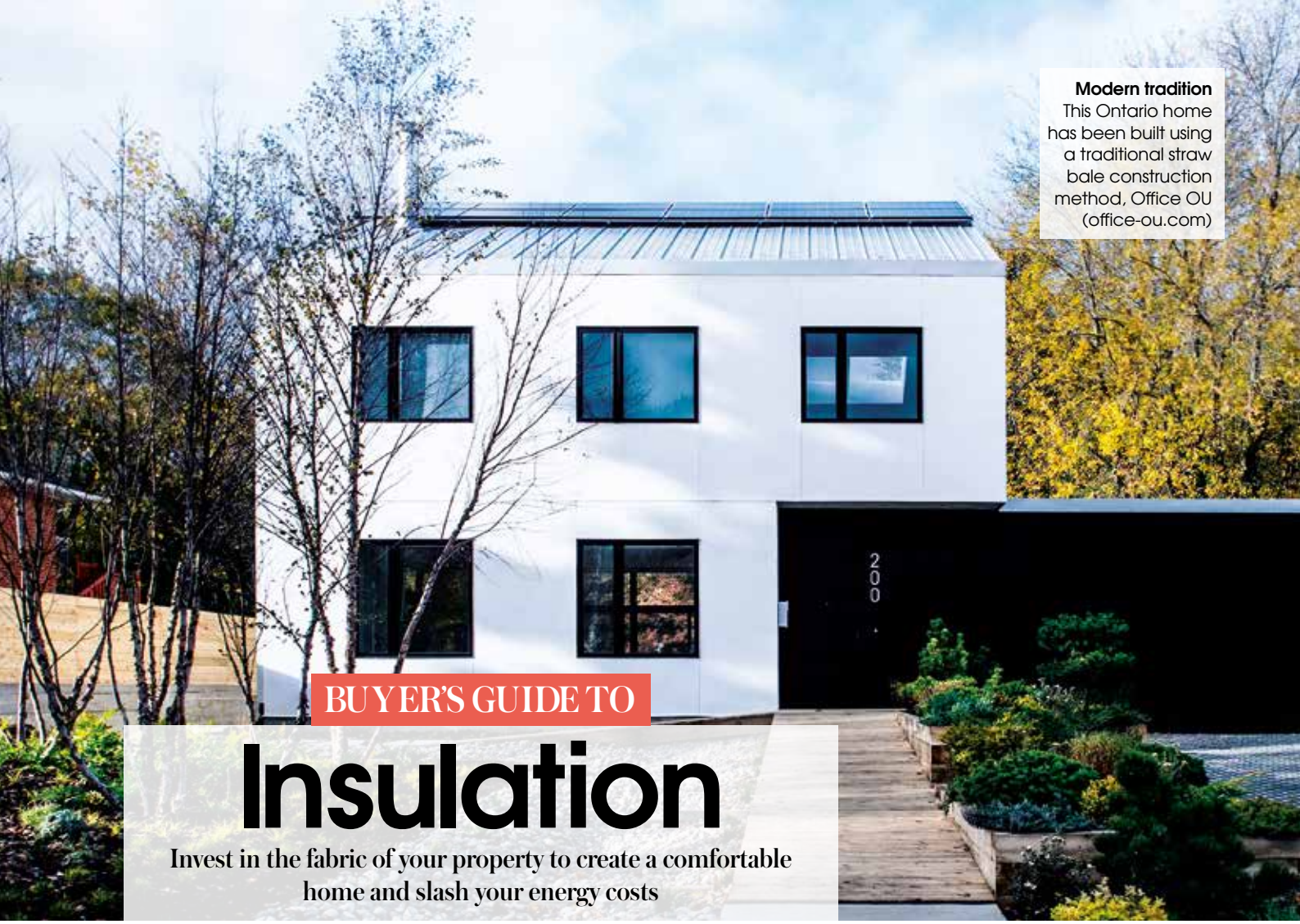


Modern tradition
This Ontario home has been built using a traditional straw bale construction method, Office OU (office-ou.com)

BUYER'S GUIDE TO

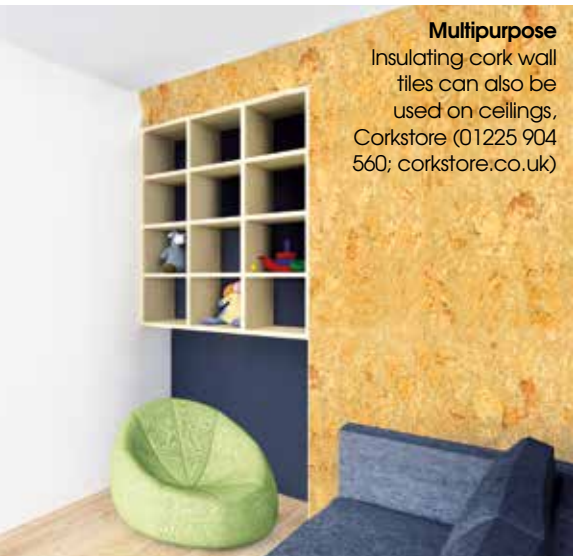
Insulation

Invest in the fabric of your property to create a comfortable home and slash your energy costs

Whether you're carrying out major renovation works, or building a house from scratch, making sure the property is as thermally efficient as possible should be high on your priority list. You may have heard of taking a fabric-first approach, which means designing a building that's tightly sealed and packed with insulation. You can always add green tech later, but with this route you might not even need to.

Sealing gaps and topping up loft insulation can help make winter much more bearable without you having to crank up the thermostat. In fact, a well-insulated home has been proven to save homeowners hundreds of pounds a year on bills. 'Insulation remains effective for the life of the building,' says Neil Marshall, chief executive of the National Insulation Association (0845 163 6363; nia-uk.org). 'And installing insulation can also protect homeowners from future energy price rises.'

There are a host of products to help you keep your home warm, some of which you can fit yourself if you're a confident DIYer.



Multipurpose
Insulating cork wall tiles can also be used on ceilings, Corkstore (01225 904 560; corkstore.co.uk)

Cavity walls

If your home was built between the Thirties and Eighties then you may have uninsulated cavity walls. Adding insulation consists of drilling small holes into the external walls and blowing in the insulating material (mineral wool, beads or granules, or foam) through the openings. With a third of heat lost through a property's walls, adding cavity wall insulation could save you £160 annually according to the Energy Saving Trust (energysavingtrust.org.uk). This work will need to be carried out by a professional, and will require you to submit a notice to building control. However, the company carrying out the work might be able to do this on your behalf.

Solid walls

These can be insulated either internally or externally with there being pros and cons for both options. The great thing with →

NEED TO KNOW

» Some energy companies offer grants and help with energy-saving measures. Find out more at ofgem.gov.uk.

» Building Regulations part L states the maximum U-value for a new loft space should be 0.18; 0.22 for floors and 0.28 for walls.

» Find a competent installer via the National Insulation Association (nia-uk.org), Cavity Insulation Guarantee Agency (ciga.co.uk) or the British Board of Agrément (bbacerts.co.uk).

insulating the facade of a property is you can give your home a facelift at the same time. However, you will need help from the professionals and you may also require local authority permission, particularly if you live in a conservation area.

Should you choose to insulate your solid walls internally it will cost you less and you may be able to do some of the work yourself. Knauf's thermal laminate is a popular easy-to-use product. Be aware that you will lose some floor space, and will need to move radiators and electrical sockets.

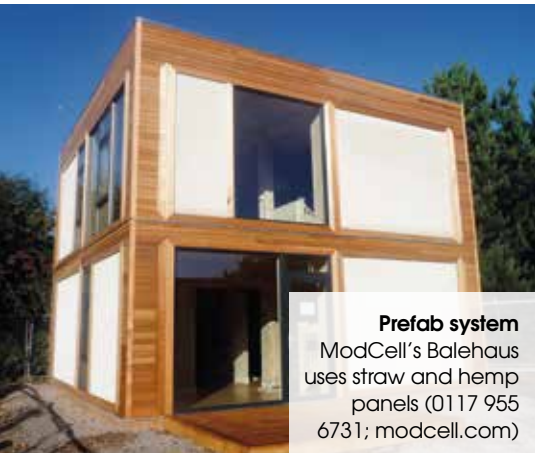
Floors

The type of insulation you choose will depend upon the floor construction of your home. Older properties are more likely to have suspended timber floors to which you can add insulation beneath the floorboards. Newer buildings often have a concrete slab floor which can be insulated internally using rigid insulation boards. Try Celotex PIR (01473 822 093; celotex.co.uk), or Thermafloor TF70 and OPTIM-R by Kingspan (01544 388 601; kingspan insulation.co.uk). According to the Energy Saving Trust, insulation will cost £300-£750 for a suspended timber floor, and between £950 and £2,200 for solid floors.

Roofs

Around 25 per cent of heat is lost through the roof of an uninsulated home and upgrading this space could save you around £200 a year*. It is also one of the more affordable insulation projects, costing between £285 and £395*, and you might be able to do it yourself depending on the type of loft space you have. 'Loft insulation works by preventing the movement of heated air through the material. The main types are blown mineral wool (glass or rock wool), blown cellulose (recycled newspaper), and quilted mineral wool,' says Neil Marshall.

The option you choose will depend on the roof construction of the house. The recommended minimum depth of mineral wool insulation is 270mm, while the thickness of other systems will vary.



Prefab system ModCell's Balehaus uses straw and hemp panels (0117 955 6731; modcell.com)

Alternative build methods

New technologies and concepts provide better opportunities to ensure the fabric of our homes is well insulated and tightly sealed. Construction methods that include insulation within the building's frame are worth considering if you're taking on a self-build project. Structural insulated panels (SIPs) consist of a layer of insulation sandwiched between two timber boards, usually oriented strand board (OSB). These panels are then used to create the main frame of the house. Another example is insulating concrete formwork (ICF), in which hollow polystyrene blocks are filled with a concrete mix, the whole structure then becoming the walls of the building. Straw bales – both insulating and load bearing – are becoming more popular as a building material, and are also being incorporated into innovative building systems, such as ModCell's prefabricated panels. **GD**

Packed in Earthwool Frametherm slabs are a glass mineral wool material ideal for timber framed builds, Knauf (0844 800 0135; knaufinsulation.co.uk)

NEXT MONTH
Wood-burning stoves

3 types of eco insulation

1 Natural material Thermafleece CosyWool is a blend of wool and recycled fibres. £54.95 per 14.43sqm (01752 692 760; roofing superstore.co.uk)

2 Forestry waste Made from natural wood fibres, Steicoflex insulation board is FSC-certified and fire resistant. £33.19 per 7.02sqm (01920 821 069; natural insulations.co.uk)

3 Regenerated jeans The recycled denim fibres of Metisse provide thermal and acoustic insulation. £12.14 per sqm (0114 258 7639; inno-therm.com)

Words Ifeoluwa Adedeji **Photography** Nicolas Koff
*Energy Saving Trust