



SEA & Welsh Government Webinar: Social Housing Fit for the Future

November 2023

FOREWORD

By Malcolm Davies, Senior Programme Manager, Housing Decarbonisation, Welsh Government



“Global events and the cost-of-living crisis serve to further underline the urgent need to decarbonize our homes – not only for the sake of our planet, but to ensure that people can afford to be warm, comfortable and healthy in their homes. All the more important for us in Wales where our housing stock is some of the oldest and least energy efficient in the UK.

While the Welsh Government continues with our primary focus on social housing, delivering improvements for social housing tenants, we are also learning and developing our policies and practice to inform work across other sectors.

The Optimised RetroFit Programme (ORP) is working closely not only with housing partners, but also with key stakeholders across the system to support the infrastructural developments and system change we need to support decarbonisation.

This includes working with the supply chain, considering the development and evaluation of new products, and considering skills development and the workforce required for the manufacture, installation, and maintenance of homes. The Welsh Government Net Zero Skills Action Plan and recently launched Consultation, forms a key part of this area of work: [Net zero skills Wales | GOV.WALES](#).

We are also working with stakeholders to attract further investment available through the Energy Company Obligation Scheme (ECO), Great British Insulation Scheme and working alongside TrustMark, who are in discussion with the UK Financial and Insurance Services Sector.

The ORP “Test & Learn” approach also supports the aspirations of the recently launched Welsh Housing Quality Standard (WHQS) 2023. A key element of the new standard will be a bold ambition to bring our social housing stock up to the highest possible levels of energy efficiency.

It is right that we focus on our social homes first and foremost, but that is not to say we are not also working to support much needed improvement and investment in private-rented and owner-occupied homes.

To support them and provide confidence, as well as provide wider advice, support, and guidance to all those involved in residential decarbonisation, we have invested in a new Housing Net Zero Carbon Hwb. The Hwb will work closely with the National RetroFit Hub, along with other Regional Hubs across the UK, in sharing of lessons learnt in improving homes.

Welsh Government has a key role to play in leading the creation of an enabling environment in which homeowners choose to decarbonise their homes, but it is not the only actor. Many other people and organisations will have important roles to play, and we recognise that a key role for the Welsh Government is enabling those other organisations and individuals to play their part.

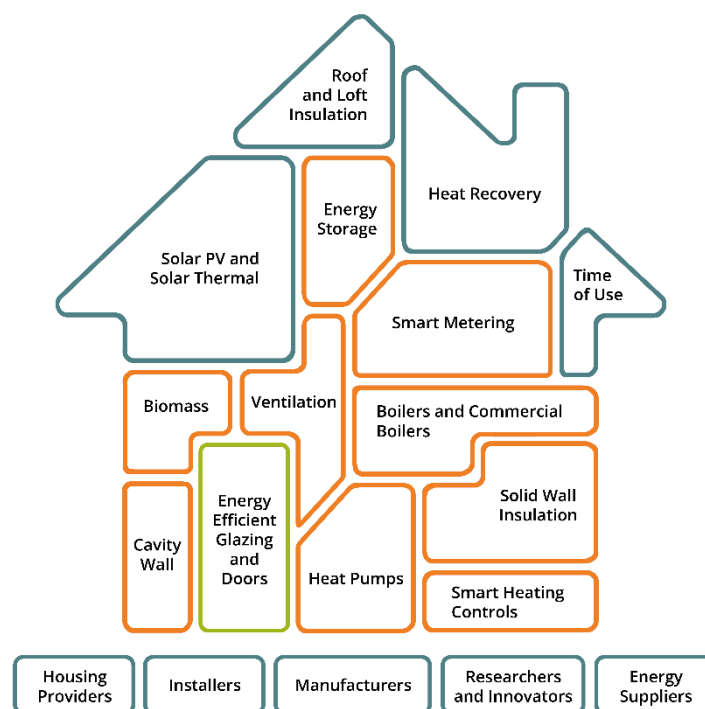
As part of this work, we are currently developing a route map for residential decarbonisation that will articulate the strategy for residential decarbonisation but also provide a framework that allows us to develop an accessible delivery plan. “

INTRODUCTION TO THE SEA

In a world of finite resources, the Sustainable Energy Association (SEA) exists to help create living and working spaces fit for future generations. Our work seeks to align the interests of business, politicians and consumers to make this a reality.

We are industry leaders in energy in buildings. We are technology agnostic and provide objective, evidence-based policy positions which help shape how we think about, generate and use energy. We are constructive, collaborative and committed to achieving our vision, by ensuring that buildings are energy efficient, net zero carbon, warm and healthy.

The Sustainable Energy Association (SEA) is a member-based industry body. We draw on our wide-ranging membership from manufacturers of energy saving technologies and heating systems to housing associations with an interest in sustainable energy. SEA member's manufacture, distribute,



install, retail or regulate a range of technologies, they also own and manage homes and supply energy. We take an objective 'whole building, technology agnostic approach' that recognises that there is no single solution to the energy challenges faced by the UK.

PURPOSE OF WEBINAR AND PROCEEDINGS

In partnership with the Welsh Government, the SEA aimed to showcase the holistic and diverse considerations required for transitioning buildings in the social housing sector—how to deliver social housing fit for the future. Extending to Registered Social Landlords (RSL) and Housing Associations in Wales, this webinar detailed the SEA's core principles; fabric first, using low-carbon heating, technology agnostic, high quality and performance, and considering adaptation to climate change, health and wellbeing. As well as some of the tools needed for delivery, like advanced building assessments, developing the necessary knowledge and skills, providing independent advice and using innovative products and techniques.

There is a critical need for the flow of information, knowledge and understanding into the social housing sector in order to achieve Net Zero. Social housing has the opportunity to lead the way when it comes to the transition, so long as they are supported and have access to the products and solutions for delivering it.

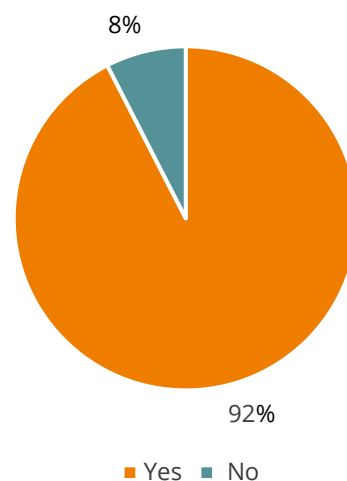
As part of shaping thinking and sharing helpful information with attendees, this webinar captured the views, opinions and information on how aligned the social housing sector in Wales currently is with the SEA's principles and recommended tools. This was done through in-webinar polling, and the results and discussion is included below.

SURVEY FINDINGS AND DISCUSSION

The sample size for all results herein was from a pool of 58 respondents and represents a significant proportion of all housing associations and RSLs in Wales.

QUESTION 1: FABRIC FIRST

1: Are you taking a fabric-first approach?



Fabric first is consideration of fabric upgrades before or alongside wider measures in a home (like heating, on-site generation, etc.) as to prioritise reducing energy demands, lowering bills, increasing comfort, health and wellbeing, and optimising the building for the other technologies to be installed.

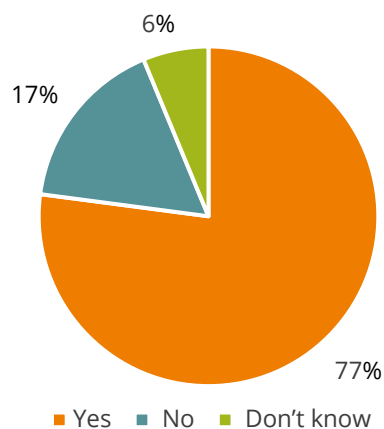
It is clear from the results that an overwhelming majority of RSLs in Wales were taking a fabric-first approach. It is a very positive sign that considerations for insulation, draught proofing and wider fabric measures are being prioritised before or alongside wider low-carbon technologies.

Following a fabric-first approach is the Welsh Government and UK Government's policy position as it will reap the benefits of reduced household energy consumption, and therefore lower bills for consumers; increase comfort and indoor health and wellbeing; strengthen energy security; minimise expenditure required for grid capacity and transmission upgrades; and much more.

It was noted that a holistic, whole-house approach, that starts with the fabric, is needed, as fabric alone will fail to deliver on our Net-Zero commitments and leave tenants stranded on what may become a far more expensive fuel in the future.

QUESTION 2: LOW-CARBON HEATING

2: Are you already installing or planning to install low-carbon heating in your housing stock?



From the results, there is a clear majority, over three quarters of RSLs who responded, that have made progress on installing or planning for low-carbon heating. These are positive results. Low-carbon heating is clearly a main consideration for housing associations transitioning to social homes fit for the future.

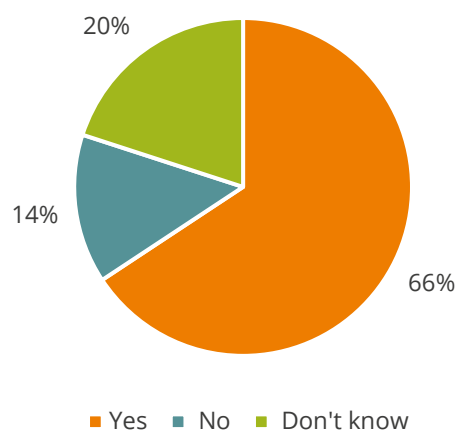
However, 17% of respondents indicated they were yet to have installed or planned for installing low-carbon heating. This is a risk to delivering Net Zero and decarbonising social housing in Wales as the vast majority of homes in the UK will need to decarbonise their heating: many tenants may be left behind and left with aging, polluting and expensive-to-run heating systems. Creating a long-term plan for transitioning heating should be a priority for housing associations, as it will enable adequate budgeting for necessary materials, products, and labour, decrease uncertainty for tenants, and allow for oversight on decarbonisation progress across the Welsh social housing sector. As part of the Welsh Government's [Welsh Housing Quality Standard \(WHQS\) 2023](#) (coming into effect on 1st April 2024), all landlords will be required do a whole stock assessment and create a target

energy pathway for each home. These requirements will ensure that a heat system transition is planned for each home. The deadline for adherence is currently under consideration but will likely be over a three-year period (2027).

A comment was made by an attendee that it was difficult to answer the question due to the limited scope of low-carbon technologies being supported under current government policies—predominantly heat pumps through UK-government policy. A number of constraints to installing heat pumps were mentioned, namely noise, space, cost, and a high liability for fuel poverty. Being able to supply the appropriate low-carbon technology for the building and tenant could help progress the transition away from fossil-fuel heating.

QUESTION 3: TECHNOLOGY AGNOSTICISM

3a: Are you taking a technology-agnostic approach?



When asked about taking a technology-agnostic approach, the majority of respondents were already doing so. An attendee commented that they were “exploring, trialling and demonstrating a range of low / zero carbon home heat technologies, including various all electric and hydrogen-based technologies. We are seeking to understand what works best in what scenarios.” This approach is beneficial to the transition to Net Zero, and as explored in our report, [‘A Technology-Agnostic Approach to Heat and Buildings Policy’](#). A ‘test and learn’ approach, coupled with granular data collection on individual homes, will drive the right outcomes for people and buildings. There is no one-size-fits-all technology and

further comments were made around the inappropriate or poor installation of heat pumps, leading to tenant disapproval and heat pumps being removed from tenements, and gas re-installed. The most effective use-cases for heat pumps should be exploited, and where not appropriate, alternatives found.

There were, however, a significant proportion of respondents (20%) who were unsure as to whether they were taking this approach—this was 6% more than those who said they weren't being technology agnostic. It is not clear why these respondents felt this way, but perhaps it could be explained by the complexity of the definition of technology agnosticism, the government drive for installing heat pumps and dominating the options for heating transition, or a lack of understanding of the range of low-carbon heating system options available for housing associations to transition with.

3b: Which technologies are you mainly using/considering?

ASHPs, PV and battery storage

Heat Pumps

least disruptive on retrofit install

currently solar power only

We are trying to develop a standard sensitivity analysis tool to help make the decision

Environmental sensors

ASHP, Solar PV, Battery, Infrared Heating, Hybrid ASHP

ASHP, GSHP, Infrared

iOpt sensors

ASHP, SOLAR, ELECTRIC Boiler, INFRARED

IES / Environmental sensors, air source heat pumps (newbuilds), smart cylinders, PV

infrared, MVHR

PV, Energy Storage Battery, Heat Battery, MVHR

heat pump, solar pv, domestic battery, time of use tariff

ASHP - PV & battery - infrared

heat pump, infrared, storage heaters, reducing hot water base load, HW storage, VERY limited hydrogen

PV and battery with EWI schemes. Heat pumps and some solar HW in properties in non-gas grid areas

PV & Batteries before heating (no standout solution currently for specific properties)

Heat pumps, radiant, MVHR, batteries, solar PV

ASHP, GSHP, infrared, Electric, Boilers. WWHR, smart controls, Battery Storage.

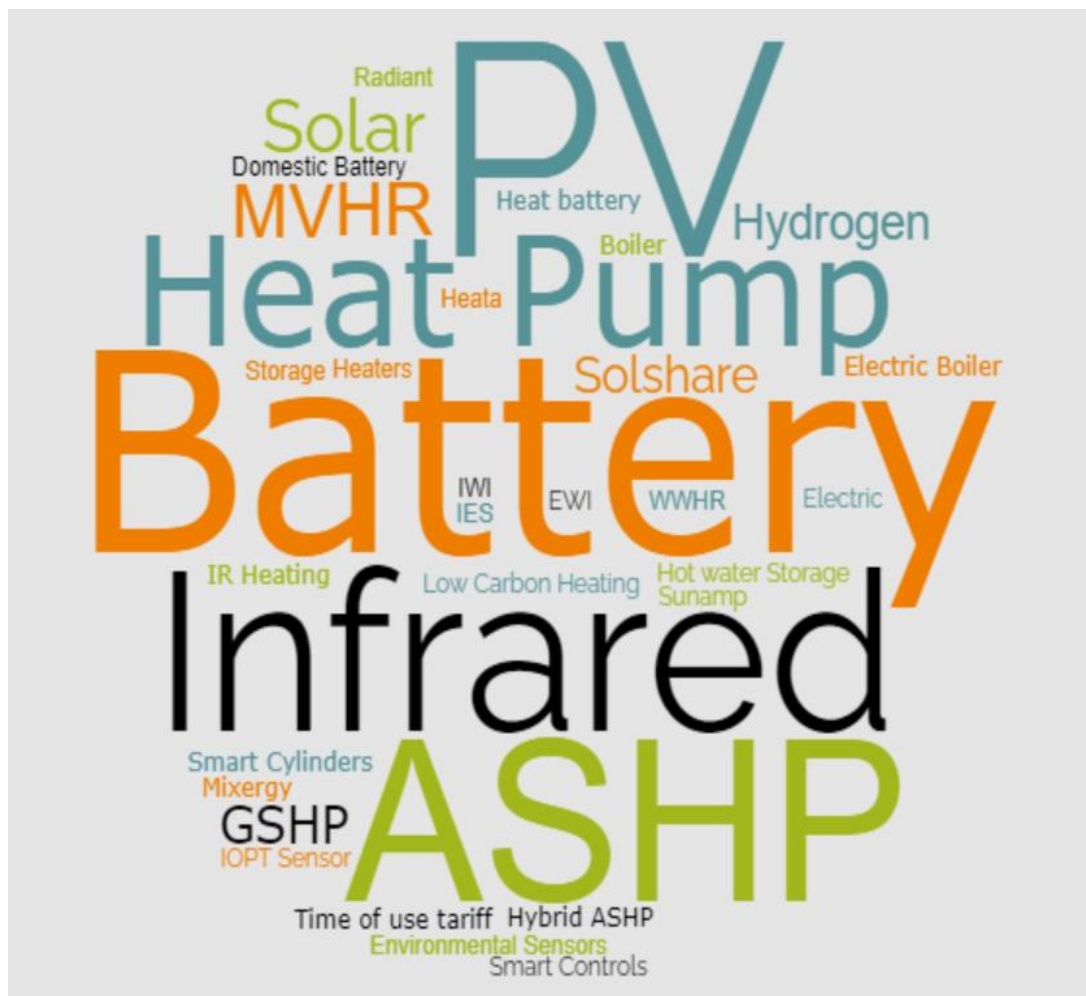
ASHP, PV&B, Sunamp, Mixergy, EWI, IWI, Infra-red, Solshare

Heat pumps, batteries, PV, H2 would be great!

Mix - Solshare for block sites, considering IR Heating, ASHP with Solar PV and Battery

infrared heating, with renewable energy supply to minimise impact on bill, have a look at system called Heata (using heat from computing to heat hot water), battery storage.

Low-carbon heating



From the results gathered here, it is clear to see that the technologies being implemented in the social housing sector in Wales are many and diverse. The most frequently referenced technologies were heat pumps, like air-source, ground-source, and hybrid heat pumps, at around 22% of all technologies referenced. Solar PV was mentioned over 20% of the time, and was closely followed by energy storage technologies, like batteries and smart thermal storage, at around 18%. Beyond this, there were a number of electric

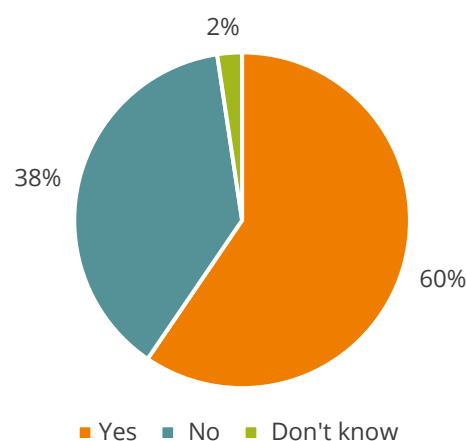
heating technologies referenced, like, infrared, direct electric heating, heat batteries and more.

Of particular note were the number of technologies being mixed and blended. This is a very positive picture for Welsh housing decarbonisation, as this diverse approach will only help to serve consumers and buildings with the best technologies for the right outcomes. Testing and verifying their efficacies and appropriateness will be key to evidencing what it means to select the best technology for the application.

A comment was raised by a respondent around the need to tie in 'technology agnosticism' with LAEP (Local Area Energy Planning). Ensuring the technologies installed are consistent with the availability of particular infrastructure or fuels, and in line with the decarbonisation plan for an area, is critical for marrying up the bottom-up approach of house-by-house retrofit, and the top-down approach lead by government policy and national targets.

QUESTION 4: IN-USE PERFORMANCE

4: Are you measuring the in-use energy performance of your buildings?



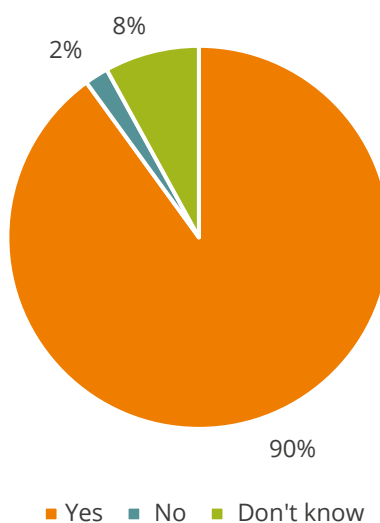
For ensuring that the measures installed in a building perform as intended, deliver on the right outcomes and safeguard against unintended consequences, using tools like in-use performance monitoring are crucial for evidencing improvements and the ongoing performance of technologies.

Results from the survey question show that 60% of respondents were using in-use performance monitoring in their housing stock. For those that do, this will ensure that the aforementioned 'test and learn' approach is being backed up by credible data and evidence. Many of these may be as a result of the Welsh Government's [Optimised Retrofit Programme](#) requirement for in-use performance monitoring and evaluation with every funded project.

A comment was made about the usefulness of in-use performance assessment to validate technologies and ensure they are fit for purpose within certain properties, but not always across the whole stock portfolio. Another comment was made around how critical in-use performance alongside smart meter demand-side consumption data will be as the UK energy system electrifies. As the UK seeks to load balance and reduce peak demands, as well as drive down the cost and carbon emissions associated with home heating and energy use, using these technologies should become a mainstay for consumers.

QUESTION 5: HEALTH AND WELLBEING

5: Are you taking steps to improve the health and wellbeing aspects of your buildings for tenants?

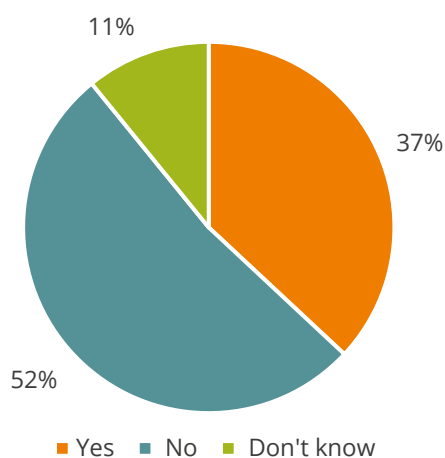


An often-missed aspect to policymaking on heat and buildings, health and wellbeing outcomes will secure a healthier future for people in buildings, remove common health problems associated with poor-quality buildings (like damp and mould, overcrowding, poor air quality, etc.) and contribute to a prosperous, happy society.

When it comes to social housing in Wales, our survey revealed an overwhelming majority of housing associations were actively improving the health and wellbeing of their buildings for tenants. [Funding policies](#) and [regulations](#) in the social housing sector are also driving this approach, evidencing the successful implementation of top-down regulations like the [Well-being of Future Generations Act 2015](#), and others within Wales.

QUESTION 6: BUILDING RENOVATION PASSPORTS

6a: Are you already using an advanced assessment tool, e.g., a type of building passport or whole-house/renovation plan?



6b: If yes, what are you using?

Consultant

SERO's target pathway modelling

Sava intelligent energy

Contracted in

Lifespan 2035 toolkit and carbon in homes module

Via EOM, Newtown

WHQS23

PAS 2035

Lifespan Carbon in Homes Module

Sava intelligent energy

IOE via retrofit assessment

Lifespan

Assets data base with additional pathway to Zero / WHA modules to provide costed investment paths

Using tools, like Building Renovation Passports (BRP) and whole-house plans, are useful for planning out what the right measures are for a building and ensure they are being installed in the correct order and at the right time. The EPC framework should evolve over time to either link into a government backed BRP or become one itself, driving a more coherent and smart approach to building retrofit across time that links in wider data to better assess a property and any available funding.

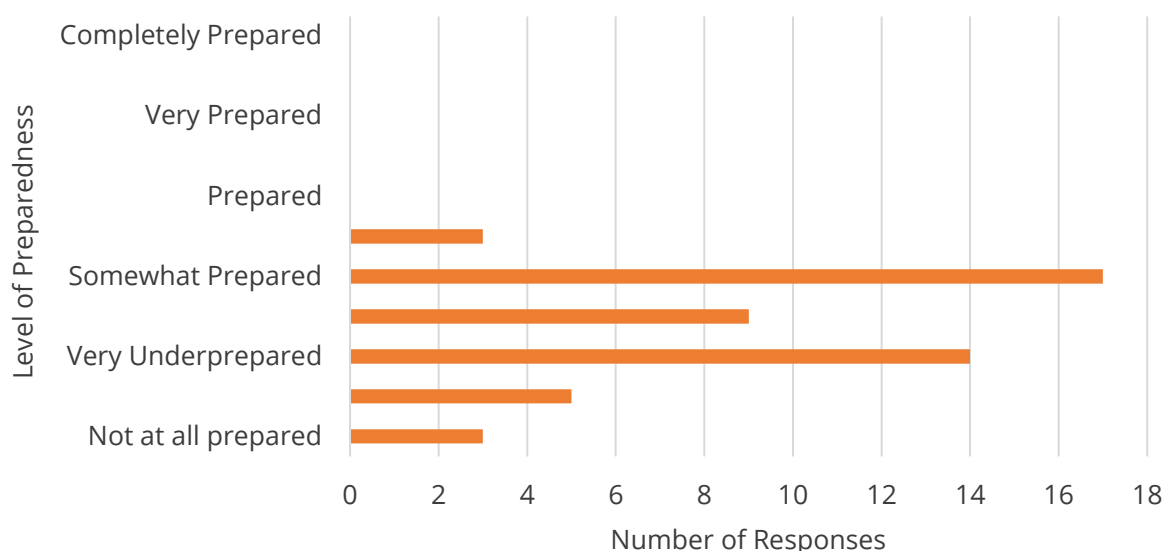
In response to our survey question, only 37% of respondents used a form of whole-house plan. Of those who did, a range of various sources and softwares were cited. Some used the government-backed PAS 2035/2030 framework and associated Medium-Term Improvement Plan (MTIP), and other third-party, end-to-end toolkits for PAS 2035/2030 compliance. There were many who contracted in consultants or third-party bodies to provide whole-stock/whole-building assessments through their own toolkits and data frameworks (Sava Intelligent Energy, EOM Electrical Contractors, SERO, Lifespan, etc.).

However, over half did not use any form of BRP or renovation plan for their stock when questioned. A comment was made around the accessibility of using some softwares, and how, for example, they are only available to Apple users and not Windows/ Microsoft-based users. It is important that the tools and softwares for helping RSLs to decarbonise are not only fit-for-purpose, but are accessible and easy to use.

It is critical that planning for retrofit improvements across the different fabric, low-carbon heating, and wider low-carbon technologies is built into a housing association's financial forecasting and budgeting, as it will help to solidify Wales' pathway to decarbonisation and allow RSLs to effectively manage the cost of the transition. The new [WHQS 2023](#) will mandate whole-stock assessments and target energy pathways for all housing associations, which, assuming the right level of support and ease of access to effective tools is given, will help to drive the sector forwards and produce the best outcomes for buildings and tenants.

QUESTION 7: SKILLS AND TRAINING

7: How prepared do you think the sector is for delivering the right skills for the challenge?



In order to effectively deliver the transition and install the myriad of technology types required, the right skills and training provision are of paramount importance. This will require clear sightlines of the supported technologies; funding and support for higher

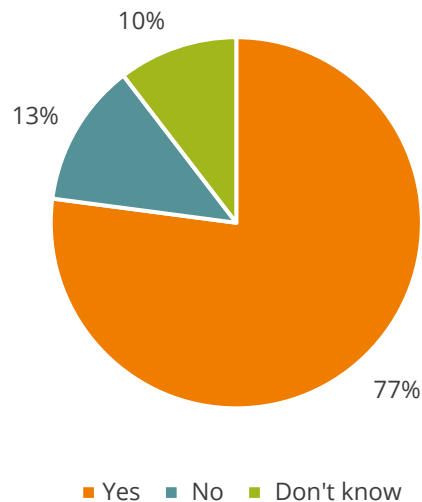
and further education, colleges, universities and businesses alike; a national skills plan for upskilling, retraining and attracting new people into the sector; among many other things. Alongside this, the types of skills supported through these schemes must be holistic and cross-cutting. Tradespeople should understand how their aspect of a retrofit can impact on other measures and facets of a building retrofit and manage this risk accordingly. This is why convening and cross-sector skills, like retrofit co-ordinators, are key for preventing unintended consequences and cutting the cost and complexity of retrofits.

As a snapshot of Wales' progression in this space today, nearly 95% of attendees thought skills in the social housing sector was between 'not at all prepared' and 'somewhat prepared' for delivering Net Zero and creating social housing fit for future generations. No respondents thought the sector was 'prepared' or more than 'prepared'.

It is clear through these results that skills in Wales are far from where they need to be, and the Government should continue working with the supply chain and with housing associations to build up clear career pathways and CPD (Continuing Professional Development) routes for those in the retrofit and renewables sector.

QUESTION 8: TENANT ADVICE

8: Do you currently provide advice to your tenants on energy efficiency and low-carbon heating?



In order to bring people along on the journey to Net Zero and ensure a just transition, it is important that housing associations develop clear lines of communication with their tenants. Many of the technologies and solutions being retrofitted into housing will require the tenant to adjust and learn, and advice and support should be given to ensure buildings are being operated at their most efficient and healthiest, and that consumers are brought along on the journey. It is also important as decisions on what happens to a tenant's home or community should be taken collectively and their comments, concerns and preferences be taken into account.

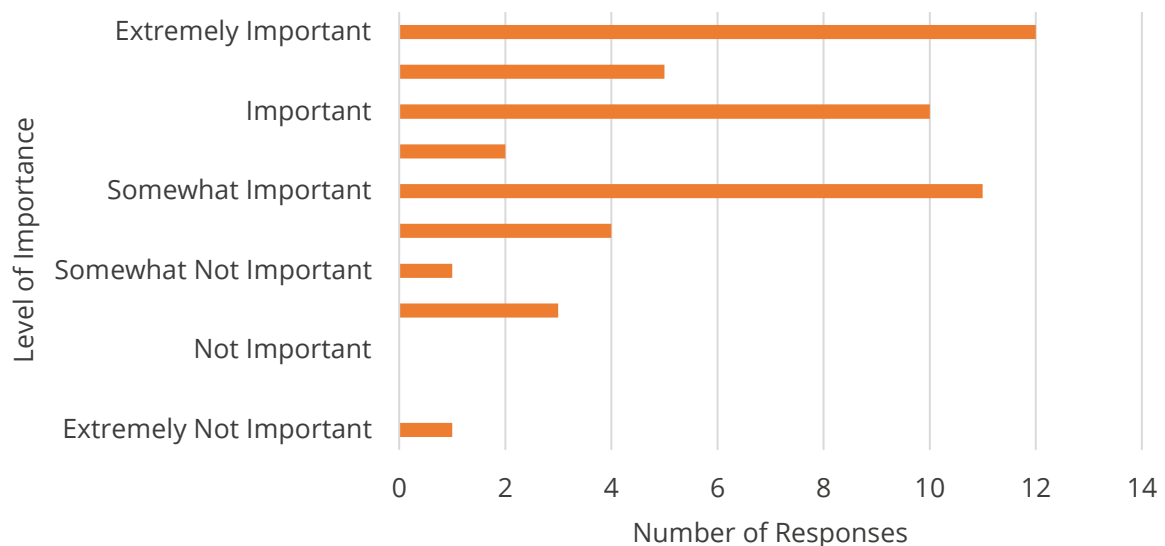
When asked about whether RSLs provide such advice to their tenants, over three quarters of respondents did. A minority of 13% did not. This indicates the already close connections housing associations have with their tenants, and the key role they have in informing people of the transition to social housing fit for the future.

One attendee commented that advice was only given to tenants in properties that are being retrofitted. Perhaps this indicates that with time and cost constraints, additional support is needed for RSLs to engage more frequently with all tenants, whether

undergoing retrofit or not. It was also noted by another that despite giving advice, they thought they “could do much better”.

QUESTION 9: INNOVATION

9: How important is the use of innovation to your plans for improving your housing stock?



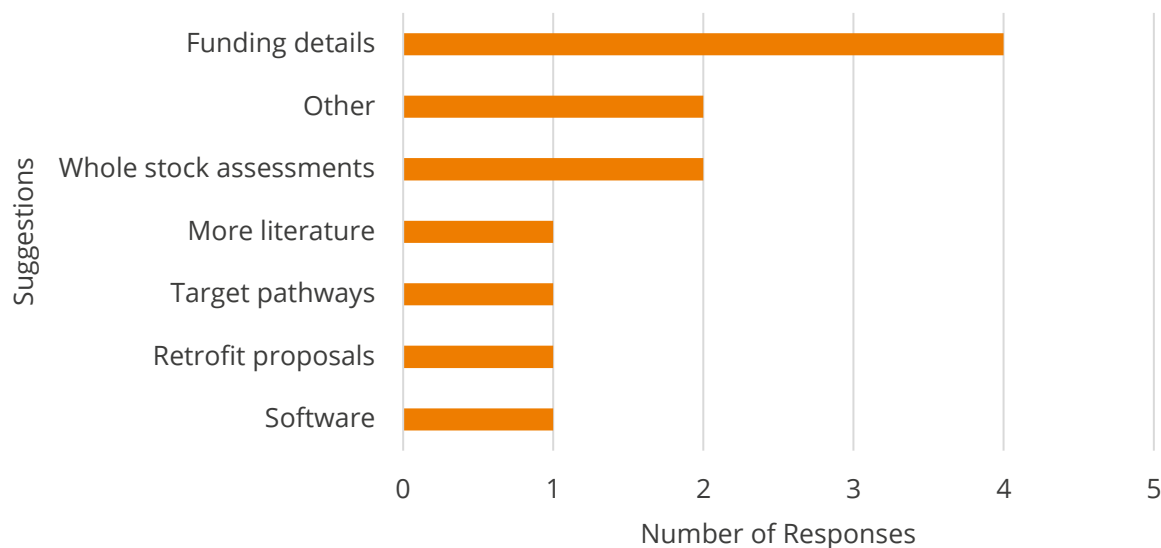
Innovation in technologies, techniques, tools and approaches is a constantly evolving and very important aspect to delivering Net Zero, healthy and cost-effective to run social housing. As we advance towards Net Zero, innovation and iteratively improving the way we deliver products, solutions, and services will only become more ingrained in the process of retrofit.

Asking how important housing associations in Wales viewed innovation for improving their housing stock, around 82% responded saying it was from ‘somewhat important’ to ‘extremely important’—the latter of which was the most frequently selected importance level, at a quarter of all respondents. One respondent noted that “innovation is critical. If what we’ve been doing for the last 50 years was the solution, we wouldn’t be in the mess we’re in now with the climate”. Another noted that “innovation isn’t about disposing of the old, just reimaging it”, and that old skills and products should be retained and continually improved. Less than 20% of responses fell below ‘somewhat important’. These results corroborate the Government and wider industry’s view of innovation and how it

will drive successive improvements within the social housing sector. The Government must continue its efforts to drive innovation within the industry and support R&D, in-situ testing, and clearer routes to market.

QUESTION 10: ADVICE NEEDED

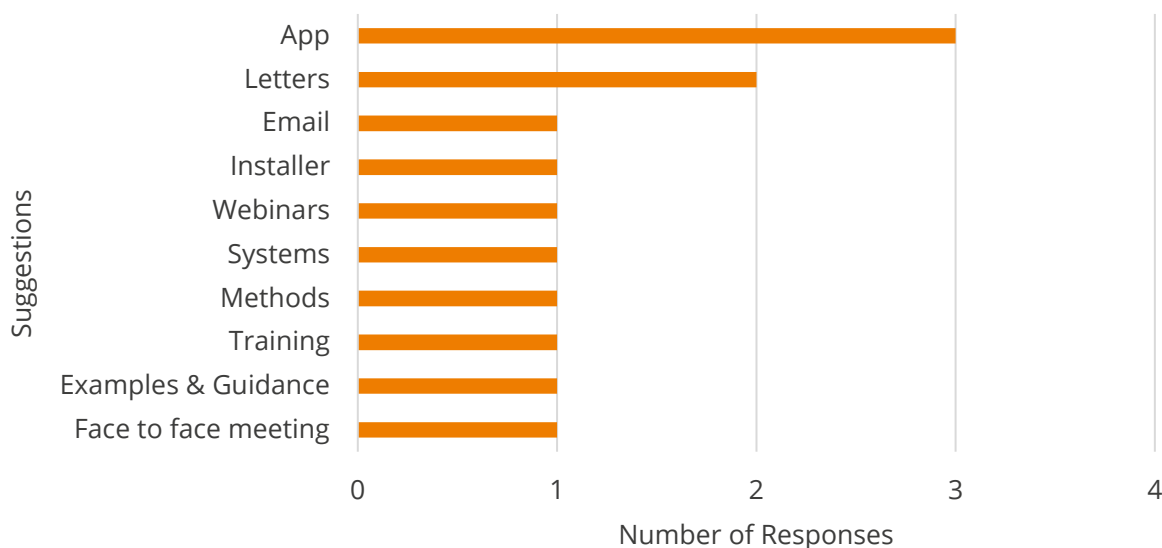
10a: What type of advice and information are you in need of from the Government and/or Industry?



The social housing sector will need confidence, direction and leadership from the Welsh Government in order to deliver a successful and ambitious transition. Only a few responses were received to this question, but it is clear that details of funding streams would be useful support, helping with budgeting and financial planning. Without this certainty, housing associations may struggle to balance typical maintenance and repair work with the additional requirements of low-carbon heating/technologies. One respondent noted that this certainty of support is important for planning capital and operational expenditure over time.

Other important advice and information points raised by respondents included whole-stock assessments and the types of softwares that would work effectively, as well as target energy pathways and how to use them to plan out the most appropriate measures for their building stock. Both will be mandated under the WHQS 2023. With the Welsh Government's recent announcement of an additional £22.5 million in funding for supporting RSLs in meeting the WHQS 2023 across financial years 2023/2024, we suspect this funding could go to best use in areas like the whole-stock assessments and target energy pathways.

10b: What format would be most useful and how? (E.g mobile app, installer, letter through the box, etc.)



We asked an additional question on what the most useful format for sharing this information and advice would be, and responses indicated that an app would help for around a quarter of respondents. However, as mentioned in a previous question response, it is key that these applications are cross-compatible, or at least have equally appropriate options for all types of operating systems and devices.

However, not all housing associations would see an app as the most helpful. This shows the important of accessibility and inclusive communication to ensure a just transition for businesses and consumers alike.

CONCLUSION

Social housing across the UK has an important role to play when it comes to leading the transition to Net Zero housing. A combination of ambitious and clearly communicated government policy and support, with a driven, well-resourced and connected social housing sector will drive a prosperous and just transition for social housing. In Wales, the policy landscape and the social housing sector themselves are already ahead of others across the UK and have the opportunity to lead the way and showcase how the transition is delivered.

It is clear from our polling results—representing a significant proportion of the social housing sector in Wales—that Welsh housing associations are already shifting the dial on Net Zero and taking progressive approaches to transitioning their buildings. A large majority are taking a fabric first, technology agnostic approach, are improving health and wellbeing, and using innovation, advanced building assessment tools, and a range of low-carbon technologies. This is very positive news, and we would encourage the sector to continue driving forward with their current trajectory and working with the Welsh Government to deliver a practical and ambitious policy framework to match. The Welsh Government are already helping to set the course for social housing decarbonisation with their Optimised Retrofit Programme Phase 3 and Welsh Housing Quality Standard 2023.

The SEA will continue to work with the Welsh Government and with housing associations in Wales to help deliver a prosperous Net Zero and social housing fit for future generations.



To find out more please contact:

Ben Copson

T: 0121 709 7740

E: ben.copson@sustainableenergyassociation.com

W: www.sustainableenergyassociation.com