

The Plasterers Inspection Process

This is the last article in a series of 3 articles aimed at keeping plasterers and their customers better informed regarding the framing, installation and decoration of internal drywall products and this segment mostly covers roof trusses.

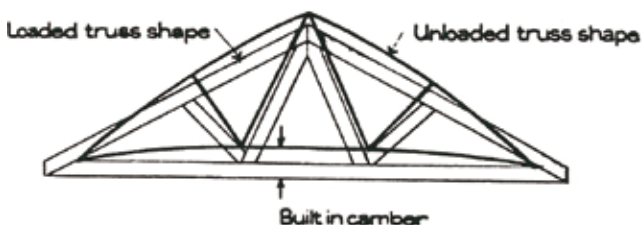
The impact of moisture on Framing and Internal Linings

Roof trusses that are installed with a moisture content greater than the moisture content at time of manufacture (not greater than 16%) are not as strong as they were at manufacture, nor can the stud adhesive used to attach the plasterboard to the ceiling, be expected in the long term to hold up the same. It has been shown in floods that wall and ceiling framing which has been subjected to an increase in moisture content (similar to uncovered trusses left in situ, or covered on the ground, in wet weather) has taken months to dry out to EMC (Equilibrium Moisture Content), as defined below. As a consequence of this above normal moisture content in timber, you can end up with undulation in the linings, inadequate adhesion of the plasterboard, possible deterioration of the fasteners and mould growth.

Without battening out the ceiling it's very difficult to produce a good plasterboard finish down the track

Battening ceilings

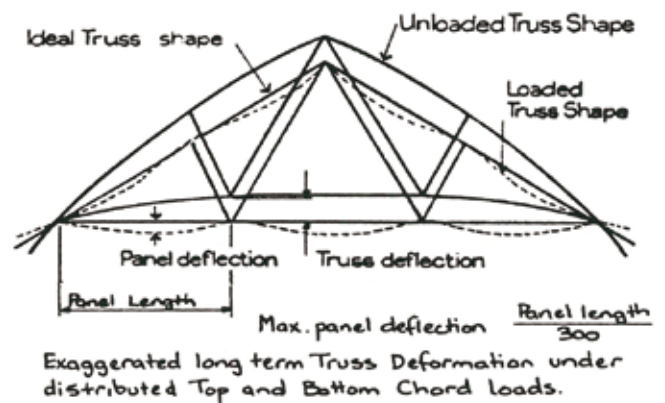
Without battening out the ceiling it's very difficult to produce a good plasterboard finish down the track as Truncated Girder trusses (TGT's) Intermediate Ceiling Joists (ICJ's) and standard roof trusses all have different cambers and all change shape (known as creep), to varying degrees, within the first 24 months of job completion. Undulating plasterboard is one of the major consequences of not battening out the ceiling.



TRUSS CAMBERED SO THAT BOTTOM CHORD BECOMES STRAIGHT AFTER A PERIOD OF APPROXIMATELY 2 YEARS.

Another consequence of direct fixing to trusses is due to compression and tension configurations in roof trusses and attaching plasterboard directly to these moving backgrounds causes screw pulling and popping, cracks in

cornices and sheeting and the subsequent distortion in sheeting due the pressures applied to it, as it is used as a diaphragm in ceiling raking resistance requirements.



Post construction information

Just like timber, plasterboard also sags over time as a result of many factors including self weight, humidity, imposed actions and internal and external environmental conditions. Typical imposed actions include light fittings, fans, insulation, ducting and other services that might be fully or partially supported by the gypsum linings. There are alternatives to reduce sag and that is to reduce the centres for the support of plasterboard, increase the thickness of plasterboard from 10 to 13mm with the reduced centres or to use the ceiling sheeting which is designed for 600 spans back to 450 and fix supported items to the framing and not the internal lining.

We do hope you benefit from this series and are better prepared to advise your builders and clients on producing a finished product that everyone is happy with.

The AWCI puts together these articles and should you find anything in them that you were not aware of then we also strongly suggest you join the AWCI, to assist you when challenged out there in the market place. It costs less than a dollar per day for a small contractor. If you are already well informed, then we invite you to join our technical committees around the country to give us a hand to help out the strugglers in the industry. Please contact your state office inside the back cover to join or to help us to improve the industry.

Definition: Equilibrium Moisture Content (EMC)

The condition of balance with the moisture content of the air, being in wood equivalent to about 15 percent of moisture at which level wood neither takes on nor loses moisture when exposed to air.