

LOAD BEARING FLOOR TRUSSES



by **ADAM DENNAOUI**
Senior State Engineer,
MiTek Australia Limited

Who knows what a roof truss is? YES - OK that was a silly question, but how many of you know what a floor truss is? Put simply, a floor truss is the combination of a top chord, bottom chord and webs.

A Posi-STRUT, MultiStrut, Longreach or Pryda Span are floor trusses that combine both timber chords with metal webs to form an open web floor truss. They say, 'A picture is worth a thousand words'. (See Figure 1).

By now you must be asking yourself, why should I choose to use a floor truss over a solid timber floor joist? The answer is simple and straightforward. A floor truss has the following advantages.

They are:

- Strong & Lightweight;
- Typically used for long spans;
- Suitable for both domestic and commercial construction;
- Provide excellent access for plumbing, electrical services and air conditioning ducts;
- Stable and easy to install;
- Made to order;
- Economical; and
- The list goes on.

Wait! My ESP senses tell me that you

Figure 1



have yet another question. However, before you ask your question, let me answer it by saying YES, they can.

There is a misconception that floor trusses cannot support load-bearing walls. To clear up this matter it is worth remembering that a floor truss is an engineered product and as such, can also be engineered to support load-bearing walls.

How did I do? Now let me show you, with some examples:

Our illustration (See Figure 2) typical shows a double storey

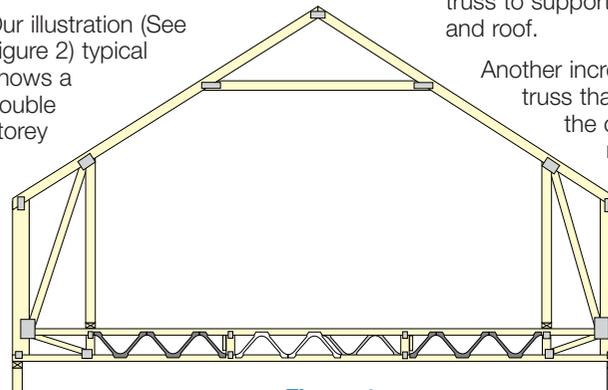


Figure 4

house that utilizes a brick veneer wall for the ground floor and a timber-clad wall for the upper floor level.

You may think nothing of it at first, but as you think through the construction sequence, it becomes apparent that the floor truss must cantilever out and over the brick wall in order to support the upper wall. (See Figure 3)

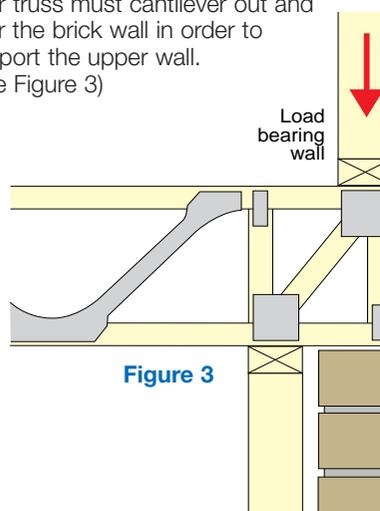


Figure 3

I hear you raise another question. Why can't the brick wall support the floor truss? A brick wall after all is a strong and solid structure.

That's true, but a brick wall in a brick veneer construction is nothing more than a decorative cladding. It is not considered a structural component, and as such cannot be allowed to support any loads.

The logical solution is to allow the floor truss to support the upper storey wall and roof.

Another increasing use of a floor truss that is gaining popularity is the construction of an attic roof structure. The floor truss in this scenario does not only provide support to the walls, it also serves as a truss bottom chord. (See Figure 4).

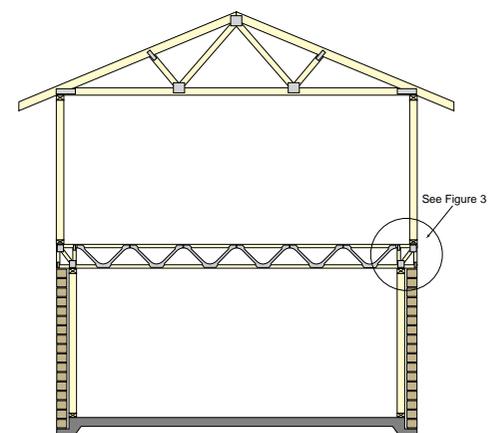


Figure 2

Naturally, there are limits to what a floor truss can and cannot do.

It should be clear by now that the advantages of floor trusses just keep growing on, and on, and on. This is only the tip of the iceberg. Now that you have seen the floor truss advantage, see your floor truss manufacturer.