wrap up your house

With so many incentives to insulate the home, there's no excuse to lag behind the eco crowd, says Jo Moulds

There's nothing better than closing your front door on a freezing cold night to be greeted by a roasting hot home, but the environmental cost is depressing. The amount of heat lost annually in UK houses is enough to keep three million homes warm for a year, that's roughly 8% of the houses in England and Wales. So, before you thaw out the planet as well as your fingertips, put these heat-saving tips to the test.

1. Roof

Under recent guidelines, **roof insulation** in new homes must be at least 270mm thick, though The Centre for Alternative Technology recommends increasing this to 350mm. If your insulation is too thin, lay an extra layer on top of the old one.

2. Tank and pipes

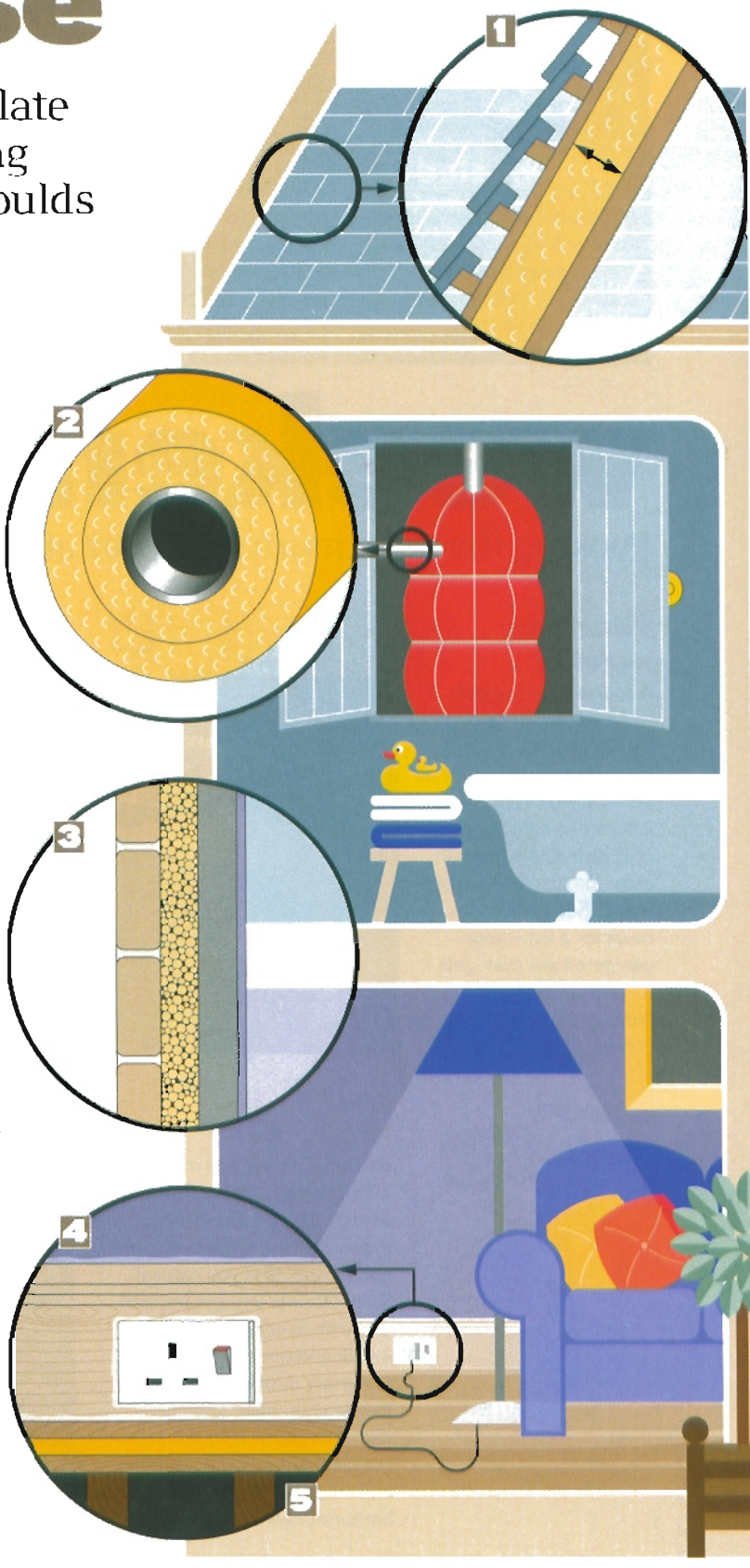
Make sure they are well-lagged. **Tank and pipe insulation** should be at least 50mm thick – the Energy Saving Trust (est.org.uk) recommends 75mm.

3. Walls

A third of heat is lost through walls. If we filled all our **cavity walls** tomorrow, we'd save £962 million of energy every year. If your house was built between the 1920s and the 1980s, you might be eligible for a grant to retrofit cavity-wall insulation. Check with the Energy Saving Trust.

4. Draughts

For **skirting boards**, between **floorboards** and around **plug points**, use a toxin-free sealant to stop draughts. Chris Herring, director of the Green Building Store (greenbuildingstore.co.uk), advises using an acrylic sealant (or 'decorator's cork') rather than a silicone-based one.



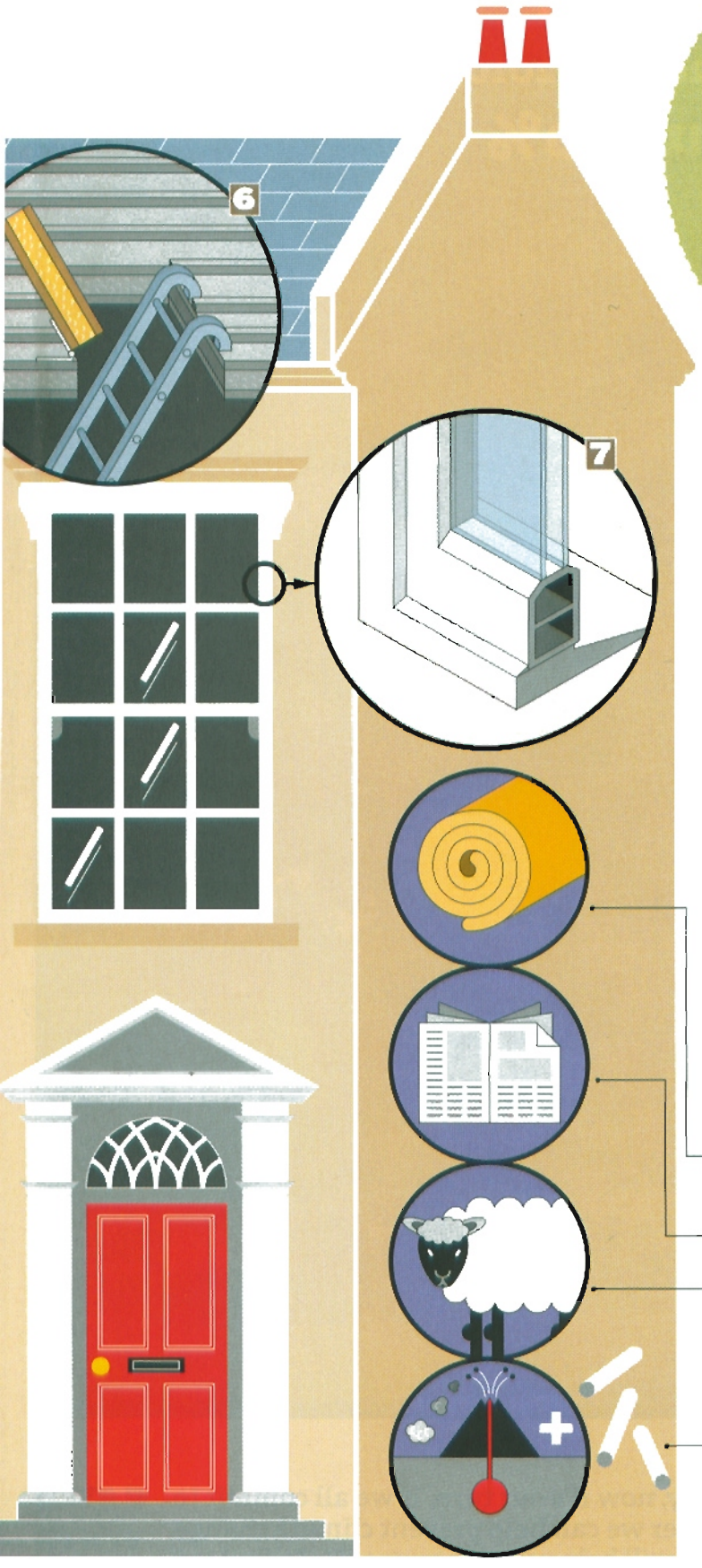
fast facts

>> If all buildings in western Europe were insulated to the highest standards, CO_2 emissions would be cut by 353 million tonnes and heating costs by 42%.

>> The government offers grants of up to 50% for domestic thermal insulation (est.org.uk). It's also worth contacting your utility company to see whether it offers any eco deals under the government's Energy Efficiency Commitment scheme. British Gas, for example, gives council-tax rebates of up to £100 to homeowners who install energy-efficiency measures.

>> The Green Building Press (newbuilder.co.uk) has a good section on insulation. Ecohouse 2 by Sue Roaf (£26.98, Architectural Press), on sale via its website, has 24 inspiring eco houses, plus green tips.

ILLUSTRATION GRUNDY & NORTHEDGE



quick fixes

1. Check for draughts with a lit incense stick - the smoke will blow sideways.
2. Lay a carpet or rug - they will act as insulation.
3. Draw the curtains at night to stop draughts and open them by day to benefit from passive solar gain.
4. Put reflective insulation behind radiators to bounce heat back into a room.
5. Fit an interior flap on your letterbox to cut heat loss.

5. Floors

Use **timber filler**, or **stripwood** to fill gaps between floorboards. Try using an airtight membrane underneath, available from Klober for around £117.50 per 75 sq metre roll (klober.co.uk) topped with insulation such as thermafleece, around £109.99 per 1200mm long roll (naturalresourcegroup.co.uk).

6. Attic

Insulate loft hatches: they're prime culprits for heat loss.

7. Windows

Double-glazing can cut heat loss through windows by 50%. Building regulations insist that new windows are at least double- or triple-glazed and the government is encouraging this by reducing the VAT on them to 5% (rather than 17.5%). Choose frames approved by forestry watchdog the FSC, such as the Ecoplus System, available from The Green Building Store.

If you live in a conservation area or listed building, contact The Society for the Protection of Ancient Buildings (020 7377 1644, spab.org.uk), which gives advice on double-glazing and reducing draughts and can put you in touch with a specialist in your area.

Get fleeced: buying insulation

The ideal insulation is organic, from a renewable source and produced in an eco-friendly way. Here are four main types:

Glass fibre: seen as an environmental sinner due to its high embodied energy, but at least the Isover Spacesaver Plus is made from 70% recycled glass (greenspec.co.uk).

Warmcel: recycled newsprint that is sprayed into roof or wall cavities. Can even be recycled when replaced (excelfibre.com).

Thermafleece: made from sheep's wool, and although more expensive than glass fibre, it absorbs 40% more moisture. 'It can make your house up to 4C warmer in winter and up to 7C cooler in summer,' says Will Brimmer from Second Nature (secondnature.co.uk), a supplier of Thermafleece. This is often used for old or listed buildings because of its damp-absorbing properties.

Rockwool: a natural material made from basalt and chalk, which when melted at 1600C turns into a 'cotton-candy-like' substance. Has great thermal and acoustic properties, although the heating process means that a great deal of energy is used in the manufacturing process (rockwool.co.uk).