

Low carbon retrofitting

Taking a whole house approach







- The whole house, fabric first approach
- Understanding your home
- Funding
- Finding contractors and advice online
- In depth retrofit advice





The whole house approach

 Considers the building fabric, services, who lives in it, and the surrounding environment

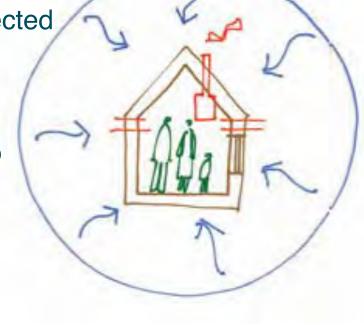
Look at maintenance and repairs first

Not just about energy saving. Connected issues such as damp and ventilation

 Sees the home as a system with interacting elements

 Helps to decide the order in which to carry out improvements

 Helps to identify potential problems which could result from retrofit









Aims of a 'fabric first' approach

Prioritising improvements to the energy efficiency of the building's external shell before building services and renewables are considered, to ensure energy demand is as low as possible.

- Even, all round insulation
 To maintain a consistent internal surface temperature
- 2. An airtight building envelope
 With a continuous, unbroken air barrier
- 3. Vapour permeable construction

 To promote the safe passage of moisture





Understand your home

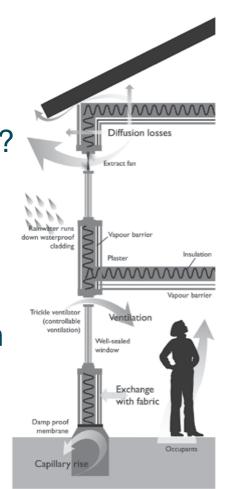
Is it traditional or modern?

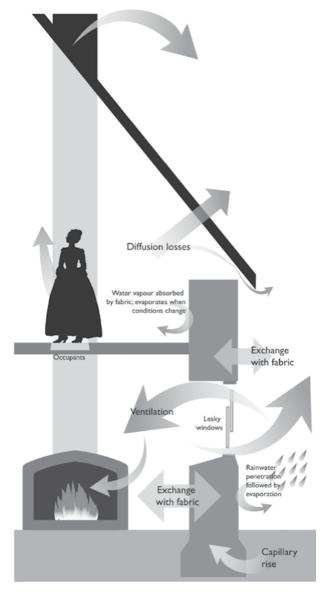
When was it built?

Is it in a conservation area?

This will help you understand how it was constructed.

Also important to understand changes which have been made later.











Funding (non means

- **TRISTICAT** e Scheme, started 1st April (replaces Renewable Heat Incentive):
 - Grants of £5,000 for ASHP or biomass boiler, £6,000 for GSHP
 - To replace an existing fossil fuel heating system
 - Limited availability 90,000 homes
 - Accessible through MCS accredited heat pump installers
 - Hybrid systems, air-to-air systems and solar thermal not eligible
 - EPC required with no recommendation for loft or cavity wall insulation.
- Smart export guarantee (solar PV) payments from electricity supplier for exporting electricity generated on site.
- Some local authorities back low interest loans for energy efficiency improvements, such as Lendology in the South West.





Funding (means tested)

Eligibility is complicated – call us for more advice! Generally speaking, to get a grant, you must be on a low income (on means tested benefits, or household income below £30K, sometimes savings limits apply)

- Home Upgrade Grant scheme (HUGS) central government funding:
 - Local authority led schemes
 - Mostly for off-gas properties
 - Wall and roof insulation, low carbon heating, heating controls
 - Grant amount depends on the EPC band and fuel type.
- Energy Company Obligation (ECO) funding from energy suppliers:
 - Cavity wall, party wall, loft, underfloor insulation
 - Replacement mains gas boilers (only if with other measures), new gas central heating.
- SSEN enabling works fund must live in the SSEN area (SSEN are an electricity distributor):
 - To pay for work to enable installation of energy saving measures, e.g. loft clearance,
 scaffolding, minor structural repairs
 - Must be eligible for a grant funded scheme paying for the measure itself.

Finding contractors

Trustmark – government endorsed quality scheme https://www.trustmark.org.uk/homeowners

National Insulation Association – quality assurance scheme for insulation https://www.nia-uk.org/find-an-installer/

Microgeneration Certification Scheme – quality assurance scheme for renewables

https://mcscertified.com/find-an-installer/

Green Register – find sustainable construction professionals in the South West https://www.greenregister.org.uk/search



CSE resources – cse.org.uk



Solar electricity

Power your home with free sunlight

The sun provides an abundant sourco of clean, renewable energy. This can be converted into electricity using solar photovoltaic panels, usually referred to as 'solar PV'.



Air source heat pumps

Low-cost, electric powered space heating





Battery storage

Store the excess electricity you generate at home





External solid wall insulation A thermal layer for outside walls

more comfortable and cheaper to heat



Love your home

Energy advice to help protect your own special place

With the wide range of energy saving options available there is always something that can be done to make our places even more special, no matter what age, size or type of home we live in. But to







Making your traditional home warmer and cheaper to run



Find out if your home is listed, or in a Conservation

Listed buildings



The design of the walls, including the pattern of window and door openings?	
Materials of the walls?	
Materials and style of the roof?	
Types/materials of windows?	
Type of door?	
Type and materials of gutters and downpipes?	
Style and materials of chimneys?	
Decorative features?	
A plaque?	

Layout of rooms and connections?	
Style and materials of doors?	
Style and materials of floors?	
Materials of interior walls?	
Decorative detailing of walls (e.g. skirtings, dados, picture rail, coving)?	
Decorative detailing of ceilings?	
Fitted furniture (e.g. cupboards, seating, bathroom and kitchen fittings)?	
Original staircase?	
Fireplaces?	
Is the roof structure original or very old?	
Original heating and ventilation systems?	
Other features?	







Other useful resources

Sustainable Traditional Buildings Alliance Responsible Retrofit Wheel https://responsible-retrofit.org/wheel/

Historic England energy efficiency guidance

https://historicengland.org.uk/advice/technical-advice/energy-efficiency-and-historic-buildings/

Green Building Forum – tips, discussion, inside info from real green builders http://greenbuildingforum.co.uk/

Designing Buildings Wiki – construction industry website https://www.designingbuildings.co.uk/

Green Building Encyclopaedia

https://greenbuildingencyclopaedia.uk/





Project run by the Centre for Sustainable Energy, initially funded by central government. The funding ended March 2021 so we now charge for our services. We offer a range of services to help homeowners make energy saving improvements and retrofit with confidence:

- Introductory energy advice
- Full survey and coordinator plan
- Site inspection and project management
- Referrals to installers and contact details for builders
- We cover Bristol, B&NES, North Somerset, South Gloucestershire, Somerset County, Swindon and Wiltshire
- Discounted surveys are available in some areas check the website

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Get in

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