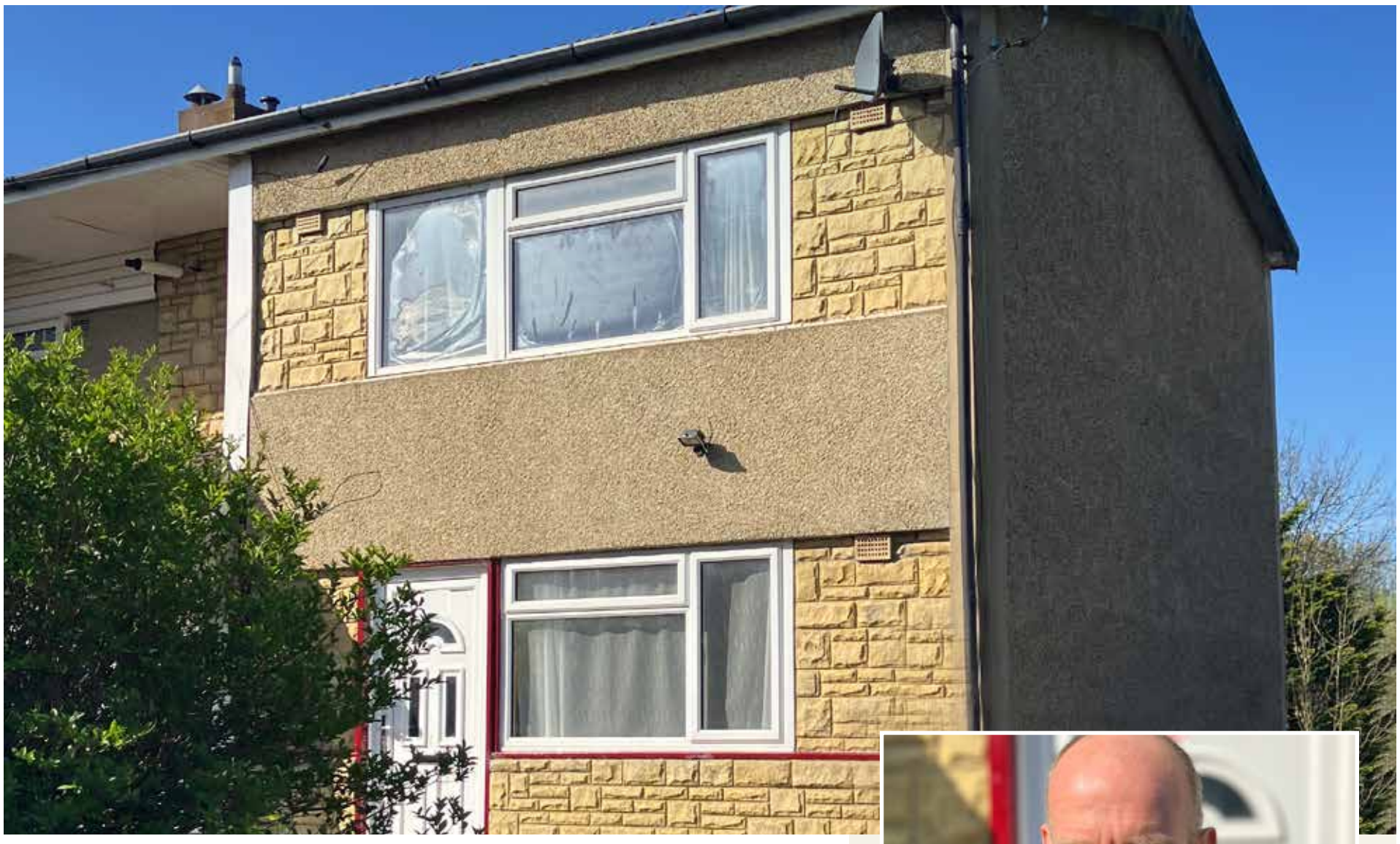
1950s steel-framed “Howard House”

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	**59 D**
Potential	**96 A**
Occupants:	Owner-occupier, one adult
Details:	Semi-detached, 3 bedrooms
Floor area:	100m² / 1,076 ft²
Walls:	Steel-frame with cement panel infill
Floors:	Suspended timber
Roof:	Low pitched steel frame with loft; flat roof section
Windows:	uPVC double glazed
Energy:	Typical annual energy use: 22,400 kWh
	Annual energy use by area: 224 kWh/m² / 20.81 kWh/ft²
	Carbon emissions per year: 4.7 tonnes

“This house is cold. I could spend a lot on heating, but that’s not good. We all want to reduce gas emissions in the world. Before considering alternative heating, you must improve insulation. The biggest difference will be made with external wall insulation.”

Mark, 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	●	●
Insulate and draught-proof loft hatch	●●●●	●
Insulate sloping ceiling of bathroom extension	●●●●	●●●
Insulate flat roof of utility extension	●●●●	●●
Increase loft insulation to 300mm	●●●●	●●
New insulated front door	●●●●●	●●
Ventilation improvements	●●●●●●	●●
Major retrofit measures **Transformative, but more costly and disruptive**		
Suspended timber floor insulation (using robot)	●●●●●	●●
External wall insulation	●●●●●	●●●
New triple glazed uPVC windows	●●●●●●	●●●●
Air Source Heat Pump	●●●●●●	●●●●
Renewables **Generate low carbon electricity**		
Solar PV	●	●●

Photo: Q-bot

Timber floor insulation using robot. Foam insulation is sprayed on the underside of floorboards without lifting them.

New windows. Install double or triple glazed windows, making sure they're installed with airtight tape and insulation.

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

What is an EPC?

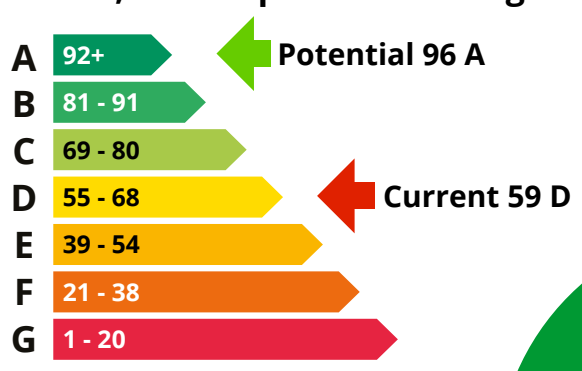
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

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



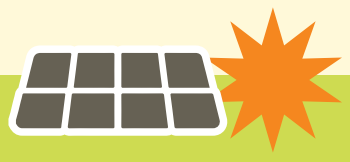
Do you live in a house like this? You could qualify for a free government grant.

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**	**59 D**	**£1,883**	**4.66**
Increase loft insulation to 300mm	£1,500 - £2,000	**60 D**	£1,850	4.57
Suspended timber floor insulation (using robot)	£4,000 - £5,500	**61 D**	£1,765	4.32
Insulate flat roof of utility extension	£3,000 - £5,000	**62 D**	£1,737	4.24
External insulation (100mm) to system built walls	£23,000 - 28,000	**74 C**	£1,155	2.59
Humidity controlled extractors in kitchen and bathroom, passive ventilation in other rooms	£2,500 - £3,000	**74 C**	£1,155	2.59



Installing solar PV

At this point, if you install solar PV, you could reduce your fuel bill to **£527**, your carbon emissions to **2.16 tCO_2** and improve your EPC to **89 B.**
Cost: £5,500 - £7,500.

Installing a heat pump

Or, if you install a heat pump, you could reduce your fuel bill to **£1,137**, your carbon emissions to **0.54 tCO_2** and improve your EPC to **78 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 **£477**, your carbon emissions to **0.11 tCO_2** and improve your EPC to **93 A.**
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**	**74 C**	**£1,155**	**2.59**
Insulate sloping ceiling of bathroom extension	£1,250 - £2,500	**75 C**	£1,107	2.45
Three new insulated doors	£6,000 - £9,000	**75 C**	£1,072	2.35
New triple glazed uPVC windows	£14,000 – £17,000	**77 C**	£979	2.09
Air Source Heat Pump with enhanced existing radiators and new hot water tank	£13,500 - £17,500 GRANT FUNDING	**80 C**	£994	0.47
Solar PV (4 kW system)	£5,500 - £7,500	**96 A**	£338	0.04

*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

"For this system-built house, we'd recommend external wall insulation as the most effective method to make it warmer because much of the heat is lost through the steel-framed walls.

The hallway is particularly cold, so we'd recommend replacing the front door with a new insulated, draught-proofed one and making sure it's properly installed."

Natasha Ginks
Cosy Homes Oxfordshire
Retrofit Coordinator

"These 1950s houses are known for containing asbestos within their structural framework due to the period they were constructed.

Asbestos testing and specialist removal may need to be factored into the cost and sequencing of the improvements."

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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