



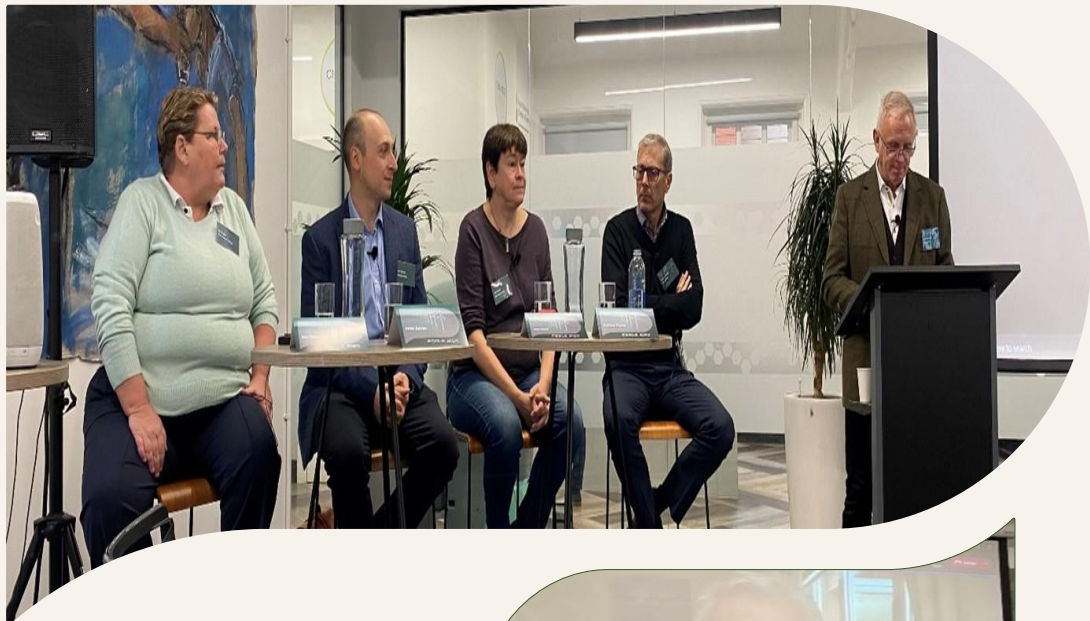
At the end of last year Poole Dick held our second 'Preparing for a Net Zero Future – Are we on track?' breakfast event, focussed on the Retrofit market. The event concentrated on the residential and commercial sectors, sharing best practice and exploring the challenges developers and landlords face across both the public and private sector to make their building stock compliant.

The event was again held at the Greater Manchester Chamber of Commerce and saw our panel of five industry experts **Judy Noah** (Director of

Development at One Manchester), **Bev Taylor** (Energy & Environment Director at Bruntwood), **Tim Wood** (Director of Innovation & Sustainability North at Equans), **Peter Bartley** (Sustainability Manager at AEW Architects) and **Andy Bayley** (Director at Poole Dick) answer a series of questions posed by our host **Stewart Grant** (Consultant at Poole Dick and AEW).

To kick things off, Tim Wood provided an overview of some completed decarbonisation schemes, the challenges faced and lessons learnt from these case studies. Peter Bartley gave an update on COP27 outputs before Stewart Grant facilitated a Q&A session with the panellists and audience.

The below summarises the points/observations made by the panel.



Bev, Peter, Judy, Andy, Stewart
And Tim via video link



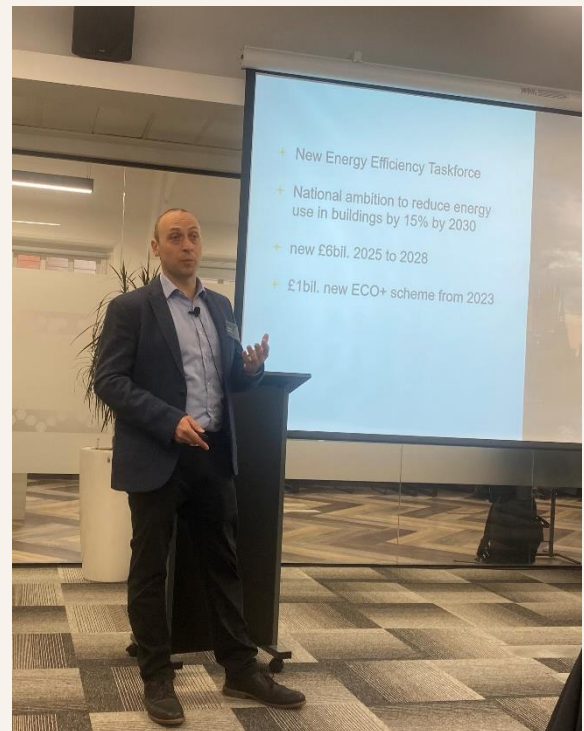
Context – Case Studies



- Completed retrofits resulted in reducing energy consumption from 350kWh to 70kWh per week.
- Successful retrofits were the ones that engaged residents throughout RIBA stages 1 to 7.
- Give yourself time to gather the data and complete the design to address the targets set.
- Ensure the supply chain has the rights skills and capabilities.
- Assess product performance, consider the availability, and lead times of products.
- To ensure you don't fall foul of funding requirements understand the accreditation system and upskill the work force to meet these requirements.
- Do not underestimate the time needed preconstruction works. Getting it right upfront will avoid delays/abortive works and disruption to tenants once work starts.
- Think about what additional works will be required as part of the fabric efficiency improvement works and plan these in to avoid future abortive works.
- Although capital cost is higher there is a 390% improvement in using ground source heat pumps instead of air source heat pumps

Context - COP27 update

- Pledges made at the previous COP 26 have proved insufficient in keeping global warming within agreed parameters.
- A new climate cost agreement was ratified to provide aid to the most vulnerable nations impacted by global warming.
- Much more needs to be done to rectify our carbon footprint and the impact on our planet.
- Focus on reducing our reliance of materials with high carbon footprints like steel and concrete
- Business and landlords need to look at how they can optime their heating ventilation and air conditioning systems which can account for 40% of an office/buildings energy cost.
- Manchester has several initiatives: the Low Carbon Academy, Your Home Better and Bee Net Zero



What is most important for you to keep you decarbonisation aspirations on track

- Good leadership with a passion/desire for it to happen.
- Form part of the business plan.
- Need to link the fabric first approach with resident use.
- Fabric first is still the priority.
- Need to understand the technologies available and make informed confident decisions.
- Know your assets and have a plan.
- Know your occupiers as this adds a layer of complexity because you rarely get to work on empty buildings.
- Need for landlord and tenants to work together with a shared vision.



How ready is the industry for SHDF Wave 2.1



- Ambitions need to reflect the budgets/funding.
- There is four billion pounds worth of funding over the next few years.
- This level of funding will have a significant impact on the available labour and materials to meet the demand.
- Designers need to have greater training on retrofit to ensure a quality service, the devil is in the detail.
- Supply chains need to upskill the teams on how to install.

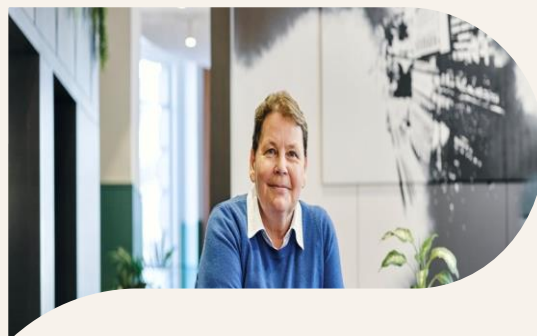
How do you control cost in a volatile market and ensure clients are getting best value?

- Collaboration and working with an experienced team.
- Learning from previous schemes and sharing this learning.
- Continuity of work will allow contractors and their supply chains to plan and secure materials in advance.



How does Bruntwood priorities the works?

- From April 2023 all business will need a plan, but Bruntwood is already ahead of the game with a published net zero strategy.
- Collect data on your assets and stick to your net zero carbon strategy.
- Look at lease events and integrate into your annual maintenance programme.
- Keep you customers informed of your plans and look at how you can work together to minimise impact of customers business.



How do you plan with confidence your retrofit programme given the huge cost to decarbonise your housing stock?

- Planning is critical as your unable to rely on grant funding and these days housing providers are facing more stick than carrot.
- Don't plan for the now, plan for the future when looking at your new build development plans, incorporate new technologies and future proof your builds to avoid future costly retrofits.

What is the single most important thing needed to accelerate retrofit delivery and achieve government targets?

- Forward planning is critical; understand the brief, complete the designs, resolve the funding and requirements of funding draw down all before works start on site.

2023 sees the new MEES (Minimum Energy Efficiency Standards) Regulations requiring landlords to hold minimum EPC rating E, how will Bruntwood ensure compliance.



- With over 24,000 offices not meeting EPC E there is a big challenge for landlords. You need to start by understanding the strengths and weaknesses taking a holistic view of your assets and have a strategic plan, but this will not be realised without funding being made available

How do we make Retrofit easier to implement and more of a priority?

You need improvements/better coordination and collaboration between Planners, Building Control and Funders. Decisions need to be made quicker and the whole process more streamlined and simplified.

- There needs to be funding made available for private landlords and owners.
- The benefits of retrofit need to be better understood in order to incentivise owners/landlords to invest and improve their properties. Currently landlord pays but resident benefits!



The UK has some of the poorest thermally efficient homes in Europe, previous attempts to address this have been scrapped e.g. ‘The green deal’ what have we learned?

- Government initiatives need to be clearly thought through and avoid problems of high interest rates which resulted in low take up, avoid having schemes that are restricted because of your income.

How is the housing industry gearing up for the new roles PAS2035?

- Better data gathering to determine the best strategy to achieve min EPC C. Assessors need to be well trained and currently there are not enough. Clients have started to employ their own assessors, coordinators, designers etc., but we are still a year off having reliable, quality skilled resource to undertake retrofit installation efficiently and successfully. Don't forget PAS 2028 new standard for retrofitting energy efficiency measures in non-domestic buildings is coming this Summer!



Do we need longer term commitment/investment into skills training?

- For years the construction industry has struggled to attract people and we certainly have a skills crisis, which will only get worse as these new PAS are introduced with new roles to be filled.
- We need confidence that support, and funding will be forthcoming, need the reassurance that it's worth investing time and money training up this resource.
- Need long term government policies that will not be affected by change in political landscape.

If we are to oversale the 1.5 deg increase in global warming by the end of the century, do we need to start designing/specifying buildings where the fabric is inherently more climate resilient at the outset?

- It's been said many times but the fabric first approach is still the best way forward, you shouldn't just rely on technology.
- There is no assessment for overheating in the PAS. This needs consideration as we don't want to go back and undertake further retrofit works.

In terms of measuring Energy Performance, are we seeing performance gaps between design modelling and real-life performance?

- The SAP calcs are not a design tool but the industry uses them this way. We need to look at the connection between comfort and technology. As a client that has built to passivhaus standards its was useful to look at fabric efficiency and measure these metrics rather than EPC's.



Fundamental to retrofit is that most of the time, you're working with existing tenants, occupiers – real people. How do you engage with them and get them on board with the journey?

- Engagement from the start and throughout and post retrofit is crucial. We need to have broader conversations and a shared vision from various disciplines. Need more guidance and case studies.
- The biggest challenge faced by One Manchester was getting residents not to use gas for cooking and heating.
- Communication with residents is key. Concerns about new technology e.g., ease of use, functionality, size of ASHP in gardens etc. Concern about how disrupting the works was probably led to residents dropping out.



What for you is the single most important thing to accelerate retrofit delivery

- Collaboration and sharing knowledge.
- Transparency of date and shared learning.
- Early engagement from residents and forward planning.
- Innovation and finance as well as long term planning and make every investment decision count.
- More innovative ways to get the finances to stack up, become less reliant on grant funding.

