1900s detached

Do you have a house like this? See how your home could benefit from energy efficiency improvements.

A House Like Mine case study

EPC rating:	**Current**	**47 E**
	Potential	**92 A**
Occupants:	Owner-occupier, 2 adults, 1 child	
Details:	Detached, 3 bedrooms	
Floor area:	138 m^2 / 1,485 ft^2	
Walls:	Solid brick	
Floors:	Suspended timber	
Roof:	Pitched with loft	
Windows:	Combination of single and double glazing, timber and uPVC; multiple bay windows	
Energy:	Typical annual energy use: 38,180 kWh	
	Annual energy use by area: 276 kWh/m^2 / 25.64 kWh/ft^2	
	Carbon emissions per year: 7.1 tonnes	

"We were aware of the rising energy costs and thought, 'OK, let's give the Whole House Plan a try.' Our main concerns at the time were the cost of heating and damp issues in the bathroom. We were also looking for solutions like a new double-glazed front door, humidity controls, and insulation under the floorboards."

Cathy and Justyn, Botley, Oxford

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What you can do...

Do you want to reduce your energy bills and cut carbon emissions? Would you like your house to be a healthier and more comfortable place to live? There are many different ways to make a building more energy efficient, whatever the house type, your personal circumstance and budget. Get ready to see the potential of your home...

Key: Low impact ● High impact ●●●●●●

Minor retrofit measures **Affordable and non-disruptive**	**Comfort and health**	**Disruption**
Low energy lighting	●	●
Install draught-excluder to open chimney flue	●●●●●	●
Insulate and draught-proof loft hatch	●●●●	●
Increase loft insulation to 300mm	●●●●	●●
New insulated front door with surrounding windows	●●●●●	●●
Ventilation improvements	●●●●●●	●●
Major retrofit measures **Transformative, but more costly and disruptive**		
External wall insulation	●●●●●	●●●
Suspended timber floor insulation	●●●●●	●●●●●●
New triple glazed uPVC windows	●●●●●●	●●●●
Air Source Heat Pump	●●●●●●	●●●●
Renewables **Generate low carbon electricity**		
Solar PV	●	●●

Install new **insulated front door** with surrounding windows to eliminate draughts and reduce heat loss.

Bay window walls. Insulate either internally or externally to reduce heat loss and improve comfort levels.

Solar PV panels on east-west facing roofs can generate electricity throughout the year.

What is an EPC?

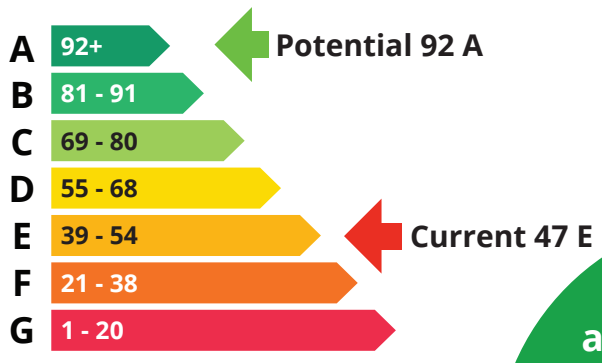
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

An Energy Performance Certificate (EPC) rating tells you about the energy efficiency of your home.

- The score is out of 100 (the higher, the better).
- It's divided into performance bands A-G.

A higher score means a more energy-efficient home with lower running costs.

Current EPC rating for this house, and its potential rating



Do you live in a house like this? You could qualify for a free government grant.

Find out more at oxford.gov.uk/retrofit

...and how you can achieve EPC rating C

Making improvements to the energy performance of your house is a journey. The table below shows the difference each energy saving action could have on this particular house's EPC, fuel bill and carbon footprint.* Grants may be available for some of these measures.

How to achieve EPC C rating	Estimated cost range	EPC rating	Estimated fuel bill	Estimated CO_2 (tonnes)
Where you are now	**Per measure**	**47 E**	**£3,225**	**7.06**
Install draught excluder to chimney flue	£50 - £100	**48 E**	£3,155	6.89
Increase loft insulation to 300mm including above bay windows	£2,000 - £2,500	**56 D**	£2,646	5.70
External wall insulation (100 mm) to solid walls	£40,000 - £50,000	**71 C**	£1,703	3.49
Humidity controlled extractors in kitchen and bathroom, passive ventilation in other rooms	£1,500 - £2,500	**71 C**	£1,703	3.49

Installing solar PV

At this point, if you install solar PV, you could reduce your fuel bill to **£1,098**, your carbon emissions to **3.08 tCO_2** and improve your EPC to **82 B**.
Cost: £5,500 - £7,500.

Installing a heat pump

Or, if you install a heat pump, you could reduce your fuel bill to **£1,496**, your carbon emissions to **0.71 tCO_2** and improve your EPC to **77 C**.
Cost: £13,500 - £17,500.

GRANT FUNDING

Solar PV + heat pump

Install both solar and a heat pump and you could reduce your fuel bill to **£861**, your carbon emissions to **0.31 tCO_2** and improve your EPC to **88 B.**
Cost: £19,000 - £25,000.

GRANT FUNDING

For even greater comfort and health...

	Estimated cost range	EPC rating	Estimated fuel bill	Estimated CO_2 (tonnes)
After Fabric Measures to C	**Per measure**	**71 C**	**£1,703**	**3.49**
Insulate suspended timber floors	£8,000 - £12,000	**74 C**	£1,511	3.04
New triple glazed uPVC windows	£16,000 - £20,000	**76 C**	£1,395	2.76
New insulated front door with surrounding windows	£4,500 - £6,000	**76 C**	£1,354	2.67
Air Source Heat Pump with enhanced existing radiators and new hot water tank	£13,500 - £17,500 GRANT FUNDING	**81 B**	£1,231	0.58
Solar PV (4 kWp system)	£5,500 - £7,500	**92 A**	£599	0.18

*Savings are dependent on the retrofit measures being installed in the order shown. Cost to commission a new EPC at any stage to reflect retrofit updates, approx. £100.

GRANT FUNDING Up to **£7,500 grant** towards a heat pump

Note: Figures are calculated using Parity Projects software from information gathered during a home energy survey. Parity Projects use nationally accepted methodology for calculations that underpin the Energy Performance Certificate (EPC) regime for all UK homes. Fuel bills are estimated and may differ from actual bills. The cost of the retrofit measures are indicative and based on current best estimates. Actual costs will vary depending on the choice of materials; the escalating costs of construction; and the availability of contractors.

Get started

Home improvements

Plan Builder is a free online tool that lets you create your own refurbishment plan to make your home warmer, reduce your carbon emissions and cut your energy bills.

Get grant funding

Whether you own your home or rent – you may be eligible for a grant for insulation, heat pumps or even a whole house upgrade.

Talk to someone about energy bills

Struggling with your energy bills or not sure where to start?
Better Housing Better Health is a free advice service for local residents.

Scan the QR code to visit houselikemine.org

For more information see houselikemine.org

The difference a retrofit can make

Geordie Stewart
Cosy Homes Oxfordshire
Scheme Manager

"The door and surrounding windows are single glazed and draughty, causing the hall and stairs to be cold. Replacing the entire door unit with a new one that meets current building regulation standards will significantly improve the situation."

Natasha Ginks
Cosy Homes Oxfordshire
Retrofit Coordinator

"Detached houses lose a lot of their heat through their walls. The measure that will have the greatest impact on reducing heat losses and improving comfort levels for this house is external wall insulation."

"This house has three sets of bay windows, and the loft space above them is uninsulated. These spaces can be accessed from the main loft and insulated using mineral wool."

You can find more case studies, support, and resources at houselikemine.org

A **House Like Mine** is an Oxford City Council initiative, delivered in collaboration with Cosy Homes Oxfordshire and Low Carbon Hub. Its aim is to help everyone in Oxford get access to the information and support they need to live in a healthy and energy efficient home.

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