From 2006 it became necessary when re-roofing works or Internal plastering and re-rendering works are carried out that a building regulation application be submitted. This guide seeks to provide information on how to achieve compliance with the Building Regulations.

The solutions shown are just some examples of how to comply, other solutions and manufacturers products may achieve the requirements. A building notice application will be acceptable for this type of work, which can be made by phone or downloading form from our website.
Roof: pitched

Where a roof is to be stripped and recovered thermal upgrading will be required to achieve a U value of 0.16 W/m²K.

In a pitched roof situation 270mm Crown wool insulation is normally installed with 100mm inserted between the ceiling joists and 170mm laid at right angles over the ceiling joists. In new construction it is usual practice to install foil backed plasterboard to the underside of the ceiling joists to reduce condensation in the roof space.

As the majority of older properties do not have foil backed plasterboard it is important to provide adequate ventilation to the roof space even with breathable roofing felt. This can be achieved by providing proprietary eaves ventilation by one of the vents shown in the photographs below.
In a pitched roof situation where the insulation is in the sloping section of the roof thermal upgrading will be required to achieve a U value of 0.18 W/m²K.

An alternative is to install 100mm Kingspan between rafters and a layer of web dynamics TLX silver fixed to the underside of rafters with counter battens and plasterboard finish.
Roofs: tile and slate fixings

Due to the amount of high winds the fixing of tiles and slates has changed to prevent tile and slate loss in high winds. Single lap tiles need to be mechanically fixed. Tiles at edges of roofs must have at least two fixings. Fixings for slates or tiles can be copper, aluminium, phosphor or silicon-bronze nails. Stainless steel nails can also be used for concrete tiles. **Zinc-coated (galvanised) steel nails should not be used.**

Roofs: ridge and hip fixings

From 2014 mortar cannot be the only method for securing ridge and hip tiles. All ridge and hip tiles must now be mechanically fixed, these also provide high level ventilation.

Roof: flat

When a flat roof is having its covering removed and replaced thermal upgrading will be required to achieve a U value of 0.18 w/m²K.

For flat roofs 100mm Kingspan insulation is normally installed between the flat roof joists level with the bottom of the joists and 50mm fixed to the underside of the joists. It is important to maintain a 50mm clear air space between the top of insulation and top of joists to prevent the possibility of dampness affecting roof timbers.
Walls

When Internal plastering and re-rendering works are to be undertaken where more than 25 per cent of the wall area is affected thermal upgrading will be required.

When plasterwork is hacked off internal walls insulation should be applied to internal face prior to plaster boarding to achieve a U value of 0.3 w/m²K. The solution below will achieve compliance.

existing brickwork
existing cavity
existing blockwork
new 72.5mm thick Kingspan K117 pre bonded insulation/plasterboard.

Solid brickwork external walls can be upgraded by lining with 82.5mm thick Kingspan K117 pre bonded insulation/plasterboard.

An alternative option is to employ a firm to inject insulation into the wall cavity to achieve a U value is 0.55 w/m²K. This should be undertaken by specialist contractors who will guarantee the work.

Where render is removed and to be reinstated insulation must be placed on the external face prior to rendering this must achieve a U value of 0.3 w/m²K. This can normally be achieved by using 60mm Kingspan K5 EWB secured to existing outer face of wall by mechanical fixings prior to application of render.
Floors

Where a floor is taken up and being re-laid the new floor must achieve a U value of 0.25 w/m²K.

It is important when relaying floors in historic buildings that the performance and breathability of the building is investigated prior to installation to ensure the replacement floor is not detrimental to the building.

The following are ways of achieving the U value requirements:

- 75mm sand/cement screed
- 500 gauge visqueen
- 75mm Kingspan insulation
- 1200g visqueen
- Minimum 100mm thick concrete slab

- 100mm concrete slab
- 500 gauge visqueen
- 75mm Kingspan insulation
- 1200g visqueen damp proof membrane
- sand blinding
- clean well compacted hardcore.

Floor boarding

- 100mm Kingspan insulation
- or 150mm rockwool flexi
- between floor joists supported by battens, nails or netting.

www.rochdale.gov.uk/buildingcontrol
Bibliography/Further guidance


Kingspan, 2011, Kooltherm K5 External Wall Board, Kingspan, Pembridge, <www.kingspaninsulation.co.uk>

Kingspan, 2011, Kooltherm K17 Insulated Plasterboard, Kingspan, Pembridge, <www.kingspaninsulation.co.uk>