

## **Fact Sheet – Insulation**

Insulation is the single most important aspect of any building.

As energy prices spiral, it is fitting lots of good quality insulation that will save energy. Merely changing heating appliances from oil to a heat pump for example is not the answer. If there is no insulation in the walls or floors or roof of a building, then it should be fitted as soon as possible.

If there is no insulation in the floors then they really need to be dug up, and insulation fitted. Fitting underfloor heating then costs almost no extra labour as the pipes are simply clipped to the top of the insulation before the concrete screed is poured on.

Only the best insulation should be fitted such as [www.celotex.co.uk](http://www.celotex.co.uk) or [www.kingspan.com](http://www.kingspan.com). Contrary to popular belief, mineral wool, fiberglass or polystyrene insulation are not particularly good insulators and we would not expect them to be used in new or renovated buildings. Other products such as Thermafleecce can be used in some areas. This is a low embodied energy insulation product [www.secondnatureuk.com](http://www.secondnatureuk.com)

For example, cavity wall insulation should always be fitted to an older building wherever possible, but do not be under the illusion that a building with the cavities filled is then *well insulated*. Generally speaking, this improves the insulation but only slightly.

Contrary to popular belief, a new-build building that just complies with current Part L in the UK building regulations would not really be very well insulated.

It is generally believed that a well-insulated building would be considered to have about 100 mm of good quality insulation such as Celotex or Kingspan in the walls and floors, and about 200 mm in the roof. A very well insulated building could have as much as double this thickness.

Many existing buildings (except some Listed buildings) can become well insulated by adding insulation on the inside of the walls, on the floors and in the roof.

Kensa Engineering Ltd. are reluctant to supply heat pumps to buildings that are anything less than well insulated.

The reason for this is simple. The better insulated a building, the lower the flow temperature required into the underfloor heating system, so the less the heat pump has to raise the temperature and the more efficiently the heat pump will operate. In addition, the better insulated a building, the less energy it will need to heat it in the first instance.

Kensa want people to be nothing less than delighted with heat pump technology and the consequent low-energy bills, and this requires the building to be well insulated.