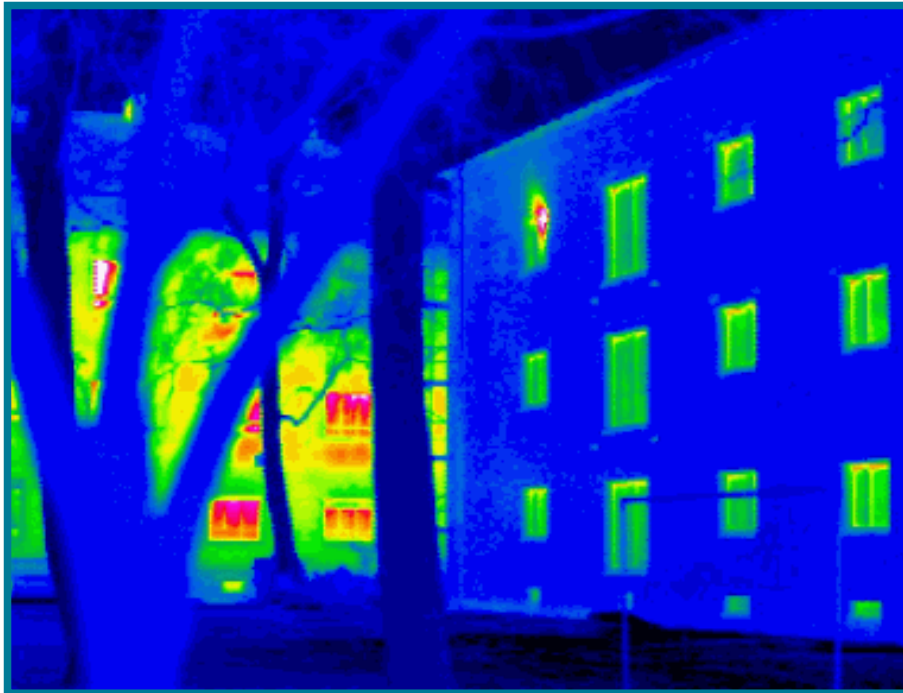


Postcard from the Future

Buildings



Source: CAT (2017). Zero Carbon Britain - Making it Happen.



Buildings

While many of the UK's buildings look the same, their performance has dramatically improved thanks to comprehensive energy efficiency retrofitting. This has come about through a mixture of minimum energy efficiency standards for buildings, incentive schemes managed by local authorities to ensure secure financial returns, and the provision of low-cost finance. Building regulations require all new buildings to be built to 'Passive House or equivalent' standards, giving everyone – whether they're home-owners or in the social and rented sectors – homes that are warmer and cheaper to run.

Methods and technologies for achieving these super-high efficiency standards have spread throughout the construction industry. With their wider implementation, costs have reduced significantly and further innovations have been developed. The adjustment in land values to cover increased construction costs has been minimal and many wonder why we didn't do it sooner!

Zero carbon heating systems, such as heat pumps and solar thermal systems, have become commonplace and people are more aware of their energy use and much better at controlling it using smart-meters and energy control systems. There is also a much increased range of 'flexible demands', such as freezer and heat pumps, which can pay the best possible price by automatically selecting to operate at the time when the grid tells them energy from renewables is available.

The materials used in building new buildings and in retrofitting existing ones have changed. Knowledge and information about the embodied energy and carbon of construction materials, as well as the health and well-being benefits of 'natural materials', have become widely available and well understood. At long last, as a nation, our housing stock has caught up with that of our European neighbours.