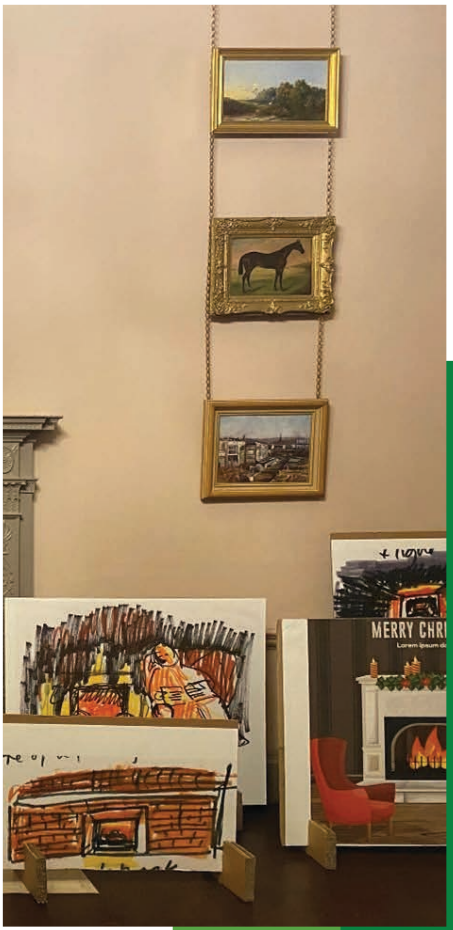
A Public Conversation about the Past, Present and Future of Home Heating

Clifton Park Museum, Rotherham
12th February 2025



Professor Aimee Ambrose (Sheffield Hallam University)
Professor Becky Shaw (Birmingham City University)
Dr Kathy Davies (Sheffield Hallam University)
Jenny Willis (Shared Future)

Introduction

This short report seeks to capture key points to emerge from a 'public conversation' about home heating which took place at Clifton Park Museum, Rotherham in February 2025. The public conversation was held as part of a project called 'JUSTHEAT: Looking Back to Move Forward: a social and cultural history of heating In Europe' that aims to use reflections on heating arrangements of the past to distil learning for the present transition away from fossil fuelled heating (the low carbon transition). The aim being to ensure that plans for the transition are socially and culturally sensitive and respond to our preferences for heating our homes. Alignment with our needs, wants and expectations regarding home heating will be key to securing widespread participation in the transition.

JUSTHEAT trialled the concept of public conversations about the past and future of home heating. In this context, public conversations involve bringing together citizens and 'decision makers' (those working in policy and practice who inform or implement policies related to heating decarbonisation) in discussion about what they hope for, and perhaps fear, about the low carbon heating transition. The approach encompasses a series of key principles that distinguishes it from a traditional focus group:

1. It targets participants whose views are likely to be underrepresented in debates about our heating futures, perhaps because of their socio-economic circumstances, their age, ethnicity, location or the type of housing they live in.
2. The voices of citizens take precedence, with decision makers occupying 'listening mode' for the most part.
3. The conversations should be non-technical and based around lived experience. They use a historical approach, where past experiences of keeping warm or feeling cold at home, help participants to identify what they want and need from the next phase of home heating, by reflecting on what they want to preserve about past ways of heating and what they never want to return to.
4. The conversations ideally take place against the backdrop of relevant visual stimulus – in this case, artwork produced as part of the JUSTHEAT project in response to the oral histories by Becky Shaw – lead artist and project Co-Investigator.
5. The decision makers present are exposed to different perspectives on familiar problems and are asked to say what they will take away from the conversation and how they will act on it.

A series of public conversations were trialled through JUSTHEAT across different locations in Sweden, Finland, Romania and the UK. Through these initial attempts, we were able to hone the approach, leaving us well positioned to deliver our largest and most effective public conversation yet, in Rotherham, South Yorkshire. This was made possible by a kind philanthropical donation to South Yorkshire Sustainability Centre (SYSC), for which we are very grateful.

Holding a public conversation about the past and future of heating in Rotherham is important, as the area is at risk of being 'left behind' in the transition to low carbon heating. This is partly due to the dominance of coal mining in the area, which delayed the shift from coal powered heating to natural gas in the area by several decades in some areas, which means that many communities may not feel ready for further change so soon. The area is also in the 20 per cent most deprived districts in England, which means that the energy prices crisis that gained momentum from 2022 and is ongoing, will be felt acutely in the area.

Who took part?

Public conversations are typically small scale, round table events structured around 2-5 specific questions that lead participants from thinking about their past experiences of heating through to their present arrangements and distilling from that, their position in relation to the current transition- their hopes and fears. To secure the required level of participation, we tend to approach a larger number of prospective participants than we need. On this occasion, it was entirely logical to invite those, living in Rotherham, who contributed oral histories of heating to the JUSTHEAT project to participate in the public conversation. In the event, many of those invited to take part accepted the offer and the event was attended by ten 'lay' participants who were then joined by six people attending in a professional capacity.

Those participating in a personal capacity were mostly retired. They came from a mix of areas of Rotherham, including the former mining town of Maltby (where the last mine closed in 2013),

Whiston (a middle-class suburb) and Wentworth (a historic village belonging to the Fitzwilliam private estate where most households rent their homes from the estate). Most participants shared a working-class background with some becoming more socially and economically mobile during their lifetimes. The decision makers present included two local councillors including cabinet members with relevant portfolios for energy and environment; a senior officer from the South Yorkshire Mayoral Combined Authority and three local authority officers from Rotherham Metropolitan Borough Council, working on aspects of domestic decarbonisation. An independent practitioner from an organisation specialising in community participation moderated the discussion, with the JUSTHEAT UK research team also present.

Taxis were arranged to enable the participation of those without access to private transport. This provision was vital in securing the participation of the majority of those who attended.

What happened on the day?

Participants were invited to arrive from 10am and most arrived around this time. They were greeted by a member of the JUSTHEAT team, who they already knew, and were taken to The Kitchen – a room in the museum which houses a Yorkshire Range (a traditional means of heating homes, warming water and cooking until around the 1950s). Here they were offered a hot drink, cake and the opportunity to listen to oral histories of heating gathered in the local area as part of JUSTHEAT. Also on display were booklets about project findings and a series of lenticular postcards and short films imaginatively and playfully juxtaposing very different eras in home heating, prepared by JUSTHEAT lead artist, Becky Shaw.

Image shows The Kitchen at Clifton Park Museum with a film showing art work by Becky Shaw.

Whilst participants enjoyed refreshments, the team circulated to introduce or re-introduce themselves. There was lively conversation in the room between participants. From 10.45, we began to usher participants into another space where artwork from the project, much of which was specific to the oral histories gathered locally, was displayed. A large table was laid out in the middle of the room, amongst the art. It was at this point that those participating in a professional capacity arrived (due to time pressures, they were invited to join a bit later, if they wanted to).

Image shows the public conversation in progress.

Participants were asked to wear a name badge to aid discussion and were issued with a £30 Love to Shop voucher to thank them for sparing the time to take part recognising that it is important to acknowledge the time commitment made by participants. After a brief bit of context from project leader, Aimee Ambrose and an explanation of the artwork on display by Becky Shaw, everyone briefly introduced themselves and why they had come. Many participants chose to start reflecting on their own heating arrangements past and present in their introductions.

Following this, participants were asked to talk in groups of two or three about what type of heating they gain or have gained most enjoyment from. In other words, what type of heating achieves 'thermal delight' for them. The discussion was lively and was eventually guided towards discussion of how those present are feeling about the next phase of home heating, which is likely to centre around technologies such as heat pumps and require higher insulation levels in homes. The discussion was rounded off by allowing the decision makers present to reflect on what they had heard and what they are likely to take away from the discussion into their practice.

Key points from the discussion were captured on a flip chart in real time in front of participants, so that they had the opportunity to correct anything that had not been captured accurately. The discussion was intended to last for one hour but went on for around 70 minutes. Participants did not hurry to leave and stayed after the discussion ended to talk to each other, to the team and to view the artwork in more detail.

What emerged from the discussion?

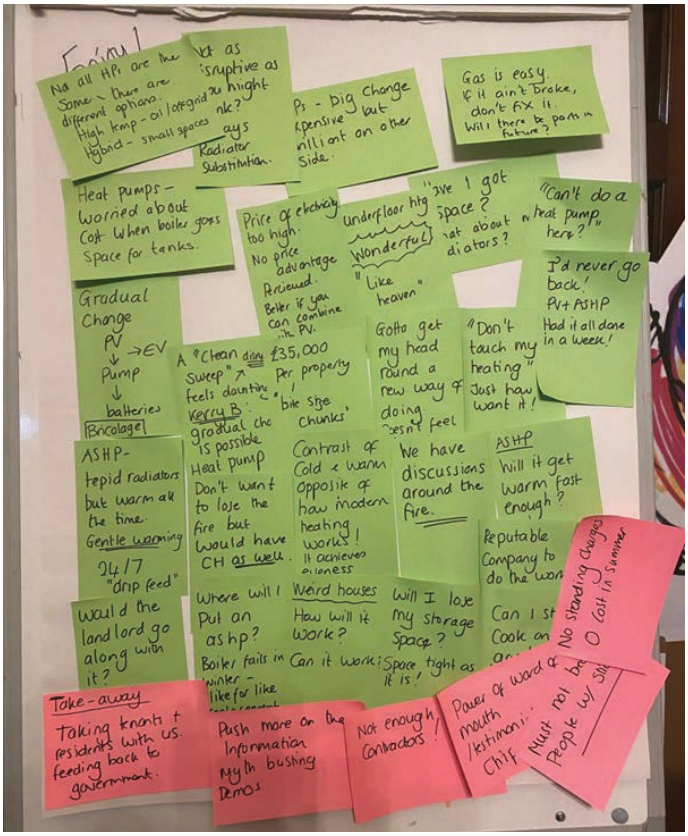


Image shows how the discussion was captured in real time on a flip chart.

Within the group, two participants (both local Councillors) out of 16 had an Air Source Heat Pump (ASHP). Both had chosen to install them and were very pleased with them. However, the majority of participants had heard of heat pumps and understood that they were widely regarded as the preferred way of heating homes in future. There was also a good understanding that gas fuelled boilers would be phased out in the coming decades, although some participants had not heard of heat pumps. The discussion about the ways of heating that bring us the most enjoyment naturally gravitated towards comparing current/past arrangements with what was understood about heat pumps. **Different eras of heating were compared in both practical and experiential terms, with the implications for energy costs discussed much less.**

In one group, discussion started with a remark that 'coal was great, you had a tonne of it delivered every week and you didn't have to worry.' This remark was made my someone who had lived their whole life in the coal mining community of Maltby. Their father and husband were miners and therefore the household will have qualified for concessionary coal, which was part of a miner's remuneration package. She went on to explain that she missed this era because there **were few concerns about the cost of fuel when the mining industry was booming** and like many JUSTHEAT participants, **they enjoyed the experience of the fireside both because of the multi-sensory experience it offered and the familial togetherness it enabled.**

However, most people in the room were now using mains gas to heat their homes and this was the focus of much of the reflection. **Gas, it was felt, was a carefree way to heat the home, albeit getting more unpredictable in terms of costs. It was remarked by one person, that if gas is working, why do we need to change it.** They added though that they were concerned that they would soon be unable to get parts to repair their 16-year-old boiler, showing an awareness that the era of gas heated homes could not continue indefinitely.

A small group of participants lived together in a sheltered housing scheme which was heated via a **district heating network – they reported abundant heat that was included in the rent. They were very appreciative of the arrangement.** It was also noted that district heating networks are often 'fuel agnostic', so the fuel used can be substituted without the end users noticing a

difference. District heating provides less than two per cent of the UK's heating needs but has been advocated by successive governments as an efficient, flexible and potentially low carbon (depending on the fuel used) means of heating homes in dense urban areas.[1] However, concerns about the lack of choice households on a district heating network can exercise over their energy provider have held back progress,[2] amongst other things.

A range of practical concerns were expressed regarding transitions to a heat pump, many of which were based on a lack of information about the conditions required for heat pump installation. A key concern, widely expressed, was that an ASHP would require a good deal of outdoor space and one person mentioned that they were proud of their garden and worried that it would spoil the appearance of it.

Image shows a wall mounted ASHP. Source: Our Heat Pump Packages | Lochinvar

Concerns about the space a heat pump would take up extended to the interior of the home. **Many participants seemed aware that they may require larger radiators in their home for it to be compatible with a heat pump. This was a concern in terms of the disruption** of fitting the new radiators and the additional space taken up by larger radiators. One participant thought that this process of changing the heating system could take weeks, but **those with heat pumps shared that it was quicker than you might imagine – a matter of days, not weeks.**

Participants were also aware that ASHPs would also require a hot water tank (some were under the misapprehension that they needed two) and many felt that they would not have room for this or that they would lose storage space to it. Someone, who has a heat pump, attempted to reassure them that the tank can go in a loft, where this is available, and can there be kept out of sight.

The issue was raised of unconventional house types and how a heat pump would work in, for example, a heritage home or a home with an unusual layout. One participant who lives in an old, stone build cottage had felt ready, a couple of years ago, to go for a heat pump, only to be told by the installation company that her home is not suitable for one. It was remarked by a professional stakeholder that **there are now types of heat pump that might be able to cope to with highly energy inefficient, older homes.** It was too late for that individual, who had now opted to replace their gas boiler. Concerns were also raised about whether there were enough suitably qualified installers and people capable of servicing heat pumps. One participant who was about to have a heat pump installed agreed, recalling that it had been difficult to find an installer, although they eventually had.

This discussion raised the issue of 'moments of change' where opportunities might exist to transition a household to a more efficient way of heating. Such moments might include a boiler break down or a house move, but it was remarked that these are stressful times, where a fast solution is needed, often leading to replacing a heating system like for like. A boiler failure in summertime, might create space to consider an alternative.

Another concern was that the price of electricity remains considerably higher (about five times higher per unit) than gas, which made participants feel that switching was not logical. What did not arise in relation to this discussion was the fact that **ASHPS offer three to four times the heat output for the same energy input compared to a gas boiler**, which goes some way to offsetting the higher cost of using electricity for heating. A well-insulated home will further boost the efficiency of the heat pump. It was pointed out that **installing**

1 Opportunity areas for district heating networks in the UK: second National Comprehensive Assessment - GOV.UK
2 District Heating in the UK Policy Challenges and Solutions

Photo Voltaic (PV) panels before or at the same time as installing a heat pump, can reduce the cost of running a heat pump significantly. But, **for many present, the costs associated with installing both a heat pump and PV panels would be prohibitive.** A representative of the local council estimated that **a comprehensive retrofit package (insulation, heat pump, PV panels etc) would cost around £35,000**, a sum which could be reduced via various government grants, such as the Boiler Upgrade Grant, which contributes £7,500 towards the cost of a heat pump.

Discussion then took an interesting turn towards how **a comprehensive package of changes to the home could make the home feel unfamiliar and alien** and would necessitate learning a new way of doing things. These amount to aspects of the debate around comprehensive retrofit that are rarely discussed. **This led the group to conclude that a more gradual transition, broken into 'bite size' chunks felt more manageable.** One person, who had comprehensively retrofitted their home, agreed that this was the approach they had taken, first installing PV which led to the purchase of an EV (prompted by the realisation that they could charge it at reduced cost due to the PV), then getting an ASHP then moving on to install batteries to ensure that electricity generated during daylight hours, could be used at other times. They had taken a modular approach to transitioning to a low carbon domestic energy system and were pleased with the results. These views chimed with the findings from the broader JUSTHEAT project that **the idea of a 'clean sweep' - where we clear away one way of heating and powering the home in favour of a different way - was daunting** and unappealing. Although this view has to be considered in the context of the urgency of the climate crisis and the pressing legal targets to reach Net Zero by 2050 at the very latest.

In response to this, several of the professional stakeholders present reflected that whilst they had been advocating rapid and comprehensive changes to homes, they might make more progress if retrofitting was undertaken in stages. This links to a wider finding from JUSTHEAT, that, across all the participating countries, **participants want to hang onto familiar ways of heating, whilst also making concessions to the need to transition to low carbon heat sources.** They want multiple options at their disposal, for example: being able to use a log burner alongside a central heating system, perhaps powered by a heat pump. The same was true of those in the room – they were mostly willing to make changes, as long as they didn't have to part with cherished ways of heating. Two participants, a married couple, used a wood and coal fire to heat the farm house that they were long term tenants of. Whilst they would consider a central heating system of some sort, they wanted to hold onto the fire as a supplementary heat source. They remarked that family discussions about all sorts of important issues take place around the fire - emphasising how **fires can often be seen as the nucleus of family life.** They also talked about how, when they come in from feeding their cattle, **the intense radiant heat of the fire provides the most satisfying way to warm their bodies** and purge the cold. Linked to this, **concerns were widely expressed about the allegedly insipid heat that an ASHP generates**, that is less vigorous that that achieved from burning gas. **Those with heat pumps explained that yes, radiators get less hot with a heat pump but that they provide a good level of heat, just gradually and gently.** They explained that, if used correctly, a heat pump should run at a low level 24 hours a day, and this is key to maximizing its efficiency. This is in contrast to a gas-based system, where it is switched on when needed and the temperature of the room climbs fairly rapidly.

Those who had heat pumps were very happy with them, which is consistent with the findings from the wider project. JUSTHEAT also revealed that **changing home heating arrangements feels worth it, when the transition delivers a step change in comfort.** Underfloor heating emerged as an approach to heating that delivers this kind of step change. One participant, who has underfloor heating, agrees that it has been a revelation in terms of comfort.

Towards the end of the discussion, a professional stakeholder pointed out that **there are now many varieties of heat pump to fit different circumstances**, including high temperature heat pumps for off grid settings and hybrid heat pumps, suitable for small spaces. This was a surprise to many around the table and we pondered, why we aren't seeing marketing for these innovations. **Why aren't the manufacturers, or even government, working to convince us to give heat pumps a try?**

We rounded off the discussion by asking the professional stakeholders what they had heard during the discussion that would stay with them. They made the following points:

- **Word of mouth is important in selling the transition**, sharing experiences between neighbours and first-hand testimonies about life with low carbon heating systems is a powerful tool in promoting transition.
- **We cannot force people** ('beat them with sticks') to participate in the transition, we need to emphasise what there is to be gained. The transition will not be possible unless we have the consent of communities to proceed.
- **We need to ensure there is more accessible information available** about technology like heat pumps and what the transition to them involves, to avoid misinformation and misunderstandings.

Feedback

A short evaluation form was issued to participants. 12 were completed and returned. All of the returned forms rated the event 5/5. There was consensus, amongst those who left a comment, that the event had felt informative and enjoyable. Comments included:

'Very informative. It was good to hear a lot about the future of domestic heating as well as the nostalgia.' This comment really emphasised the value of reflecting on past experiences as a way into thinking about what happens next.

'We need to build more resident engagement into out retrofit planning.' This suggests that the event had highlighted the learning and insight that becomes possible when you give citizens space to reflect on a topic that, although central to their daily lives, they are rarely asked about.

'Very interesting, especially about heat pumps. Learnt a lot about them.' This comment highlighted how, having a mix of people who had heat pumps and those that didn't, in one place, allowed for knowledge exchange and challenging misconceptions.

Above all, the comments suggest that the event was enjoyable. For example: *'Really informative, so pleased we came'* and from another person, *'I'd be pleased to do that all over again.'* Making discussions about the future of heating enjoyable, rather than daunting and technical, feels important to broadening who is involved in the debate. When we are enjoying ourselves, we are receptive to new information and alternative views and we are more likely to open up about our own thoughts and feelings. In this sense, the discussion was an excellent example of the power of 'social learning.'

Conclusions

The strong attendance and active participation that the event attracted suggest that the format adopted is attractive to members of the public including those not typically engaged in debates about energy futures or the future of their homes. The fact that six professional stakeholders made time for the event at a time of considerable policy flux (following the formation of a new government in July 2024) suggests that the event offered them valued access to a group of residents, who might be considered 'hard to reach'. The lively discussion we witnessed suggests that this topic is interesting to people, even those who aren't actively seeking out opportunities to discuss it, and that it matters to them.

Those present had an awareness of the need to transition to low carbon heating systems and that the era of fossil fuelled heating would come to an end in the coming years. They expressed a lot of concerns about the practical, experiential and cost related implications of switching to a heat pump and focussed more on the equipment itself (the heat pump) than the accompanying changes to the home, such as bolstering insulation. Many of the concerns expressed are unlikely to be as significant as feared by those expressing them and the need to reduce misconceptions about the risks and benefits of heat pumps was underlined. Indeed, the conversation held went some way towards dispelling or at least challenging misunderstandings amongst those present, demonstrating the value and power of creating opportunities for the exchange of knowledge in social settings (social learning).

The professional stakeholders present particularly noted how difficult it can be to contemplate a ‘clean sweep’, where established ways of doing things are rapidly replaced by a different way and how the rapid and comprehensive retrofit of a home, could be unappealing and unsettling. They left understanding that people don’t want to limit their options regarding heating but they are willing to add low carbon sources into the mix. They also left understanding that modular, or ‘bite size’ approaches to the transition are likely to gain more traction.

Next steps…

We propose to take several steps to ensure that the learning from the event is disseminated and embedded in practice:

- Publish the method and findings as an open access academic article in an international journal read by practitioners and academics, such Energy Policy.
- Set up a meeting with the professional stakeholders present in one month’s time to follow up on how they are planning to take forward the learning in their practice. We will also discuss how the evidence from the wider project might also be channelled to supporting their work to advance the low carbon transition in an inclusive and socially and culturally sensitive way.
- To follow up with the same group again after six months, to help ensure that residents perspectives are not forgotten in the longer term.