

# Retrofitting your home:

a brief how-to guide

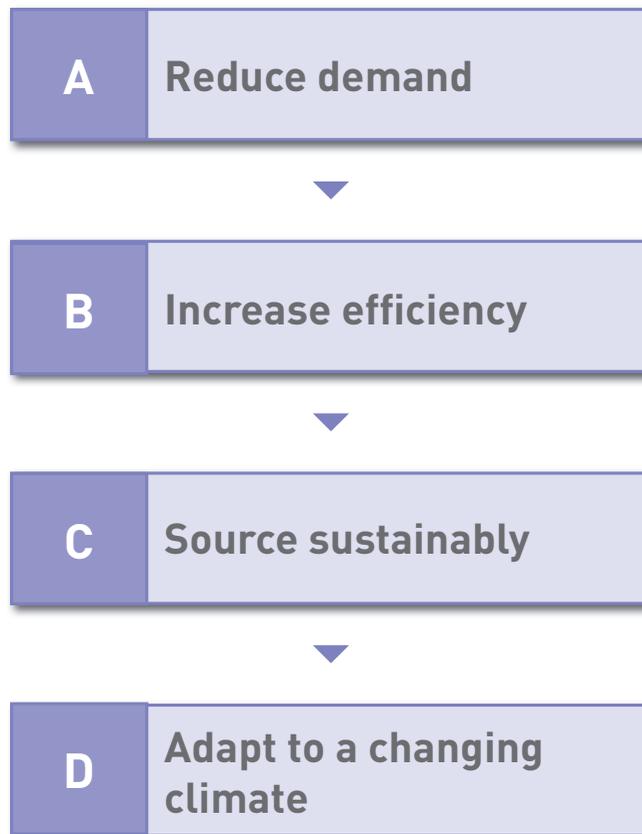


## What is Retrofitting?

Retrofitting means making changes to your home so you use less energy and water, and to make your home more comfortable to live in. This includes using more sustainable sources of energy and water and protecting your home against predicted changes in climate, such as heat waves and more severe storms.

This short 'how to' guide will help you think about and plan your retrofit. The comprehensive Retrofit Guide on how to plan your retrofit is available on the Building Futures website at [www.hertslink.org.uk/buildingfutures](http://www.hertslink.org.uk/buildingfutures). Building Futures is a partnership of all eleven Local Authorities in Hertfordshire, that seeks to improve the quality and sustainability of the built environment in Hertfordshire.

To successfully retrofit your home simply follow the ABCs of retrofitting:



## What are the benefits?



### ▶ **Save money**

Retrofitting your home could save you up to £1,000 on your annual energy bills. Just installing loft and cavity wall insulation could save you around £300 a year. You can even earn money through renewable energy!



### ▶ **Create a warm and comfortable home**

If you feel it is almost impossible to keep your home at a comfortable temperature then installing insulation and blocking draughts will help keep the heat in and the cold out, making your home nice and cosy!



### ▶ **Make your home easier to sell or rent out**

Under legislation, you are now required to provide an 'Energy Performance Certificate' when selling or renting out your home. This may influence the decision of a potential buyer or tenant – 52% of people would pay more for an energy efficient home.



### ▶ **Reduce your impact on the environment**

There is great potential to reduce our demand for energy and water, and to use both more efficiently. For example, homes in Hertfordshire use more water on average than the rest of the UK but are located in one of the driest counties in the country.



### ▶ **Be prepared for a changing climate**

Our climate is changing. It is expected that our weather will become more extreme, with more severe storms, heat waves and periods of drought. Retrofitting will help you and your home to cope.

Thousands of people in Hertfordshire have already started retrofitting their properties, with many people taking advantage of schemes which provide measures for free (see the **funding** section for more information).



# Your 12 step retrofit plan



**Step 4**  
**Identify which measures you could do for free**

- See the list on **page 5** for cheap and simple things you can do.
- Depending upon your circumstances, you could be eligible for free retrofit measures. See **page 8** for info.

**Step 5**  
**Decide which other measures to install**

- Having done your homework, and with the ABCs of retrofitting in mind, consider which measures are most suitable for your home.

**Step 6**  
**Plan and combine your retrofit with other works**

- Place the order of retrofit works and combine with other work you're doing to save time; minimise disruption, costs and waste; and to ensure any retrofit measures will work effectively.

**Step 10**  
**Get planning or building control consent**

- Do you need planning permission or listed building consent before doing the work?
- Most retrofit measures require Building Regulations Approval once installed.

**Step 11**  
**Choose an installer**

- Consider previous work they've done and other services they offer.
- What guarantees can they offer?
- Don't pay for the whole job up front.

**Step 12**  
**Start work, enjoy lower energy bills, maintain**

- Monitor your energy and water savings through your bills or energy monitors.
- If necessary, ensure proper maintenance.



## Not sure what to do first?

- ▶ Fully insulate your **loft**.
- ▶ Lag your **hot water cylinder**.
- ▶ **Lag** any hot water pipework which runs along external walls and floors.
- ▶ Install heating controls, such as a **room thermostat** and **controls for the radiators**.
- ▶ Place **reflective panels** behind radiators fixed to external walls.
- ▶ **Draught-proof** the home.
- ▶ Switch from incandescent (CFLs or LEDs) to **energy saving light bulbs**.
- ▶ Switch to **A-rated appliances** if your current appliances are D rated or lower.
- ▶ If you have an old gas boiler, D rated or lower, upgrade to a new **A rated boiler** which will work much more efficiently and help reduce your heating bill.
- ▶ Convert your **taps and shower head(s)** to aerated or low flow fittings.
- ▶ If you have a garden, install a **water butt** to collect rain for watering the plants.
- ▶ Get your water company to fit a **water meter** for free. Metered water can often be cheaper than paying standard water rates.

### Off the gas grid?

It may be worthwhile thinking about a **biomass boiler** or **heat pump** early on, since they are likely to be a very cost effective alternative to oil or electric heating.



### I'm a tenant/live in a flat. Can I retrofit my home?

Yes! There are many simple solutions which wouldn't require permission from your landlord and can be carried out in flats, such as:

- Draught-proofing
- Thermal films for windows
- Energy efficient light bulbs
- Radiator panels
- Lag hot water pipes
- Hot water cylinder jacket
- A-rated appliances



## What else can I do?

There are lots of other retrofit solutions that will help you to save energy and water, utilise renewable energy, utilise alternatives to mains water, and help adapt to a changing climate.

Our full Retrofit Guide provides information on over 40 retrofit solutions such as solid wall insulation and solar panels which is available on the Building Futures website at [www.hertslink.org/buildingfutures](http://www.hertslink.org/buildingfutures). For each solution, you will find information on:

 <p>Costs</p>	<p>Information on the typical costs of buying and installing the solution.</p>	 <p>Conservation or listed</p>	<p>If you own a Listed Building or building within a conservation area then different planning rules apply. This symbol provides more information on this issue.</p>
 <p>Savings</p>	<p>Info on the typical savings on your annual utility bills. This is based on current energy prices. It is likely that savings will increase year on year as energy prices are expected to rise.</p>	 <p>Difficulty</p>	<p>Info on how difficult it typically is to instal the solution. One hammer denotes an easy DIY job, two hammers for a more advanced DIY job and three hammers for a solution that would require professional help.</p>
 <p>Savings</p>	<p>Info on typical water savings for certain solutions.</p>	 <p>Other work</p>	<p>Tips on practical issues associated with installation, and whether works/solutions can be combined.</p>
 <p>Payback period</p>	<p>Approximate amount of time it will take to save as much money on your utility bills as you have spent on buying and installing the solutions.</p>	 <p>Maintenance</p>	<p>For renewable energy and water recycling technologies the expected maintenance requirement is provided.</p>
 <p>Funding</p>	<p>Identifies what different funding opportunities there are for each solution.</p>	 <p>Accreditation</p>	<p>Highlights the accreditation body you should look for when procuring a contractor or installer to undertake the work.</p>
 <p>Permissions</p>	<p>Advice is given as to what permissions may be needed.</p>	 <p>More Information</p>	<p>Provides links to further information.</p>

## How can I fund my Retrofit?

There are various funding schemes and initiatives available to help you pay for your retrofit. These include schemes such as CERT which can provide you with free or discounted measures, such as loft insulation, depending upon your circumstances. There are also schemes which allow you to earn money by generating renewable energy such as FiTs.

Before spending any money, you should consider which solutions will provide the biggest savings for the money you spend, and the shortest 'payback period'.

At the end of 2012 the Government's Green Deal initiative will be available to homeowners. This will allow you to install retrofit solutions at no up-front cost, with the cost of the solution(s) being recouped through your energy bill savings. If you have savings and are unlikely to move home, then investing in energy saving measures or renewable energy for your home may be a good alternative to loans or credit. The financial returns over the long term may be greater than the interest you are earning and will come straight to you.



### What is the payback period?

The payback period is how long it takes to save as much money from your utility bills as you have spent on buying and installing the solutions. For example, loft insulation can cost between £100 and £350. Once installed, you could save around £175 a year on your heating bill. This means that the payback period would be between under a year and two years.

	Carbon Emissions Reduction Target (CERT)	Green Deal	Energy Company Obligation (ECO)	Feed in Tariff (FiT)	Renewable Heat Incentive (RHI)
Which solutions are applicable?	Funding is focussed on insulation, but any measure which reduces energy consumption is allowed, except energy saving light bulbs.	Any measure which meets the "Golden Rule", i.e. the cost of paying back the loan on the measure is lower than the energy bill savings.	Solutions which are too expensive for the Green Deal, e.g. Solid wall insulation.	Solar photovoltaics Wind turbines Micro CHP Anaerobic digester Micro-hydro power	Air-source heat pumps Ground source heat pumps Biomass boilers Solar thermal panels
Who is eligible?	Anyone is eligible for discounted solutions and free solutions too for limited periods.  If you are over 70 or are on certain benefits then you will be eligible for free solutions. Varies, depending on what solutions you need.	Anyone  If you rent your home you can ask your landlord to install the measure (you will pay back the loan through the savings on your energy bill).	The vulnerable  Those who are on low incomes  Those who need solutions which are too expensive for the green Deal.	Currently anyone, but from April 2012, your home will need to install energy efficiency solutions to achieve an EPC rating of D or above before receiving funding.	(To be confirmed.) Anyone, but it must be installed in your main home and have basic energy efficiency solutions in place.
How much funding is available?	Varies, depending on what solutions you need.	Depends on whether the measure will payback but potential for loans of as much as £20,000	Solutions will be free for households with low incomes. For other households the solutions will be subsidised.	Depends on technology, but the later you install the panels the lower the tariff you receive.	Will be available towards the end of 2012.
What is the deadline?	December 2012	Due to start in October 2012. No deadline.	Due to start in October 2012. No deadline.	No deadline, but the later you install the panels the lower the tariff you receive.	Will be available towards the end of 2012.
Where to get more information	Contact the Energy Saving Trust Advice Centre to find out which installers are doing CERT-funded work (0800 512 012).	Energy Saving Trust website will have information when it becomes available <b><a href="http://www.energysavingtrust.org.uk">www.energysavingtrust.org.uk</a></b>	Energy Saving Trust website will have information when it becomes available <b><a href="http://www.energysavingtrust.org.uk">www.energysavingtrust.org.uk</a></b>	Contact the energy Saving Trust Advice Centre (0800 512 012) or see their website: <b><a href="http://www.energysavingtrust.org.uk">www.energysavingtrust.org.uk</a></b>	Energy Saving Trust will have information when it becomes available: <b><a href="http://www.energysavingtrust.org.uk">www.energysavingtrust.org.uk</a></b>



## Get the paperwork right before you start!

You may need planning permission or Listed Building Consent before doing any work to your home, and much of the work will also need Building Regulations Approval. Contact your local council to find out what permissions and approvals you will need.

Local Authority	Building Control	Planning	Conservation Areas & Listed Buildings
Broxbourne	Tel: 01992 785510 <a href="http://www.broxbourne.gov.uk">www.broxbourne.gov.uk</a>	Tel: 01992 785566 <a href="http://www.broxbourne.gov.uk">www.broxbourne.gov.uk</a>	Tel: 01992 785567 <a href="http://www.broxbourne.gov.uk">www.broxbourne.gov.uk</a>
Dacorum	Tel: 01442 228587 <a href="http://www.dacorum.gov.uk">www.dacorum.gov.uk</a>	Tel:01442 228000 <a href="http://www.dacorum.gov.uk">www.dacorum.gov.uk</a>	Tel: 01442 228176 <a href="http://www.dacorum.gov.uk">www.dacorum.gov.uk</a>
East Herts	Tel: 01279 655261 <a href="http://www.eastherts.gov.uk">www.eastherts.gov.uk</a>	Tel:01279 655261 <a href="http://www.easthearts.gov.uk">www.easthearts.gov.uk</a>	Tel:01279 655261 <a href="http://www.easthearts.gov.uk">www.easthearts.gov.uk</a>
Hertsmere	Tel: 020 8207 7456 <a href="http://www.hertsmere.gov.uk">www.hertsmere.gov.uk</a>	Tel:020 8207 2277 <a href="http://www.hertsmere.gov.uk">www.hertsmere.gov.uk</a>	Tel:020 8207 7583 <a href="http://www.hertsmere.gov.uk">www.hertsmere.gov.uk</a>
North Herts	Tel: 01462 474000 <a href="http://www.north-herts.gov.uk">www.north-herts.gov.uk</a>	Tel: 01462 474000 <a href="http://www.northherts.gov.uk">www.northherts.gov.uk</a>	Tel: 01462 474000 <a href="http://www.northherts.gov.uk">www.northherts.gov.uk</a>



Local Authority	Building Control	Planning	Conservation Areas & Listed Buildings
St Albans City & District	Tel: 01727 866100 www.stalbans.gov.uk	Tel:01727 819344 www.stalbans.gov.uk	Tel: 01727 866100 www.stalbans.gov.uk
Stevenage	Tel: 01438 241164 www.stevenage.gov.uk	Tel: 01438 242838 www.stevenage.gov.uk	Tel: 01438 242255 www.stevenage.gov.uk
Three Rivers	Tel: 01923 278304 http://www.swhertsbc.co.uk	Tel: 01923 776611 http://www.threerivers.co.uk	Tel: 01923 776611 http://www.threerivers.co.uk
Watford	Tel: 01923 278304 http://www.swhertsbc.co.uk	Tel: 01923 226400 www.watford.gov.uk	Tel: 01923 776611 www.threerivers.gov.uk
Welwyn Hatfield	Tel: 01707 357391 www.welhat.gov.uk	Tel: 01707 357000 www.welhat.gov.uk	Tel: 01707 357000 www.welhat.gov.uk



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To access the full Retrofit Resource, consisting of the Retrofit Manual and database, and for information on the Building Futures initiative and partnership, please visit [www.hertslink.org/buildingfutures](http://www.hertslink.org/buildingfutures)

Building Futures is a partnership of all eleven Local Planning Authorities in Hertfordshire, that seeks to make a development in Hertfordshire more sustainable and of a higher quality in design terms.

