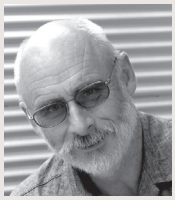

# FIXING COMMON RENOVATION PROBLEMS

## Mixing old and new materials when renovating brings challenges, but there are ways to work with these so the differences are not obvious.

**By Trevor Pringle,** ANZIA, BRANZ Principal Writer

A common cladding for older houses is direct-fixed rusticated weatherboard without building paper. Adding an extension brings the dilemma of how to match the weatherboards in a new extension to the weatherboards on the existing house.

### Matching weatherboards

New cladding may be able to be added to an existing weatherboard house without a cavity where the existing cladding can be shown to have performed satisfactorily.

An option to address the higher risk when no cavity is installed is to use a flexible wall underlay that is an air barrier behind the new cladding – this would need to be discussed with the Building Consent Authority. This allows the boards to be aligned and provides an additional level of protection.

Where a drainage cavity is being used, for example when E2/AS1 is being following, alignment of old and new claddings can be difficult. One option is to make the change from existing to new cladding at an existing wall junction so that the depth of the cavity can be masked both from the inside and the outside (see Figure 1). This may require the removal of some cladding – the amount depending on where the existing walls are. This detail can be used with a range of cladding options.

### Different sized framing

The framing in many older buildings is significantly wider than the framing now used. It is possible to have a special run of framing manufactured, but this is expensive, particularly with the small amounts of timber usually required.

The most effective option is usually to use new framing and packing it to align with the existing (see Figure 2). Framing size differences can also be hidden by making a change at a wall junction (see Figure 3). ➔

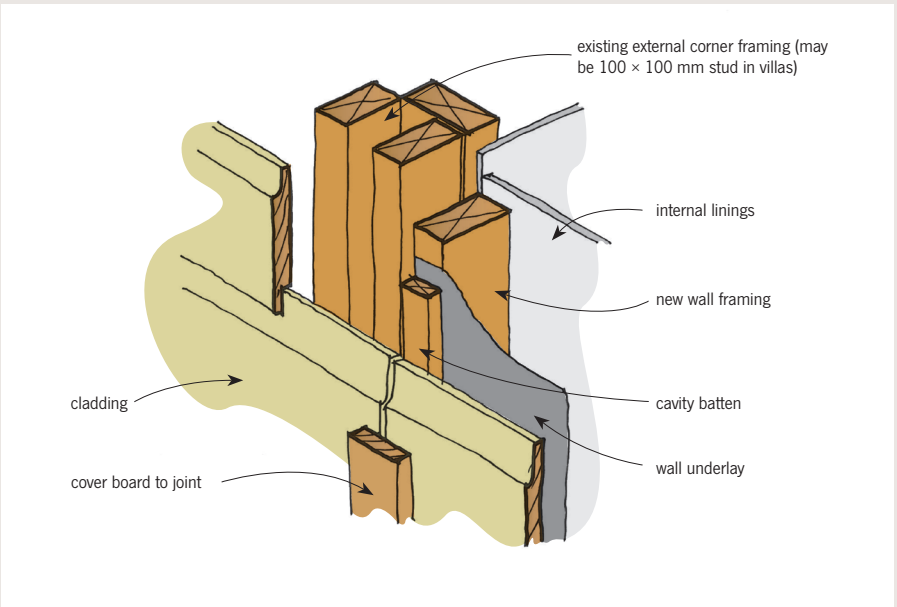


Figure 1: Detail to mask differences in wall thicknesses at the corner when cavity added in extension.

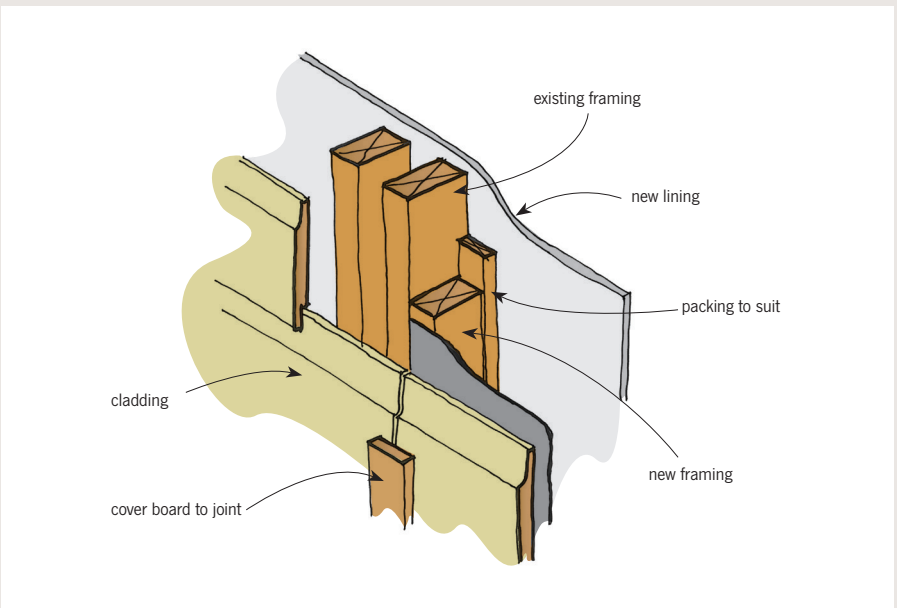


Figure 2: Detail to hide differences in framing sizes where the internal lining is continuous.

## Replacing windows

When windows are removed, repaired and replaced, the reveal or jamb width may not be suitable for the overall wall thickness, usually because hard lining has been added to the interior walls. While new windows will have the jamb sized to suit the wall thickness, a reused window will usually require the addition of a packer to the jamb to bring it to the required dimension (see Figure 4).

Removing windows also allows for the opening to be finished with flexible flashing tape and sill tray flashings replaced or installed if possible before the window is reinstalled.

## Increasing height above ground level

The floor level in many old buildings is closer to the outside ground level than is now allowed under reference documents such as E2/AS1. This may be exacerbated when a building is extended with the floor level of the extension matching the existing. There are other options:

- If repiling an existing building, consider lifting the building. Can it be lifted enough to create (possibly with some excavation) additional basement space that can be detailed and constructed to be waterproof? Lifting may be required for renovations or extensions to a building in a designated flood-prone area.
- Construct the new extension on a concrete floor slab.
- Replace an existing timber floor that is too close to the ground with a concrete slab-on-ground.
- Excavate around the outside of the building to lower the ground level and reshape it to drain water away from the building.
- Detail the perimeter of the building with a drainage channel to intercept water.
- Use a concrete slab-on-ground for the extension and build new framed walls on a concrete nib. This is a solution commonly adopted during the remediation of leaky modern buildings where outside ground levels are too high and can not be economically modified.

## Replacing roofing cladding

Many buildings needing renovation have part or all of their roof constructed at a lower slope than is now required for the roof cladding used. Where it can be shown that the roofing cladding has met the minimum durability period specified in Building Code Clause B2 *Durability* (that is, not less than 15 years), the same type of roofing may be reinstalled without a building consent.

Where the roofing has failed to meet the durability requirements, a building consent will be required for the roofing, and it is likely that a different roofing material/profile will be needed.

Where a metal roof is being replaced, a change in profile should be able to be fitted to the existing roofing. Some additional purlins may be necessary around the edge of the roof as edge purlins were typically at larger spacings than currently required in NZS 3604:1999. Purlin fixings should be checked and additional fixings installed as required.

Profiled metal should also be able to be laid directly over 50 mm tile battens, provided they are adequately fixed.

For membrane roofs, which were traditionally laid over timber boarding, a new plywood substrate is likely to be required where a new membrane is to be laid.

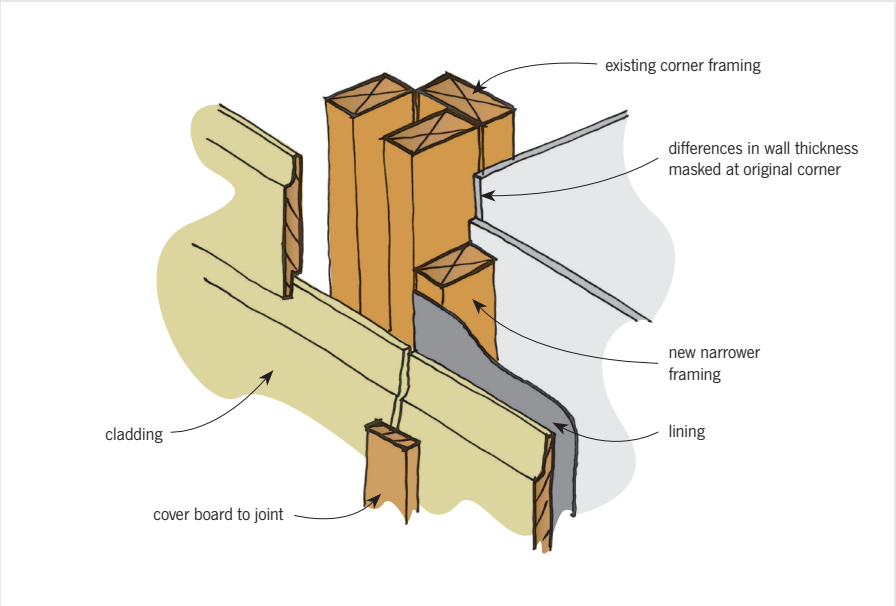


Figure 3: Detail to mask differences in wall thicknesses at the corner with new narrower framing.

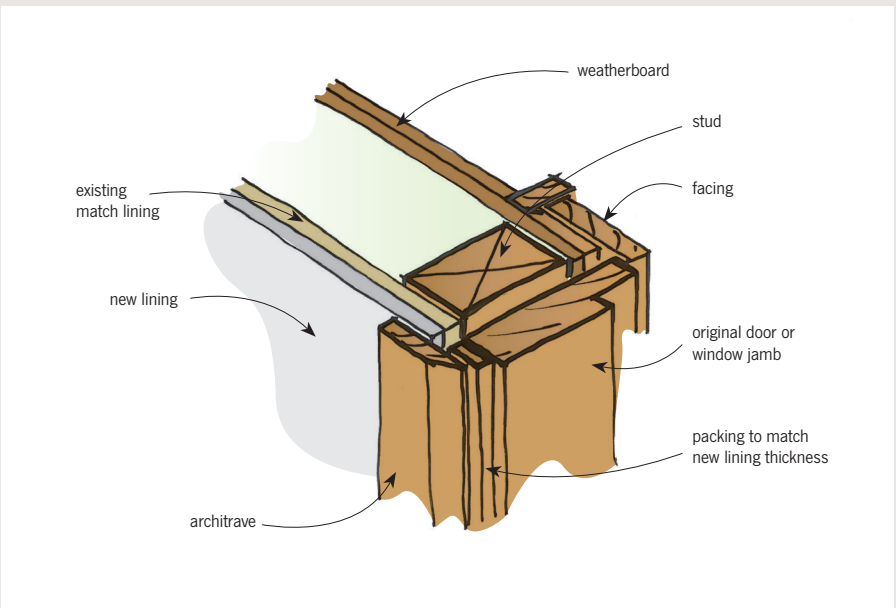


Figure 4: Door or window jambs may need a packer in the jamb to make them the correct size.