



FLOOR INSULATION

About 15 % of the heat from a house is lost through the ground floor and through unsealed gaps in the flooring. This happens even if there are carpets.

Floor insulation was not included in new houses until 1991, so if your home is older than this, it is unlikely to have floor insulation. This could save 15 % of your total heating costs. For a four bedroom detached stone house in Banchory this could also save **1.4** tonnes of greenhouse gas CO₂ per year. In addition to saving on fuel bills, floor insulation also noticeably increases comfort levels and room temperatures at floor level.

There are two ways to insulate a ground floor, **underfloor** insulation (which is fitted underneath the floor) and **floating** floor insulation which is laid on top of the floor.

Underfloor insulation is possible if there is enough space to get under the ground floor. Make sure all pipes under the floor are lagged prior to the main insulation being done. Seal any draughts in the floor prior to having the insulation installed. This could be done by using a polythene vapour layer, tube sealant or wood filler.

The floor insulation is fitted between the floor joists across which the floorboards are laid. You could use standard insulation products such as space blanket fibreglass from B & Q or Kingspan TP 10 insulation board from B & Q or Sheffield Insulation at Bridge of Don. 100 mm of Kingspan TP10 gives the equivalent of 190 mm of fibreglass. Ideally leave an air gap of 20 – 50 mm between the vapour barrier/floor and the insulation material as this improves the insulating effect. The insulation can be kept in by strong netting or boards. Insulation board requires less effort to get it to stay in place. Historic Scotland don't bother with having vapour barriers for this.

For even more effect, make sure there is insulation added below the joists too. This could be done by having an additional layer of insulation fitted, either using standard materials or insulated plasterboard.

If there is no access under a suspended floor you could **take up floorboards** from above, to gain access. You would not need to take up each floorboard. A skilled joiner might be able to manage to insulate with only 1 in 6 floorboards taken up. Options are:

- to nail battens to the sides of the bottoms of the joists to support rigid insulation boards or
- to use insulation quilt such as Spaceblanket. Before doing this, strong plastic or wire netting needs to be stapled between the joists to keep this insulation in place.
- Historic Scotland have used hemp or wood fibre boards for insulating floors

When insulating a suspended floor, if there are ventilator grills in the walls below the floor it is **important** that these are left uncovered to provide ventilation across the bottom of the insulation from each side.

Floating floor insulation requires lifting the carpets or laminate on the ground floor. Specialist insulation can be many times better than thick carpets. You would need to have a joiner trim the doors to get them to close when the insulation is fitted. A recommended product is Kingspan Kooltherm K3 floor insulation. 50 mm of this material gives the equivalent effect of 100 mm of fibreglass. This comes in a range of thicknesses and is available from Sheffield Insulation at Bridge of Don, Aberdeen. Spacetherm gives similar insulation but is a lot thinner. Replace your carpet or flooring on top of the insulation material after it is fitted.

Some insulation companies do underfloor insulation but they need at least 4 feet (1.2 metres) of access space under the floor. Details of insulation companies are as follows: Eaga Scotland, telephone 0800 408 1444 Miller Pattison at 01324 638414 the Mark Group at 0800 616 302 and Buchan Insulation tel 01346 517545

BERI is not responsible for the outcome of any DIY measures done and you are advised to study the manufacturers installation instructions. Banchory Energy Reduction Initiative (B.E.R.I.) is a local community organisation funded by the Scottish government's Climate Challenge Fund until March 2012 and run by volunteers and part time staff. Online information at www.banchory.org see link to community projects. Tel 077 697 125 20 e mail beri.banchory@hotmail.co.uk Drop in advice sessions at Banchory Town Hall Mondays and Fridays 10.30 – 12.30