

# Pre-1900 end-terrace

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



**Landlords**  
Find out how you could improve the energy efficiency of your property.

## A House Like Mine case study

**EPC rating: Current 58 D**  
**Potential 85 B**

- Occupants: Tenants, 5 adults
- Details: End-terrace, 5 bedrooms, in conservation area
- Floor area: 135 m<sup>2</sup> / 1,453 ft<sup>2</sup>
- Walls: Solid
- Floors: Suspended timber
- Roof: Pitched with rooms-in-roof
- Windows: Timber with a combination of single, double and secondary glazing
- Energy: Typical annual energy use: 29,334 kWh  
Annual energy use by area: 220 kWh/m<sup>2</sup> / 20.44 kWh/ft<sup>2</sup>  
Carbon emissions per year: 6.1 tonnes



“We always want to ensure our properties are as energy efficient as they can be, for the longevity of the property but also to make the houses better for the tenants and for them to have lower bills.

We found the Whole House Plan really detailed and useful in telling us what we can do to make them more efficient.”

Connie, Property Manager, Lucy Properties, Jericho, Oxford

# What you can do...

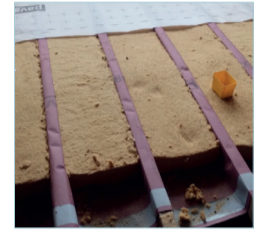
Do you want to reduce your energy bills and cut carbon emissions? Would you like your house to be a healthier and more comfortable place to live? There are many different ways to make a building more energy efficient, whatever the house type, your personal circumstance and budget. Get ready to see the potential of your home...

**Key:** Low impact ● High impact ●●●●●

## Minor retrofit measures

Affordable and non-disruptive

|                                       | Comfort and health | Disruption |
|---------------------------------------|--------------------|------------|
| Low energy lighting                   | ●                  | ●          |
| Secondary glazing from single glazing | ●●●●●              | ●          |
| Increase loft insulation to 300mm     | ●●●●●              | ●●         |
| New insulated front door              | ●●●●●              | ●●         |
| Ventilation improvements              | ●●●●●●             | ●●         |



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

## Major retrofit measures

Transformative, but more costly and disruptive

|  |        |        |
|--|--------|--------|
| Upgrade room-in-roof insulation            | ●●●●●  | ●●●●●  |
| Internal wall insulation                   | ●●●●●  | ●●●●●● |
| Insulate suspended timber floors           | ●●●●●  | ●●●●●● |
| New double or triple glazed timber windows | ●●●●●● | ●●●●   |
| Air Source Heat Pump                       | ●●●●●● | ●●●●   |



**Internal insulation.**  
Woodfibre boards are applied to the inside of external walls and covered with lime plaster.

## Renewables

Generate low carbon electricity

|          |   |    |
|----------|---|----|
| Solar PV | ● | ●● |
|----------|---|----|



**Ventilation.**  
Good ventilation and moisture extraction is very important in high occupancy houses.

## What is an EPC?

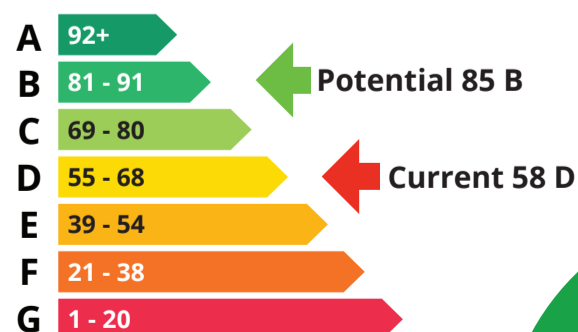
An EPC is a great milestone, but it's just the start. While it measures energy efficiency, it doesn't guarantee maximum comfort, warmth, or cost savings – those come from a complete retrofit of your property.

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>58 D</b> | <b>£2,412</b>       | <b>6.11</b>                        |
| Upgrade insulation in rooms-in-roof  | £12,500 - £15,000    | <b>63 D</b> | £2,110              | 5.25                               |
| Internal wall insulation (60 mm) to solid walls  | £22,500 - £27,500    | <b>67 D</b> | £1,845              | 4.50                               |
| Insulate suspended timber floors   | £7,500 - £10,000     | <b>69 C</b> | £1,729              | 4.17                               |
| Humidity controlled extractors in kitchen and bathroom, passive ventilation in other rooms | £2,500 - £4,500      | <b>69 C</b> | £1,729              | 4.17                               |



## Installing solar PV

**At this point, if you** install solar PV, you could reduce your fuel bill to **£1,269**, your carbon emissions to **3.88 tCO<sub>2</sub>** and improve your EPC to **78 C**.  
Cost: £4,000 - £6,000.



## Installing a heat pump

**Or, if you** install a heat pump, you could reduce your fuel bill to **£1,562**, your carbon emissions to **0.74 tCO<sub>2</sub>** and improve your EPC to **75 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 **£1,079**, your carbon emissions to **0.45 tCO<sub>2</sub>** and improve your EPC to **84 B**.  
Cost: £17,500 - £23,500.



# 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>69 C</b> | <b>£1,729</b>       | <b>4.17</b>                        |
| Replace all windows with triple glazed timber windows                        | £28,000 - £42,000    | <b>71 C</b> | £1,637              | 3.92                               |
| New insulated front door   | £2,500 - £4,500      | <b>71 C</b> | £1,627              | 3.89                               |
| Air Source Heat Pump with enhanced existing radiators and new hot water tank | £13,500 - £17,500    | <b>76 C</b> | £1,471              | 0.70                               |
| Solar PV (2.5 kWp system) in a conservation area                             | £4,000 - £6,000      | <b>85 B</b> | £989                | 0.41                               |

\*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 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](https://www.houselikemine.org)



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

## The difference a retrofit can make



**Geordie Stewart**  
Cosy Homes Oxfordshire  
Scheme Manager

*“Many Victorian houses have thin walls which lose a lot of heat. This house is in a conservation area so wall insulation would need to be applied internally, with care taken to use materials that are suitable for the house and the occupants.”*




**Natasha Ginks**  
Cosy Homes Oxfordshire  
Retrofit Coordinator

*“If internal wall insulation is being applied, it’s a great time to tackle the draughts and heat loss from suspended timber floors. Membranes and airtight tapes are used to create a cradle which holds flexible insulation material in place between the floor joists.”*

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

A [House Like Mine](https://www.houselikemine.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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