



CHAPTER 12

ROOFS

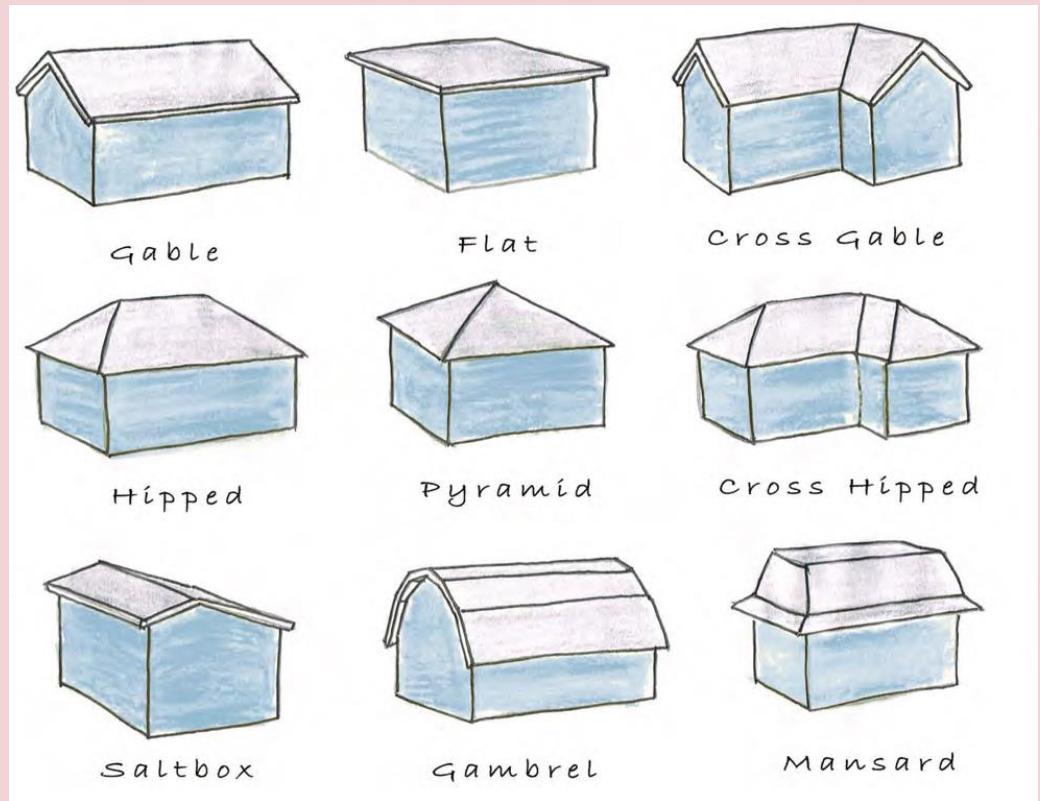


Roof Design

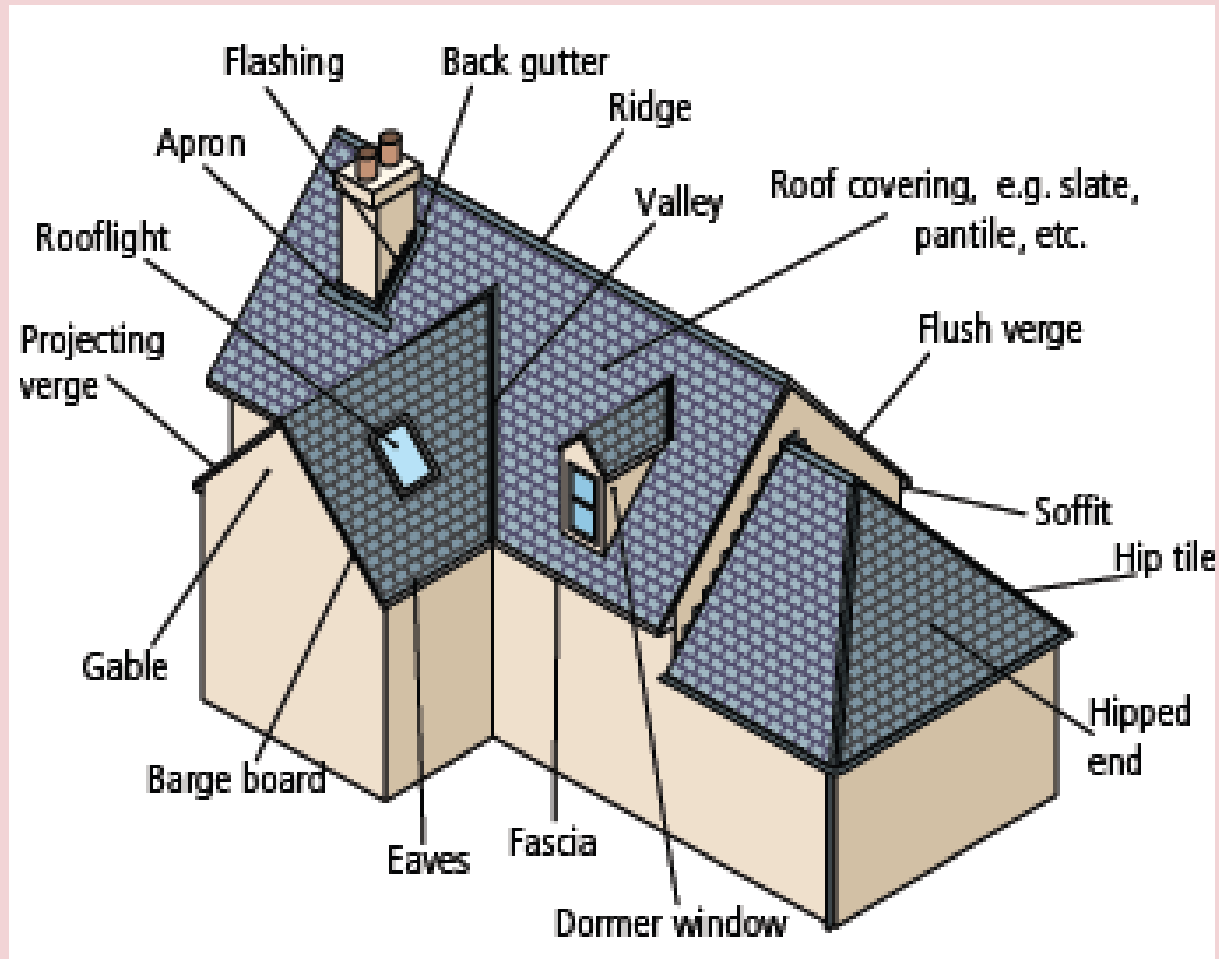
Design considerations

- Insulation
- Strength
- Durability
- Weather resistance
- Fire resistance

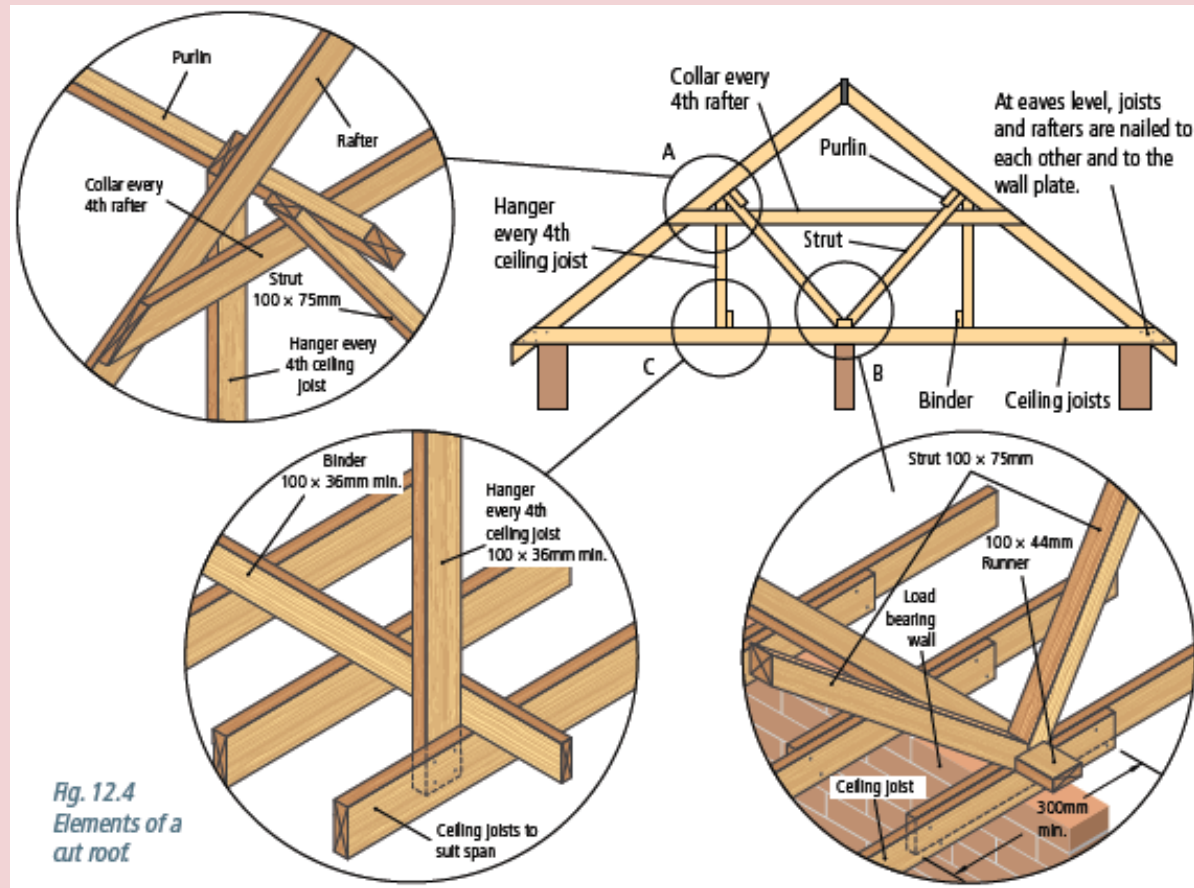
Roof shape



Roof Terminology



Roof Construction: Traditional Cut Roof



Bracing Methods

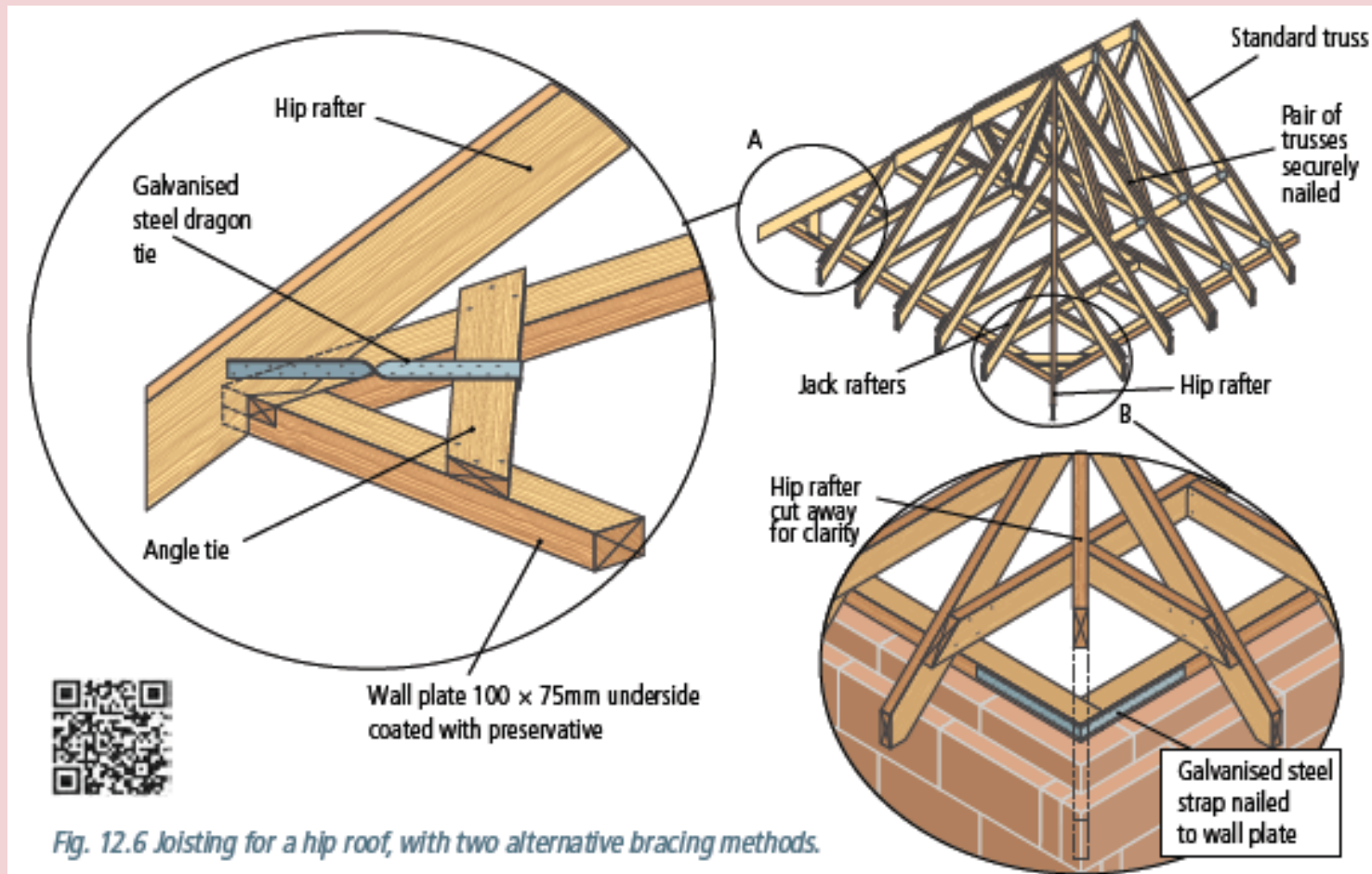
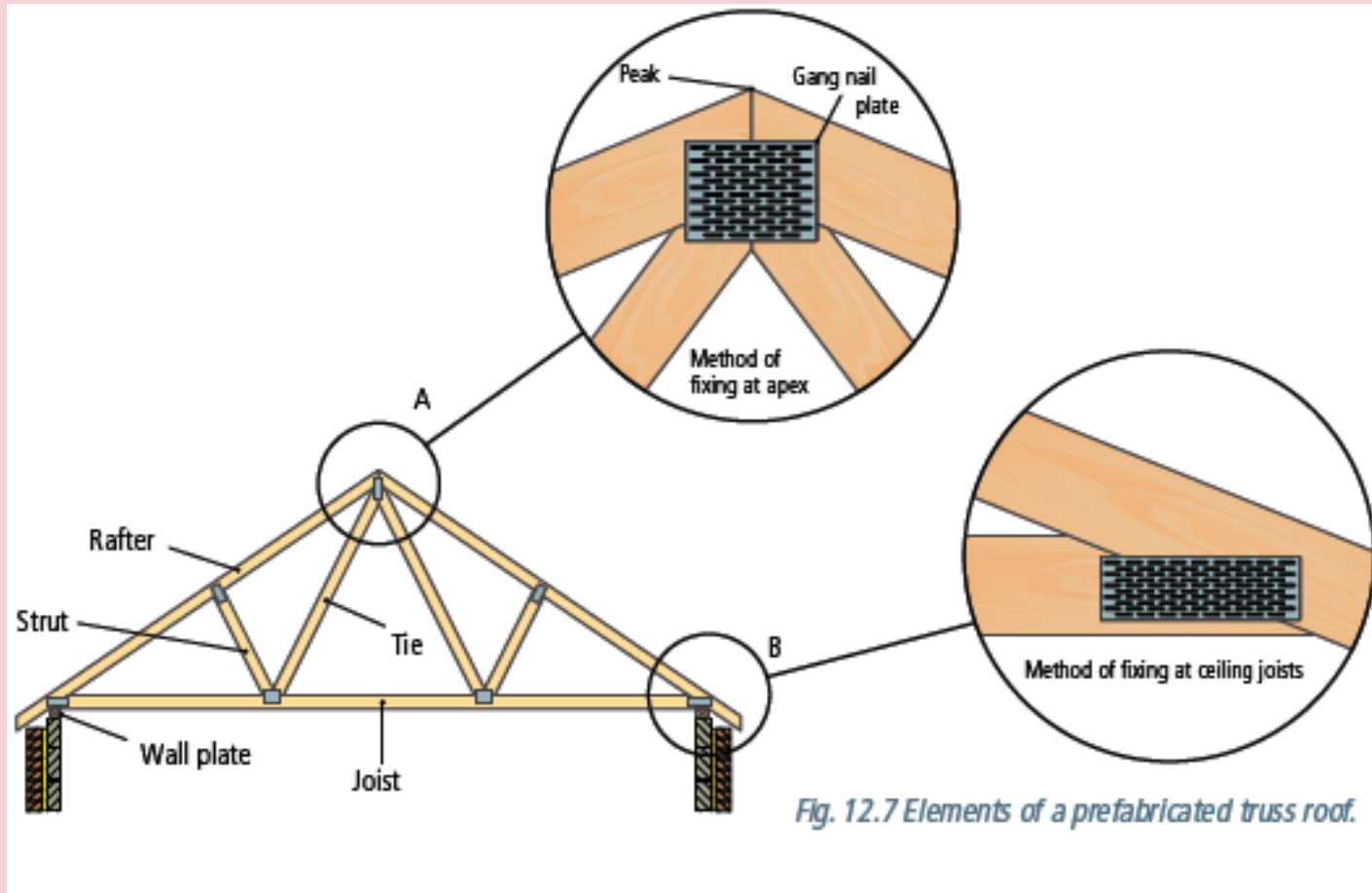
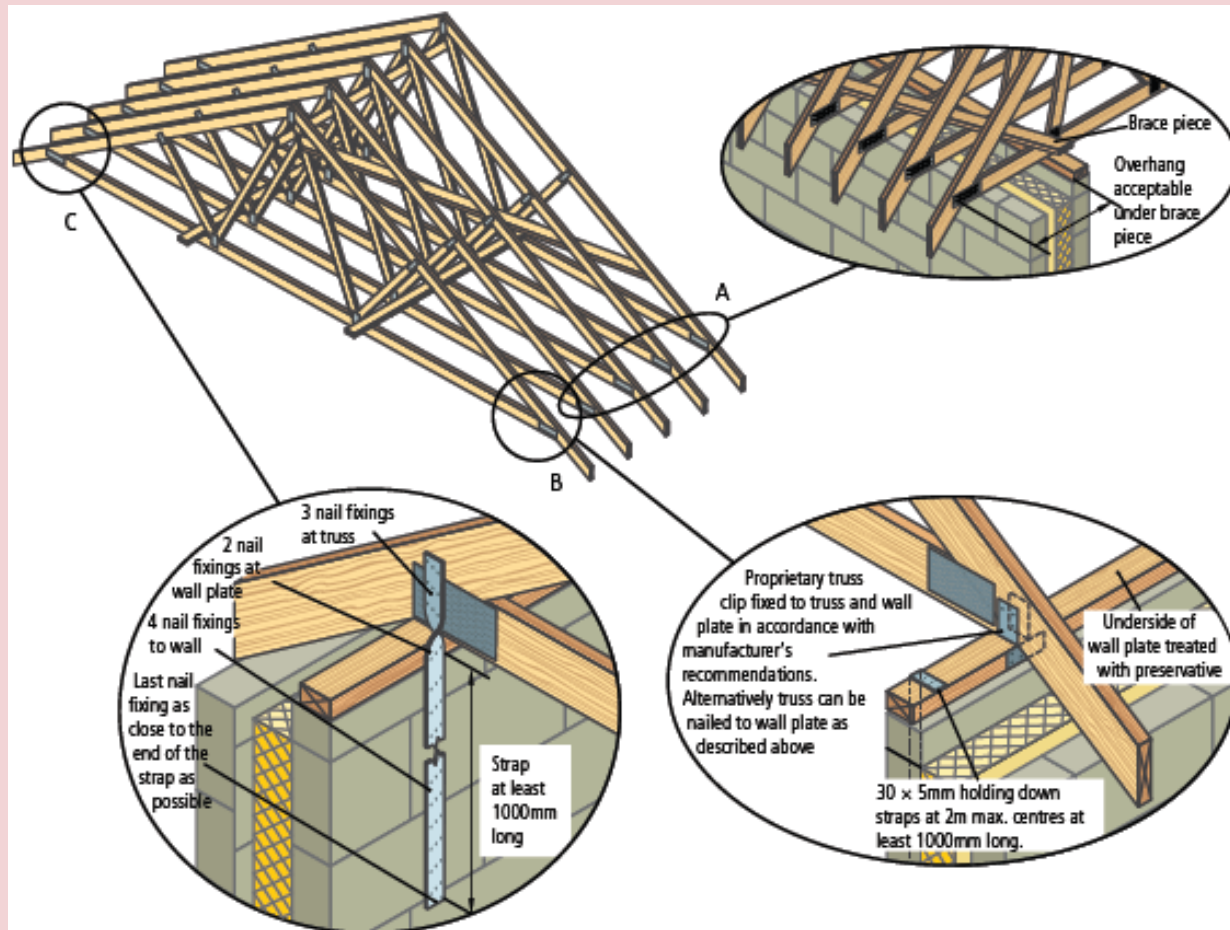


Fig. 12.6 Joisting for a hip roof, with two alternative bracing methods.

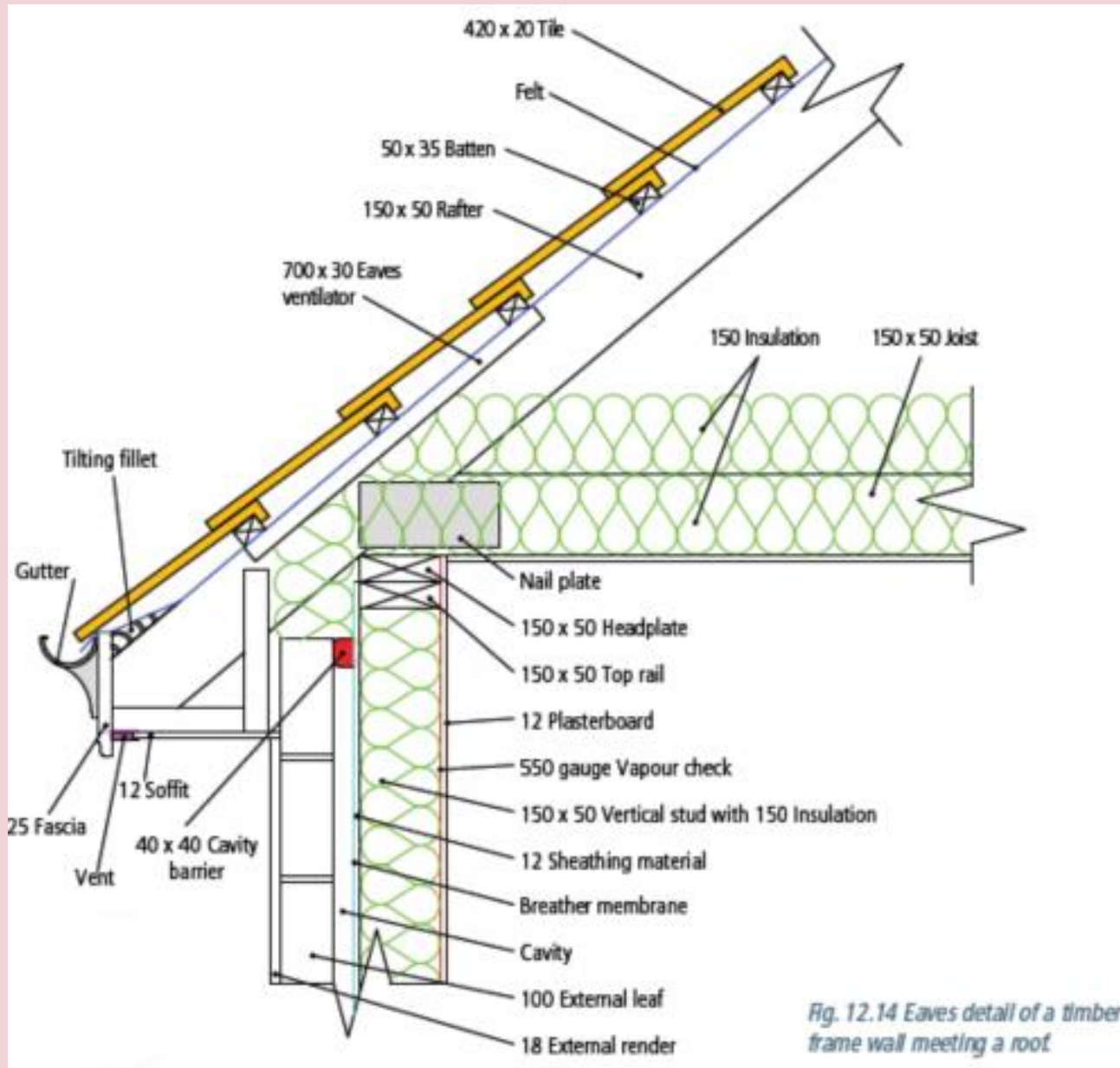
Prefabricated Truss Parts



Bracing of Truss



Eaves Detail



Lean-to Roof Detail

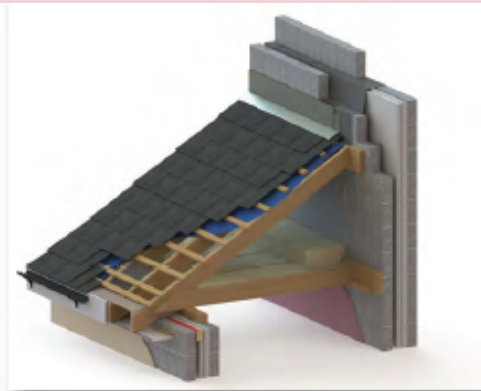
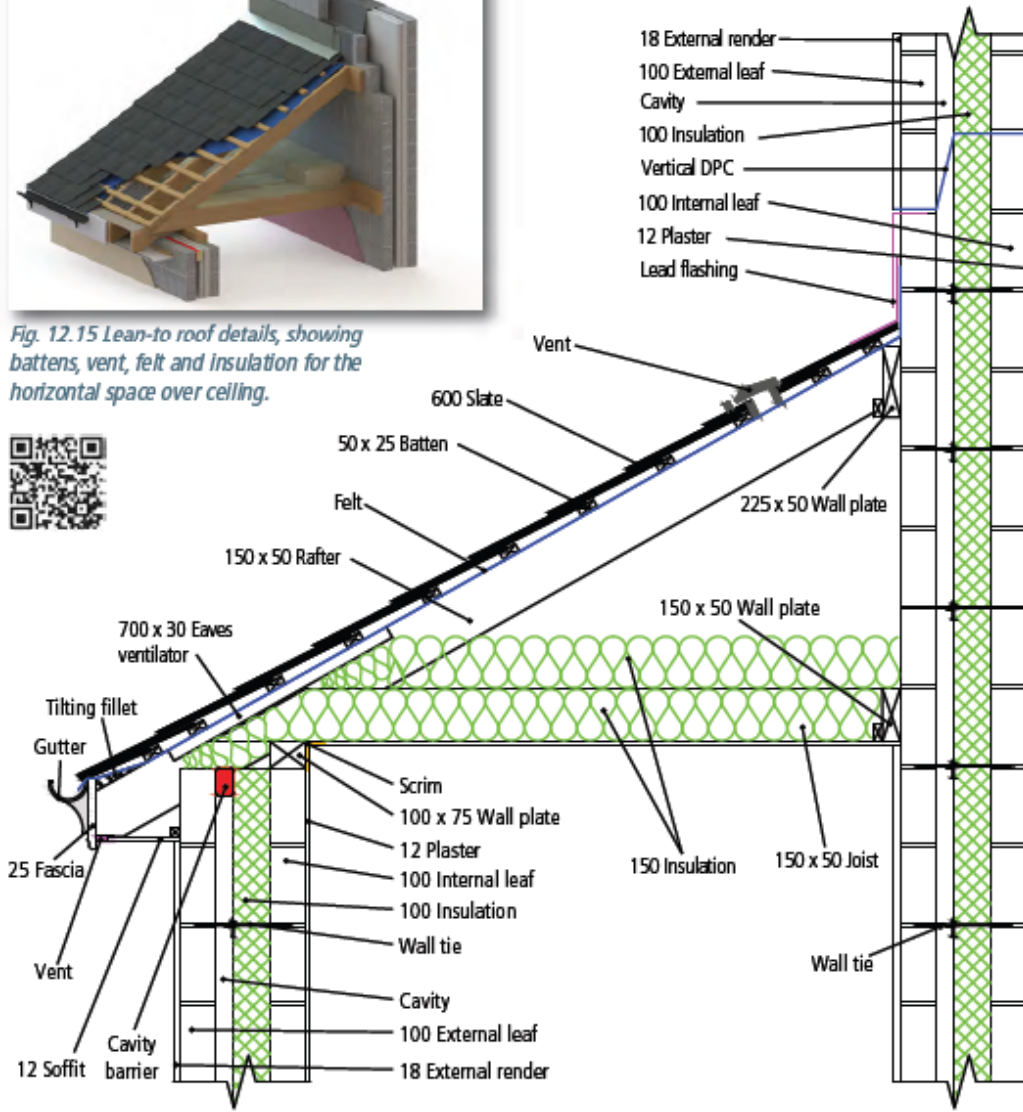


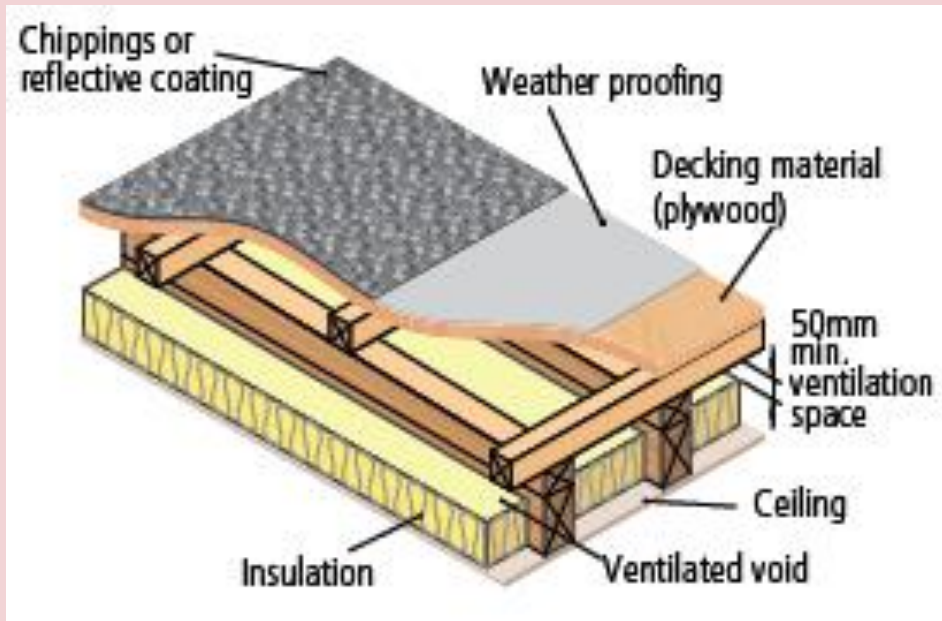
Fig. 12.15 Lean-to roof details, showing battens, vent, felt and insulation for the horizontal space over ceiling.



Flat Roof

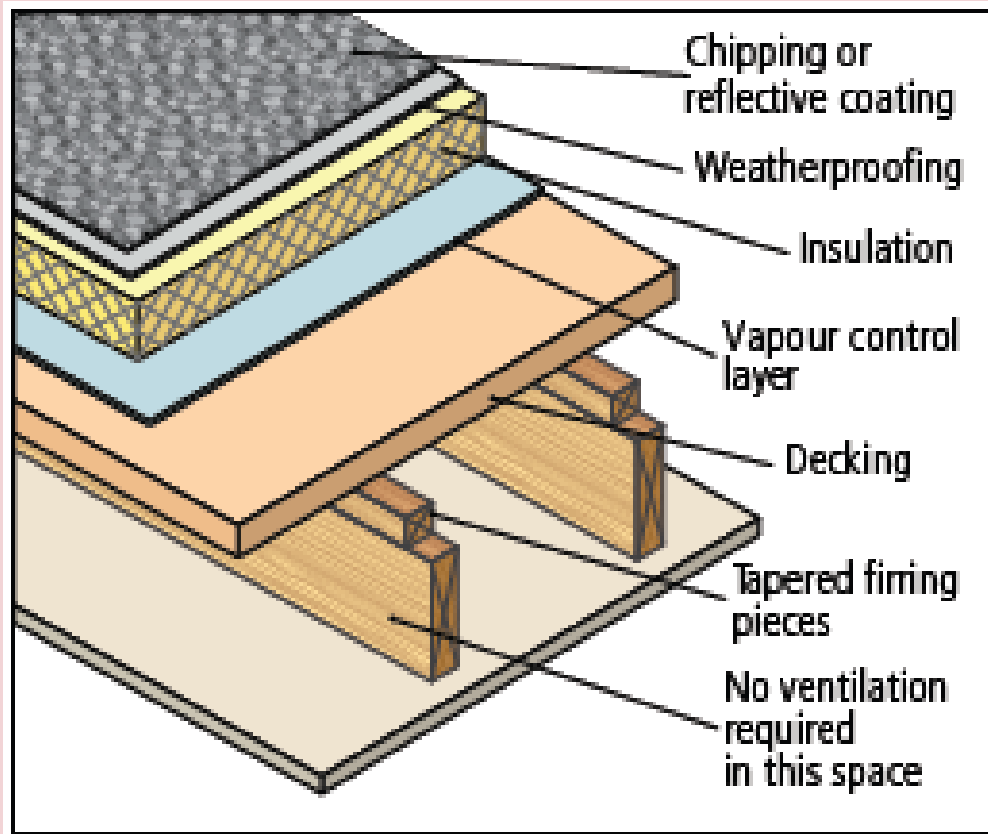
- Small slope for water run off
- Two methods of construction:
 - Cold deck
 - Warm deck

Flat Roof: Cold Deck



- Traditional method of flat roof
- Insulation under the deck
- Ventilation space allows warm moist air to flow away from the timber.
- This prevents condensation.

Flat Roof: Warm Deck



- Insulation above the deck
- No ventilation required as condensation cannot build up

Roof Covering

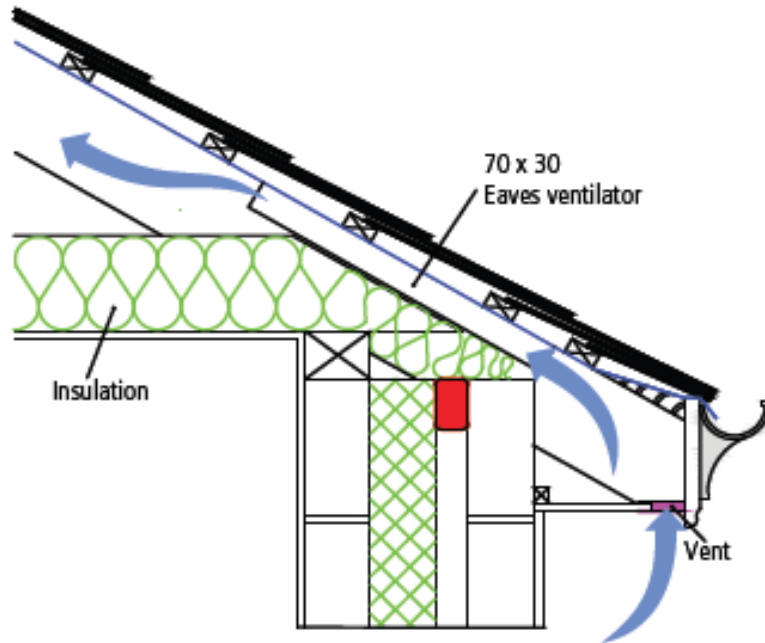
Various types of roof covering:

- Thatch
- Slate
- Shingles
- Ceramic tile
- Concrete
- Metals
 - Copper
 - Zinc



Ventilation

Soffit Vent



Vent Tile

