

TIMBER IN NEW BUILDINGS

Recent trends show timber use has increased in house claddings but decreased in framing and that timber floors feature in over half of additions and alterations.

By Ian Page, BRANZ Economics Manager

The BRANZ Materials Survey records a wide range of materials used in new buildings every quarter. Components looked at include framing, flooring and claddings, which all use significant timber volumes.

Timber trends

There have been several notable trends for timber in the last 10 years. These are the most notable:

- A decline in timber's share in house framing. This shift to alternative framing systems, such as concrete masonry and steel framing, may now have bottomed out (see Figure 1).
- An upward trend in timber house claddings (see Figure 2) as weather-tightness problems encouraged a return to traditional weatherboard and brick cladding, away from the monolithic façade popular in the 1990s. Fibre-cement weatherboards have also trended upwards.

Timber flooring more likely for alterations

In the flooring market, concrete slabs have dominated for many years. At present, about 88% of all new detached houses are on a concrete slab. The other 12% of houses have timber foundations only. For floor areas, however, about 26% of the total floor area of new detached houses is timber, much of this being in the upper floors.

The housing alterations and additions market has a higher timber floor percentage than does new housing. In 2008, the floor area of about 53% of all additions and alterations was timber (either particleboard, plywood or strip timber).

This high percentage may be for two reasons. Where possible, owners wish to have ground floor additions at the same level as the original house and existing floors in pre-1970 houses are on timber foundations. Second, site constraints often dictate that any additions need to be at an upper level, and usually these additions have timber floors for structural reasons.

Non-residential framing

Timber framing in non-residential buildings is shown in Figure 3. The percentage share is for the main framing system, not the infill framing. Some building types, such as health buildings, prisons and hostels, are not shown because the sample sizes were too small. The timber share for education, farm and social/cultural buildings is quite high because these buildings are often domestic in scale and use similar construction systems to housing.

Timber use in claddings and floors in non-residential buildings is low, with concrete floors and proprietary claddings the dominant materials.

Research looks outside traditional markets

Research is underway at the University of Canterbury on timber framing systems that can be used outside timber's traditional market (see page 40). This includes beam and column systems and composite floor systems that can span larger distances than traditional timber framing. This research will provide the potential for timber to expand beyond its current share in non-residential buildings. ■

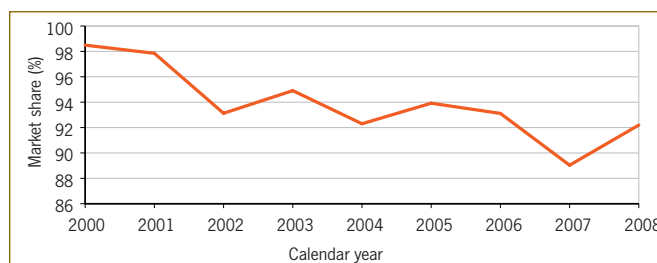


Figure 1: New house timber framing market share.

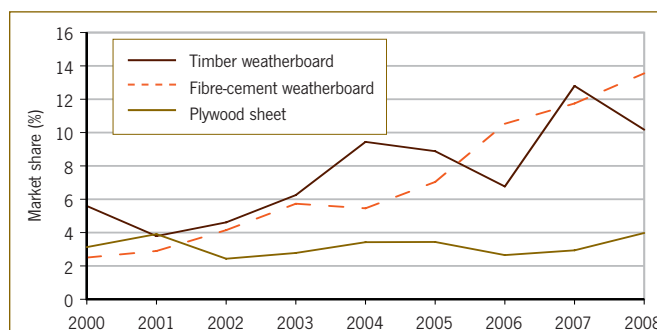


Figure 2: New house timber-based claddings.

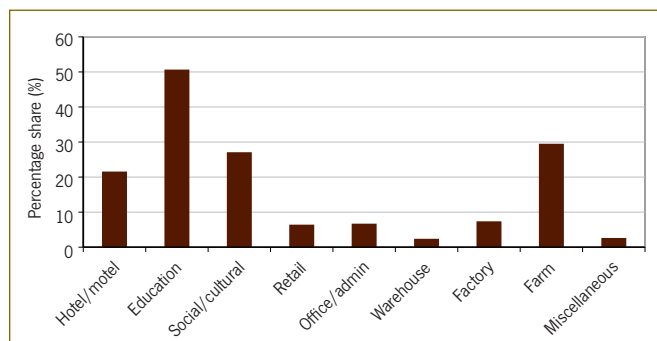


Figure 3: Timber as the main framing in non-residential buildings – average for 8 years ending 2008. (Based on BRANZ Material Survey.)