1930s semi-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**	**65 D**
	Potential	**99 A**
Occupants	Owner-occupier, retired couple	
Details	Semi-detached, 3 bedrooms	
Floor area:	70m² / 753 ft²	
Walls:	Cavity walls with solid bay window walls	
Floors:	Suspended timber	
Roof:	Pitched with loft	
Windows:	Double glazed, uPVC, bay windows	
Energy:	Typical annual energy use: 13,644 kWh	
	Annual energy use by area: 188 kWh/m² / 17.47 kWh/ft²	
	Carbon emissions per year: 2.8 tonnes	

“We started off with simple low-cost measures, like putting aluminium foil behind radiators on external walls, heavy curtains over the front and back doors, and turning the thermostat down. We’re now having external wall insulation wrapped round the whole house.”

Eleanor and Chris, Rose Hill, 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	●●●●	●
Cavity wall insulation	●●●●●	●●
Increase loft insulation to 300mm	●●●●	●●
New insulated front door	●●●●●	●●
Ventilation improvements	●●●●●●	●●
Major retrofit measures **Transformative, but more costly and disruptive**		
External cavity and bay window walls insulated	●●●●●	●●●
Insulate suspended timber floor	●●●●●	●●●●●●
New triple glazed uPVC windows	●●●●●●	●●●●
Air Source Heat Pump	●●●●●●	●●●●
Renewables **Generate low carbon electricity**		
Solar PV	●	●●

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

External wall insulation boards covered with a special render are applied to the outside of the house.

Air Source Heat Pump collect heat from the outside air and transfer it to your heating and hot water systems.

What is an EPC?

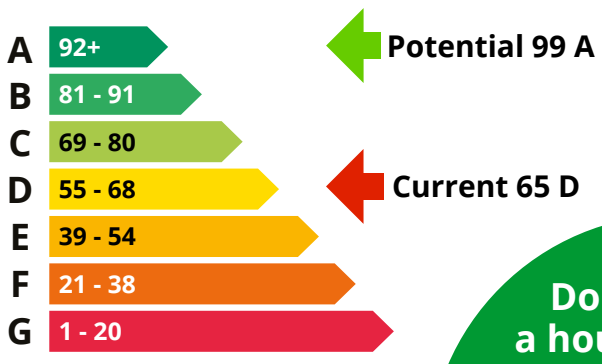
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

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**	**65 D**	**£1,588**	**2.82**
Low energy lighting	£50 - £100	**66 D**	£1,560	2.82
Install draught excluder to open chimney flue	£50 - £100	**67 D**	£1,525	2.74
Increase loft insulation to 300mm	£1,500 - £2,000	**67 D**	£1,487	2.66
Cavity wall insulation	£1,000 - £1,800	**71 C**	£1,298	2.25
Humidity controlled extractors in kitchen and bathroom, passive ventilation in other rooms	£1,500 - £2,500	**71 C**	£1,298	2.25

Installing solar PV

At this point, if you install solar PV, you could reduce your fuel bill to **£338**, your carbon emissions to **1.90 tCO_2** and improve your EPC to **87 B**.
Cost: £4,500 - £6,500.

Installing a heat pump

Or, if you install a heat pump, your fuel bill could increase slightly to **£1,344**, your carbon emissions fall to **0.50 tCO_2** and improve your EPC to **75 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 **£384**, your carbon emissions to **0.14 tCO_2** and improve your EPC to **90 B.**
Cost: £18,000 - £24,000.

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**	**£1,298**	**2.25**
External wall insulation (100mm) to filled cavity walls and bay window walls	£18,000 - £24,000	**72 C**	£1,226	2.10
Insulate suspended timber floor	£4000 - £6,000	**74 C**	£1,165	1.97
Triple glazed uPVC windows	£6,500 - £8,000	**76 C**	£1,048	1.72
New insulated doors – front and rear	£4,000 - £6,000	**76 C**	£1,019	1.65
Air Source Heat Pump with enhanced existing radiators and new hot water tank	£13,500 - £17,500 GRANT FUNDING	**83 B**	£860	0.32
Solar PV (3 kWp system)	£4,500 - £6,500	**99 A**	£0	0

*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

The difference a retrofit can make

Geordie Stewart
Cosy Homes Oxfordshire
Scheme Manager

"Like many houses in Oxford built in the 1930s, this house has bay windows. These are often thinner than the main walls and lose more heat. It's important to find out how the bay window walls are constructed, and devise a plan to insulate them alongside insulating the main walls."

Natasha Ginks
Cosy Homes Oxfordshire
Retrofit Coordinator

"Cavity wall insulation was installed 15 years ago but thermal imaging showed that in places it had slumped due to the type of material used at the time. To overcome this problem, external wall insulation was applied to all the walls, including the bay window walls, to create a consistently insulated and draught-free home."

Find more inspiring case studies at cosyhomesoxfordshire.org





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.

Scan the QR code to visit **houselikemine.org**

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.

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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