

HOW COUNCILS ARE TACKLING THE RETROFIT SKILLS GAP

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CONTENTS

Executive summary	I
Key findings	I
Guidance for councils – how to boost retrofit skills	2
Introduction	3
Background	4
What are retrofit skills?	4
Previous reports	4
Key policy updates	5
Methodology	7
Insights from councils	8
Funding	8
The issues to date	8
Ways forward – what needs to happen next on funding	8
Governance	10
The issues to date	10
Ways forward – what councils can do next on governance	11
Forecasting retrofit skills needs	14
The issues to date	14
Ways forward – what councils can do next on forecasting	15
Commissioning and procurement	16
The issues to date	16
Ways forward – what councils can do next on commissioning and procurement	18
Protecting households, especially those in fuel poverty and vulnerable people	20
The issues to date	20
Ways forward – what councils can do next to protect households	21
Conclusion and guidance for councils	23
Annex A	26
Acknowledgements	27

EXECUTIVE SUMMARY

This report, based on 13 interviews, examines the role of councils in England and how they could help close the retrofit skills gap. We explore some of the barriers they have faced and suggest steps to overcome them. We also offer recommendations for councils looking to boost retrofit skills in their areas.

KEY FINDINGS

The key findings were:

- Councils across England are already major ‘customers’ for retrofitting, which means their buying power and influence on skills could be significant. This role could be enhanced if councils gain devolved responsibility for retrofit funding, giving them more scope to take an area-based approach and join up their delivery and skills plans. Only two areas currently have devolved retrofit funding.
- In practice, tight timelines, scope and budgets for government retrofit schemes have limited councils’ ability to boost retrofit skills.
- Most councils have relied on tier 1 contractors to deliver retrofit schemes in their area, but they often bring in subcontractors from further afield instead of training or developing the local workforce.
- Some councils have included social value clauses in their contracts to attempt to secure skills and job outcomes but have lacked the capacity to monitor and enforce these clauses.
- Councils were looking to strengthen their social value approaches, and/or were considering alternative delivery methods, such as bringing aspects of the retrofit process in-house or partnering with community organisations.
- Some councils had convened retrofit taskforces or forums that brought together their leads for retrofit delivery, net zero, adult education, as well as further education (FE) colleges, employers, community organisations and other relevant local partners.
- Strategic convening enabled councils to take a broader range of actions to support retrofit skills, such as community training and recruitment events, employer engagement, schools outreach and brokering more support for FE colleges.

We include case studies of promising practice from Greater Manchester, West Yorkshire, Hertfordshire, Plymouth, Greater London and Lewisham and have based our [guidance for councils](#) on them. However, national policy will remain a significant driver of change, so councils must also closely monitor policy developments.

GUIDANCE FOR COUNCILS – HOW TO BOOST RETROFIT SKILLS

See [Conclusion and Guidance for Councils](#) for more details.



INTRODUCTION

Retrofitting is a huge opportunity to improve lives in this country. In England, 2.73m households are currently in fuel poverty and we have some of the poorest quality housing stock in Europe.^{1 2} Retrofitting the nation's homes – including fabric improvements and changeover to low-carbon heating – has the potential to reduce energy bills, improve the nation's health and ensure our homes are fit for the future. It is also critical for meeting the UK's climate targets.

But if we do not have the skilled workforce available to deliver it to a high standard, the opportunity will be missed. Indeed, poor-quality delivery is threatening the reputation of retrofitting. A recent review by the National Audit Office found that tens of thousands of homes that received wall insulation under the Energy Company Obligation (ECO) scheme will need fixing due to substandard work.³

A persistent retrofit skills gap must be addressed if we are to do better in future. In two previous reports,^{4 5} we made recommendations for national policymakers. These included calling for a national retrofit strategy, making training mandatory and updating all qualifications for those entering the construction workforce.

At a local level, councils have an important role to play in closing the retrofit skills gap. It is critical that councils develop effective partnerships, engage with and support local communities, commission high-quality retrofitting and ensure local people have access to high-quality training opportunities.

To be ready for these opportunities, councils need a better understanding of the retrofit skills system and how they can influence it to best effect. In 2025, two strategic authorities acted as trailblazers with devolved funding settlements from HM Treasury for retrofitting, while other councils have used pilot funding to develop new plans and approaches. This report shares insights and case studies from some of these councils. It also highlights lessons that have been learned and the barriers that still need to be addressed.

This report pools insights from councils in England, but there is much to be learned from practice in other countries. Many European countries have more in-depth and holistic technical training programmes,⁶ along with a more coordinated approach to managing their overall training systems and how these support jobs and delivery.⁷ By contrast, England has a market-based approach to retrofit skills that has become trapped in a vicious cycle of low demand, low skills and low quality.⁸ National policy changes are needed to change this. Nonetheless, this report aims to share actionable insights to support councils to do the best they can in the current context.

1 Department for Energy Security and Net Zero (DESNZ) (2025) *Fuel poverty factsheet: England, 2024*.

2 Planning, Building & Construction Today (October 2023) *English housing is worst in Europe, report finds*.

3 National Audit Office (October 2025) *Press release: Weak controls and oversight blamed for faulty home installations under energy efficiency scheme*.

4 Ravenscroft, C. (2024) *Ready for retrofit? An analysis of Local Skills Improvement Plans in England*. Report to the Gatsby Foundation.

5 Ravenscroft, C. (2025) *Closing the retrofit skills gap*. Gatsby Charitable Foundation, Ashden Climate Solutions and National Retrofit Hub.

6 Killip, G. (2020) *A reform agenda for UK construction education and practice*. pp.14-15.

7 Clarke, L., Sahin-Dikmen, M. and Winch C. (2023) *Building it green: European report*.

8 Ravenscroft, C. (2024) *Ready for retrofit? An analysis of Local Skills Improvement Plans in England*. Report to the Gatsby Foundation. pp.8-9.

BACKGROUND

WHAT ARE RETROFIT SKILLS?

In this report, retrofit skills refers to all the skills needed to retrofit homes in England, including for fabric improvements and the changeover to low-carbon heating.

Two important notes about this definition. Firstly, while most of England's homes need some changes, there is no consensus about how extensive these changes need to be, which measures will be favoured (by households, policy, funding, availability of materials, new technologies and more), nor the trajectory for delivery. For example, bringing homes up to an energy performance certificate (EPC) rating of C, as several government programmes currently aim to do, does not necessarily involve low-carbon heating. Likewise, although air-to-water heat pumps are a favoured technology at present, warmer countries prefer air-to-air heat pumps that can also cool homes.⁹ Skills plans will therefore need to be kept up to date to reflect changing needs and preferred technologies over time.

Secondly, it is helpful to think broadly about retrofit skills. The government has previously estimated the number of retrofit delivery roles at over 250,000 full-time equivalent (FTE), including heat pump installers and retrofit coordinators. However, other estimates include supporting roles, such as community outreach and evaluation, and are therefore higher.¹⁰ Commissioners and planning staff in councils also need training. Furthermore, the need for new-build homes to be constructed to a higher standard and home renovations that do not compromise the performance of installed retrofit measures, suggests that the whole construction industry will need some upskilling in energy efficiency and building physics in the coming years – hence our earlier recommendation to update *all* entry-level construction qualifications.

Bearing these points in mind, an expansive list of retrofit skills published by Palmer and Gillich in 2025 provides a good overview for councils to consider (see [Annex A](#)).¹¹

PREVIOUS REPORTS

This report builds on two previous reports: *Ready for Retrofit: An analysis of Local Skills Improvement Plans in England*¹² and *Closing the Retrofit Skills Gap*.¹³ We recommend reading these two reports first for more background on:

- the scale and scope of retrofit skills needs
- the vicious cycle of low retrofit skills that has held back delivery and led to a persistent performance gap in retrofit outcomes

9 Khosravi, M., Lowes, R., Ugalde-Loo, C. (2023) *Cooling is hotting up in the UK*. *Energy Policy*, Vol. 174, p.113456.

10 Workforce estimates vary depending on their scope and time frame. For example, at the lower end are estimates of 230,000 fabric retrofitters plus 60,000 heat pump installers in Magrath, D. (2021) *Green jobs taskforce*. Report to government, industry and the skills sector. Department for Business, Energy and Industrial Strategy (BEIS), p.20 and p.24. At the upper end are estimates of 515,000, including indirect roles, in Brown, D., Wheatley, H., Kumar, C. and Marshall, J. (2020) *A green stimulus for housing: The macroeconomic impacts of a UK whole house retrofit programme*. New Economics Foundation, p.4.

11 The definitive list of retrofit roles and skills was first published in Palmer, P. and Gillich, A. (updated 2023) *Retrofit skills: Building the local net zero workforce in the Borough of Lambeth*. It was updated again in April 2025 for publication in Jenkinson, C. and Palmer, P. (June 2025) *Policy recommendations for a national workforce strategy*. National Retrofit Hub.

12 Ravenscroft, C. (2024) *Ready for retrofit? An analysis of Local Skills Improvement Plans in England*. A report to the Gatsby Charitable Foundation.

13 Ravenscroft, C. (2025) *Closing the retrofit skills gap*. Gatsby Charitable Foundation, Ashden Climate Solutions and National Retrofit Hub.

- what colleges and employer bodies in England have been doing to build retrofit skills from 2023-2025
- our national policy recommendations, that remain critical.

The main policy recommendations from these two previous reports were:

- The need for a national retrofit strategy to join up policies that:
 - boost the demand side (i.e. government funding and incentives for retrofit roll-out)
 - boost the supply side (i.e. funding to enable the expansion of training courses at FE colleges and independent training providers; support for small to medium-sized enterprises (SMEs) and tradespeople to access courses; support for careers education in schools; requiring firms involved in delivering public contracts to provide apprenticeships and/or other training support)
 - boost quality (i.e. require firms to access training, and to establish stronger quality control and customer protection regimes).
- Mandatory training for retrofit professionals to upskill the existing workforce – without this, firms have indicated they will not prioritise training.
- Updating all construction courses for new entrants to the sector to include building physics (how a building works in terms of heat transfer, energy efficiency, moisture management, acoustics) and sustainability.

Many of the recommendations from our two previous reports were supported by the National Retrofit Hub's *Policy Recommendations for a National Retrofit Workforce Strategy*, published in June 2025.¹⁴

KEY POLICY UPDATES

In summer 2025, the **Warm Homes Programme** was allocated £13.2bn funding over this parliament as part of the Spending Review. The associated Warm Homes Plan was, at the time of writing, due to be published in late 2025.

The *English Devolution White Paper* set out the government's intention to devolve retrofit funding to mayors from 2028.¹⁵ The devolution of retrofit funding was not on the face of the *English Devolution and Community Empowerment Bill* (published July 2025), but the Bill confirmed the process to designate an established mayoral strategic authority (EMSA).¹⁶ Only EMSAs would receive integrated settlements (devolved funding from HM Treasury).

This suggests EMSAs may develop their own approaches to retrofit funding, while other councils may need to continue having to apply for retrofit funding through national government schemes for the foreseeable future.

The same white paper indicated that in the future, all strategic authorities would hold joint responsibility for **Local Skills Improvement Plans** (LSIPs) together with the employer representative bodies (ERBs) that currently lead on them.¹⁷ This will

¹⁴ Jenkinson, C. and Palmer, P. (2025) *Policy recommendations for a national retrofit workforce strategy*, National Retrofit Hub.

¹⁵ Ministry of Housing, Communities and Local Government (2024) *English Devolution white paper*, p.13 and p.15.

¹⁶ House of Commons (2025) *English Devolution and Community Empowerment Bill*, p.8.

¹⁷ Ministry of Housing, Communities and Local Government (2024) *English Devolution white paper*, p.14.

come into effect when new statutory guidance is issued in autumn 2025.¹⁸ It should improve the potential for councils to join up local retrofit plans with skills plans.

The **Energy Security and Net Zero (ESNZ) Select Committee** held hearings on retrofitting, which included the recent delivery failures. The committee recommended a new national workforce accreditation scheme because of the risks to residents' health and wellbeing from poor-quality retrofitting.¹⁹ This aligns with our recommendation for mandatory training for retrofit professionals.

The government established a new **Retrofit System Reform Advisory Panel**²⁰ to make recommendations on quality standards in response to findings of systemic failures of the ECO and the Great British Insulation Scheme (GBIS), which were administered by energy companies, not councils.²¹

¹⁸ Confirmed via author correspondence with the Department for Education.

¹⁹ ESNZ Select Committee (2025) *Retrofitting homes for net zero*. p.1.

²⁰ DESNZ (July 2025) *Retrofit System Reform Advisory Panel: Terms of reference*.

²¹ National Audit Office (2025) *Energy efficiency installations under the Energy Company Obligation*.

METHODOLOGY

This new report builds on our previous two research reports to look more closely at the role of councils and their future responsibilities for devolved retrofit funding and skills planning. It is based on 13 semi-structured interviews, including:

City council/London borough	5
County council	4 interviewees from 2 different counties
Combined authority	3
Council support organisation	1

Interviewees were approached based on reports showcasing their work on retrofit. They also made suggestions of additional interviewees from councils we should speak to. The interviews were anonymous to encourage candid reflections. The case studies were approved by the relevant council to ensure an accurate representation of their work.

A note on terminology: The recent English Devolution White Paper and subsequent Bill introduced the term 'strategic authority' to refer to combined authorities and combined county authorities, with and without mayors. The intention is for all areas of England to be covered by strategic authorities, although each will be at different stages in the coming years. This is the footprint on which LSIPs will operate and to which retrofit funding may be devolved in the case of established mayoral strategic authorities. This new terminology is used in this report where relevant.

INSIGHTS FROM COUNCILS

This section draws insights from interviews with councils and council support organisations (collectively referred to as ‘interviewees’). We look at some of the key issues they have experienced in developing retrofit skills, and some of the solutions developed to address them.

However, some issues will remain difficult or impossible to solve at a local level until there are national policy changes in line with the recommendations made in our previous reports. Therefore, the ways forward discussed here should not be seen as the ideal approach to building retrofit skills so much as the art of what is possible in our current policy context.

FUNDING

THE ISSUES TO DATE

Headline funding commitments from the Labour government have been welcomed by councils.²² Total retrofit funding is set to reach £13.2bn over this parliament. If well delivered, this could provide a big boost to retrofitting in England over the coming years, creating new job opportunities and incentivising firms and individuals to access retrofit skills training.

However, interviewees described how the government’s funding approach to date has limited their ability to boost retrofit skills and jobs. Retrofit funding programmes delivered under the Conservative government – including the Home Upgrade Grant (HUG) and the Social Housing Decarbonisation Fund (SHDF) – were allocated on a competitive, short-term basis to councils and housing associations. This meant funding was unpredictable and it condensed time frames for councils and contractors, limiting their ability to develop the workforce:

Chop and change funding has always been a big problem ... 12-month, 18-month contracts where government departments need to get money out the door ... They drop it down to the combined authorities to issue and then actually it’s not strategic, it’s not thought out, it’s not long-term, it just tends to be lower quality in general.

Interview 9

Anyone whose been through HUG2 delivery, most of us have come through it quite bruised and battered. To have got through it has been the main thing, anything else has been a bonus really.

Interview 1

The short duration of retrofit funding rounds has had repercussions for training, because of how long it takes to train a new member of staff. For example, councils said this precluded them from asking contractors to recruit apprentices as part of their contracts:

Actually the apprenticeship itself was too long to even fit within the timescale of the project.

Interview 9

²² UK:100 (2025) *The Spending Review is a win for Warm Homes.*

There's been a fundamental barrier in the length of these contracts ... I don't think any of those [HUG schemes] have been longer than 2 years. To what degree can you meaningfully make an impact on skills in that time frame?

Interview 6

While there have been improvements since the 2024 general election – notably, the new Warm Homes grants are three years long – retrofit funding methods have continued to be problematic under the Labour government. Interviewees that had applied to the recent funding competition for Warm Homes (which replaced SHDF in 2025) had found that their councils were awarded lower amounts of funding than expected, which had knock-on effects for negotiating with contractors and securing skills:

One of our issues now is that our funding has been cut. We applied for 11.5m, we got given 3.75m, so it's massively lower and that will curtail what we can do and also who we can attract to work with and what's doable for them.

Interview 1

We've had a fairly scaled back award of funds for the Warm Homes local grant which means we'll have to scale back our delivery.

Interview 12

If it's a really small contract value like 500,000, you wouldn't be able to ask for an employment outcome realistically.

Interview 8

Even when adult education budgets or other pots of funding had been found to support retrofit skills, they were seen as ineffectual without sufficient funding for retrofit delivery:

We ran the four cohorts of retrofit [training for local residents] ... but you're putting someone on a course where there's not a ton of progression and ... I have no jobs to line up these people for.

Interview 8

The ambition was to all work together and collaborate but when you haven't got funding, even for pilots ...

Interview 11

This confirms the recommendations made in our earlier reports, that funding streams that support demand (for retrofitting) and supply (of skills) need to be better aligned. Neither funding stream can be fully successful without the other. As ever, sectoral industrial strategies and skills strategies need to be linked to optimise each other.

In all the interviews, devolving funding or at least changing government's funding methodology was seen as critical to enabling better quality retrofit delivery, underpinned by a skilled workforce.

A few interviewees also pointed to the lack of a statutory duty on councils to tackle climate change as a constraint on their ability to prioritise and resource action on retrofit skills.

WAYS FORWARD –WHAT NEEDS TO HAPPEN NEXT ON FUNDING

Devolved funding settlements could enable councils to take a stronger lead on the roll-out of retrofitting. Interviewees said it would mean they could commit to longer-term retrofitting plans, which would provide local education providers, businesses and individuals with greater certainty about investing in retrofit skills. Several felt it would also put them in a better position to negotiate skills and jobs requirements with contractors.

Unless you get multi-year funding, place-based settlements, you won't be able to do anything beyond component-based work.

Interview 10

The *English Devolution White Paper* anticipated that retrofit funding would be devolved across England by 2028. However, the Bill (still in its passage through parliament) allows only established mayoral strategic authorities to receive devolved funding.²³ At the time of writing, only Greater Manchester and the West Midlands had secured trailblazer devolved funding settlements, but other strategic authority areas were negotiating to secure them.

Undoubtedly, the extent to which councils can close the retrofit skills gap will be significantly affected by the funding and powers that they have, and over the next few years, retrofit roll-out in many areas will take place against the backdrop of local government reorganisation.

GOVERNANCE

THE ISSUES TO DATE

At present, there are siloes in governance at a national and local level that inhibit the growth of retrofit skills.

LSIPs are currently authored by local ERBs. LSIPs are important because they steer the skills system – particularly FE colleges – to plan new training pathways and provision.

Most interviewees for this study said they had not been involved with LSIPs to date:

There's a number of disconnects in the system, which includes LSIPs. I don't have any contact with that. I don't think local authorities have much to do with it. I've spoken with a number of local authorities about this topic.

Interview 2

A recommendation of our previous reports was that all ERBs should consult local authorities and housing associations about retrofit skills needs in their area. With notable exceptions, interviewees suggested this was not yet the norm.

The *English Devolution White Paper* stated that strategic authorities will take on joint responsibility for LSIPs, to create a closer connection between local growth plans and local skills plans. This will come into effect through statutory guidance due to be issued in autumn 2025.²⁴ In principle, this should be a significant improvement on the current approach to foreseeing retrofit skills needs.

Interviewees also pointed to unhelpful siloes that currently exist in council portfolios for housing and net zero, mirroring a divide at national level between the

²³ UK Parliament (accessed November 2025) *English Devolution and Community Empowerment Bill – stages*.

²⁴ Confirmed in departmental correspondence with the author.

Ministry of Housing, Communities and Local Government and the Department for Energy Security and Net Zero (DESNZ), and between these portfolios and skills:

They're almost a microcosm of the same [national government] tensions.

Interview 10

These siloes are relevant for retrofit skills because the government's aspirations to both retrofit homes and to build 1.5m new homes will rely on an overlapping set of skills (e.g. solar panels, heat pump, mechanical ventilation heat recovery installation). Therefore, councils need to be thinking about the workforce needed for retrofitting *and* new-build housing locally, feeding both requirements into LSIPs.

WAYS FORWARD – WHAT COUNCILS CAN DO NEXT ON GOVERNANCE

Good collaborative governance is going to be key to securing retrofit skills and delivering mass retrofitting successfully.

In much the same way as a retrofit coordinator will create a whole-house retrofit plan and coordinate different trades, councils would ideally start by creating an area-based plan for retrofitting (thinking about local housing, sequencing, funding streams etc). This will be especially important for strategic authorities, as they assume increasing responsibility for devolved funding for retrofitting over time. In some areas, councils are already drawing up area-based plans for retrofit delivery as part of creating a Local Area Energy Plan (LAEP).²⁵

An area-based plan for retrofitting will then need a corresponding plan – and action – to boost retrofit skills and jobs. Developing a retrofit skills plan necessarily involves convening a range of key local partners, with representation from councils, employers/ERBs, housing providers, FE colleges and any other key partners.

Examples from Greater Manchester and West Yorkshire illustrate how strategic authorities can play a key role in convening joined-up conversations about overall retrofit delivery and skills.

Greater Manchester Combined Authority received a £630m integrated settlement from HM Treasury in 2025. The settlement includes responsibilities for retrofitting and skills, providing one of the first opportunities in England to redesign local delivery of these twin priorities.

A retrofit taskforce has been chaired by the mayor, Andy Burnham, since 2021. It brings together local councils, housing providers, FE colleges, academics, relevant local firms and finance firms. The taskforce has three areas of focus: delivery, finance and skills. In 2022, the taskforce published its first Greater Manchester retrofit action plan,²⁶ which places significant focus on skills.

A skills task-and-finish group also reported into the main taskforce for a period, enabling an in-depth conversation about how to boost the local retrofit skills offer at local FE colleges and independent training providers. As a result of the task-and-finish group, nearly 100 FE staff across the Greater Manchester area were upskilled by Daikin, a heat pump manufacturer that also donated equipment, significantly increasing local training capacity.

25 For more on LAEP planning see: Energy Systems Catapult (accessed 2025) *Local Area Energy Plans (LAEP)*.

26 Greater Manchester Combined Authority (2022) *RetrofitGM: Accelerating the renovation of Greater Manchester's buildings*.

Since receiving the integrated settlement, Greater Manchester has begun to pilot a new area-based approach to retrofitting and has been developing further plans for retrofit skills. Construction and the green economy is also one of the priority sectors in the Greater Manchester Baccalaureate (MBacc), a mayoral education initiative aimed at encouraging young people to enter growing industries.

Joe Crolla, principal skills manager at Greater Manchester Combined Authority, says that coordination at the strategic authority level offers significant benefits:

Having a retrofit taskforce chaired by the mayor has enabled that strategic level conversation about how to marry up our skills offer with our delivery ambitions.

While delivery happens at different levels, convening the conversation at the strategic authority level has worked well because the key partners – including local councils, colleges, chambers of commerce – have a long history of working together at the Greater Manchester level. It helps that our respective planning ‘footprints’ were the same to begin with.

The trailblazer deal is really the game changer though. It is allowing us to look afresh at our retrofit, housebuilding and skills goals over a longer time frame, and see how we can potentially deploy some of our funding differently to get multiplier effects. It’s still a question of ‘watch this space’, but I’m confident that having greater flexibility to shape our plans at this level is going to improve skills, jobs and retrofit outcomes for local residents.

Home Energy West Yorkshire (HEWY) is a 16-person team that coordinates West Yorkshire Combined Authority’s work on domestic decarbonisation. Over several years, it has:

- secured multiple rounds of SHDF/Warm Homes funding for the region, which is distributed by five local authorities and social housing providers
- delivered pilot area-based schemes, testing innovative technology and delivery models in multi-tenure environments
- launched a free and transparent energy advice service in the region and delivered support for homeowners, including a loan product and a collective buying scheme for solar panels.

The head of HEWY, Jessica McNeill, says that coordinating retrofit delivery at the strategic authority level over a longer time frame brings several benefits:

- more visible, accountable leadership from the mayor
- increased trust from local residents, who have more confidence in local advice and funding schemes
- more opportunity for long-term convening and collaboration with local partners, firms and FE colleges.

HEWY's work to date builds on earlier recommendations from the mayor's Green Jobs Taskforce, where partners came together to identify the skills and jobs needed to support the region's transition to net zero.

Since then, HEWY have worked closely with West Yorkshire Combined Authority's skills team who have long-established networks with local FE colleges and training providers across the area. Their next step is to bring key stakeholders together to develop a compelling vision and action plan for strengthening West Yorkshire's retrofit supply chain and ensure the region has the skilled workforce needed to meet its ambitious domestic decarbonisation targets.

Interviewees for this study shared some useful lessons learned about convening for improved retrofit skills.

Firstly, convening takes clear leadership, time and budget. As the examples above show, strategic authorities or upper-tier authorities can play a key role in convening for retrofit skills. At present though, the main resource for developing LSIPs sits with ERBs in each area. Our previous research found that making progress on retrofit skills was difficult while this was the case because ERBs prioritise what employers say, and most employers said they were not aware of the opportunities in this field and were not intending to take up training.²⁷

In some areas, alternative forums, such as green skills advisory panels have been set up.²⁸ Councils should therefore check what is already happening and aim to reach agreement locally about governance for retrofit skills planning. It may be that retrofit skills planning needs a new dedicated forum that feeds into the LSIP.

Secondly, although it makes sense to *plan* for retrofit skills and jobs at a strategic authority level, this is not necessarily the level at which actions and interventions need to happen. To deliver retrofit effectively on the ground relies on close relationships with communities, the workforce and education providers – so it will be important for funding to be devolved further as needed:

Delivering [retrofit] schemes is absolutely about your relationships with local communities ... Getting that balance right is going to be really key – when retrofit [funding] is going through to the strategic authority, whether and how they choose to pass that through to unitaries, so we get the balance of scale and link with skills, as well as that really granular relationship with places.

Interview 6

Finally, there needs to be scope to do things differently, not simply to replicate national policy siloes. Membership and terms of reference for retrofit skills forums should consider the need for diverse viewpoints and for innovative ideas. Council staff involved in retrofit delivery and skills, and net zero teams will likely need to be involved, because coordinating their different responsibilities is needed to secure retrofit skills.

²⁷ Our previous reports – aggregating insights from LSIPs – found that most employers lacked knowledge about future retrofit skills needs and therefore only a minority of ERBs had given it a high priority. While it is important for employers to be involved in the discussions, in most cases, councils will have better oversight of what retrofitting is planned (social housing) and likely to come forward (for the private rented and owner-occupier sectors).

²⁸ For more information on green skills advisory panels and a map of their locations see Green Skills Advisory Panel (accessed 2025) [Membership](#).

FORECASTING RETROFIT SKILLS NEEDS

THE ISSUES TO DATE

The critical starting point for closing the retrofit skills gap is to understand its significance locally:

Once you have an understanding of the scale of work that needs to be done, and a sense of the other new construction that needs to take place as well, you then start to realise the deficiency and the [skills] gap within that.

Interview 9

Taking net zero targets as the starting point and working backward shows a huge increase in the retrofit skills and workforce required nationally. This is the basis on which the Climate Change Committee forecast that over 250,000 FTE delivery roles will be needed nationally.²⁹ Similarly, local authorities using this approach to planning have evaluated their local housing stock against their net zero targets (some of which are earlier than 2050) and arrived at even higher local forecasts.³⁰

However, our 2024 research showed that many employers did not intend to recruit or train for these skills unless it became mandatory. This meant that colleges were struggling to recruit to their courses.³¹ So LSIPs that based their forecasts on employer views offered a much more constrained outlook. This was also the case in LSIPs that extrapolated recent construction workforce estimates without taking net zero targets into account.

The real need is likely to fall somewhere between these two forecasting approaches, at least for the near future. In our previous reports, we recommended that areas need both a long-term view, based on net zero targets, and a short-term view, that needs to be developed in consultation with councils and housing associations who will have better knowledge of imminent contract opportunities than local employers typically do. However, as the section above shows, even councils are grappling with uncertainty due to government funding approaches, so it remains a matter of regularly iterating forecasts rather than there being a fixed 'correct' answer.

An additional issue raised by interviewees for this report is the importance of considering the mobile construction workforce and geography when forecasting future skills needs.

To date, the largest firms (known as tier 1 contractors) have regularly moved their subcontracting workforce between different projects, which has created less local demand for training and fewer local jobs than councils may perhaps have anticipated:

Sometimes the external wall insulation installers come from Wales to work in the South East ... It's Premier Inn that benefits.

Interview 2

As the scale of retrofitting opportunity grows, contractors will need to increase their workforce. Councils understandably want to ensure this happens promptly,

29 As noted in the [background](#) section, this estimate is not comprehensive and does not include all the roles that will be needed. See [Annex A](#) for more.

30 Ravenscroft, C. (2024) *Ready for retrofit? An analysis of Local Skills Improvement Plans in England*. A report to the Gatsby Charitable Foundation. pp.15-17.

31 Ravenscroft, C. (2025) *Closing the retrofit skills gap*. Gatsby Charitable Foundation, Ashden Climate Solutions and National Retrofit Hub. pp.16-17.

so they can be confident about meeting delivery timelines and, ideally, secure job outcomes in their local areas in the process:

There's only so many levers we have ... We're telling [the tier 1 contractor] ... we want you to ... upskill, grow the team. You've got two big contracts in [our area now]. It's not possible that you're using the same team that you had when you only had one. So the workload has doubled and we're not seeing that materialise into jobs. You should be advertising the jobs ...

Interview 11

However, councils also need to be mindful of their own geography and how realistic it is for private firms to exclusively recruit from or deploy workers from within council boundaries, at least until the scale of retrofitting contracts ramp up:

All of their social value criteria had to be met with a [borough] resident not a [strategic authority] resident, despite the fact that the shape of the borough is very long and thin and actually where the town hall is you can walk half a mile and you're in [the neighbouring borough].

Interview 9

WAYS FORWARD – WHAT COUNCILS CAN DO NEXT ON FORECASTING

What all of this means for forecasting retrofit skills is that it should be done at the strategic authority or LSIP level and consider both the long term and near term.

Retrofit skills forums should take stock of the full scale of retrofitting required to meet net zero targets and establish indicative long-term forecasts for skills. However, near-term forecasting should take account of what skills are likely to be needed over the agreed period (e.g. 2-3 years) given existing funding programmes and the incentives on offer to homeowners. This will provide a realistic basis for colleges to plan their provision for the months and year ahead, enabling them to recruit tutors with confidence and preventing them from having to cancel courses or contracts prematurely.

As noted in the [governance](#) section, the near-term forecasts in particular should be arrived at through collaboration between the different players involved, particularly council skills and housing leads, who will know about forthcoming retrofit funding opportunities in their areas.

The role of **Hertfordshire Futures** – part of the growth and environment directorate of Hertfordshire County Council – is to shape a sustainable and prosperous future for Hertfordshire through initiatives that foster economic growth, protect the environment and build resilient communities.

Hertfordshire Futures has undertaken detailed retrofit skills forecasting. This enabled it to secure support from the Microgeneration Certification Scheme (MCS) Foundation's Local Area Retrofit Action (LARA) pilot programme and be selected as a retrofit skills pilot by the Greater South East Net Zero Hub (GSENZH).^{32 33}

Market intelligence work identified that the local domestic energy efficiency supply chain in 2021/22 included over 300 companies and 12,000 employees

32 MCS Foundation (accessed 2025) [Local Area Retrofit Accelerator \(LARA\)](#).

33 GSENZH (accessed 2025) [Retrofit skills development: Regional skills pilot](#).

and was worth £1.2bn to the local economy. Despite the sector's strong representation locally, in 2023, the county only had 33 registered retrofit assessors, 3 retrofit coordinators and 157 competent and certified TrustMark/MCS installers.³⁴ This was limiting the potential for local firms to get involved in government-funded retrofitting schemes.

Meanwhile, the forecasting also identified the size of future opportunities in retrofitting, with 482,000 homes needing retrofitting by 2050 to achieve net zero. Only three in five homes in the county had a current EPC rating of C or above.

Having identified this gap between the current capacity and future needs, Hertfordshire Futures developed and delivered its first retrofit skills plan, which was published in 2024.³⁵ It included grants for colleges so they could scale up their provision, and for businesses so they could access training, as well as employer engagement events. More resources for local authorities and a podcast about the retrofit skills plan are available on the GSENZH website.³⁶

Helen Pollock, the clean growth manager for Hertfordshire Futures, says forecasting was a vital first step for taking action on retrofit skills:

To accelerate retrofit delivery, we needed to understand our starting point and the activities of the key stakeholders in Hertfordshire. By working with our colleges, businesses and housing associations, we gathered market intelligence and assessed both the current retrofit skills and capacity in the region as well as what retrofit measures need to be delivered. This retrofit skills gaps research helped us make informed decisions and unlock the resources to deliver our first retrofit skills plan.

COMMISSIONING AND PROCUREMENT THE ISSUES TO DATE

All the interviewees who had engaged with HUG and/or previous waves of SHDF had procured external contractors to deliver retrofitting locally. These councils acknowledged that their procurement approach was not yet supporting retrofit training, skills and job creation effectively.

There were several reasons for this. Firstly, the nature of the construction industry in the UK means that generally only tier 1 contractors can realistically bid for these large contracts. The tier 1 contractors then subcontract to SMEs or individual tradespeople. Some implications of this approach noted by interviewees were limited competition, cost inflation and limited influence over their supply chains:

We're largely looking at 1 or 2, maybe 3, contractors who then come in with very cost inefficient proposals because they know there's limited choices of contractor.
Interview 3

It's quite a fiction in most cases that LAs [local authorities] are able to control who works on their properties because of the procurement process that's necessary. The cyclical nature of retrofit grants exacerbates the situation. You get the award, you have to procure quickly. And to procure quickly, you have to go to the regional

34 GSENZH (2023) *Domestic energy efficiency supply chain market intelligence*.

35 Hertfordshire Local Enterprise Partnership (2024) *Hertfordshire retrofit (greener homes) skills plan*.

36 GSENZH (accessed 2025) *Retrofit skills pilot*.

frameworks or the national frameworks and those are generally lists of the same tier 1 contractors.

Interview 2

Secondly, interviewees referred to social value clauses being their main vehicle for achieving skills and local job outcomes. In some cases, they acknowledged that their own social value requirements had not been firm enough in the first place:

There's the very squishy social value language about 'you should hire local people, you should hire local apprentices, you should offer local training'. There's just nothing binding in it. It doesn't have any teeth.

Interview 7

We just amended our social value process but right now we're currently working in contracts that all have the old social value [measures] that oftentimes have no legs.

Interview 8

Thirdly, interviewees reported that their councils had lacked capacity to monitor and enforce social value clauses, whether the contract went well or went poorly:

Social value often just gets forgotten. If a building or a project is completed on time to budget, then it doesn't really matter if you didn't hit some of the social value criteria ... We don't have any resource that's kind of dedicated to it at the minute.

Interview 9

When the project goes pear-shaped, the social value is the least of things. The pressure is on time and money and quality.

Interview 2

It's one of those things, you go out to procure the contract and once you're into delivery you kind of forget a little bit about that.

Interview 1

Fourthly, none of the interviewees were aware of any additional training requirements for operatives delivering retrofit measures. All the requirements to be PAS 2030 or MCS certified fell on the tier 1 contractor:

I don't think we had any specific training requirements it's more a case of, where possible, promoting using local installers.

Interview 1

This lack of training requirements, as well as adequate quality control, is likely to be a factor in some of the poor-quality retrofitting seen to date on government programmes.

Theoretically, if the tier 1 contractors choose not to require their supply chain to be trained to a high standard, the risk sits with them, because they will be responsible for any failures. However, in practice, interviewees explained that risk remained at least partially with the council. If poor-quality or incomplete work cannot be rectified promptly – one interviewee gave examples of two contractors going out of business – then councils may ultimately have to put it right. Another risk to the council is that if a local supply chain is not recruited and developed for the contract, there will be no local capacity for the future.

WAYS FORWARD – WHAT COUNCILS CAN DO NEXT ON COMMISSIONING AND PROCUREMENT

These types of recent experiences with procurement had prompted a few councils to consider alternative approaches:

We are going to be re-procuring this year ... It's a really good time for us to ... actually rethink our whole delivery model: do we want to use local delivery partners or are there options to bring more elements in-house?

Interview 1

There is a strong historical precedent for bringing delivery in-house. Until the 1980s, many local authorities directly employed construction teams known as direct labour organisations or DLOs. The DLOs had enabled them to build and maintain social housing.³⁷ However, housing policy changes since the 1980s saw these decline.³⁸ Where council DLOs have continued, they have been for repair and maintenance services, and interviewees referred to the model being used more widely by housing associations.

DLOs typically provide local, secure, unionised jobs and have therefore been invested in the training of their workforce to ensure high-quality delivery. Professor Linda Clarke of Westminster University contrasts the nature of DLOs to “the fragmented and insecure employment practices that often characterise the private construction sector in the UK”.³⁹

A few interviewees had experience with in-house delivery through DLOs, usually for repair and maintenance. They were considering what it would take to expand this model more widely:

Quite a lot of our housing providers are DLOs – have their own workers on their books ... The DLOs, in particular, we're keen to do a lot more with.

Interview 9

DLOs are a fantastic opportunity but they're difficult beasts to manage ... You have to really have confidence and experience to manage a DLO effectively. But I would really like to see more of them. The advantage is that you could run it at 10% less efficiency financially than a contractor could because you're saving 20% on your VAT.

Interview 2

A 2020 report from the Institute for Government looked at factors to consider when thinking about insourcing services. The report states that insourcing will be the best option when the market is not healthy or competitive, when flexibility will be key because frequent or significant changes to the design and scope of a service might be needed, when there is a lack of the commercial skills needed to successfully procure or manage a contract or when integrating one service with another could improve the service and/or result in savings.⁴⁰

37 Clarke L. (2014) Building by direct labour: The significance of direct labour organisations in the provision of public housing in the UK 1890-1980. In eds., Campbell, J., Andrews, W., et al. *Proceedings of the first Construction History Society Conference*. Construction History Society.

38 In the 1980s, the Conservative government's Right to Buy scheme saw many council homes sold, and from the late 1980s onwards, policies of both Conservative and Labour enabled the transfer of social housing stock to housing associations. Therefore, not all councils have retained their own housing stock. Investment in building new social housing also declined dramatically over the same period – see Shelter (accessed 2025) *Loss of social housing*.

39 Clarke L. (2023) Municipal socialism: Its distinct development through building production in Britain. *European Social Science History Conference*, 12-15 April, Gothenburg.

40 Institute for Government (2020) *Government outsourcing: When and how to bring public services back into government hands*. pp.8-9.

Another model being considered by a few interviewees was partnering with a local charity or community organisation. An example of where this is already happening is Plymouth.

Plymouth City Council partnered with local charity, Plymouth Energy Community (PEC), to develop an alternative approach to delivering two recent government retrofit schemes.⁴¹

PEC describes its mission as “empowering our community to create a fair, affordable, zero carbon energy system with local people at its heart”.⁴² It offers a range of support to the public, including energy advice and helping those eligible to access funding.

As part of its work, PEC maintains a network of competent local retrofit installers, who it introduces to homeowners eligible for support under government schemes. If the homeowner decides to proceed, PEC prepares a grant application for the pair, and the grant is paid by the council to the installer.

PEC’s experienced retrofit assessor checks the quality of the work, and their team provides customer support throughout the process. PEC receives a separate annual grant from the council that covers its costs.

This grant-funded partnership model has enabled Plymouth to retrofit nearly 400 fuel-poor homes over the past five years using government schemes. PEC reports a customer satisfaction rating from homeowners of 4.8 out of 5. It has also created a reliable pipeline of opportunities for local firms, with 76% of the £4m being spent with Devon and Cornwall businesses.

PEC’s benchmarking suggests their delivery costs were consistently 9-11% below national averages under HUG2.

Justin Bear, the retrofit services manager at PEC, attributes this saving to their not-for-profit model and says the key difference between them and a typical tier 1 contractor is that they are a charity focused on their local area:

As a local charity, we’re here to serve our local community – especially those in fuel poverty – and we need to maintain our reputation within this community. So high-quality delivery, maintaining trust and customer satisfaction is critical for us.

We’re trying to build trust with the local installers too – we have examples now where they are training up additional staff, because they are more confident about the pipeline of work.

Other councils were looking at strengthening their use of social value clauses in retrofit procurements by agreeing appropriate outcomes with contractors and increasing the council’s capacity to monitor and enforce social value during contract delivery.

41 HUG and Green Homes Grant: Local Area Delivery (LAD).

42 PEC (accessed 2025) [About PEC](#).

One interviewee described how they were looking at social value clauses for larger new-build housing contracts as well as for retrofitting, to begin developing their local workforce:

I work with the section 106 social value teams to try and pivot any opportunities for green skills development, to funnel people to the colleges and support the courses that are on offer, but also to build our capacity locally.

Interview 11

In London a collective approach to social value for retrofitting is being rolled out.

Warmer Homes London is a new joint venture from the Greater London Authority and London Councils. It has been allocated £78m over three years to deliver DESNZ's Warm Homes funding across 27 boroughs in London.

The team have developed a new social value database that will be shared between the partners involved (councils and social housing providers). This will provide model social value clauses to be used by procurement teams, along with a centralised tracking system and staff capacity to monitor compliance with contract obligations.

Jack Ostrofsky, the partnerships and delivery director at Warmer Homes London, says that working collectively will strengthen the councils' position when it comes to delivering skills and job outcomes:

We really want to leverage the social value potential of the Social Housing Fund 3.0 within DESNZ's Warm Homes programme.

Compared to new-build schemes where the contracts have been large enough to fund apprenticeships at a substantial scale, previous retrofitting schemes have been too small-scale and short-term to support similar opportunities.

This is different: Warmer Homes London is providing a strategic service across 27 partners working together. We can tighten up the specification of social value, focusing on the key outcomes we want across London, and monitoring and enforcing their delivery robustly. We want to make sure there are new opportunities, high-quality training and support for those entering the retrofit workforce and do it at ever increasing scale.

PROTECTING HOUSEHOLDS, ESPECIALLY THOSE IN FUEL POVERTY AND VULNERABLE PEOPLE

THE ISSUES TO DATE

Low skill levels, a lack of competence and a poor culture in the construction industry have been linked to the retrofit performance gap, where the retrofit measures installed do not have the desired outcomes.⁴³ Councils need awareness of the risks involved to inform skills planning and so they can take steps to reduce those risks.

⁴³ Killip, G., Fawcett, T., Jofeh, C., Owen, A., Topouzi, M. and Wade, F. (2021) *Building on our strengths: A market transformation approach to energy retrofit in UK homes*. Federation of Master Builders/Centre for Research into Energy Demand Solutions. p.26.

There have been high-profile cases where poor-quality work has led to unintended outcomes such as mould and damp.⁴⁴ In the latest government review, in over half the homes where solid wall insulation had been installed it was found to be substandard.⁴⁵ There have also been cases where heat pumps have been installed but have proved to be too expensive for low-income households to run.⁴⁶ Another government evaluation found that almost half of residents who had retrofit measures installed had not been given any guidance on how to operate their newly retrofitted home.⁴⁷

In all these cases, there are issues with skills, but also with competence and culture that need to be addressed. Residents' voices need to be heard at every stage of the process, especially in selecting appropriate measures, and after installation to ensure positive outcomes and remedy any problems. However, councils have found it hard to tackle this problem, particularly when negotiating with contractors:

Something that we've really battled with is making sure that retrofit companies upskill the staff that are working with the residents.

Interview 12

As outlined in the [background](#) section of this report, it would be preferable to have national mandatory training requirements or to have a national licensing scheme. Interviewees have explained that it would be difficult for them to impose higher standards locally, because firms will seek to work elsewhere. Nonetheless, there are steps councils can take to place stronger emphasis on quality control, resident liaison and customer service.

WAYS FORWARD – WHAT COUNCILS CAN DO NEXT TO PROTECT HOUSEHOLDS

These issues underscore the importance of taking a broad view of retrofit skills, as noted in the [background](#) section.

Gaining the trust and engagement of the local community is critical to achieving positive, high-quality retrofit outcomes. This can conflict with the prevailing delivery model, which often relies on out-of-area contractors who may not have established relationships with the area or knowledge of local needs.

One interviewee had decided to increase their own resident liaison capacity, to maintain trust and provide crucial feedback loops:

We're building our resource capacity around resident liaison officers.

Interview 3

Another had decided to increase their internal retrofit design and coordination skills:

We've trained up staff here. We've got retrofit assessors at [the] city council and are also training retrofit coordinators ... to be able to hold contractors to account ... Local authorities are pivotal to the quality of retrofit. In a world where we are governed by short window stints of grant funding windows, we are best placed to

44 ESNZ Select Committee (2025) *Oral evidence: Retrofitting homes for net zero, HC 453*. DESNZ suspending ECO contractors.

45 BBC News (2025) *30,000 homes fitted with botched insulation under government schemes, ministers admit*. 4 September 2025.

46 For example: Hayes, D. (2025) *Opinion: There is no trust in TrustMark*. LinkedIn, 15 September 2025.

47 DESNZ (2024) *Social Housing Decarbonisation Fund (SHDF) Wave 1: Process evaluation report*. p.12.

make sure that the quality of retrofit is rolled out.

Interview 12

Others were exploring partnerships with community organisations to support community engagement and resident liaison. In the Plymouth example, the council grant-funded a community organisation to act as an intermediary between residents, contractors and the council.

Other areas have inspiring charities, like Civic Square⁴⁸ and Canopy Housing,⁴⁹ that empower local residents to take the lead on retrofitting.

Councils can also look to adopt more participatory approaches themselves. Lewisham is an example of where the council is aiming to do this.

Lewisham Council has put significant emphasis on engaging with residents. The council has hired a cultural anthropologist to engage with local residents during the upcoming housing retrofit programme. Their role has been to understand residents' perspectives, identify what they need in their homes and ensure that they have the full picture of the council's retrofit plans far in advance of any works being scheduled. Their work will also help communicate the short- and long-term impact of works to other residents.

Tania Jennings, the net zero carbon manager at Lewisham Council, says the council's next step is recruiting local residents to be directly involved in the delivery of government-funded schemes in their buildings:

We already have a really clear sign-off process with our residents, because that feedback is so important. We want to know right away if there's a problem, because – ideally – we want it to be resolved while the contractors are still on site.

For our next round, we're hiring citizen scientists from the blocks that we're going to retrofit. So we're trying to find people from the community who are actually having the works done to help with the monitoring and the evaluation.

Getting the best outcomes from these programmes relies on resident voices being heard throughout the process, so that's why we're really focused on creating these roles.

48 Civic Square (accessed 2025) [About Civic Square](#).

49 Canopy Housing (accessed 2025) [About us](#).

CONCLUSION AND GUIDANCE FOR COUNCILS

The aim of this report is to shine a light on what councils have been doing and what they can do to support the development of retrofit skills. These skills will underpin the successful scaling up of retrofit delivery to homes across England. Through our interviews and by looking at case studies, we have explored the key issues councils face in developing these skills and seen some of the ways they are innovating and overcoming common challenges.

The issues raised in this report highlight shortcomings in national policy that cannot be addressed by councils (at least, not until more have devolved powers and funding). Our previous two reports offer policy recommendations for the UK government (see [Previous Reports](#)).

So what follows is not a comprehensive set of recommendations for councils, because some of the main problems are out of their scope and it is likely that the policy landscape will shift. Instead, we offer guidance for how councils could begin to play a stronger role in supporting retrofit skills in 2025/26, based on the promising examples of councils taking action highlighted in this report.

Governance:

- Strategic authorities (or the highest tier of local government) should convene a taskforce or forum to discuss retrofit skills. Any such forum must include representatives from councils, housing associations/providers, ERBs (who currently hold responsibility for LSIPs), local FE colleges and other key community leaders or partners. Check if a green skills advisory panel or another forum already exists that can be built on.
- Relevant portfolio leads and teams in councils (e.g. net zero, housing, employment and skills, procurement) need to work closely to share information about retrofit skills needs and to align approaches, budgets and delivery timelines as far as possible.

Forecasting:

- For long-term forecasting consider local net zero commitments, social housing improvement plans and new-build housing commitments, to create a high-level understanding of the scale of retrofitting that will likely be needed in your region between now and 2050.
- For short-term forecasting create a more detailed estimate of the scale of retrofitting that can be undertaken in the next 2-3 years based on available government funding streams and expected take-up of incentive schemes. How many homes will be treated? How many measures are needed? How long will it take on average? And therefore, what FTE workforce will likely be needed?
- Do not limit forecasting to installer roles, remember that lots of resident liaison will be needed. See [Annex A](#) for more detail. Commissioning and delivery teams in councils and housing associations also need skills.
- Use other relevant evidence to inform your skills forecasts e.g. LAEP, LSIP, local fuel poverty statistics and feedback from community organisations.

Planning:

- Assess the size of the retrofit skills gap by comparing your forecasts to what is known about local construction sector capacity and trends. Remember that the trades workforce is mobile, so unless there is sufficient work to keep them in an area, it is likely they will work in multiple areas – this should be factored into your assessment of the retrofit skills gap and plans for how to close it.
- Document your rationale for addressing the retrofit skills gap. This should include, but not focus solely, on net zero. Could new jobs and training opportunities be created in the local area? Could high-quality retrofitting benefit residents by lowering their bills and improving health and wellbeing? Could poor-quality delivery cause harm and entail costly remediation?
- A plan will likely include actions to engage and support local education providers, local employers, local schools and the local community. It also needs to shape local approaches to funding and commissioning retrofit, as below. Actions may be split into short term and long term, with short-term actions depending on current resources. The retrofit skills plan should feed into the LSIP.

Commissioning and procurement:

- Commissioning practice can have a significant influence on skills, particularly by setting quality standards for retrofit delivery and training standards for the workforce. Consider the best approach given the councils' in-house capacity, that of its partners and the local supply chain.
- Consider alternatives to the typical procurement model, such as establishing or expanding the remit of existing DLOs or grant funding community retrofit organisations. Reasons to recommend these approaches include the creation of more local job and training opportunities (that benefit local residents and increase capacity for future delivery), multiplier effects that grow the local economy and increased local accountability.
- Any procurement through tier 1 contractors should be guided by lessons learned to date. Use robust language and monitor skills training and job outcomes. Consider collaborating with local FE colleges to provide a certain number of teaching hours or other contributions.
- Ensure resource is available at the appropriate level (for example, at the strategic authority or across local authorities and social housing providers) to enforce skills requirements with contractors.
- Make clear to contractors how works will be inspected and signed off. Strong quality assurance incentivises higher-quality work and having the right skills to deliver it.
- Track national policy around retrofitting/heat pump roll-out – share this information with local firms through ERBs and local FE colleges. The more notice they receive the better.

Protecting households:

- Residents' needs and voices – especially vulnerable residents – must be at the centre of your planning. This may highlight additional skills and roles that are needed to deliver retrofitting successfully, whether in-house or as part of delivery partnerships or contracts.

- Have a clear resident engagement plan. Ensure that everyone who will interact with residents has the skills and knowledge needed to provide high-quality support and guidance. Consent, safeguarding, selection of appropriate measures, quality assurance, handover and complaints routes all need careful consideration.
- Consider how local communities could be better supported to deliver retrofitting in their own homes and areas, and whether they could be engaged in support roles, such as in the [Lewisham Council case study](#).

ANNEX A

MANAGEMENT

- Administrators
- Funding / bid managers
- Retrofit procurement managers
- Sustainability Managers (*within Housing Associations & Local Authorities*)
- Retrofit project managers

ADVISORY SERVICES

- Citizen campaign developers
- Energy efficiency advisors
- Customer service & customer support agents
- Financial advisors
- Sales representatives
- Retrofit advisors
- Quality Assurance advisors
- Heritage Consultants
- Ecologists

GREEN FINANCE

- Green grant administrators
- Green loans / mortgages
- Social loans providers
- Product development
- Underwriters
- Advisors
- Administrators

COMMUNITY

- Social prescribers
- Community champions
- Resident liaison officers

DESIGN

- Masterplanning (*inc urban greening / climate proofing*)
- Architects
- Building Services
- Retrofit programme designers
- Retrofit Designer*

MATERIALS & FABRIC

- Multi-trades
- Bricklayers
- Wood and interior carpenters
- Double glazing installers
- Specialist & secondary glaziers
- Plasterers
- Roofers
- Scaffolders
- Stonemasons
- Floor layers
- Insulation installers
- Cavity wall
- Internal wall
- External wall
- Underfloor
- Loft Drillers
- Conservators
- Structural Engineers
- Sustainable drainage

RETROFIT PROFESSIONAL ROLES

- Energy assessors
- Clerk of works / Site inspectors
- Retrofit Advisors*
- Retrofit Assessors*
- Retrofit Coordinators*
- Retrofit Evaluator*

*roles marked with an asterisk are PAS2035 mandated

RETAIL / TRADE

- Key account managers
- Retrofit materials advisors
- Material (collect / recycle / grade)
- Re-use & refurb / material suppliers
- Retail / trade supply staff

ENERGY

- Energy service / tariff designers
- Heating engineers (design & install)
- Gas (decommission / convert)
- Electricians
- Air-source HP installers
- Ground source HP installers
- Solar thermal / PV (design & install)
- Plumbers
- Electrical engineers
- Building Services engineers
- Mechanical ventilation engineers
- EV charging installers

TRAINERS

- Retrofit project management
- Retrofit professional roles
- Renewables trainers
- Construction trades trainers
- Construction site supervisor training
- Apprenticeships / other mentors
- School / college career advisors
- EDI outreach / recruitment specialists

PLANNING / REGS

- Local Authority Planning
- Building Officers
- Environmental health
- Conservation Officers
- Archaeologists
- Net zero planning
- Building control
 - New build
 - Refurbishments
 - Retrofit
- MEES inspection officers
- Circular economy / materials

MANUFACTURING

- Innovation / funding specialists
- Sustainable material developers
- Insulation manufacturers (mfrs)
- HP / PV / battery mfrs
- Glazing & timber mfrs
- Heat pump mfrs & distributors

MAINTAIN & MONITOR

- Maintenance & conversion of legacy systems
- Soft landings specialists
- Building maintenance operatives
- Facilities management
- Data system design & analysis
- Technical monitors
- New / low carbon systems repairs & maintenance
- Smart meters
- Digital twinning

A Definitive List of Retrofit Roles & Skills

Revised April 2025

Data for this list has been drawn from multiple academic and non-academic sources and developed in consultation with the sector.

First iteration of the list published in: *Retrofit Skills: Building the local net zero workforce in the Borough of Lambeth*; P Palmer & A Gillich, May 2022

Second iteration of the list published in: *C. Jenkinson, P. Palmer, Policy Recommendations for a National Workforce Strategy, National Retrofit Hub, June 2023*



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