevant local authorities.

There is some useful guidance for local and regional government such as the National Retrofit Hub checklist for regional retrofit skills development[9], but funding is explicitly required to build the capacity and capability of local government, in addition to the capital funds provided through the Warm Homes programme.

Liverpool City Region is a great example of what can be done, embedding local employment targets into regional retrofit programmes, and co-ordinating regional college provision to ensure best use of limited teaching resource. As devolution progresses there should be clear mechanisms for sharing best practice.

How can the new Office for Clean Energy jobs contribute to workforce planning in the energy sector?

The Office for Clean Energy Jobs could play an important role in ensuring that training and good local jobs are delivered through publicly-funded retrofit programmes.

[9] Regional retrofit skills taskforce checklist, National Retrofit Hub (2024)

Schemes such as Warm Homes: Local and Social Housing Fund can be important levers for training local people, but it has been challenging to date to incorporate skills development into schemes due to short delivery timescales. We welcome proposed longer delivery timelines for the most recent schemes and would encourage government to include skills and jobs targets for recipients of government retrofit funds, and also for suppliers delivering ECO schemes.

Recent government policy has supported the use of social value to drive skills development, and creation of local jobs. But discussions with many housing providers and other commissioners indicate that social value is currently being used as an 'add-on' to procurement of retrofit schemes – so social value delivered might include tree planting in an area, rather than training local people on retrofit and providing them with roles on the retrofit schemes being delivered. This can be solved by longer term funding for retrofit schemes, mandated skills targets within those schemes, together with capacity building on procurement. A relevant example here is the Scottish government's contract with Warmworks for delivery of fuel poverty work which explicitly specifies community benefit targets including local skills and jobs.

£28m has been provided by government for heat decarbonisation training through two rounds of heat decarbonisation training competitions and the Heat Training Grant. Whilst this has undoubtably boosted training, delivery timescales through the training competitions have been a year or less which has not provided the long-term certainty for training providers to invest.

The Office for Clean Energy Jobs could encourage delivery of local retrofit skills and jobs by:

- Providing training and advice for the commissioners of large retrofit programmes to help them achieve jobs and skills targets, use social value effectively and monitor delivery against these targets.
- Helping share best practice between regional level jobs and skills initiatives.
- Setting up and administering a new long-term Green Skills Fund, as suggested by CIOB and others, enabling fully or partly subsidised training in key retrofitting and net zero roles.

What more can the Department for Energy Security and Net Zero do to ensure the workforce is in place to deliver the Clean Energy Mission and accelerate the retrofitting of homes and businesses?

Developing the workforce to accelerate the retrofit of homes and business is a challenge that spans multiple government departments, including DESNZ, MHCLG, DfE, DBT and DWP.

In recent years, the UK skills and training system has started to focus more on the decarbonisation challenge. Many colleges are investing in green construction using government funds such as Local Skills Improvement Fund (LSIF) and Shared Prosperity Fund, and are offering an increasing number of retrofit courses. Private training providers and

product manufacturers such as Ashden Award winner Kensa are also growing their heat decarbonisation, renewables and fabric retrofit training.

However, to train the number of people required to the quality and competence needed, the skills and training system must deliver:

1. Better linkages between training to relevant retrofit work experience and jobs
2. A stronger focus on renovation/retrofit in mainstream construction training
3. More consistent training quality
4. Easier access to the skills system for SMEs
5. Greater awareness of retrofit jobs and career opportunities.

There is also a wider challenge relating to construction training more generally. Most FE construction learners do not go on to work in the sector and less than 1 in 6 go on to take a construction apprenticeship. This is compounded by a high apprenticeship dropout rate.

In relation to the challenges set out above:

Better linkage of retrofit training to jobs

Learners undertaking retrofit training need clear routes to retrofit jobs. Strong local partnerships between commissioners of retrofit work, installers and training providers are required. Tier 1 and Tier 2 contractors can take a greater role in the development of skills in their supply chains but this requires longer term certainty on the retrofit pipeline, and a more explicit focus on skills in government-funded retrofit programmes. Commissioners of retrofit programmes also need to be upskilled to use social value to achieve skills and jobs outcomes.

More should be done to support newly qualified learners in construction, including retrofit, into work. The sector is often not conducive to new starters, with little mentoring, and a lot of self-employment. Employers can and should be doing more to ensure that qualified learners can get decent jobs. Regional and local government could run programmes to support those new to the construction workforce.

There is also a role for new works and training companies, along the lines of B4Box who won an Ashden Award in 2022. B4Box are a construction and training organisation who undertake renovation and retrofit of void properties for Stockport Homes and other clients. The company pays a living wage and offers multi-skilled training and mentoring from the start. B4Box has a unique procurement contract whereby the company is paid by Stockport Homes to deliver training to local residents.

Recommendations:

- **Drive skills and jobs via public-funded retrofit delivery** through **integrated, long term, non-competitive funding pots** with **skills targets**
- Provide guidance for retrofit clients on how to deliver skills outcomes through **procurement**
- **a national body** (Office for Clean Energy Jobs?) to guide, oversee and co-ordinate regional & local retrofit skills development mandated by public funded schemes (including social value).

A stronger focus on renovation/retrofit in mainstream construction training

Training for people working in the homes repairs and maintenance sector (RMI) has long been neglected, compared to training that focuses on new build construction. Training has been siloed between trades, with little focus on the whole house and on understanding building physics. This needs to be urgently addressed to avoid poor quality work – such as introducing damp and mould through insulation work.

We recommend that all construction learners should have an introduction to retrofit and basic building physics. A multi-skill general builder apprenticeship has been in development for 3 years – this would be excellent preparation for a career in renovation and retrofit and should be launched as soon as possible.

Recommendation:

- Embed **compulsory retrofit units (including building physics)** in all existing construction courses to ensure new entrants to the industry are equipped with essential knowledge.

More consistent training quality

The FE sector lost significant funding between 2010-2024 and the Association of Colleges reports that college lecturers are now paid up to £9000 less than secondary school teachers[10]. This makes it particularly hard to recruit construction lecturers, and even harder to recruit those with retrofit expertise.

Colleges are innovating to address these challenges. Exeter College is collaborating with employers to bring in guest lecturers via their Green Skills Advisory Panel, which they are now expanding to other colleges across the UK. Some city region authorities are working with colleges to co-ordinate provision so that each college doesn't need to have specialist teachers – this approach works better in urban areas where colleges are closer geographically. Private sector training providers are also playing an important role, particularly in upskilling.

But regardless of these excellent initiatives, colleges need more funding to recruit and retain trainers. We also recommend a national construction trainer recruitment programme with a fast track for mature /pre-retirees to train as trainers.

Colleges and private training providers also need long term stable funding to facilitate the development and delivery of retrofit training programmes. Short term training competitions such as the heat decarbonisation skills training competition run by the previous government did not provide that certainty. A new 'green skills fund' as suggested by CIOB and others should be considered.

There is considerable duplication and inconsistency in the training system – different awarding bodies develop similar qualifications, and each college develops their own training materials. A positive development in this respect is the work led by the Construction Leadership Council in defining competency (skills, knowledge, experience and behaviour)

[10] Fair pay must be addressed warns AOC, FE News (2024)

into installer roles including retrofit-related roles. It is important that occupational standards and qualifications are updated to reflect these competencies as soon as possible.

The quality of assessment of qualifications such as NVQs for the existing workforce is variable, particularly the assessment of on-site work undertaken by operatives, to ensure competence. Better assessment standards are required.

Finally, a key driver of better training outcomes is better performance evaluation of homes retrofitted through government schemes – to determine where skills gaps and training deficits lie.

Recommendations:

- Long term stable funding via a new 'green skills fund' to training providers and local authorities to facilitate the development and delivery of retrofit training programmes
- Targeted funding for training providers for recruitment and retention of trainers
- Occupational standards aligned with clear expectations of competence for all retrofit-related roles (underway with Industry Competence Steering Group)
- a national 'train the trainer' programme with a fast track for mature /pre-retirees to train as trainers.
- Improve quality of assessment of qualifications
- Better performance evaluation of homes retrofitted through government schemes

Easier access to the skills system for SMEs

The domestic repairs and maintenance (RMI) and heating engineering/plumbing sectors are fragmented, dominated by small and micro-businesses. However, many construction and plumbing/heat engineering apprentices are employed by larger firms often undertaking mostly new build. This does not provide the range of experience that working in retrofit situations require. SMEs often don't take on apprentices because of perceived quality of apprentices, bureaucracy and retention. More support needs to be available to these SMEs – see apprenticeship comments below.

Green skills bootcamps have been a positive intervention in relation to developing skills but micro-businesses are often deterred by loss of earnings. Funding should be available to these businesses not just to cover training, but also working time lost.

Regional government and growth companies can also play an important role in reaching out to local SMEs and helping to link them to training offers, building peer networks as Ashden winner Carbon Coop has done in Manchester to exchange skills as well as support them to take on apprentices.

Many small builders serving the private market don't see a need to upskill in energy efficiency. In part this is due to uncertainty about demand, in part this is because there are few standards for privately purchased retrofit. Currently, anyone can set themselves up as a builder, leaving consumers exposed to poor quality retrofit work with disastrous unintended consequences. We recommend that anyone undertaking high risk retrofit work such as wall insulation should be Trustmark registered and PAS2030 qualified, though we also call for a simplification of the Trustmark process.

Recommendations:

- Long-term funding to subsidise retrofit training for SME's (including cover for loss of earnings
- New standards for privately-purchased retrofit work.

Greater awareness of retrofit jobs and career opportunities

A national campaign is required to attract talent, raise awareness and improve the image of the sector to present it as an attractive, rewarding and worthy career for a future workforce.

Schools and colleges lack an awareness of green qualification pathways, particularly in vocational subjects and apprenticeships. MCS Foundation undertook a research project[11] looking at how those influencing young people's career and educational decisions in England perceive green apprenticeships. The research found that only 6% of teachers and 13% of careers advisers strongly agreed that 'I know enough to inform young people about opportunities in green jobs', which led to low confidence in explaining green jobs and pathways.

Both national and regional government can play a role in providing outreach, resources & support for career advisors, job centres, schools & colleges to put retrofit on the radar.

With high levels of economic inactivity, including young people, more funding is needed to connect employers with diverse local jobseekers, including those who've struggled to access employment. Organisations like Good People (add links) are doing some great work here.

Recommendations:

- National campaign to attract talent from diverse backgrounds, raise awareness and improve the image of the sector, working with careers advisors, schools and colleges and job centres
- More funding to connect employers with diverse local jobseekers, including those who've struggled to access employment.

Apprenticeship reform

Apprenticeships have a crucial role to play in developing retrofit skills. Yet there has been a sharp decline in intermediate apprenticeship starts from 291,330 to 76,280[12] over the last 8 years, youth apprenticeships have nearly halved over the same period, and SME apprenticeships have also plummeted.

The apprenticeship levy is flawed, and we agree that reform is needed. As Aldersgate Group has set out it is important that new flexibility does not come at the cost of quality. We also agree with Aldersgate's recommendations to a) increase the Apprenticeship Incentive Payment to support SMEs to take on, train, pay, and retain apprentices b) increase the apprenticeship rate to be the same as the national minimum wage.

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[11] Getting Gen-Z into retrofit and renewable jobs, MCS Foundation (2024)
[12] Beyond the levy, Aldersgate Group (2024)

Regional and local government can play an important role in passing on large employer's unspent levy to local SMEs, including through setting up shared apprenticeship schemes. Regions should also be able to allocate some of the levy to a regional training fund that can prioritise sectors like retrofit.

Recommendations

- Reform apprenticeship levy to reverse decline in intermediate apprenticeships
- Support SMEs to raise the first year apprenticeship wage, at no additional cost to the SME
- Support SMEs to take on apprentices, including through shared apprenticeship schemes (flexi-job apprenticeships) such as BESAS[13], and a possible uplift to the Apprenticeship Incentive Payment.

January 2025

[13] BESAS – Build Environment Shared Apprenticeship Scheme