



Wall Framing

Carpentry - Residential Construction

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WALL FRAMING OVERVIEW

This text introduces a variety of subject matter related to Building and Construction, at a trade level.

It outlines wall framing terminology, members, and methods of bracing in relation to wind loadings, setting out of wall frames for timber and brick veneer structures including steel frames and their structural connections between members.

Traditional methods of calculating framing quantities and costs, are reviewed on a simplistic basis for a small project. With advances in technology, traditional calculation procedures move aside with the introduction of estimating software.

A comprehensive 'Glossary of Terms' is included at the end of the text, which provides a detailed description of trade terms, technical content and some trade jargon.

INTRODUCTION TO FRAMING

A frame may be described as being a structural framework of two or more members joined together to form a fabricated unit, which provides strength for a building and fixing for other materials.

The individual members of a frame perform specific functions such as supporting, separating and preventing other components from twisting or to simply provide a face or edge to be used for fixing.

The history of framing has seen the use of mixed Australian Hardwoods, Douglas Fir imported from the USA, Zinalume and galvanised steel fabrication. Today Radiata Pine is the substantive timber commercially grown and harvested for residential construction. Harvested sawlogs are processed in sawmills and their products used in the 150,000 – 170,000 houses built in Australia each year.

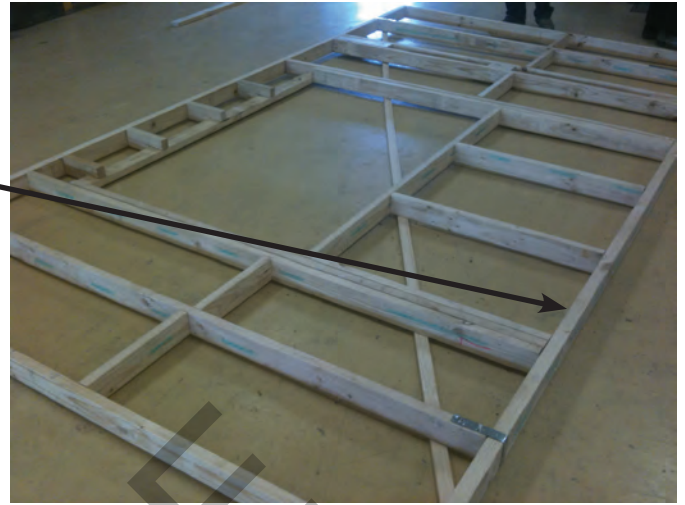
Frames may be classified into two basic categories:

Loadbearing: These are structural frames which support loads from roofing or upper floor frames and transfer these loads through the supporting floor frame members to the footing system. They may be external or internal frames.

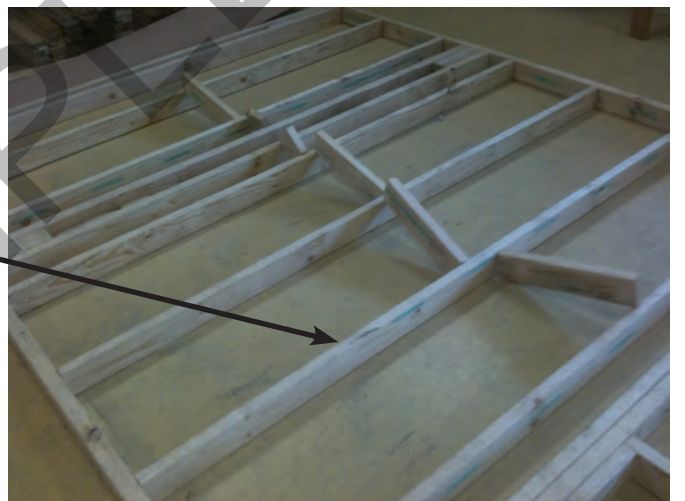
Non-loadbearing: These are non-structural or partition frames which do not support other loads apart from their own. They are usually internal frames or infill panels.

TERMINOLOGY

PLATES - These are the horizontal members, which form the top and bottom of the frame, and are separated by the studs.



STUDS - These are the vertical members placed between plates, which provide the height for the wall and transfer the loads from the top to the bottom plates.



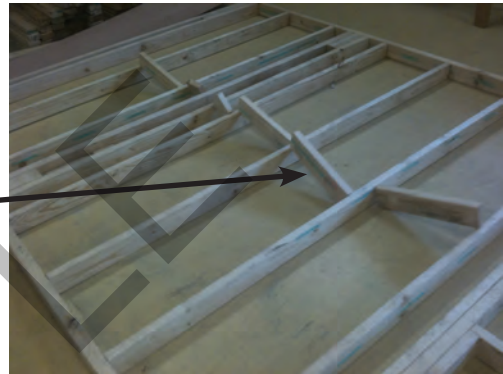
TRIMMERS - These are the relatively short horizontal members fixed between window sills and door heads, often referred to simply as *sill or head trimmers*.



TRIMMING STUDS - These are short infill studs, which run between trimmers and plates or are used to block out the back of a narrow lintel. They may also be referred to as Jack studs.



NOGGING - These are horizontal members cut between studs to keep them straight, equally spaced and prevent them from twisting, as they are not considered to be a structural frame component.



LINTEL - Also referred to as a *head*, it is a horizontal member placed between studs, walls or columns to form an opening. The lintel is designed to transfer the load of the roof and/or upper floor to the sides of the opening, without *deflecting*.

Lintels may be of solid stress graded unseasoned timber, solid stress graded seasoned timber, horizontally laminated stress graded timber, vertically laminated timber (LVL), boxed with plywood sheeting and combinations of timber and steel.



Traditional timber lintel



Combination timber and steel