1940s 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 67 D
Potential 91 A

Occupants:	Owner-occupier, 2 adults
Details:	Semi-detached, 4 bedrooms
Floor area:	222 m^2 / 2,389 ft^2
Walls:	Cavity
Floors:	Suspended timber and solid
Roof:	Pitched with room-in-roof
Windows:	Timber, single and double glazing
Energy:	Typical annual energy use: 32,982 kWh Annual energy use by area: 150 kWh/m / 13.94 kWh/ft^2 Carbon emissions per year: 6.4 tonnes

"The Whole House Plan really clarified the various measures and their costs for us, something we only had a vague idea about before. It laid out some interesting options, which have been incredibly helpful in planning our next steps."

Felicity and Jan, St Clements, Oxford

THE MCS FOUNDATION · Lucy · OXFORDSHIRE COUNTY COUNCIL · low carbon hub · cosy homes oxfordshire · OXFORD CITY COUNCIL

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**
Separate conservatory from house with external grade doors	●●●●●	●●●
Cavity wall insulation	●●●●●	●●
Insulate sloping ceiling of rear extension	●●●●	●●●
Secondary glazing to single glazed windows	●●●●●●	●●
New insulated front door	●●●	●●
Ventilation improvements	●●●	●●
Major retrofit measures **Transformative, but more costly and disruptive**		
Upgrade room-in-roof – insulate throughout	●●●●●	●●●●●
Suspended timber and solid floor insulation	●●●●●	●●●●●●
New double or triple glazed timber windows	●●●●●●	●●●●
Air Source Heat Pump	●●●●●●	●●●●
Renewables **Generate low carbon electricity**		
Solar PV	●	●●

Photo: Knauf Insulation/ Flickr

Cavity wall insulation. Polystyrene beads in resin are blown into the wall cavity through drilled holes.

Secondary glazing. Cost-effective, internal layer added to windows to prevent heat loss and draughts.

Conservatory. Replace glazed roof in conservatory with insulated panels to prevent heat loss.

What is an EPC?

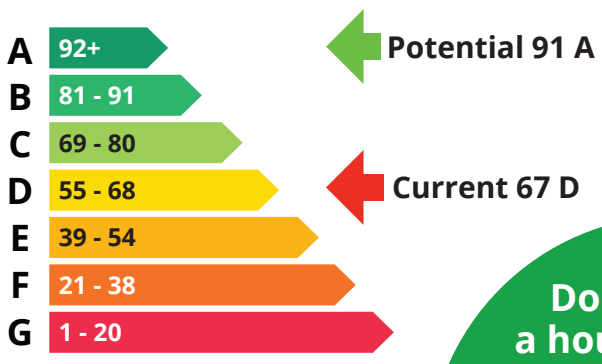
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

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**	**67 D**	**£3,548**	**6.43**
Separate conservatory from house with external grade doors	£4,000 - £6,000	**67 D**	£3,413	6.17
Cavity wall insulation	£1,500 - £2,000	**69 C**	£3,177	5.70
Humidity controlled extractors in kitchen and bathroom, passive ventilation in other rooms	£1,500 - £2,500	**69 C**	£3,177	5.70

Installing solar PV

At this point, if you install solar PV, you could reduce your fuel bill to **£1,907**, your carbon emissions to **5.23 tCO_2** and improve your EPC to **79 C**.
Cost: £5,500 - £7,500.

Installing a heat pump

Or, if you install a heat pump, you could reduce your fuel bill to **£2,939**, your carbon emissions to **1.08 tCO_2** and improve your EPC to **74 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 **£1,626**, your carbon emissions to **0.60 tCO_2** and improve your EPC to **84 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**	**69 C**	**£3,177**	**5.70**
Upgrade room-in-roof - insulate throughout	£10,000 - £15,000	**72 C**	£2,836	5.02
Insulate sloping ceiling of single storey rear extension	£2,500 - £4,000	**72 C**	£2,822	4.99
Insulate suspended timber floors	£8,500 - £12,500	**74 C**	£2,671	4.69
Apply secondary glazing to single glazed timber windows	£5,000 - £10,000	**74 C**	£2,618	4.58
Replace old double glazed timber windows with triple glazed timber windows	£40,000 - 50,000	**77 C**	£2,309	3.97
New insulated front door	£2,000 - £3,000	**77 C**	£2,294	3.94
Air Source Heat Pump with enhanced existing radiators and new hot water tank	£13,500 - £17,500 GRANT FUNDING	**82 B**	£2,061	0.76
Solar PV (4kWp system)	£5,500 - £7,500	**91 A**	£791	0.29

*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

"If loft areas are inaccessible due to rooms in the roof, it's worth creating access. This allows you to check whether there is enough insulation and top it up if necessary."

Natasha Ginks
Cosy Homes Oxfordshire
Retrofit Coordinator

"To improve energy efficiency, separate off the conservatory from the rest of the house with external-grade doors. Alternatively, consider replacing some or all of the glazed roof with solid insulated roof panels."

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.

THE MCS FOUNDATION · Lucy · OXFORDSHIRE COUNTY COUNCIL · low carbon hub · cosy homes oxfordshire · OXFORD CITY COUNCIL