

Healthy, Comfortable and Affordable - Home improvements in Letchworth Garden City

Introduction

On a cold Tuesday in February, 23 people met at the Garden City Brewery with the promise of snacks from Vutie Beets and information about home energy saving from [People Powered Retrofit](#).

Downloads

A recording of the session can be [watched back here](#), and the [Q&A session is here](#). Slides can be [downloaded here](#).

Disclaimer

The topics discussed here can be complex and the best solutions may depend on the context and condition of your home. They may also change over time. We recommend that you seek advice particular to your home before carrying out energy efficiency or retrofit work.

Whilst every effort has been made to record information from the workshop accurately in this article, there may still be errors or omissions. Please carry out your own research before making alterations to your home.

Decide your priority

People should first consider what their priorities are, before approaching home energy efficiency measures. Looking to reduce energy bills? Focus on insulation, air-tightness and solar panels. For those seeking comfort, ventilation is important. And to reduce your carbon footprint, heat pumps are likely to be part of the answer along with energy efficient technologies.

If you're focused on bill reductions and getting off gas, we were reminded that keeping a track of bills from the start helps show the impact of different changes you make to your home.

Condition and repairs

However, before taking any action, it pays to understand what you are working with, the recommendation here is to get a home energy survey. Costs for these vary from absolutely nothing (at the time of writing) through schemes like [SuperHomes](#), right up to £1,500, for a detailed study. [GreenHeat Coop](#), are a local organisation that offers these kinds of services, or national organisation [National Energy Foundation](#).

Looking for a DIY option to start? Letchworth Garden Shed have thermal imaging cameras that can be used for a nominal fee. When the conditions are right, thermal imaging cameras will highlight areas that are missing insulation, or suffer from drafts, such as historic flat roof extensions, gaps around skirting boards, loft hatches and uncontrolled ventilation.

As part of looking at your property, checking it's condition is important. Do you have leaking or blocked gutters and downpipes? Is there soil up against a wall creating a damp area? Is vegetation causing issues? Are all mortar joints properly pointed? Are there any cracked roof tiles? Are all underground drainage systems performing as intended?

A damp wall is a cold wall, therefore fixing these problems will improve the comfort of your home, and probably reduce your heating bills too. Also, if repairs are not carried out first, any insulation applied is likely to cause problems in the future.

Draughts and controlling ventilation

Uncontrolled ventilation, or draughts, are expected to cause about one third of the heat loss from a building. Therefore, we were urged to consider mechanical ventilation, regardless of how draughty your home might be. Of course it would help to minimise gaps in windows, doors, floors and walls that let air escape.

Some key methods of improving air-tightness are using draught excluders, sealant for floorboards, devices to block chimneys, covers for downlighters and better cat flaps. Also check outside your property, have previous works been carried out (like a new kitchen) without pipework being properly sealed back up? Different DIY products are on the market, like covers that go over exposed pipes, fabrics and tapes. However, some skilled work is sometimes best, such as applying wet plasters.

But don't start draught excluding without a ventilation strategy! Which includes plans to:

- extract air from kitchens and bathrooms
- provide fresh air to the whole home
- a way to purge, for when you burn the toast!

Mechanical ventilation with heat recovery is the best option, but a whole house system can be disruptive and costly. There are decentralised systems which are a compromise, or even just mechanical extract ventilation might work in some situations.

New windows and doors

When upgrading windows, double or triple glazed windows may be acceptable but will need to match the original window design.

Insulation - Loft

The next step after helping to control how your home 'breathes', is to put on some extra layers to keep it warm in winter and cool in summer. This starts in the loft, checking for about 300mm (about a foot) of loft insulation.

This isn't always easy because of some features in lots of homes, like small sections of sloping roofs. Missing insulation in these areas would create a cold spot, which could lead to condensation and mould growth. Therefore a combination approach of insulating loft spaces, and on the internal side of rooms may be necessary.

However, we were reminded that if you insulate your loft, it will become cooler in winter and hotter in summer, and therefore check that there is ventilation. Most commonly by using loft vents, which slip into the roof felt.

Whilst sorting your loft out, check out your loft hatch, does it properly seal? And is it backed with insulation? If not – it could be time for an upgrade.

Insulation - Chimneys

Chimneys are a significant contributor to heat loss, if you don't plan to have a stove or open fire, the chimney can be safely blocked with insulating products without affecting the external appearance.

There are also insulation products that can be installed to line the chimney that will improve its performance.

Insulation - Under floor

If your home has a suspended floor, a combination of insulation and air tightness fabric will help improve the performance. But don't block up ventilation under the home, which could lead to damp and mould growth.

Insulation - Walls

Internal wall insulation must be applied with care to avoid creating issues. Seek specialist guidance to make sure all details have been considered. We heard how problems occur most often at points where there are joins. Like windows, doors, roofs, walls and floors.

External insulation is problematic for many homes because of external features like gutters, pipes and architectural features and details, as well if not well detailed and designed can create unintended consequences such as mould.

Internal works that do not affect the external appearance of the property do not need our consent. However if you are considering an external cladding project, please [get in contact with us](#) to obtain free pre-application advice prior to submission of an application. It is important to note that in the Heritage Character Area or on Homes of Special Interest, external cladding is unlikely to be permitted.

Make your own electricity

Solar panels won't make your home feel any more comfortable, however they do reduce your reliance on grid electricity, and in the long run are cost effective. There are some solutions that integrate into roofs, which could be a good option if you are having to replace roof tiles on your home, they also have less of a visual impact.

Solar panels affect the external appearance of properties, therefore please read our guidance on this topic. When you're ready [get in contact with us](#) to seek free pre-application advice prior to submission of an application. If you can't install solar panels on your property, we heard about an organisation called [Ripple Energy](#). Where it is possible to invest in solar generation elsewhere and have the saving applied to your energy bill. The payback is longer, because someone else is also making profit. However, this solution saves you money even if you move home.

Get off gas (or other fossil fuel)

If you have a gas boiler, or other fuel burner to heat your home, switching to a heat pump will help decarbonise your heating, because the UK's electricity grid is producing less carbon emissions each year. Heat pumps work better if they run at a constant temperature all day and with a cooler flow temperature than most gas boilers. So, although you don't necessarily need to reduce heat loss by controlling ventilation and insulating, you might be able to have a smaller heat pump, and lower bills if you do! Engineers will assess your home, to identify if pipework or radiators need to be upgraded (it isn't always necessary).

Want to see if your home might be heat pump ready? If you have a combi boiler, turn the boiler flow temperature down to 50°C and leave it running at a more constant temperature. If you are still comfortable and happy with how much your heating bill was, then you could be heat-pump ready.

Running some boilers at low flow temperatures can cause damage, so only do this if you are certain it won't negatively affect your boiler.

Most heat pumps are installed externally, therefore when you're ready [get in contact with us](#) to seek free pre-application advice prior to submission of an application. New guidance will be published soon on this topic.

Make a plan

In wrapping up, we heard about work in Saltaire. They have [a guide](#) that provides information about how to create a plan for your home. It is possible to do upgrades gradually, and to match with other home upgrade plans, like new bathrooms and kitchens, or even just room redecoration. However, having a plan means you don't have to undo any work, and makes sure you don't miss any opportunities.

Funding opportunities

There is funding available, but there are often certain income thresholds.

Great British Insulation Scheme: 'Single measures' – mostly cavity wall and loft insulation. Qualifying criteria are council tax band and current home energy efficiency. Apply through your energy supplier.

ECO (Energy Company Obligation): Insulation, solar panels and heating improvements for homeowners and renters. Qualifying criteria include household income and current home energy efficiency. Apply through your local council or a participating energy supplier.

Warm Homes: Local Grant: new schemes are just about to start running in North Herts - so keep a lookout for new information. <https://www.gov.uk/government/publications/warm-homes-local-grant-budget-allocation>

Boiler Upgrade Scheme: Up to £7500 to homeowners to install low carbon heating systems - heat pumps. Apply through a Microgeneration Certification Scheme (MCS) certified installer: www.mcscertified.com

A health warning was issued about organisations that use the phrase 'government backed'. This does not mean the government endorses their work. Also some work we heard about is intrusive and can take a long time, make sure your contractor is clear about expectations and agree in writing contracted work/timeframes and you are satisfied with their proposed process.

Find out what other homeowners have done in the UK to make their homes more affordable and comfortable on the [Carbon Co-Op Youtube channel](#).

What can you do and who do you need permission from?

Below is a table containing the measures that were discussed in the presentation. If you have a listed property, please seek further information about [listed building consent](#).

Measure detailed in this blog	Requires our consent if your property falls in a Character Area in Letchworth	Requires North Herts Planning Permission	Notes	Links
Home energy survey	No	No	Price varies from Free to £1500	SuperHomes GreenHeat Coop , National Energy Foundation .
Internal insulation and draught proofing	No	No	Various DIY projects are possible, however for complex internal insulation seek advice.	ASBP Article on Internal Insulation
External repairs	Like-for-like repairs and maintenance are unlikely to need our consent but it is advisable to seek further advice prior to works commencing on site.	Like-for-like repairs and maintenance are unlikely to need permission	Skipping this step risks other projects failing or causing even more damage	Looking after your home guide
Ventilation	New holes created in walls will require consent.	New systems are unlikely to need permission, since they may be considered permitted development (subject to current legislation)	Replacement technology that uses existing holes will not normally need our permission although any new flues or ventilations grills will require consent	
Air Source Heat Pumps (ASHP)	Nearly all installations will require our consent, because they are normally installed outside a property.	Air Source Heat Pumps may meet permitted development limits (subject to current legislation)	New guidance is in draft form.	

Measure detailed in this blog	Requires our consent if your property falls in a Character Area in Letchworth	Requires North Herts Planning Permission	Notes	Links
Solar Panels	Our consent is always required.	Not normally if they meet permitted development limits. (subject to current legislation)	See our guidance on this topic	Our Solar Panel Design Guidance
External wall insulation	Our consent is always required.	Is required (Permitted development limits)	Specific guidance on this topic is contained in the two design principle guides	Heritage Character Area Modern Character Area

The onus to check current planning and building regulations and any other legislation is on the homeowner or lessee and not with The Letchworth Garden City Heritage Foundation.