

Building Advisory Committee



POLICY NUMBER: BAC 2016/01

Fixing of Horizontal Run External Wall Cladding

The purpose of this Building Policy is to guide the fixing of horizontal run external wall cladding.

Based on the allowable fixing spans of horizontal run wall cladding it is an occasional practice to fix external wall cladding to every second stud. However, the design of studwork by an NT registered structural engineer to resist wind suction forces may require the fixing of horizontal run external wall cladding to every stud, particularly in corners that are subject to additional wind loading.

Wind suction forces on external wall frames can be the critical design load for studwork. The design of modern high strength, thin gauge cold-formed studwork to AS/NZS 4600:2005 Cold-formed steel structures, is refined with little excess bending capacity. Accordingly, the design of studwork and the correct fixing of horizontal run wall cladding are critical to ensure external walls retain design strength.

In cases where horizontal run external cladding is fixed to every second stud, corner studs carry an additional 67% load and in general pressure zones studs carry an additional 48% load. In these cases, when subjected to design wind pressures the studs are heavily overloaded and will deflect excessively and transfer the load to internal linings and noggings. This may result in cracking of internal wall linings and also potentially create weatherproofing issues when external wall cladding is either temporarily or permanently deformed by wind pressures.

Under AS 4055-2012 Wind loads for housing, corner studs are not required to take local pressures and may result in fixing to only every second stud under this standard. As a consequence, the intermediate studs are not engaged to resist wind suction forces and this would result in studs to which horizontal run external wall cladding are fixed becoming overloaded.

Wind suction forces on external wall frames may require horizontal run external wall cladding to be fixed to every stud to maintain design strength. Therefore, to withstand wind suction forces, horizontal run external wall cladding should be fixed in accordance with the structural drawings that accompany the building permit document and the fixing regime not altered for aesthetic purposes.

If you are unsure you should contact the NT registered structural engineer identified in the building permit.

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STEVEN EHRLICH
Chairman

