Pre-1900 mid-terrace

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 64 D
Potential 92 A

Occupants:	Owner-occupier, couple with lodgers
Details:	Mid-terrace, 5 bedrooms in conservation area
Floor area:	177 m^2 / 1,905 ft^2
Walls:	Solid brick and cavity
Floors:	Solid concrete
Roof:	Pitched with rooms-in-roof
Windows:	Timber with a combination of single, secondary and double glazing
Energy:	Typical annual energy use: 25,712 kWh
	Annual energy use by area: 146 kWh/m^2 / 13.56 kWh/ft^2
	Carbon emissions per year: 5.2 tonnes

"We started with the relatively easy ways to improve insulation in an old house: we put in better doors and double-glazed windows. Then, the biggest change we made to the barn was to put in an Air Source Heat Pump as these are said to be more efficient than a gas boiler. That was a big gain."

Iain, Osney Island, 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
Install draught-excluder to open chimney flue	●●●●●	●
Increase loft insulation to 300mm	●●●●	●●
Insulate sloping ceiling of rear extension	●●●●	●●●
Internal wall insulation to timber frame wall	●●●●●	●●●●
New insulated front door	●●●●●	●●
Ventilation improvements	●●●●●●	●●

Major retrofit measures

Transformative, but more costly and disruptive

Upgrade room-in-roof insulation	●●●●●	●●●●●
External wall insulation	●●●●●	●●●
Solid floor insulation	●●●●●	●●●●●●
New double glazed timber windows	●●●●●●	●●●●
Air Source Heat Pump	●●●●●●	●●●●

Renewables

Generate low carbon electricity

Solar PV	●	●●

A chimney sheep is a removable draught excluder made from durable wool – it reduces heat loss & prevents damp.

Replace single glazed windows with **double glazed timber windows**, subject to conservation area guidelines.

A **new insulated front door** reduces heat loss, improves security and increases comfort.

What is an EPC?

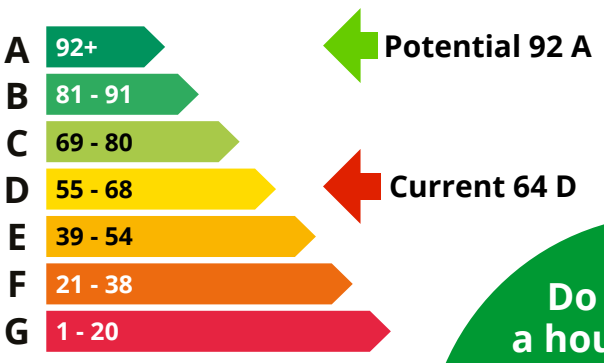
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

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**	**64 D**	**£3,297**	**5.21**
Install draught-excluder to open chimney	£50 - £100	**65 D**	£3,250	5.13
Increase loft insulation to 300mm	£1,500 - £2,000	**68 D**	£2,914	4.56
External wall insulation (50 mm) to solid walls	£12,500 - £17,500	**70 C**	£2,676	4.15
Humidity controlled extractors in kitchen and bathroom, passive ventilation in other rooms	£1,500 - £2,500	**70 C**	£2,676	4.15

Installing solar PV

At this point, if you install solar PV, you could reduce your fuel bill to **£1,479**, your carbon emissions to **3.71 tCO_2** and improve your EPC to **81 B**.
Cost: £4,000 - £6,000.

Installing a heat pump

Or, if you install a heat pump, you could reduce your fuel bill to **£2,087**, your carbon emissions to **0.77 tCO_2** and improve your EPC to **79 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 **£891**, your carbon emissions to **0.33 tCO_2** and improve your EPC to **89 B.**
Cost: £17,500 - £23,500.

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**	**70 C**	**£2,676**	**4.15**
Internal insulation to timber frame wall at front	£3,000 - £,5000	**71 C**	£2,589	4.01
Insulate sloping ceiling of rear extension	£3,000 - £5000	**72 C**	£2,562	3.96
Upgrade insulation in room-in-roof	£7,500 - £15,000	**72 C**	£2,532	3.91
New double glazed timber sash windows	£35,000 - £55,000	**74 C**	£2,357	3.62
New insulated door	£2,000 - £5,000	**74 C**	£2,336	3.59
Air Source Heat Pump with enhanced existing radiators and new hot water tank	£13,500 - £17,500 GRANT FUNDING	**81 B**	£1,861	0.69
Solar PV (2.5 kWp system)	£4,000 - £6,000	**92 A**	£665	0.25

*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

"This house is in a conservation area where measures affecting the external appearance of the house must be approved. The homeowners were allowed to install external wall insulation because their house is rendered at the front and so the appearance wouldn't change much."

Natasha Ginks
Cosy Homes Oxfordshire
Retrofit Coordinator

"The owners decided to replace some of their single glazed windows with double glazing to reduce heat loss and improve comfort levels in particular rooms. They installed double glazed timber sash windows to meet conservation area requirements and match the period features of the house."

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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