Cyclone Testing Station

Information Bulletin - October 2005 www.eng.jcu.edu.au/cts

Bracing panels

A widespread problem, the overdriving, and incorrect spacing and edge distance of nails or screws into bracing panels reduces the house's capacity to withstand wind storms.

Horizontal wind loads pushing on the house are transferred down to the foundations by the bracing panels. In other words, the bracing panels resist these sideways forces to keep the house standing.

Panel bracing works through diaphragm action, in that the bracing forces are transferred between the house frame and the panel via the nails. In resisting the wind loads, if some thickness of panel has been lost from crushing from overdriving, the panel ruptures with the nails bursting through the edge. Overdriving or not leaving enough edge distance will cause premature failure of the panel as there is not enough 'meat' left in the panel.

The bracing capacities contained within AS1684 and product design guides are all derived from tests where the fixings are installed as per the manufacturer's specifications (eg not overdriven).

An apparent fix for not overdriving using a nail gun involves setting the gun's depth adjustment (or for some guns buying and using the add-on depth adjustment fitting).

Please refer to the manufacturer's product data sheets for information on edge distances and correct fixing. **Remember a house is only as strong as its weakest link. Don't let it be you.**

Further info online

Other information on wind related issues such as battens, truss tie down in masonry block, topography classification is available from the CTS web site: http://eng.jcu.edu.au/cts/learning.htm

Phone 07 47814476 *Fax* 07 47751184 *Email* jcu.cts@jcu.edu.au *Web* www.eng.jcu.edu.au/cts