1950s semi-detached

Do you have a house like this? See how your home could benefit from energy efficiency improvements.

A House Like Mine: Charlbury

EPC rating: Current 60 D
Potential 93 A

Occupants	Owner-occupier
Details	Semi-detached, 4 bedrooms
Floor area	140 m2
Walls	Cavity (unfilled) and solid
Floors	Suspended timber and solid
Roof	Pitched with rooms-in-roof
Windows	Double glazed, uPVC
Energy	Typical annual energy use: 27,241 kWh
	Annual energy use by area: 226 kWh/m²
	Carbon emissions per year: 5.06 tonnes

"The whole house plan helped us think completely differently about how our home worked, and helped us take steps to improving it without having to commit to a full retrofit.
I also work in housing policy – and it's supported my wider understanding of the decisions people take in relation to energy efficiency – and why retrofit policy is hard!"

Alice, Charlbury

Sustainable Charlbury
Reducing carbon, restoring nature

cosy homes oxfordshire

low carbon hub

EVENLODE FOUNDATION
EMPOWERING COMMUNITIES

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	●	●
Increase loft insulation to 300mm	●●●●	●●
Insulate and draught proof loft hatch	●●●●	●
Cavity wall insulation	●●●●●	●●
New insulated front door	●●●●●	●●
Ventilation improvements	●●●●●●	●●
Major retrofit measures **Transformative, but more costly and disruptive**		
Upgrade room-in-roof insulation	●●●●●	●●●●●
External wall insulation to cavity walls	●●●●●	●●●
Insulate suspended timber and solid floors	●●●●●	●●●●●●
New double or triple glazed uPVC windows	●●●●●●	●●●●
Air source heat pump	●●●●●●	●●●●
Renewables **Generate low carbon electricity**		
Solar PV	●	●●

Insulate timber floors. Drape membrane between floor joists and lay mineral wool snugly in between.

Room-in-roof insulation Insulate roof rooms internally with wood fibre to keep warm in winter and cool in summer.

Insulated front door to eliminate draughts and reduce heat loss.

What is an EPC?

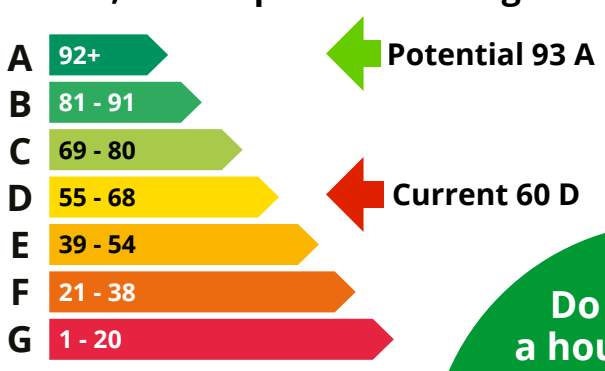
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

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? Find out more about retrofitting your home:

Oxfordshire County Council

...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**	**60 D**	**£1,911**	**5.06**
Cavity wall insulation	£1,350 - £1,650	**64 D**	£1,708	4.46
Increase loft insulation to 300mm	£1,350 - £1,800	**67 D**	£1,526	3.92
Insulate suspended timber floors	£9,700 - £11,800	**70 C**	£1,410	3.58
Humidity controlled extractors in kitchen, utility & bathroom, passive ventilation in other rooms	£1,800 - £2,200	**70 C**	£1,410	3.58

Installing solar PV

At this point, if you install solar PV, you could reduce your fuel bill to **£776**, your carbon emissions to **3.11 tCO_2** and improve your EPC to **85 B**.
Cost: £6,750 - £9,000

Installing a heat pump

Or, if you install a heat pump, you could reduce your fuel bill to **£1,258**, your carbon emissions to **0.71 tCO_2** and improve your EPC to **76 C**.
Cost: £7,500 - £12,500

GRANT FUNDING

Solar PV + heat pump

Install both solar and a heat pump and you could reduce your fuel bill to **£595**, your carbon emissions to **0.24 tCO_2** and improve your EPC to **91 B.**
Cost: £14,250 - £21,500

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**	**£1,410**	**3.58**
Increase sloping ceiling insulation in single storey extension	£2,400 - £3,000	**70 C**	£1,395	3.54
Insulate solid floor of single storey extension	£2,300 - £2,800	**70 C**	£1,374	3.47
New uPVC double glazed windows	£10,600 - £16,500	**73 C**	£1,257	3.12
New insulated front door	£2,100 - £2,700	**73 C**	£1,246	3.09
Air Source Heat Pump with enhanced existing radiators and new hot water tank	£7,500 - £12,500 GRANT FUNDING	**78 C**	£1,127	0.63
Solar PV (4 kWp system)	£6,750 - £9,000	**93 A**	£465	0.17

*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 Costs shown include **£7,500 grant** deduction

Note: Figures are calculated using Cotality software from information gathered during a home energy survey. Cotality 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

"Rooms-in-roof can suffer from overheating especially if there are skylights. We always recommend using wood fibre insulation because it's the best material to prevent overheating. It's also a good idea to upgrade skylights to triple glazed versions with external blinds to stop the sun's rays penetrating on very hot days."

Natasha Ginks
Cosy Homes Oxfordshire
Retrofit Coordinator

"This house has suspended timber floors. Insulating them can improve the energy rating of the house and make it feel less draughty. Membranes and airtight tapes are used to create a cradle which holds flexible insulation material in place between the floor joists."

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.

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.

This Whole House Plan case study template was developed for the A House Like Mine project – an Oxford City Council initiative delivered in partnership with Cosy Homes Oxfordshire and Low Carbon Hub. It builds on the original Charlbury Home Comforts Project, which is now being re-energised under the A House Like Mine Charlbury framework – helping residents plan for warmer, healthier, more energy-efficient homes.

The Low Carbon Hub IPS Limited is a registered society under the Co-operative and Community Benefit Societies Act 2014.
Registration number 31903R. Registered office: Holywell House, Osney Mead, Oxford OX2 0ES

Sustainable Charlbury
Reducing carbon, restoring nature

cosy homes oxfordshire

low carbon hub

EVENLODE FOUNDATION
EMPOWERING COMMUNITIES