

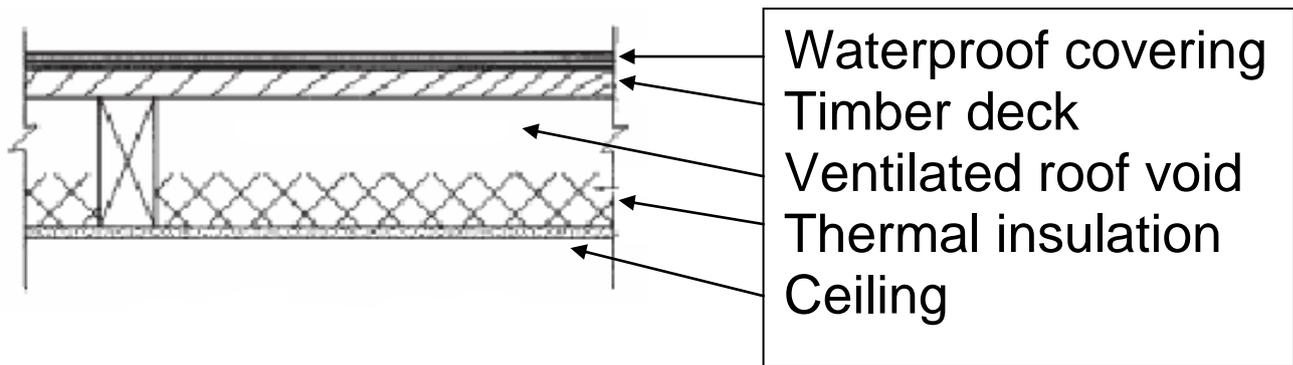
# GUIDANCE NOTES

Produced by

**Tendring District  
Council**  
Building Control Service



## Flat roofs: A brief guide



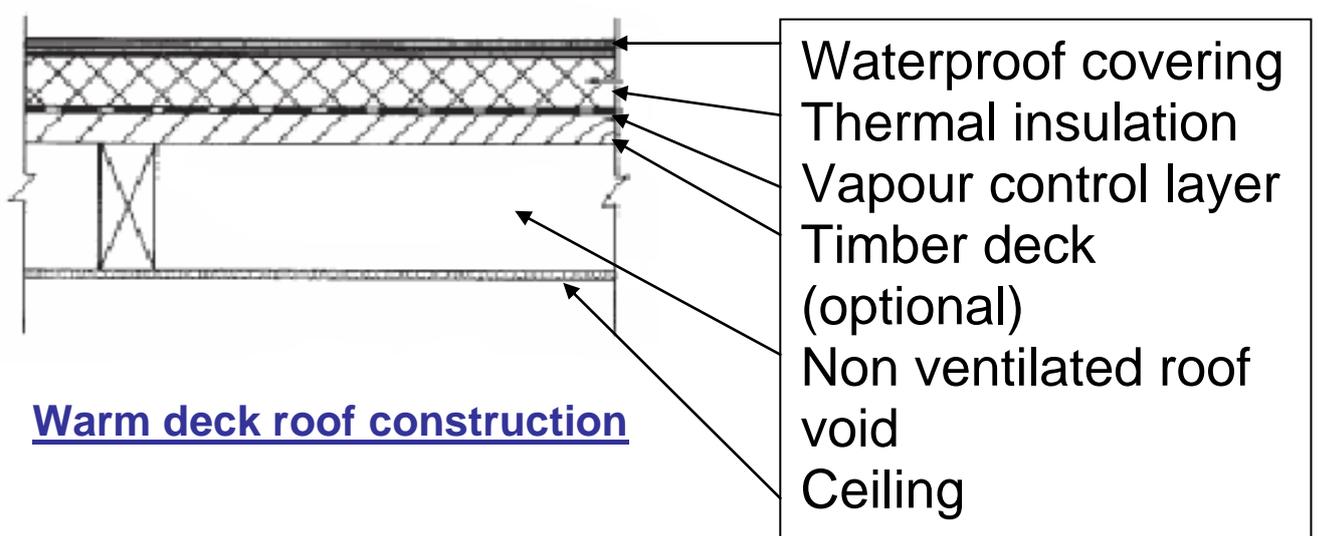
**Cold deck roof construction**

Flat roofs are divided into two main categories due to the position of the insulation in relation to the other elements of construction.

The cold deck roof as shown above has the insulation at ceiling level and must have a ventilated cavity of at least 50mm. The cavity must be ventilated on two opposing sides by a continuous ventilation gap of 25mm. A vapour control layer is required on the warm side of the insulation to combat condensation.

The warm deck roof as shown below has the insulation located above the deck. With a warm deck roof there is less chance of thermal movement and condensation, it should therefore be considered as the standard form of construction for flat roofs.

The traditional method of waterproofing is two or three layers of felt laid onto hot bitumen, finished off with a layer of protective chippings. Modern alternatives to the bitumen based felts have been developed one of which uses four layers of glass reinforced polyester bonded permanently to each other and the decking, with no joints or seams. These modern coverings have much better life spans.



**Warm deck roof construction**

# Cold deck roofs do's and don'ts

## Do

- Have a minimum roof void of 50mm between the top of the insulation and the underside of the deck. For spans over 5m the roof void should be increased to 60mm.
- Ventilate the roof void on two opposing sides with a minimum 25mm continuous ventilation strip. For spans over 5m the gap should be increased to 30mm.
- Include a vapour control layer between the insulation and the plasterboard ceiling.
- Provide a suitable lead flashing to abutments. \*
- Provide a minimum fall of 1:80 to drain the flat roof. \*
- Ensure that the roof covering is manufactured to BS 747:2000 or BS EN 13707:2004 \*

## Don't

- Place the joists at any greater than 400mm centres if an asphalt covering is to be used.
- Allow vermin or birds to enter the ventilated cavity by using a suitable proprietary ventilation strip.
- Ventilate on one side or on adjoining sides. If cross ventilation cannot be provided, consider using a warm deck roof.

**\*Also applicable to warm deck roofs.**

# Warm deck roofs do's and don'ts

## Do

- Ensure that every edge of the insulation is supported by joists or noggins.
- Provide a vapour control layer between the deck and the insulation. This can be achieved by mastic sealing all the joints of the foil backed PIR insulation board or by using a separate vapour control layer, such as a polythene sheet.
- Ensure that the wall and roof insulation meet to create a thermal envelope for the building.

## Don't

- Ventilate the roof void.
- Position the joists at greater than 400mm centres if the warm roof is subject to foot traffic.
- Leave the wall insulation short of the roof insulation. Take special care with abutments to existing walls and roofs.

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