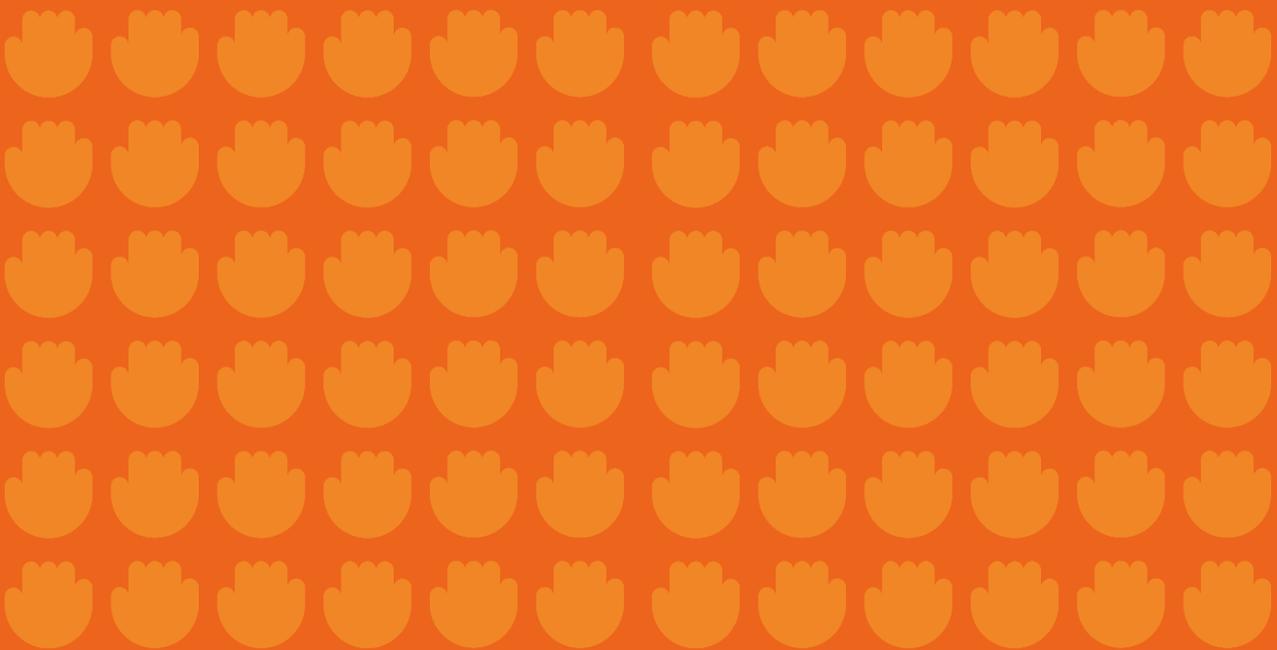


Industry Labour Market and Skills Intelligence Report

Low Carbon Buildings

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Skills Intelligence for Meeting Low Carbon Buildings Challenge

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PURPOSE OF REPORT

The report sets out an overview of the skills intelligence available relating to skills required to meet our Low Carbon Buildings Challenge across Greater Manchester. The objectives of this intelligence are as follows:

- Identify the business case for skills response to GM retrofit skills needs.
- Identify which occupations need to be prioritised.
- Identify opportunities for the skills system to increase the available pathways for new entrants and upskilled/reskilled workers into priority occupations needed for retrofit ambitions in GM.
- Understand how skills provision can best fit with Covid-19 recovery plans.

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1. INTRODUCTION

- (1.1) Retrofit generally does not require new trades, however, there is significant need to upskill and retrain trades within construction sector to meet the expected future demand for retrofit works. This presents a variety of challenges for the construction sector as a whole, including:
- Addressing the pre-existing shortage of skilled trades across GM.
 - Bringing younger generations into the construction sector. It is currently an aging workforce and is decreasingly seen as occupation of choice for first-time entrants to the labour market.
 - Inconsistent 'ebb and flow' market cycles combined with competitive procurement and low profit margins which makes it difficult for employers to invest in long-term skills (such as for Zero Carbon Homes Standard or solar PV feed-in tariffs).
 - Concerns that a lack of skills and capacity in the market will increase costs and lead to 'value engineering' of low carbon measures has meant that commissioners are reluctant to specify more sustainable homes standards.
 - Many employers in GM are SMEs, which adds complexity for at-scale upskilling and training.
 - Limits to on-site work due to Covid-19 as well as limited access to training means that employers may not be looking at taking on large numbers of new entrants in the next 12 months.
- (1.2) Retrofit projects of all sizes require trades and construction professionals to operate differently. This will require new skills and competencies, which see greater interaction across different trades, better planning and understanding of a whole-building approach and, in the future, the wider system.
- (1.3) A proportion can be achieved through new occupations, but it is more likely current trades will need to be upskilled in these new areas this will affect both trades and professional occupations.
- (1.4) However, as market demand for these skills is limited, and confidence that the skills will be needed in the short term remains low, there are few training providers offering the necessary courses. There are also challenges around current qualifications containing the required content to meet the retrofit quality standards required or even if they exist at all.
- (1.5) At face value there appears to be a good spread of skills provision for occupations related to construction and therefore retrofit, however, there is a lack of understanding amongst providers and other stakeholders of the ability and process for current curriculums to deliver a cohesive retrofit training package.
- (1.6) It is envisaged that there will be a training need for current tutors and assessors of skills in GM. The understandably cautious approach of employers to investing in upskilling and reskilling for low-carbon homes means that this will be a regulation-driven market where employers will generally only upskill to the standard stipulated.

Definitions

For the purposes of this report the following definitions set out what we mean by retrofit and low carbon homes. The skills intelligence gathering does not comprehensively cover all aspects of retrofit and the process is a continuous and developing process.

Retrofit is the installation of energy efficiency, renewable energy generation, low carbon heating or energy storage solutions.

A **low carbon home** is one where the Occupier/landlord has a good knowledge of baseline energy use across their home and is able to take action through targeted hierarchical interventions aimed at improving efficiency, decreasing waste and then maximising opportunities to generate and store local low and zero carbon energy.

A definition of **zero carbon home** would be similar with the terms elimination of gas added and focusing on fabric, local generation of Zero carbon electricity and heat and storage capability. A zero carbon home will have much more emphasis on this, with Generation and Storage being of financial benefit to the homeowner.

2. BACKGROUND

Policy landscape

- (2.1) Nationally, Government has set a target for carbon neutrality by 2050. In 2019, Government ran a [consultation](#) on part L (conservation of fuel and power) and F (ventilation) of the Building Regulations to receive feedback on proposed options to increase energy efficiency under the planned Future Homes Standard.¹ Feedback is currently being analysed and will be used to create new, more stringent standards for low-carbon buildings to come into force immediately, along with the promise of further review and enhanced standards to be implemented in the Future Homes Standard in 2025.
- (2.2) The construction industry has been one of the first sectors to be able to go back to work during Covid-19. The sector has been seen as central to Greater Manchester's plans to Build Back Better and was at the heart of Government's 'Build, Build, Build' recovery programme announced by the Prime Minister which loosely stipulated that the recovery must be a 'green' one.

¹ The consultation looks at two options. The first proposes use of high fabric standards to reduce carbon emissions by 20% against current Building Regulations, and the second looks at combining a lower fabric standards with PV provision to reduce emissions by 31%. Government's preference is for the second option, however, both retain the use of gas boilers which will run low temperature radiators (<55°C) enabling them to be swapped out with Heat Pumps in the future. This will require higher-quality buildings than mandated under current regulations, especially air-tightness given that even new homes leak heat.

- (2.3) On 8 July, the Chancellor announced a £3bn green investment package that was aimed at supporting the creation of an estimated 140,000 green jobs and targeting 600,000 beneficiaries through building energy efficiency improvement works. The package includes:
- **£2bn Green Homes Grant scheme** to upgrade the energy efficiency of homes in England
 - £500m of this funding will be delivered through local authorities to support low income household with up to £10k upgrades (£200m in Phase 1, £300m in Phase 2 later in 2020).
 - The remainder will be issued as vouchers of up to £5,000 to households in England, which will pay for at least two thirds of certain energy-savings measures
 - **£1bn public programme** to make public buildings, including schools and hospitals across the UK more energy efficient
 - **£50m pilot funding** for innovative approaches to retrofitting social housing at scale
- (2.4) Assuming Greater Manchester receives a proportional amount of the funding compared to its share of the UK labour market, this would suggest the creation of 7,000 new jobs in GM, however, in reality retrofit works will not necessarily create new jobs but will be a blend of upskilling and training of existing workers with some new jobs created for new market entrants.
- (2.5) The programme set out by the Chancellor reflects Government's priorities to retrofit the public estate and social housing which leads to:
- The ability to increase skills level of our local workforce
 - Drive high paid employment
 - Provision of a local labour market
 - A sustainable pipeline of work
 - Driving inclusive growth across communities
- (2.6) This policy programme is well timed, coming in at a point where consumer behaviour is changing as a result of Covid-19. There are some reports that people may be willing to invest more in home improvements as a result of a shift towards working from home (and resulting increases in heating bills).

Covid-19: Impact on the construction industry

CITB survey (223 employers in the North West)

Key areas for employer support:

- Ensuring personnel on site are trained to deal with the immediate health and safety issues – (employers in GM placed greater emphasis on this than wider NW)
- Ensuring retention/ continuation of apprentice recruitment (50% of construction companies have furloughed apprentices and many are concerned about the ability to retain numbers long-term even though few have been made redundant so far).
- Also concerns about how apprentices would continue to learn and how new apprentices would be recruited in autumn.
- Employers felt there should focus on specific groups (micros and SMEs): scaffolding SME, House building SME, general building micro.

Issues with on-site working:

- Fewer people allowed on-site due to social distancing (employees cannot train if not on site)
- Issue with expiring CSCS cards which will stop people coming back on-site (and training pipeline issues as training is needed to obtain CSCS card)

Top three priorities when back on site:

- Retraining skilled staff and ensuring they can return to work
- Focusing on post-crisis business survival
- Retention of apprentices and ensuring they complete their training

Employers and training providers survey (7-31 May; analysis of results ongoing)

- The majority of construction have had some sites suspended
- 65% have furloughed some staff with 25% furloughing ALL staff
- Employers anticipate sites will open and a number of companies will reduce number furloughed
- Looking after staff health, safety and wellbeing has been most important factor in getting back to work
- 42% of companies expect to recruit fewer new entrants in the next 12 months and 30% anticipate recruiting fewer skilled staff. 25% expect the overall number of workers in their company to decrease. Fuller data will be released in the coming weeks.
- Companies plan to continue training at the same level (increasing H&S, developing the existing workforce and conducting leadership and management training).
- 74% felt existing apprentices will be able to complete the training programme, however, only 35% plan to train new apprentices.
- This is also consistent trends the SEDA project is seeing from construction SMEs in their workforce planning conversations.

- (2.7) Greater Manchester's 5 Year Environment Plan specifies that the city-region must be carbon neutral by 2038, with all new buildings to be carbon neutral by 2028.

The retrofit and construction pipeline needed to meet these targets will require 62,000 homes to be retrofitted per annum. The majority of these are private residences, however, GM local authorities have influence over approximately 80,000 social homes. Beyond retrofit, the Greater Manchester Spatial Framework also stipulates the need for approximately 10,000 new homes to be built each year across

the city-region. Creating a consistent pipeline of demand for retrofit and energy-efficient construction is the biggest factor in igniting retrofit skills provision.

- (2.8) In the short-term, there is an opportunity to focus on homes owned by Registered Social Landlords (RSLs) and the public estate where there is an already specified demand for retrofit activities. Across GM's public estate, the top 100 highest energy-consuming buildings have now been identified and core intervention measures have been outlined. Other examples include:
- Stockport Homes: Policy introduced for all planned gas boiler replacements to switch to electrified heating.
 - Southways Housing: Wythenshawe have a direct labour organisation.
 - Wigan Council: The borough has brought the social housing stock back under local authority control, with the ability to centrally influence what is needed, desired quality of work etc.

In the longer-term, there is a need to develop an able-to-pay model that is suitable for SMEs, with the ability to scale up when required.

Wider related work in GMCA

- (2.9) There are discussions in place to look at accelerating retrofit skills as part of the Covid-19 recovery process, with a focus on driving the market. A paper has been sent to senior leaders for review. In addition to this, discussions with BEIS around funding to create an at-scale market are ongoing as are discussions with the LEP.

Stakeholders

- (2.10) Greater Manchester has a strong network of employers, skills providers, centres of excellence and other skills facilitating organisations which will allow us to develop employer-led, innovative and collaborative skills to support the low-carbon buildings challenge. These stakeholders include:
- GMCA low carbon buildings challenge group
 - University of Salford (international centre of excellence for research in this sector)
 - Employers (engaged, passionate employers committed to prioritising skills for the industry)
 - Community (strong and experienced community of practice)
 - Skills organisations (active skills facilitating organisations for example CITB)

The above network have been involved in developing this intelligence in several workshops and face to face meetings to ensure it is a comprehensive evidence base of what evidence we have in GM to develop a skills response for retrofit.

- (2.11) Beyond these stakeholders, Greater Manchester also has strong regional policy for environment and the development of green skills and generally good skills provision to build upon for affected trades.

3. MARKET AND STANDARD OF RETROFIT REQUIRED

Understanding the retrofit market in Greater Manchester

- (3.1) The market in Greater Manchester, as it stands, is primarily catering for small-to-medium scale retrofit across the social housing sector, with some current projects in the pipeline. There is a small but growing demand for retrofit in private homes.
- (3.2) For skills provision to meet the needs of the current and future low-carbon buildings market, there needs to be a GM consensus on what skills are needed and what level of retrofit will likely be demanded across the region. There is wider work in GMCA working on understanding the type and level of retrofit required across building stock to reach our climate targets. This work will document this and amend the skills response accordingly.
- (3.3) Retrofit is a new skill and does not always require a higher level of educational attainment, so those currently working in the sector, or those who have recently left, could be re-trained or upskilled. Retrofit training should be largely on-site and skills needs will largely depend on the types of retrofit needed. Much of the basic retrofit work has been done so skills provision must involve some entry-level provision, but also higher-level skills for more complex retrofit works.
- (3.4) This reskilling process is not restricted to the craft trades such as joiners, plumbers, plasterers or electricians. It also needs quantity surveyors, architects’ planners and project commissioners.
- (3.5) Building retrofit requires commissioners (be that public, commercial or domestic) to become informed clients and requires retrofit coordinators; individuals who can develop whole house solutions connecting thermal efficiency, heating and ventilation. Alongside these roles, wider trades and specialist functions will also be needed.

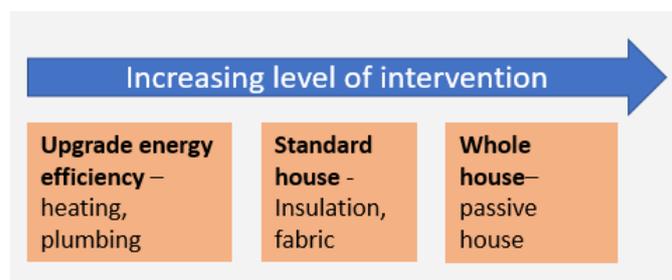


Figure 1: The majority of the market is likely to be between the ‘upgrade of energy efficiency’ and ‘standard house’ levels of intervention. There will be a much smaller market willing to invest in full passive house works.

- (3.6) Analysis of the construction sector in Greater Manchester has shown that we have a good jobs provision for all the trades which underpin retrofit work (see Figure 2), however, a more comprehensive review of the provision for core and optional skills content will be necessary to identify and prepare people for retrofit roles.

What should the Greater Manchester standard be?

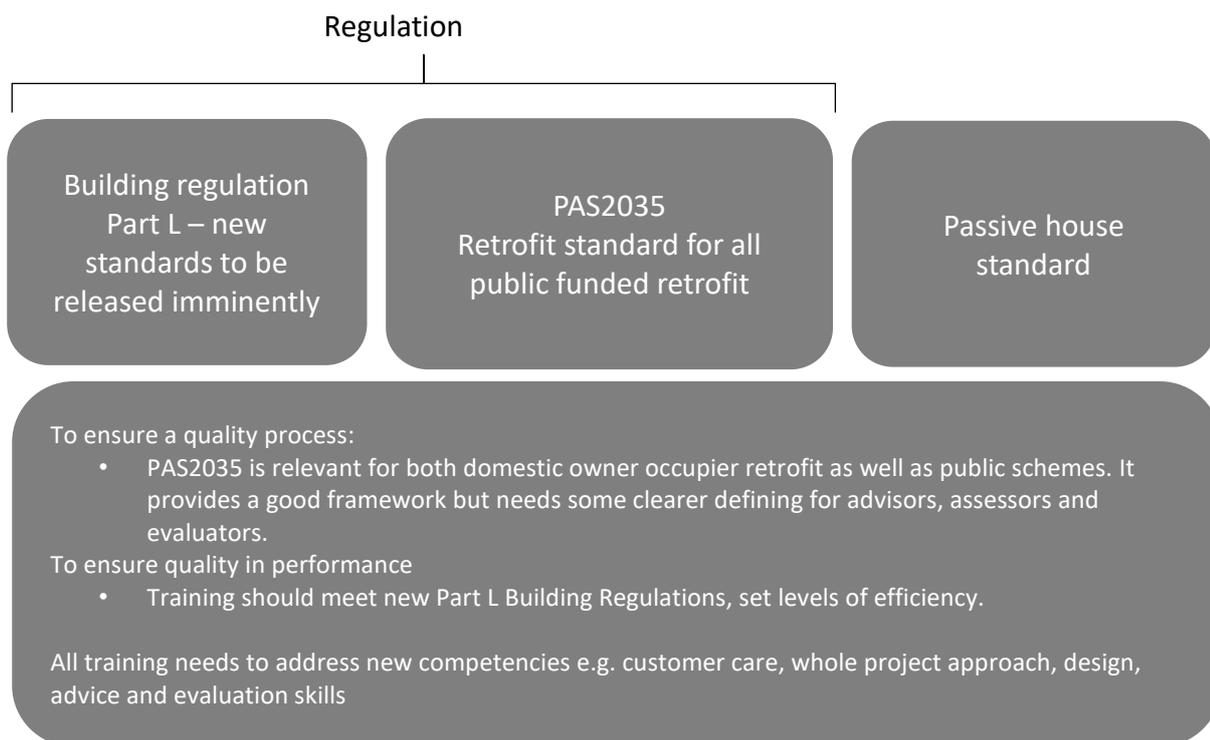


Figure 2: Ensuring quality process and performance for retrofit work in Greater Manchester.

Quality process

- PAS2035 is relevant for both domestic owner-occupier retrofit as well as public schemes. It provides a good framework but requires clearer definitions for advisor, assessor and evaluator roles.

Quality performance

- Training should meet new Part L Building Regulations which set requirements for levels of efficiency.
- All training needs to address new competencies such as customer care, whole project approach, design advice and evaluation skills.
- We also need to consider the wider competencies required and ensure that training is recognised to an industry standard.
- Air tightness of properties is a key component for successful retrofit and new build works to achieve energy efficiency targets and GM will need to set appropriate standards if not covered comprehensively in PAS2035.

4. RETROFIT JOBS AND SKILLS NEEDS

Trades	Supervisor and specialist roles
<p>Existing trades affected:</p> <ul style="list-style-type: none"> • Heating engineers (especially higher level upskilling) • Electrical trade and installations • Plumbers • Joiners • Roofers • Plasterers 	<p>Existing trades affected:</p> <ul style="list-style-type: none"> • Architects • Project managers • Site supervisors • Planners • Designers
<p>New roles:</p> <ul style="list-style-type: none"> • Multi-skilled trade (Due to the need to understand a whole-house approach, is it more beneficial for individuals to have multi-trade skills) • Retrofit designers and advisors 	<p>New roles:</p> <ul style="list-style-type: none"> • Retrofit coordinator (It is widely thought that individuals who can develop, advise on whole house solutions connecting thermal efficiency, heating and ventilation are required to support the concept of an informed client)
<p>Skills Opportunity:</p> <ul style="list-style-type: none"> • Upskill for new competencies required as part of PAS2035 such as design or assessment of retrofit to support developing a pathway to L5 retrofit coordinator • Embed skills and competencies set out in PAS2035 into curriculums for existing trades or add on as extra modules. • Create opportunities for existing trades to become multi-skilled • Encourage upskilling where there are new “competent person” schemes for example heat pump installation 	<p>Opportunity</p> <ul style="list-style-type: none"> • Upskill existing professions to develop new competencies required as deliver to PAS2035 standards up to L5 retrofit coordinator • Ensure new entrant routes have curriculums which meet this standard or offer competencies as part of extra modules.

Figure 3: Skills requirements for retrofit work and opportunities for developing existing skills base.

Retrofit skills to support GM COVID Recovery

(4.1) When considering skills and training different learner needs should be considered and training tailored accordingly. This approach could ensure that we look at retrofit opportunities as part of GM COVID recovery plans supporting those displaced from at risk sectors into construction and ready for the retrofit opportunity. The wider GMCA recovery plan for work and skills will be considered in looking at progression pathways and supporting specific groups to gain skills to support retrofit as will considering utilising central government initiatives. This will include:

GMCA employment and skills:

- Key messaging through the Young Person Guarantee – Utilising [GMACS](#) and [Bridge GM](#)
- AEB funding to support routes to retrofit for those wanting a taster and also adding retrofit related modules to existing construction training.
- Apprenticeship Levy to stimulate demand for relevant retrofit apprenticeships within SMEs
- Support messaging of the retrofit and construction opportunity through JCP and wider employment programmes
- Use ESF Skills for Growth funding to support upskilling for retrofit for SMEs

Central Government:

- Align kickstart scheme with retrofit training (when more information is known)
- Use employer apprenticeship grants to stimulate take up of relevant apprenticeships
- Align traineeships to include opportunities to develop retrofit skills

(4.2) For ‘recently unemployed’ in Figure 4 below, the opportunities for retrofit skills are:

- Many construction trades are in shortage anyway and there is therefore an opportunity to align training to retrofit standards and encourage people to retain in this area
- Use the advantage of having an extra skill to encourage current trades to upskill and become multi-trade
- Create ‘add-ons’ which make current occupations (both trades and professionals) more attractive, for example, to become a retrofit assessor, or a new ‘competent person’ for fitting heat pumps

(4.3) For those who have been unemployed for longer periods, marked ‘medium / longer term unemployed’ in Figure 4 below, opportunities for retrofit are for more tailored, supportive training. This would be focused on enabling retrofit workforces to be built around the current pipeline of work for social housing, including the retrofit standard. This would not be large-scale with the current pipeline.



Figure 4: Unemployment spectrum – short to long-term.

(4.4) Our approach to assessing the opportunities and next steps for retrofit skills provision is structured around an employment pathway process for entering and remaining in the industry as shown in Figure 5 below.



Figure 5: Retrofit skills employment pathway.

Upskilling and reskilling

Pathway Stage	Existing Support / Initiatives	Challenges	Gaps to fill / opportunities
1. Deciding on retrofit careers	<ul style="list-style-type: none"> Retrofit accelerator group creating market and pipeline PAS2035 standards driving need to reskill for public projects New building regulations driving need for upskilling for new builds 	<ul style="list-style-type: none"> Lack in confidence from employers in pipeline of work History of previous initiatives not coming to fruition (employers have been burnt before). Until there is a critical mass of pipeline in the market employers will not respond with investing in skills 	<ul style="list-style-type: none"> Create a strong confident pipeline for retrofit working with social housing providers and existing public estate as well as new builds. Start with these smaller scale projects and build to perpetuate the market and need for skills Communication strategy to engage employers toolkit to assess and understand need.
2. Seeking training	<ul style="list-style-type: none"> Various small scale independent training providers in GM 	<ul style="list-style-type: none"> Lack of understanding about what training is needed and where to find it. 	<ul style="list-style-type: none"> Align training with pipeline projects initially. Develop new types of agile and flexible learning including mobile site based training and digital solutions (e.g. small sessions late afternoon suggested) Diagnostic toolkits and IAG required for employers (especially SMES) and individuals to help them better identify what they need and where to get it

3. Effective training	<ul style="list-style-type: none"> • Various small scale training providers Local and national centers of excellence which could help keep training up to date with new technology if there is better links 	<ul style="list-style-type: none"> • Confidence of scale of learners to justify developing high quality training • Lack of skilled tutors • Current offer does not have the infrastructure to continuously upskill and adapt based on new innovations • We need to set a GM standard for what “effective training” is for retrofit • Lack of physical facilities which can be used by multiple skills providers. 	<ul style="list-style-type: none"> • Increase links between Independent training providers, FE, colleges and employers • Need to research current training and check they are suitable and sustainable to deliver PAS2035 and any other quality standards we decide for GM
4. Seeking employment	<ul style="list-style-type: none"> • Existing pipelines with social housing Small number of private residential 	<ul style="list-style-type: none"> • There is not a large enough pipeline yet to justify upskilling on scale 	<ul style="list-style-type: none"> • Create smaller scale training around social housing opportunities. For training involving additional trade skills creating multi-skilled trades, this is actually a positive opportunity for more employment.
5. Remaining at employer	<ul style="list-style-type: none"> • (not known) 	<ul style="list-style-type: none"> • Pipeline challenge currently 	<ul style="list-style-type: none"> • Develop better pathways for current workforce to access add on and bolt on training which supports them to upskill for retrofit a bit at a time. This should include opportunities to become retrofit designers, assessors and even progress of retrofit coordinators. For other trades requiring certification there should be clear routes and opportunities to train to this level

Figure 6: Opportunities and challenges to support upskilling and reskilling at each stage of the employment pathway.

(4.5) The opportunities for upskilling and reskilling are summarised as follows:

1. **Start small:** Reskilling and retraining alongside pipelines of small-to-medium sized projects with housing providers, whilst building an employer base for future projects.
2. **Develop new competencies:** Provide opportunities for new design and advisory competencies resulting in a new workforce of retrofit designers and advisors. This may lead to the creation of new training pathways for retrofit coordinators.
3. Encourage retraining opportunities around heating system installation to include new **“competent person” certification.**

4. **Target professions for CPD** so that they can cascade retrofit approach down through a project. Ensure training includes the development of toolkits to support in cascading retrofit advice.
5. As training develops around local social housing projects develop ways to **include wider skills providers** in the area including local colleges and FE, to increase awareness for wider learners whose jobs will be affected by the future of retrofit and raise awareness.
6. **Develop clearer reskilling and retraining pathways and packages** for employers which meet a GM standard of “effective training for retrofit” and better market these to alongside the rationale and business case for change within the construction industry.
7. **Develop new types of agile and flexible learning** including mobile, site-based training and digital solutions (for example, late afternoon small sessions have been suggested).
8. Potential to **develop shared physical training facilities** for use by multiple skills providers.
9. **Toolkit development** for employers to understand opportunity, assess skills and seek training.

New entrants

Pathway Stage	Existing Support / Initiatives	Challenges	Gaps to fill / opportunities
1. Deciding on retrofit careers	<ul style="list-style-type: none"> • Bridge GM enabler to highlight careers • GMACS • STEM Framework provides opportunities to raise the profile of the sector, and engage with families and communities • CITB – careers activity • Class of Your Own – Design Engineer Construct 	<ul style="list-style-type: none"> • Young people, teachers and parents/careers do not value understand the opportunity of these careers and pathways • Lack of confidence in pipeline of work • Negative perception of construction 	<ul style="list-style-type: none"> • Better market as careers which can address the climate crisis • Better IAG about retrofit careers, pathways and local skills provision • Develop opportunities to become multi-skilled in several trades allowing access to more work opportunities for individuals

<p>2. Seeking training</p>	<ul style="list-style-type: none"> • Procure Plus • Various small retrofit training providers • Various providers for trades across GM – unclear of inclusion of retrofit in curriculum • New T-Level routes (we don't know if they are fit for the market need) 	<ul style="list-style-type: none"> • Does training for trades and other existing roles include retrofit teaching to the standards required? • Clear training pathways may not exist for some occupations such as retrofit coordinators and retrofit designers and advisors as well as an increased technical role for those installing heating systems • Training not being offered in the way we need because the market doesn't exist yet? 	<ul style="list-style-type: none"> • Understand where curriculums are meeting the standards for the market or where there is opportunity – further research needed • Work with training providers and colleges to build curriculums which include PAS2035 standards, enable a multi-trade approach and build in understanding of a new competencies required for retrofit projects. • New pathways may need to be created for occupations where they don't exist e.g. retrofit coordinators and heat pump installers • Opportunities for digital modelling type learning and gamification of learning • Opportunity for University of Salford to become regions Centre of Excellence
<p>3. Effective training</p>	<ul style="list-style-type: none"> • Similar to point 2, but until we know what we want we cannot assess what is up to standard. 	<ul style="list-style-type: none"> • Do we know if training is up to standard • Tutors lacking up to date industry knowledge • Unknown what provision maps to PAS2035 requirements • Lack of physical facilities which could be used by multiple skills providers 	<ul style="list-style-type: none"> • Need research to understand what we mean by “effective training” standard means for retrofit. What we want the GM standard to be? • New collaborative ways for FE, colleges and independent training providers and employers to work together for learners to be exposed to and better understand how retrofit will shape their careers in the industry.
<p>4. Seeking employment</p>	<ul style="list-style-type: none"> • Social housing already has a market (have there been initiatives like this before, where there has been good practice in GM or nationally?) 	<ul style="list-style-type: none"> • Is there the pipeline of work to employ new entrants – especially for those with retrofit specific roles? 	<ul style="list-style-type: none"> • There is the opportunity to start with social housing projects and build up small scale programmes which can be up scaled when there is a wider market. • To ensure direct employment and buy-in from employers' technical routes such as T-Levels and apprenticeships should be encouraged as route into these occupations. • Opportunity for social inclusion. Upskilling local workforce in some of our more deprived areas.

<p>5. Remaining at employer</p>	<ul style="list-style-type: none"> • CITB 	<ul style="list-style-type: none"> • Existing challenges within the construction sector which make it seem a risky prospect for employment – feast or famine nature 	<ul style="list-style-type: none"> • GM must ensure there is a clear pipeline of work and clearly communicate this within the sector to ensure confidence. • There is a need to build a strategy to develop a market starting with social housing, including new build, public estate, but also taking advantage of the small percentage of private residential. • Promote technical routes into retrofit including apprenticeships and T-Levels
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Figure 7: Opportunities and challenges to support new entrants at each stage of the employment pathway.

(4.6) The opportunities for new entrants are summarised as follows:

1. **Raise the profile of construction as a green skills sector** through inspiration activity with young people and families inside and outside of school. Giving consistent messages about career pathways for retrofit.
2. **Develop ‘effective training’ standard for retrofit for GM** (PAS2035 plus anything extra we decide) so that we can check current curriculums are at the quality we need.
3. **Develop more multi-skilled trade pathways.**
4. **Develop clearer pathways to develop retrofit designers, and assessors** (perhaps alongside a trade) as well as progression to retrofit coordinators.
5. **Increase skills** for new types of heating and plumbing. Including competent person standards where possible.
6. **Develop new innovative ways to deliver retrofit content** in curriculums including; gamification, better links with regional and national centres of excellence and increased co-design with employers.
7. Linked to the above, **promote employer engagement** through increasing technical routes including apprenticeships and T-Levels.
8. **Potential to develop shared physical training facilities** for use by multiple skills providers.

5. GMCA SKILLS APPROACH TO RETROFIT SKILLS INTELLIGENCE

(5.1) It is challenging to develop a clear timeline for skills development for retrofit because skills development relies heavily of the market and confidence in the pipeline of work. Employers will not respond unless the market for retrofit is there and upskilling too early carries the risk that there is no employment for learners.

(5.2) Until there is a critical market at scale the sector is unlikely to respond. This work is well aligned to wider GMCA work as part of the Retrofit Accelerator so is well placed to be updated as the market develops. Current evidence does allow GM to start supporting development of retrofit skills, where time scales refer only to the market level set out in the table in figure 8 below:

	Short term	Medium term	Long term
Market	Localised small to medium sized Social housing retrofit projects	Increased social housing (when we have the levers to drive the market)	Need on scale across public and increasing private
	Some new build	Public estate (top 50 buildings)	
		New Build	
		Increasing privately owned retrofit “able to pay”	
Approach	Onsite training on live projects		
	GMCA research into curriculums for trade and specialist roles		
Occupations	Reskilling and upskilling for traditional building trades, electrical and plumbing installation	Development of new retrofit coordinator role with increased need for client coordinator role	
	Opportunity to develop Multi-trade routes and add on trades for existing workforce	Assess additional roles from energy group bringing in wider energy roles for example to install solar PV	
	For current trades upskilling add-ons for retrofit design, advisors (lower-level building pathways to higher level retrofit coordinator)		
	Upskilling CPD for professionals (architects, surveyors, planners, project managers) to increase employability		
Actions	Design training which meets PAS2035 standards and new Part L of Building Regulations to upskill and retrain as well as embed in existing trade pathways.	Shared training facilities for upskilling and new entrants.	
	Potential to develop new training to add on a trade for current workforce	Align traditional trade and profession pathways to include retrofit standards	
	Potential to develop new more highly skilled multi-trade pathways (T-Levels?)		

	Create new pathways for upskilling existing trades to become retrofit assessors and designers as this training is at a similar level as an add on		
	Develop accredited CPD for professionals which meet standard for retrofit and gives them an employment edge/specialisation		

Figure 8: Skills development opportunities aligned to retrofit market levels.

Summary of GMCA skills response

(5.3) Skills intelligence for retrofit is an ongoing process within the work and skills team. The following actions are currently being undertaken within the Industry Skills Intelligence Team at GMCA, with amendments to this report reflecting progress due for the end of 2020.

Key ongoing activity to develop skills and talent needs are outlined in Figure 9 below:

Objective	Activity	Timeframe
To gain a better understanding of where curriculums and qualifications can align to the skills need for retrofit.	<ul style="list-style-type: none"> Research into curriculums which can deliver or be flexed to deliver PAS2035 both for new entrants and upskilling/reskilling. Consultation with skills providers on intelligence and retrofit training action plan 	Add findings to this report end of Oct 2020
Look at funding option for retrofit skills development in GM	<ul style="list-style-type: none"> Create retrofit skills action plan looking at devolved Adult Education Budget options and ESF funded Skills for Growth Programme 	Look for skills delivery to start as early as January 2021
Retain up to date industry skills intelligence for low carbon buildings	<ul style="list-style-type: none"> Continue to work with Low Carbon Buildings Challenge group to disseminate and gather intelligence for retrofit especially around the market Gather skills intelligence for wider areas of low carbon buildings through work with the Energy Challenge group 	<p>Revisit retrofit skills intelligence in January 2021</p> <p>Industry skills intelligence gathering to start with Energy Challenge group from October 2020</p>

Figure 9: Next steps for GMCA Industry Skills Intelligence Team in addressing skills for low carbon buildings.