

# RETROFIT ENGAGEMENT IN GLOUCESTERSHIRE: Exploring new approaches for the county



COTSWOLD  
DISTRICT COUNCIL



CHELTEMHAM  
BOROUGH COUNCIL



Forest of Dean  
— DISTRICT COUNCIL —



## Funded by:

South West  
**NET ZERO  
HUB**



Department for  
Energy Security  
& Net Zero

**WEST OF  
ENGLAND**  
Combined Authority

& supported by **Climate Leadership Gloucestershire**

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## INTRODUCTION

Gloucestershire's six District Councils, alongside the County Council, have worked in partnership for some time on retrofit action via the public sector partnership- [Climate Leadership Gloucestershire](#).

Three of the county's District Councils- Cotswold, Cheltenham and Forest of Dean- came together to bid for funds to recruit Retrofit Engagement Officers, dedicated to driving awareness of home retrofit within their respective Districts. These roles were also set within the wider context of the work being done by all Gloucestershire councils to offer [advice to those in fuel poverty](#) and a [platform](#) for those able to finance measures. The goal of the project was to trial and develop innovative approaches to retrofit engagement, that might be expanded and adopted across the county, and beyond.

The councils were successful in obtaining funding for this project from the South West Net Zero Hub's Local Net Zero Grant, with Authorities providing match funding towards the roles.

The funded project had the following objectives:

- To recruit the three Retrofit Engagement Officers
- Survey residents on their awareness and understanding of retrofit and energy efficiency measures
- Deliver a retrofit headline engagement event within each District
- Take forward further engagement initiatives and activities
- Engage 2500 households below EPC C; with a minimum of 85 households working to progress installation measures in the first 12 months.

The three officers were encouraged to experiment with varied and novel engagement approaches, looking to address the particular challenges within Gloucestershire, such as the high amount of traditional and heritage properties in the county; and the high proportion of households reliant on oil heating (15.9% of households in the Cotswolds and 18.9% of households in the Forest of Dean relying on oil heating)<sup>1</sup>.

The officers employed several approaches detailed in this report, including large engagement events; town and parish engagement; home visit services; rural heat network exploration; trade partners demo events; and trialling green open homes.

Ultimately the officers were successful in meeting the targets set out for the project- seeing commitments for measures in 88 properties, with a carbon saving of just under 170 tonnes. They identified real opportunities for further work in the county. However there have been challenges and constraints faced, particularly around resource required to marshal effective engagement in a challenging landscape. This type of local government retrofit engagement has previously been tested and pioneered predominately in urban metropolitan areas and it is hoped that this report will serve as useful evidence and information for other rural areas across the country.

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<sup>1</sup> [housing-briefing.pdf](#)

## SUMMARY OF ACTIVITY

All Retrofit Engagement Officers spent the early weeks in their roles gaining insight into immediate opportunities for engagement, and forming initial pictures of householder motivations via surveys- on views and barriers to taking forward retrofit measures. This information informed the officers' approach to activities, which are summarised for each council below. Subsequent retrofit measures, or intention to take forward installations, was monitored via follow-up surveying following the activities.

### Cotswold District Council



#### Headline event: 'Drive and Thrive' – 6th March 2025

This event was held in central Cirencester, organised in partnership with Let's Experience Electric: a company who collaborates with local councils and businesses to showcase electric vehicles and related infrastructure. LEE organised the electric vehicle side of the event, with the Engagement Officer arranging the electric based energy efficiency exhibitors and guest speakers.

The event saw over 200 attendees; 16 retrofit-focused stands; nine expert-led sessions; alongside 40 electric vehicles displayed.

### Cotswold 'Drive and Thrive' Event

- 233 attendees
- 16 retrofit-focused stands & exhibitors
- 9 expert-led talks on retrofit, heating homes, and EVs
- 40 electric vehicles displayed

**Discover Energy Efficiency & EV Solutions for Your Home!**

**drive & thrive**  
Plug into the future.

**Cirencester Market Place & The Corn Hall**  
Thursday, 6th March 2025 | 10am - 4pm

- **Test Drive Electric Vehicles:** Experience the latest EVs!
- **Save Money & Find Grants:** Home energy efficiency made easy.
- **Trade Show:** Discover innovative products and expert advice.
- **Talks & Expert Panels:** Learn to save and go green.

**Free Entry!**  
For tickets scan the code or register now at:  
[cotswold.gov.uk/driveandthrive](https://cotswold.gov.uk/driveandthrive)

**COTSWOLD** District Council  
**WEST OF ENGLAND** Combined Authority  
South West **NET ZERO HUB**  
**Make My House Green**  
**furnbow**

*"I have much better understanding of solar panels in conjunction with storage batteries, and helpful discussion of issues re EVs"*

Stand exhibitors included local installers for a range of efficiency measures, alongside CDC partners Warm and Well, Furbnow, and Make My House Green. All exhibitors expressed healthy interest and sales after the event. The expert talks included sessions on taking a whole-house retrofit approach, and heating your home sustainably (including talks on easy/low-cost wins, as well as sessions on heat pumps and other technology).

Working alongside Let's Experience Electric was found to be positive, given their expertise in delivering these events, although they had not previously participated in an 'everything electric' event that encompassed home energy efficiency.

### **Retrofit Roadshows: Taking the Lead Across Cotswold District**

In the absence of many active environmental groups in the District, the Engagement Officer took forward this project- to design and deliver community-based events and requesting parish and town council support for awareness raising and promotion. The community events raise awareness of home energy improvements, and increased understanding of retrofit measures using the PAS2035 framework. They also aimed to connect residents with sources of further support.

The programme commenced in May 2025 and continued through to August 2025, with seven events scheduled across the district.

At events the Engagement Officer delivered an in-depth snapshot of whole house retrofit, PAS2035, vapour open and vapour closed properties, planning restrictions for homes that are listed or within a conservation area, and the need for ventilation. There was a tabletop display of insulation materials suitable for traditional homes (woodfibre, calcitherm, etc.), leaflets for local installers, suppliers, and partners; as well as general energy efficiency leaflets. A local heat pump and solar PV installer (Redbridge & Sons) attended and presented at the Kemble and Chipping Campden events.

Across all completed events, online interest has been consistently high, with Eventbrite views ranging from 210 to 882. However, this has not translated into high physical attendance, with numbers typically between 10 and 18 per event. Despite lower-than-expected turnout, the quality of engagement has been strong, with each event generating multiple home visit requests and, in some cases, offers of further participation in community initiatives such as 'Open Homes' events. The retrofit roadshows have certainly successfully established a district-wide platform for community engagement on home energy improvements; with events generating tangible outcomes in the form of home visit requests.

### **Home Visits**

Residents engaged in the above activities were offered the opportunity to book a free tailored home visit by the REO (a qualified and experienced Domestic Energy Assessor, Retrofit Assessor, and Retrofit Coordinator) to help them understand what types of measures are suitable for their home. The visit and subsequent informal written report

provide impartial expert advice, recommendations, suggestions for installers and further help.

Visits begin with an initial conversation to understand the homeowners' requirements and any energy efficiency or concerns experienced in their home.

The building's current condition is reviewed and advice given on essential repairs, suitable insulation and draughtproofing upgrades, and the feasibility of measures such as solar PV, battery storage, and heat pumps. If installation is not immediately practicable the visit aims to identify the steps required to prepare the property for future improvements.

A crucial aspect of the home visit is the evaluation of the home's construction type. The assessment considers whether the property has solid or cavity walls, the vapour permeability of the building fabric, and any restrictions arising from listed status or conservation area designation. Based on these findings, recommendations are made on suitable insulation approaches and wall finishes that are technically appropriate and sensitive to the property's character.

If homeowners are identified as being eligible for national or local funding schemes, grants, or other financial support, they are signposted to the most relevant sources of assistance, helping to reduce barriers to undertaking retrofit works.

Following each visit, the householder receives an informal written report summarising the findings and recommendations. This document outlines the key opportunities identified, highlights potential next steps, and directs residents towards further resources and support. The report is designed to be practical and easy to understand, giving householders a clear roadmap for improving the energy performance of their home. It also includes information on accessing local initiatives like the Thermal Imaging Camera loan scheme through parish and town councils via the GAPTC (Gloucestershire Association of Parish and Town Councils) scheme.

The home visits provide a personalised, fabric first, whole-house perspective that blends technical expertise with household needs and available support. By offering clear, actionable advice, combined with funding guidance and a written summary, the visits empower residents to make informed decisions about retrofit and move forward with greater confidence.

There have been 38 home visits carried out so far, with another 11 in the pipeline.

## Headline event: Future Fit Homes Cheltenham Retrofit Show

This was a large resident-focussed retrofit engagement event, presented in association with Planet Cheltenham and From the Ground Up, a local volunteer sustainability group. It attracted over 500 visitors, to St Philip & St James Church, Leckhampton, and played a major part in raising the profile of the CBC Retrofit Engagement Officer.

The day featured a range of exhibitors as part of an advisory hub. These were trusted local professionals offering advice on solar panels, insulation, heat pumps, double glazing, rainwater collection and more. These exhibitors included our energy efficiency platform partners Furbnow, and our Warm & Well programme partners Severn Wye Energy Agency. The day also featured expert-led talks on retrofit. The event then acted as a guide to homeowners on how to tailor solutions to their specific needs, with plenty of opportunities to ask questions and consult experts directly.

This level of engagement from a single event represents an excellent response and demonstrated the power of utilising networks possessed by local grassroots partners (Planet Cheltenham and From the Ground Up).

## Live Heat Pump Demos

Four days of heat pump demonstrations using a mobile demo rig with fully operational air source heat pump, pipework and radiators. Initial research showed that most homeowners were interested in heat pump technology but were wary of installers and confused by differing specifications and estimates. With this in mind, a trade trainer was chosen (from Optimum) rather than an installer to work with us and focussed on providing unbiased guidance rather than hard sell.

## Heat Pump Demonstrations (July events)

**73+** booked participants (+ walk-ups) over 2 days, 20-minute pre-booked sessions including a trade-only session for a local firm of architects, RRA

**100%** of participants felt the session improved their understanding of heat pumps



*“The opportunity to speak to an impartial, non-sales heat pump expert who could give advice and answer any questions we had. It was also great to see a heat pump in operation, to see how quiet it was when running”*

The events attracted over 160 people with a format of small 2-6 people sessions, utilising an informal Q&A. The audience comprised project homeowners, the general public, staff, councillors (all pre-booked online) and walk-ups who were attracted by the technology.

The demos garnered interest from many stakeholders outside of the county, with interest from the MCS, the UK Green Building Council, Retrofit West, Somerset Council and the Department for Energy Security & Net Zero (DESNZ) who's social media team filmed the July 2025 event.

### **Home Visits**

This project involved the direct delivery of support to homeowners via home visits from the Retrofit Engagement Officer, with the production of Energy Performance Certificates and tailored guidance to identify and potentially overcome retrofit barriers.

The support consisted of-

- A pre-project virtual interview on Teams to assess eligibility;
- A home visit to carry out a full energy assessment;
- An emailed Energy Performance Report (in effect, a draft EPC);
- A follow-up visit where necessary to run through the EPC recommendations in more detail;
- Full lodging of the EPC with the government directory;
- And finally tailored support to encourage action, be that through invitations to events, grant signposting, installer sourcing (via certified schemes only) or linking in to further resources.

Where relevant, homeowners are referred on to the Gloucestershire energy efficiency platform provided by Furbnow for a home energy plan and project management services.

### **Green Open Home Events**

The Retrofit Engagement officer has worked with a homeowner in Cheltenham (in 2022, the first to gain planning permission for a heat pump in a conservation area) to pilot the Borough's first green open home- allowing neighbours and residents to gain insight on retrofit from a local home example.

This project saw 20 participants attend the green open home. Each group size was purposefully small, and officers limited the visit time to one hour but left the format of the event to the homeowner, a retired engineer with a passion for renewable energy and retrofit.

The event consisted of a short tour to see the first floor wall-mounted heat pump and solar PV (at the back of the house and accessible only via a public car park), the external outhouse housing the hot water cylinder, solar inverter and battery storage and then the house itself, a mix of pre-1900s full retrofit and 1980s partial retrofit.

Feedback on both sides (homeowner and participants) was excellent and we've encouraged the homeowner to give us his thoughts on the Nesta Visit a Heat Pump website; though it was noted that the homeowner appreciated the security of this being a council-facilitated initiative.

### **Cheltenham Science Festival**

This flagship festival in Cheltenham hosted an advice surgery on retrofit, supported by the Retrofit Engagement Officer, Planet Cheltenham, Furbnow and Severn Wye Energy Agency, allowing residents to obtain expert tailored advice.

## **Forest of Dean District Council**



### **Micro Rural Heat Network**

This has been a key focus of work for the Retrofit Engagement Officer over recent months. The Officer has conducted continuous engagement with residents in a housing area known as 'The Belfry' after initial contact with two of the householders wishing to move away from oil heating. This has now expanded, with an ultimate aim- to find a suitable solution to move residents from oil to heat pumps without excessive internal work and using the BUS scheme and other grants to provide a cost-neutral solution. Work is now firmly underway to pioneer a Forest of Dean micro rural heat network for the Belfry.

The officer conducted research, including on cascading air source and shared ground loops. Contact was made with leading heat network firms and local suppliers to work out possible options, including Rendesco, who proposed producing a high-level desktop survey. Based on this research and consultation a total of 24 households within the Belfry signed up to be part of the project.

The Rendesco report was commissioned and received which has led to an even firmer commitment to the project from residents and the next stage will see a bid into the South West Net Zero Hub to pursue a detailed feasibility study, working in partnership with local stakeholder groups and the parish council.

*"This began as a project just for my house, but it soon became clear that the scope needed to be widened. Although other officers were interested, nothing ever came from these earlier meetings...Sam was designated to our area and made considerable efforts to connect with us, our project and to try to move it forwards. He has been tenacious in finding out information and tracking down groups, sources and funding in what is a highly confusing sector. His enthusiasm has sustained us through numerous obstacles"*

## Thermal Camera Imaging Loan Scheme

30 Thermal Cameras have been purchased and placed within hubs around the Forest for resident loan to identify heat loss in their homes. The scheme has been used to encourage the adoption of low-cost heat-saving measures, along with more extensive measures like loft insulation. Additionally, the scheme has been a gateway to promote other county-wide services and grant options.

### Forest of Dean Thermal Camera Loan Scheme

*“Looking at ceiling temperatures to gauge and confirm insulation needs and working with Year 6 pupils so they can take the camera home to do the activity provided by FoDDC. We plan to relaunch this more widely in the autumn so families can prepare for the winter. (I am a site manager in two primary schools).”*



There are now 13 loan sites within the district in total, and five engagement events have been built around the scheme.

A second rollout is now scheduled for autumn, with drop-in sessions planned at libraries and several Parish Council halls. A marketing strategy, including social media, press (print), and radio, along with a headline event booked for 5th October featuring Pass Thermal demonstrations and advice, has already been outlined.

## CONCLUSION

All Retrofit Engagement Officers were able to meet the targets set for them in this project and cumulatively see retrofit measures progress, or residents provide a firm commitment to progress imminently, at 88 properties (see Appendix) as a result of the summarised engagement work; cumulatively saving just under 170 tonnes of carbon.

However, it is clear that a lot of resource was required to reach those individual installation commitments and represent 1000s of separate engagements and interactions conducted by the officers over the 12-month project period. There have certainly been lessons learnt on

the approach needed, and challenges faced, which has informed views on future potential opportunities for further engagement.

## Challenges

1. **Funding period challenge:** The lead-in time and scope of this project was affected by the tight funding window which necessitated a 12-month initial project. The lack of longer-term funding for retrofit engagement remains a challenge for Authorities given the local government funding landscape. For now significant future work will likely rely on obtaining further external funding, though councils remain committed to supporting the Gloucestershire energy efficiency platform, and as much ancillary work around this as possible.
2. **Residents' lack of financial resources:** The lack of financial resources residents have to address many of their properties problems is clear. The perceived 'able-to-pay' sector isn't realistically able-to-pay in many cases and many residents have no understanding of their eligibility for government grant support (the majority believe grants are linked to benefits). This lack of available finances and fear of costs was seen across Districts. This is exemplified in Forest of Dean's camera scheme which saw a surprising outcome- with some residents preferring not to learn about heat loss, as it would be another issue they would have to face.
3. **Seasonality of activity:** It was observed that for key activities, such as Cotswold's Retrofit Road Show, interest and engagement was hard to maintain outside of Autumn/Winter when residents are more primed to consider energy efficiency. Given the year-long nature of this programme it was therefore challenging to ensure high participation at other times of the year. Going forward, activities will be planned to peak in Autumn/Winter.
4. **Lack of awareness, and potential for confusion:** Retrofit is still an area that has low-awareness for many, and can cause confusion. Many residents aren't aware of the grants potentially available to them, or the actions and solutions that could be considered to improve their home's energy efficiency. Many residents do not know where to seek advice and which contractors to trust for carrying out works which leads to further inaction. This is partially addressed by Gloucestershire's recently launched [energy efficiency platform](#) (see below under 'Future Opportunities')

## Lessons Learnt

1. **Need to firstly address fundamental concerns on property condition:** Engagement Officers found that a fabric-first approach looking at insulation was the most effective first focal point for Gloucestershire's traditional homes. Despite starting with an ambition to pursue whole house retrofit, fabric-first felt like a manageable gateway

for most residents, particularly given finance concerns. This was approach, coupled with low-cost 'quick fix' solutions and further advice on securing funding proved most effective.

2. **Consideration of Gloucestershire's traditional housing stock:** There is a high proportion of traditional properties in the county, with a larger amount of homes listed or in conservation areas. Strengthening communication with conservation and planning officers within council areas is imperative to ensuring that properties that are listed and/or within conservation areas are not overlooked on the road to Net Zero. Additionally, homeowners living in traditionally built homes benefit from education and advice about suitable interventions for their properties- to ensure that unsuitable and risky materials are not used in renovation, especially in properties that are within conservation areas but not listed. Having retrofit coordinator collaboration can help to reduce risk and prevent significant harm to both traditional homes and inhabitants.
3. **Engagement requires significant resource for relatively small gains:** Given that retrofit technologies remain a relatively new concept for most residents, and that finance to pursue is limited, officers found that they had to spend considerable time and effort, in many cases on a 1-2-1 basis to make progress. At this stage a huge amount of advice, support and encouragement is required to move residents from being vaguely interested in energy efficiency to taking concrete steps to improve their property. This may improve if the below opportunities were pursued, and certainly if the funding landscape or national government policy alters to encourage retrofit. It should be noted that residents overwhelmingly found this quality of advice helpful, and highly valued the engagement with the officers.
4. **There is definitely a needed role for Local Authorities in promoting retrofit:** The level of trust and assurance residents have from their local council underlines that a council-mediated programme of retrofit engagement can be effective and will be necessary for encouraging greater energy efficiency. This was exemplified by Cheltenham's 'Green Open Homes' trial at which the council took responsibility for picking participants and managed group in and out of the property. Attendees appreciated this, and the homeowner made clear that they were much more comfortable working with the council to organise than via a national online open homes portal. Councils clearly have a role as convenors and organisers of retrofit activity.
5. **Existing community groups and projects are a huge asset, but need convening:** Our Engagement Officers found that engagement and support from local charities, community groups, colleagues in service areas such as libraries, and town and parish council partners were a huge benefit to engagement. Many of these groups had built up a lot of trust and presence within their communities, which enabled effective engagement on retrofit. Their involvement also boosted attendance at events, such

as with the Cheltenham Future Fit Homes Roadshow, co-organised with local charity 'From the Ground Up'. It was also clear that many local groups and existing organisations had at least some interest and many cases existing activity on improving energy efficiency. However, efforts were uncoordinated and overlapped in many cases, again demonstrating the organising and convening role for Local Authorities.

## Future Opportunities

1. **A 'fix it first' programme:** If further novel programme work was to be pursued it was identified by Engagement Officers that a fabric-first approach, which considered advice and support tailored to residents in traditional or poorly insulated properties, and that would ensure suitable measures to address this, would have the most effect. Instead of an initial focus on whole-house retrofit, the more basic fundamentals of improving properties' insulation and condition would be a popular programme with residents, and could then act as a gateway for fuller retrofit measures via our energy efficiency platform to pursue the full whole-house approach.
2. **Expansion of key projects- thermal imaging camera loan scheme, heat pump demos, home visits, and green open homes:** Despite the challenges faced it was clear that certain activities were effective and will now be considered for expansion across the county.
  - The thermal imaging camera loan scheme has proved an effective means of starting conversations with residents on energy efficiency, and the hub approach, utilising libraries and community spaces for the scheme will be explored for further Districts. All Engagement Officers considered thermal cameras as a perfect engagement tool as it triggers understanding and then action. The scheme has been included in the libraries service's Greener Together Strategy.
  - The heat pump demos have also proved an effective introduction for residents on this technology, and expansion of these demo events across the county is already planned as part of Gloucestershire County Council's upcoming energy campaign.
  - The trial of the green open home event has also proved a useful engagement tool with residents and expansion of green open homes/buildings network will now be considered; possibly utilising Nesta's platform to progress this.
  - The Retrofit Roadshows and home visits conducted in Cotswold District, utilising the impartial expertise of the Engagement Officer have proved a highly effective means of engagement, and these programmes will be retained and optimised going forward into Autumn/Winter 25-26.

- 3. Financing for residents:** It's clear that residents require a suitable loan scheme or grants to enable them to take the full action needed on retrofit. Gloucestershire should explore a retrofit financing scheme, or joining regional options such as that being developed by the Hub. Ultimately it's clear that further national government support for retrofit will be required to see the comprehensive transition needed.
- 4. Further development of rural heat networks:** Given the progress made on the Belfry heat network as part of this project Forest of Dean are exploring other options for the development of rural heat networks in other areas of the District and are currently seeking further funding for feasibility work. This could prove a useful template for other rural areas nationally.
- 5. Maintain the Gloucestershire energy efficiency platform, and consider ways to expand its benefits:** The efforts of the Retrofit Engagement Officers were bolstered by the opportunity to direct residents to the Gloucestershire platform, where further advice and retrofit services could be obtained. As detailed in the above 'Challenges' section lack of certainty around which contractors and suppliers to trust is a definite issue in households pursuing measures, and the vetted installer network created as part of this platform is therefore certainly a useful tool. Further consideration needs to be given as to how we proliferate these options further, as signing up to the platform, and becoming a Furbnow customer, still represent potential barriers for some residents utilising these offers. Gloucestershire councils will now consider if elements can be further promoted and supported more widely, particularly advice on trusted installers.

# APPENDIX: Summary of property measures achieved in engaged households

## Cotswold District Council

Installation commitments achieved at: 29 properties

Total carbon savings: 38.4 tonnes

Property	EPC Rating	Property Type	Household	Issues	Barriers	Installation Commitments	Co2 savings (t)
Property 1	D	1980 Mid terraced 3 bed	2 adults 2 children	Damp/ draughty/ too hot	Guidance; grants/ funding	Ventilation/ DG	0.5
Property 2	E	Pre-1900 detached 4 bed	2 adults	Too expensive	Guidance; grants/ funding	Secondary/ DG	0.7
Property 3	D Exp	1930s semi-detached 4 bed	2 adults	Too expensive	Guidance; help finding installer; grants/funding	LI	1.2
Property 4	D	Pre-1900 end-terraced 3 bed	2 adults	Too expensive	Grants/ funding; help finding installer	IWI	1
Property 5	G	1960s detached 5 bed	2 adults 1 child	Flood zone, cold bedroom	Guidance; help finding installer; grants/funding	CWI	1.8
Property 6	No EPC	Pre-1900 semi-detached 4 bed	2 adults	Too cold/ expensive/ draughty	Guidance; help finding installers; grants/ funding	UFI/ LED lighting	0.5
Property 7	No EPC	1990 detached 5 bed	2 adults	Draughty/ kitchen hard to keep warm	Guidance; help finding installers	Draughtproofing/ DG	0.6
Property 8	D	Pre-1900 mid-terraced 3 bed	2 adults	Attic too cold/ hot	Guidance; grants/ funding	LI	0.5
Property 9	F Exp	1960s detached 3 bed	2 adults	Too cold/ expensive/ draughty	Guidance; help finding installers; grants/ funding	DG/ CWI/ Solar PV	3.2
Property 10	D Exp	1950s mid-terraced 3 bed	2 adults	Damp, condensation, mould	Guidance; help finding installers; grants/ funding	CWI/ LI/ Solar PV	2.5
Property 11	D	Pre-1900 end-terraced 3 bed	2 adults	Too expensive	Guidance; grants/ funding	IWI/ ventilation/ smart airbricks	1.3
Property 12	E	Pre-1900 detached 5 bed	2 adults 2 children	Too expensive/ damp/condensation/mould/cold bridges	Guidance; grants/ funding	New door/ ventilation	0.2
Property 13	No EPC	Pre-1900 detached 8 bed	2 adults 2 children	Too cold, expensive, damp, condensation and mould	Guidance; grants/ funding	battery, insulated plaster, chimney sheep	1.2
Property 14	No EPC	Late 1980s mid-terraced 2 bed	1 adult	Too cold, too expensive, draughty	Guidance; help finding installers; grants/ funding	Front door/ solar PV	1.8
Property 15	E	Pre-1900 mid-terraced 3 bed	2 adults	Too expensive	Guidance; help finding installers; grants/ funding	LI	1.1
Property 16	E Exp	1950s semi-detached 2 bed	1 adult	Too expensive/ damp, condensation, mould	Guidance; help finding installers; grants/ funding	LI/ Solar PV/ ASHP	3.5
Property 17	D Exp	1980s detached 4 bed	2 adults	Too cold/ expensive/ draughty/ damp/ condensation/ mould/ too hot	Guidance; help finding installers; grants/ funding	LED lighting/ vent	0.2
Property 18	No EPC	1980s detached 4 bed	2 adults	Too expensive	Guidance	IWI/ LI/ LED lighting	1.3
Property 19	F	Pre-1900 semi-detached 5 bed	2 adults 2 children	Too cold/ Too expensive/ Draughty	Guidance; help finding installers; grants/ funding	LI	1.8
Property 20	E	Pre-1900 detached 4 bed	1 adult	Too expensive/ cold	Guidance; help finding installers; grants/ funding	LI/ Solar PV/ battery	2.6
Property 21	No EPC	Pre-1900 end-terrace 3 bed	2 adults	None of these	Guidance; help finding installers; grants/ funding	Draught proofing, secondary glazing, dMEV	0.7
Property 22	E	Pre-1900 semi-detached 4 bed	2 adults	Too cold, too expensive, draughty, damp, condensation, mould	Guidance; grants/ funding	LED lighting/ shutters/ small IWI	0.6
Property 23	D	Pre-1900 semi-detached 5 bed	2 adults	Damp, condensation, mould/ too hot	Guidance; help finding installers; grants/ funding	DG/ LI/ LED bulbs/ ZEB	1.4
Property 24	No EPC	2000s detached 4 bed	2 adults	None	Guidance; help finding installers; grants/ funding	CWI/DG/ vent	1.9
Property 25	No EPC	1980s detached 3 bed	2 adults	Too cold, too expensive	Guidance; help finding installers; grants/ funding	LI/ LED lighting/ dMEV	1.3
Property 26	No EPC	2000s detached 5 bed	2 adults	Too cold, too expensive	Grants/ funding	CWI/ LED lighting	1.6
Property 27	No EPC	Pre-1900 semi-detached 3 bed	2 adults	Too cold, draughty, condensation and mould	Guidance; help finding installers; grants/ funding	LI	1.3
Property 28	D	1970s detached 3 bed	2 adults	Too hot, too cold	Guidance; help finding installers	LI/ Conservatory doors	1.8
Property 29	No EPC	Pre-1900 mid-terraced 3 bed	2 adults	Too cold/ expensive/ draughty/ damp/ condensation/ mould/ too hot	Guidance; help finding installers; grants/ funding	Draughtproofing	0.3

# Cheltenham Borough Council

Installation commitments achieved at: 29 properties

Total carbon savings: 57.2 tonnes

Property	Prop Age	Household Type	Source	Conf Level	Barriers	Measures Taken	Measures Planned	Carbon Savings (EPC projection by Tonne)*
1	Pre 1900s	Retired professionals	FFH project & show	Low	Fear of the unknown / rogue installers / spray foam loft insulation / fabric issues	EPC / TRVs / building survey / removal of spray foam loft insulation	Extractor fan in kitchen / address damp in kitchen / new back door to lean to	4
2	1950-1966	Working professionals	CBC	Medium	Spray foam loft insulation / limited available budget / fabric issues	EPC / Building survey	Removal of spray foam loft insulation	2
3	1950-1966	Retired professionals with part-time work	CBC	Medium-High	Innate caution / budget	EPC / applied for CWI through the GBIS	CWI / new letterbox / new windows to rear	2.2
4	Pre 1900s	Retired professional with part-time work	HC talk	Medium-High	Innate caution	EPC / all appropriate and practical works have been carried out by homeowner	Draughtproofing to front window and door	2.3
5	Pre 1900s	Retired professionals with part-time work	Greener Glos e-newsletter	Low	Longer term plans / health	EPC / New glazing to back door	Portiere and curtain for front door / ASHP (future property)	3.3
6	1900-1929 plus 2007-2011 ext	Working professionals	HC talk	Low	Fear of the unknown / innate caution / fabric issues	EPC / referral to Furbnow	With Furbnow	3.4
7	1950-1966 & 2012 ext (cons area)	Retired professionals, part-time work	CBC advocate	High	No barriers (homeowner has installed an EV charge point, solar panels and battery storage since original EPC)	EPC / Shortening curtain length in master bedroom (covering radiator)	Potential insulation to garage ceiling to prevent heat loss through master bedroom floor	0
8	Pre 1900s (cons area)	Retired professionals	HC talk	Low	Fear of the unknown / budget / longer term plans	EPC / New front door to lower ground	New electric heating (HHRSHs) / Warm & Well helpline	4.6
9	Pre 1900s (cons area)	Retired professionals with part-time work	HC talk & advocate	High	No barriers (homeowner has installed solar panels since original EPC)	EPC / Draughtproofing to older sash windows	ASHP (longer term)	1.4
10	1967-1975	Retired professional with part-time work	CBC advocate	Low-medium	Available budget	EPC / Draughtproofing to front windows	Looking into air-to-air heat pumps to provide air con & heating	1.3
11	1930-1949 & 2012 ext (cons area)	Working professional	HC talk	Medium	Available budget	EPC / Applied for GBIS and discovered CWI was in place (in original section of house)	ASHP	1.3
12	1991-1995	Working professional	Leck with WH PC e-newsletter	Medium	Innate caution / property needs some updating but is energy efficient	EPC / no action necessary	ASHP / solar PV / battery storage (longer term)	1.6
13	1950-1966	Retired professional	Local Answer ad	Medium-High	Age / innate caution	EPC / No urgent measures due but would benefit from solar panels	REO encouraged homeowner to call the Warm & Well Helpline to check on eligibility for solar grants	1.4
14	1950-1966	Retired professional	FFH Retrofit Show	Low	System built house / fear of the unknown / confusion / long term plans / age / health	EPC / REO took homeowner to see EW being installed on social housing	Property is energy efficient, no apparent need to make changes but homeowner feels EW would help. However, retrofit engagement has confused rather than demystified despite best efforts	1.3
15	1967-1975	Working professional	FFH Retrofit Show	Low-Medium	Innate caution / available budget / disruption	EPC	ASHP / address damp to first floor	0.9
16	1950-1966	Retired professional, part-time work	HC talk & advocate	Medium	Available budget / care duties / disruption	EPC / checked with glazing company re G & U values / checked with roofing company on insulation levels	CWI and solar PV - will look into BUS, ECO4 and Warm Homes Fund via the Warm & Well Helpline	2.4
17	Pre 1900s	Retired professional	FFH Retrofit Show	Low	Anxiety / fear of the unknown / budget / disruption	EPC / building survey / solar PV & battery report / removal of RTS meter	Urgent fabric repairs to address rising damp and potential subsidence, review of hot water E7 programmer (bills far too high), new HHRSHs	10
18	Pre 1900s	Working professional	Local Answer ad	Low-Medium	Disruption / installer assumption that property isn't suitable for a heat pump / lack of space / existing pipework	EPC / visit to see Redbridge & Sons with REO to discuss ASHP options, e.g. gas hybrid	Insulation to cellar ceiling to prevent heat loss through lounge floor / getting 2 other specialist installers to estimate on heat pump (as recommended by Optimum)	2.7
19	1950-1966 with 2012 and 1983-1990 exts	Working professionals	FFH Retrofit Show & advocate	Medium	Available budget / disruption	EPC / property is extremely energy efficient due to solar PV, battery storage and new large ext	ASHP (longer term)	0.2
20	Pre 1900s	Working professional	Leck with WH PC e-newsletter	Low-Medium	Fabric issues / availability of local building surveyor to carry out an assessment on structural cracks and areas of damp	EPC / trying to get hold of RICS building surveyor	Address fabric issues / ASHP (longer term)	2.9
21	1900-1929	Retired professionals with part-time work	Local Answer ad	Medium-High	Poorly built glazed sun-room is leading to excessive heat in summer and cold in winter / potential lack of CWI	EPC / contacted OGA to assess existing CWI / looking into interim blinds for sun-room to block heat in summer and retain heat in winter / chimney balloon in open fireplace	Liaising with architect on proposed new ext and will ensure that a whole house approach to energy efficiency is taken	1
22	Pre 1900s with 1983-1990 ext	Retired business owner	Local Answer ad	Low	Age / health / son now living in as carer which affects household income for grants / fear of change / boiler at first floor level resulting in low pressure / old style meters	EPC / advice given to daughter and son-in-law re grants and IWI for original part of house	Call to Warm & Well Helpline to check on replacement boiler grants and solar PV, Smart meters	1.7
23	Pre 1900s	Working professional	CBC advocate	Medium-High	Homeowner has already moved from GFCH to electric rads/heat battery for hot water and has experienced much higher energy bills / spray foam loft insulation	EPC (not lodged as rating will be skewed by elec rads and heat battery) / building surveyor instructed for impact of loft insulation / new energy supplier and more preferential tariff for all-electric house	Removal of spray foam loft insulation and new roof / solar PV and battery storage / app to monitor rad usage (REO felt the landing rads would overwork during the winter months due to double height area over stairs)	0
24	1930-1949 with 2007-2011 ext	Working professional (with carer duties)	Local Answer ad	Medium	Family and carer commitments prevent any form of retrofit disruption / available budget	EPC	TBC	0.9
25	Pre 1900s	Working professional	From the Group Up	Medium	Available budget / time	EPC / Warm Homes Fund application online	REO to visit homeowner 28/8/25 to follow-up	2.1
26	1930-1949	Working professionals	Local Answer ad	Low-medium	Available budget / fabric issues / confusion created by previous assessment	EPC / contacted OGA to see whether guarantee is still valid and whether installer is still operating	If CWI is intact (and not the cause of damp to external wall) then homeowner to instruct RICS building surveyor to assess fabric issues	0.4
27	1930-1949 with exts 1996-2002 & 2012-2022	Working professionals	HC talk	Medium-High	Innate caution / longer term plans	EPC / review of cavity wall insulation	Interested in ASHP but not a priority at this stage	1.3
28	1950-1966 with exts 1967-1975 and 2012-2022	Working professionals	HC talk & advocate	High	No barriers (homeowners are both architects and project managed their own deep retrofit)	EPC	Homeowners are getting their solar panels and battery storage 'reinstalled' to gain MCS certification	0.2
29	1930-1949	Working professional	Local Answer ad	Low	Recently widowed, homeowner has acquired immediate responsibility for a family rental without any prior experience	EPC / replacement of all CFL bulbs with LEL bulbs / review of open chimneys	Call to Warm & Well helpline to see whether future tenant could benefit from Warm Homes Fund grant for solar panels	0.4

## Forest of Dean District Council

Installation commitments achieved at: 30 (domestic) properties along with 6 community buildings

Total carbon savings: 73.93 tonnes

House number	EPC rating	Combined Space and Hot Water demand (kWh)	Current Carbon per KW - Gram (heating)	Ground source per KW-Gram (heating)	Savings (heating)	Other Carbon Saving Kw-G	Energy saving measure
1	F	24451	7824320	1026942	6797378		heat network
2	-	13044	4174080	547848	3626232		heat network
3	D	12482	3994240	524244	3469996		heat network
4	D	12916	4133120	542472	3590648		heat network
5	C	8884	2842880	373128	2469752		heat network
6	D	14273	4567360	599466	3967894		heat network
7	D	9188	2940160	385896	2554264		heat network
8	-	13044	4174080	547848	3626232		heat network
9	-	13044	4174080	547848	3626232		heat network
10	D	9113	2916160	382746	2533414		heat network
11	E	10099	2171285	424158	1747127		heat network
12	D	6743	1449745	283206	1166539		heat network
13	-	10526	2263090	442092	1820998		heat network
14	E	9465	2034975	397530	1637445		heat network
15	-	10526	2263090	442092	1820998		heat network
16	D	9529	2048735	400218	1648517		heat network
17	E	14639	3147385	614838	2532547		heat network
18	C	14884	3200060	625128	2574932		heat network
19	-	10526	2263090	442092	1820998		heat network
20	E	10544	2266960	442848	1824112		heat network
21	-	10526	2263090	442092	1820998		heat network
22	-	10526	2263090	442092	1820998		heat network
23	-	10526	2263090	442092	1820998		heat network
24	E	8306	1785790	348852	1436938		heat network
1 Elm View	E	19886	6363520			307500	Conservatory roof
Little burway	E	12611	4035520			1008880	MVHR
1Mousel Villas	E		0				Lime Rendering
1 Leadon view	E	15391	4925120			1231280	HVHR
The beeches	E	14766	4725120			945024	Front door
Woolston School	E		0				Fabric, heritage heating advice
Tutshill School	E		0				Fabric, Heritage, heating advice
Meditation Centre x 3 properties	E	38209	12226880			3056720	Insulation
Broadwell Hall	N/a						Fabric/Whole building
Newent Pavillion							Possible heatnetwork, Solar, EV
Mitcheldean community centre	B					4723500	Solar
The court	E	16037				900000	Solar

