

(The Code clause and table references given below apply to Part 2 and Part 3 unless specifically noted)

Background

AS 1684 Parts 2 and 3 **Clause 8.2** requires temporary bracing to be installed to provide stability to the house so that it can resist wind and construction loads during construction. Lateral forces on the building during construction can be as high or higher than the forces on a completed clad house.

These lateral forces can arise from construction loads such as unevenly stacked materials on the floor or roof frame or from wind creating 'drag' forces on individual framing members or, a combination of both.

The most vulnerable time during construction is when the roof is clad but the walls still have no external or internal sheeting or lining installed.

AS 1684 only requires temporary bracing to be 60% of the permanent bracing and this reflects the lower probability of a building being subjected to its long term maximum design gust wind speed event, during the relatively short period of construction.

Temporary bracing can be achieved by:-

- using temporary diagonal braces such as 70x35 mm framing nailed to top plates and to the floor frame or slab or to the bottom plate of adjacent walls or,
- by sheeting such as plywood tacked off to the frame at

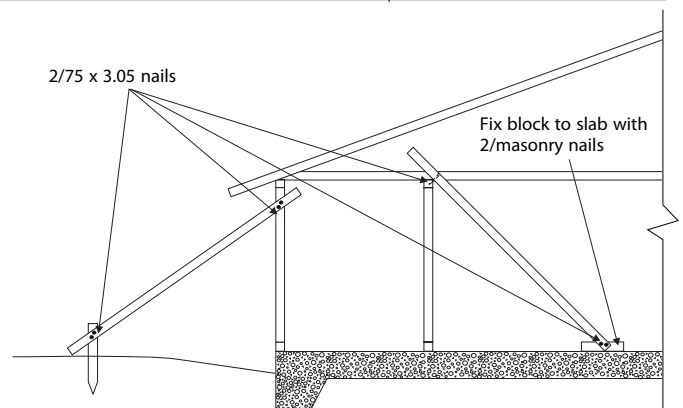
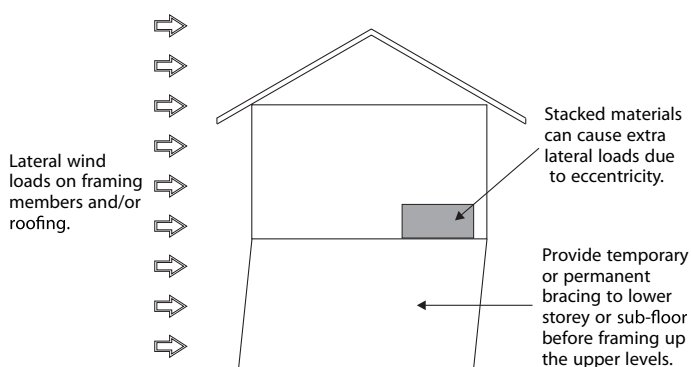
- the corners and the middle of the sheet or,
- by using permanent bracing fully nailed off.

Issues relating to temporary bracing have been raised with respect to how to determine the amount and type of temporary bracing required to satisfy the 60% requirement.

Recommended Procedures and Practice

1. Prior to the erection of the roof frame, it is recommended that the full permanent bracing required for the lower storey or sub-floor be installed and fixed off.
2. For single or upper storey wall frames, temporary bracing should be installed in both directions evenly distributed prior to framing up the roof.
3. Where the permanent structural bracing is also used to act as temporary bracing, the amount required is 60% of the total permanent bracing required. If the total permanent bracing is going to rely on nominal bracing walls to provide the maximum of 50% of total permanent bracing, then additional temporary braces equivalent to 10% should be installed in conjunction with the 50% of structural bracing. (Any other combination of structural plus additional temporary is permissible provided the total adds up to 60% of total permanent bracing required).
4. The capacity of temporary braces can be determined from the following table:-

Description of temporary brace	Bracing Capacity (kN)
Minimum 70 x 35 F5 diagonal brace nailed with 2/75 x 3.05 dia nails or equivalent to top plate or top of stud and to floor or bottom plate or concrete slab or peg driven 300 mm minimum into firm ground. Brace to be between 30 to 60 degrees to horizontal.	1.0
900 mm minimum long structural sheet brace nailed with 2/30 x 0.8 dia nails to each corner and 1/30 x 0.8 dia nails at quarter and mid points along each stud.	1.0





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