

# ADDING EAVES

A common feature of many leaky buildings is that they were constructed without eaves, usually with walls terminating with a parapet. Changing this design detail can greatly enhance a building's weathertightness.

By Trevor Pringle, ANZIA, BRANZ Principal Writer

**E**aves can, depending on their width and the height above the ground, provide significant shelter to a wall cladding and penetrations, such as windows, by deflecting water away.

Typically, pitched roofs can have outriggers flitched to the side of the rafters or truss top chords to create eaves. Doing this involves total removal of the parapet wall and its cladding and the repair of any damaged wall framing.

## Questions to ask

Engineering advice may be needed on the extension of rafters, particularly where proposed eaves are wider than 400 mm. →

new profiled metal roofing matching existing, lapped under existing roofing 150 mm and sealed to prevent condensation running between sheets (see Metal Roofing Manufacturers Code of Practice 7.1.1)

purlins to support roof extension

new rafter extensions fixed to side of existing trusses/rafters

turn-down to trapezoidal and trough profile roofing if roof pitch less than 10°

new gutter and fascia, block behind as required and paint fascia before installing gutter

new edge purlin

new soffit lining beneath rafter extensions

new cladding on drained and vented cavity on new wall underlay

blocking between rafter extensions to support soffit

new roofing underlay lapped 150 mm min. under existing roofing underlay and dressed into gutter, lift roofing as required to install new underlay

minimum back span = 2 × eaves overhang  
minimum 10° pitch for corrugate profile

two M12 hot-dip galvanised bolts with 50 × 50 × 5 mm washers each side

existing roof trusses/rafters

new framing, wall underlay, insulation and lining as required

## Note:

- 1 Roofing warranty not usually provided.
- 2 New roofing must be compatible with old, avoid lapping galv steel and al zinc steel.
- 3 New rafter extensions to match existing rafter/top chord size.
- 4 Insulation not shown for clarity.

Figure 1: Roof extension – long-run metal roofing with lined sloped eaves.

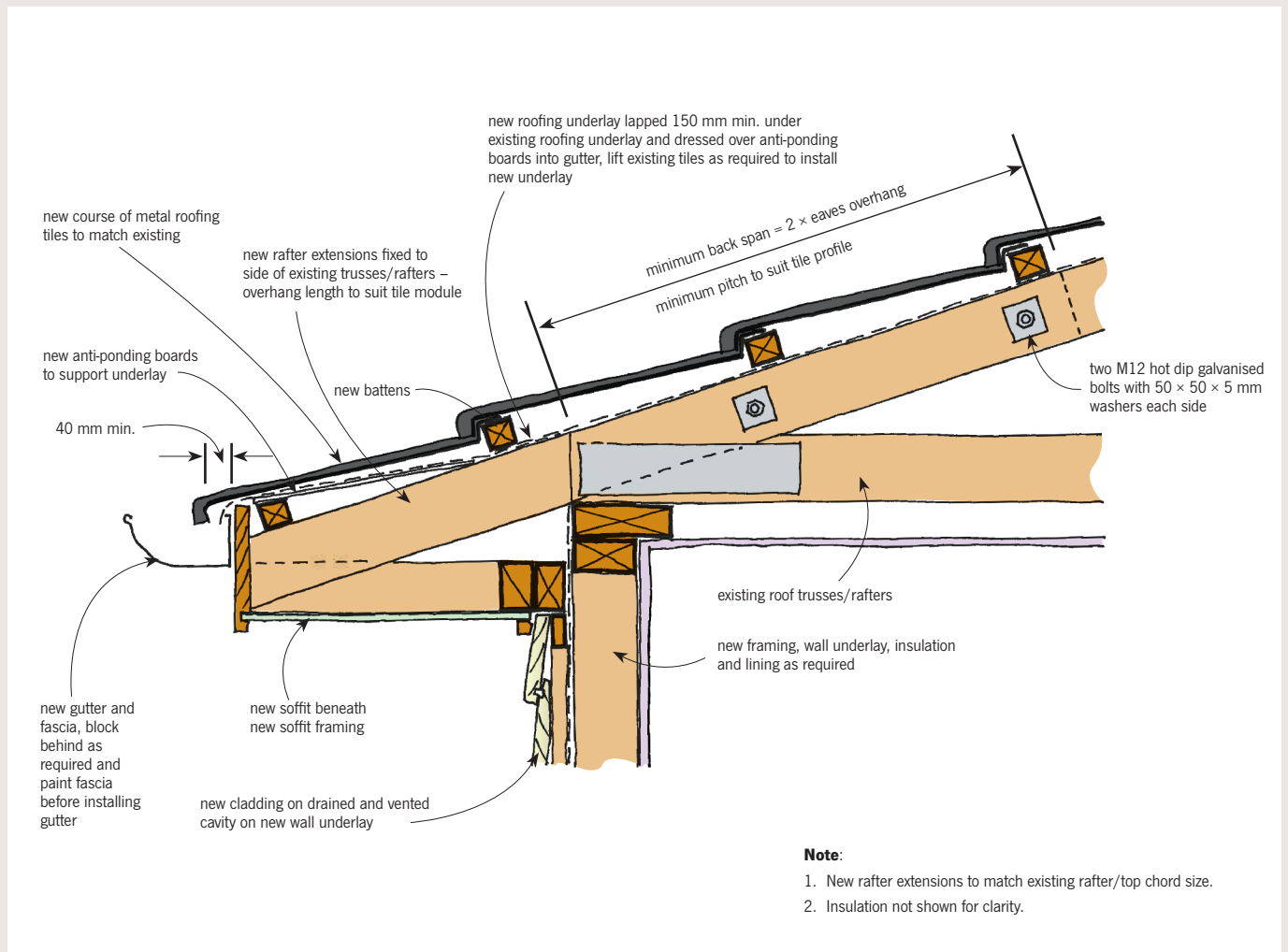
The designer will also need to consider:

- how the additional roof cladding is to be integrated with the existing roof cladding – can there be a lapped junction or does the roof extension need to be a specific length to suit a module, such as concrete or metal tiles?

- the effect the extension may have on any roof cladding warranties, for example, having a lapped joint between new and existing steel long-run roofing may void any manufacturer's warranty on the new materials.
- the final form of the eaves – is the new soffit fixed to the underside of the extension

(see Figure 1) or a fully boxed flat soffit (see Figure 2)?

*CAD versions of these figures will shortly be available on the BRANZ website, [www.branz.co.nz](http://www.branz.co.nz), under BRANZ Details Remediation. ■*



**Note:**

1. New rafter extensions to match existing rafter/top chord size.
2. Insulation not shown for clarity.

Figure 2: Roof extension – metal tile roofing with boxed eaves.