

# 1920s 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 62 D**  
**Potential 100 A**

Occupants: Owner-occupier, 2 adults  
Details: Semi-detached, 3 bedrooms  
Floor area: 84 m<sup>2</sup> / 904 ft<sup>2</sup>  
Walls: Solid brick  
Floors: Suspended timber and solid  
Roof: Pitched with loft  
Windows: New uPVC double glazing, bay window  
Energy: Typical annual energy use: 16,600 kWh  
Annual energy use by area:  
197 kWh/m<sup>2</sup> / 18.30 kWh/ft<sup>2</sup>  
Carbon emissions per year: 2.8 tonnes



“When we got the house, we wanted it to be as insulated as possible and environmentally friendly. Once we had done the things that we had to do and could do financially, we thought it would be great to find out what more we could do. Using the Whole House Plan, we looked into how much it would cost and what the next steps could be.”

Sophie Froud, Rose Hill, Oxford

# What you can do...

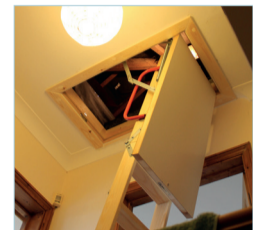
Do you want to reduce your energy bills and cut carbon emissions? Would you like your house to be a healthier and more comfortable place to live? There are many different ways to make a building more energy efficient, whatever the house type, your personal circumstance and budget. Get ready to see the 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	●●●●	●●
Insulate bay window roof	●●●●●	●●
New insulated front door	●●●●●	●●
Ventilation improvements	●●●●●●	●●



Install new insulated and draught-proofed **loft hatch** to prevent heat escaping to the loft.



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

## Major retrofit measures

Transformative, but more costly and disruptive

External wall insulation	●●●●●	●●●
Insulate suspended timber floor	●●●●●	●●●●●●●
Air Source Heat Pump	●●●●●●	●●●●



**Solar PV panels.** Convert sunlight into electricity and help to reduce energy bills.

## Renewables

Generate low carbon electricity

Solar PV	●	●●
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# What is an EPC?

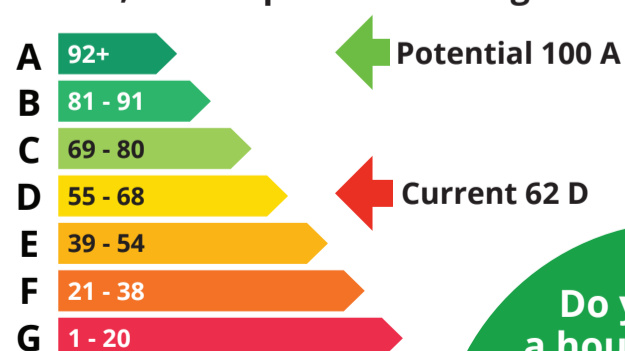
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

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](http://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 <sub>2</sub> (tonnes)
<b>Where you are now</b>	<b>Per measure</b>	<b>62 D</b>	<b>£1,551</b>	<b>2.84</b>
Install draught-excluder to open chimneys	£100 - £200	64 D	£1,472	2.68
Increase loft insulation to 300mm	£1,500 - £2,000	64 D	£1,460	2.65
External wall insulation (100 mm) to solid walls	£17,500 - £20,000	73 C	£1,066	1.85
Humidity controlled extractors in kitchen and bathroom, passive ventilation in other rooms	£1,500 - £2,500	73 C	£1,066	1.85



### Installing solar PV

**At this point, if you** install solar PV, you could reduce your fuel bill to **£435**, your carbon emissions to **1.42 tCO<sub>2</sub>** and improve your EPC to **91 B**.  
Cost: £5,500 - £7,500.



### Installing a heat pump

**Or, if you** install a heat pump, you could reduce your fuel bill to **£958**, your carbon emissions to **0.45 tCO<sub>2</sub>** and improve your EPC to **79 C**.  
Cost: £13,500 - £17,500.



### Solar PV + heat pump

**Install both** solar and a heat pump and you could reduce your fuel bill to **£294**, your carbon emissions to **0.02 tCO<sub>2</sub>** and improve your EPC to **96 A**.  
Cost: £19,000 - £25,000.



## For even greater comfort and health...

	Estimated cost range	EPC rating	Estimated fuel bill	Estimated CO <sub>2</sub> (tonnes)
<b>After Fabric Measures to C</b>	<b>Per measure</b>	<b>73 C</b>	<b>£1,066</b>	<b>1.85</b>
Insulate pitched roof above bay windows	£2,000 - £3,000	73 C	£1,050	1.82
Insulate suspended timber floor	£5,000 - £7,500	75 C	£952	1.62
New insulated front door	£2,000 - £3,000	76 C	£937	1.59
Air Source Heat Pump with enhanced existing radiators and new hot water tank	£13,500 - £17,500	85 B	£679	0.32
Solar PV (3.9 kWp system)	£5,500 - £7,500	100 A	£27	0.00

\*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.



Up to **£7,500 grant** towards an 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 [houelikemine.org](https://www.houselikemine.org)



For more information see [houelikemine.org](https://www.houelikemine.org)

## The difference a retrofit can make



**Geordie Stewart**  
Cosy Homes Oxfordshire  
Scheme Manager

*"This house has a large loft with its original roof and no roofing membrane. If you plan to extend into the loft in the future, it's best to combine this with re-roofing and roof insulation works. For houses with loft rooms, we always recommend wood fibre roof insulation because it helps prevent overheating."*




**Natasha Ginks**  
Cosy Homes Oxfordshire  
Retrofit Coordinator

*"The bay window area in the living room is colder than the rest of the room, partly because the small pitched roof above it has no insulation. By integrating insulation into the roof structure, you can reduce heat loss and make the living room warmer."*

You can find more case studies, support, and resources at [houelikemine.org](https://www.houelikemine.org)

A [House Like Mine](https://www.houelikemine.org) 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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