

ENERGY AND COMFORT

CREATING A HIGH-PERFORMANCE HOME

The property you are buying will have an Energy Performance Certificate, or EPC (for an example, please see below). These are obligatory throughout Europe for every home that goes on the market, whether for sale or for rent. It's widely accepted that (unfortunately) they are somewhat rough-and-ready (more detailed energy assessments/plans are available). Nonetheless, the EPC will give you a reasonable guide as to the current energy performance of your new home.

EPCs assess the performance of walls (whether/how well they are insulated), roof insulation, floor insulation, efficiency of windows, lighting and heating and hot water. It awards points for each category, which are totalled to give an overall score for current efficiency and potential efficiency. A property that scores under 20 points is very inefficient, and is in Band G. One that scores 92 or more is extremely efficient, and in Band A. Most older properties are likely to be Band F, E or D, with considerable scope for improvement. (If it's scored an A or B, you can probably stop reading now and just get ready to enjoy living there!)

GET ADVICE – AND A PLAN

There's a whole range of ways to make a home work better in terms of energy and comfort. Some involve only minor work, some are more major and may require planning permission. They can be done in one go, or gradually – ideally in line with a systematic plan from a home energy consultant or an architect who specializes in energy issues. Having a plan will greatly reduce the chance of “if only ...” mistakes.

“IF ONLY ...”

Most of us in the HS sustainable homes group – and a lot of our friends – have groaned “if only ...”, when we realised we'd done work on our homes without taking the opportunity to improve the comfort and energy profile. But you could learn from our mistakes!

If only we'd ..

... insulated properly before putting down those (expensive) ceramic floor tiles (so cold underfoot)

... made sure the builders had filled the hole where the kitchen waste pipe exits

... put in LED lighting instead of halogens (which use 10 times as much electricity)

... given the attic a clean out and insulated it properly before we redecorated the stairs

... thought of adding a solar PV roof when we had the roof done

... replaced that airbrick with a heat recovery fan

... not opened up that chimney – the draught!

... bought an A++ fridge or freezer (as they run 24/7 it makes a real difference)

... insulated that wall before putting in the fitted shelving and cupboards



21st century homes

character ● comfort ● low carbon

2014

- ... done something about the draughts coming up through the floorboards before having them sanded and stained – and the room decorated
- ... had the windows refurbished or replaced (we had no idea they would be so draughty in winter)
- ... had insulated the floor/walls/windows of the kitchen or bathroom before it was fitted out
- ... realised that putting in electric under-floor heating would use so much electricity
- ... fitted a door between the house and the new conservatory – the heat floods out in winter
- ... built a new room with a skylight instead of a conservatory – it would have been warmer in winter and cooler in summer
- ... built a loft conversion but didn't consider insulation and solar panels
- ... fitted sunscreens outside those big windows – it's so hot in summer
- ... had done a complete overhaul of the heating system – having different heating zones would make so much sense in this large house
- ... made sure that new hot water tank was large enough to use for solar hot water
- ... had realised different taps, WCs and showers could have saved a lot of water
- ... made sure those lovely new curtains were thermally lined

There are many more examples!

Having a whole house plan in place means that, even if you work on your property gradually, you'll be aware of the opportunities as they come up. Being aware of all the jobs that require planning permission can help you get this in place at the earliest opportunity. (See the 'Highgate's Conservation Areas' page).

Having one of the recently introduced Green Deal Assessments of your home will reveal a lot of possibilities. However, it's widely acknowledged that they are generally less detailed than the more tailor-made surveys, so it is worth exploring a few options.

KEEPING THE HEAT IN

By and large, in the UK we are much more concerned about keeping a house warm than cool. On average, heating accounts for 60% of a home's energy consumption – more in older, draughty properties.

The heat in our buildings is always on its way out! The higher the temperature indoors, the faster the heat leaves.

This diagram shows how much heat typically leaves a house, and by which route. The heat leaves in two ways: through holes and gaps in your house that allow heat out

