BUILD RIGHT

Bearer joints

What can be done when joints are required in bearers over anchor or braced piles?

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FLOOR BEARERS usually run from side to side of a building's subfloor. This is typically greater than standard lengths of timber, so joints in the bearers will be required.

Joints only over support or pile

NZS 3604:2011 *Timber-framed buildings* states that the joints must be made over a support or pile but not over anchor piles or braced piles. This will often cause problems on site where there may be lots of anchor or braced piles. So what are the solutions?

Key is to maintain load paths

The main reason for the prohibition on joints over anchor and braced piles is to maintain the integrity of the load paths between the floor structure and pile bracing elements.

If connectors can be provided to maintain those load paths, there should be no reason to prohibit bearer joints over piles that are bracing elements.

Options to keep load path continuity

Figure 1 shows the applicable directions where the load paths need continuity. That is, 12 kN in the direction along the bearer connecting across the joint and 12 kN from each bearer to the top of the pile.

Proprietary or bespoke connections (see Figure 2) would all be suitable provided their strengths in the directions shown (determined in accordance with clause 2.4.7. of NZS 3604:2011) matched the 12 kN target capacities. Durability in accordance with section 4 of NZS 3604:2011 would also need to be verified.

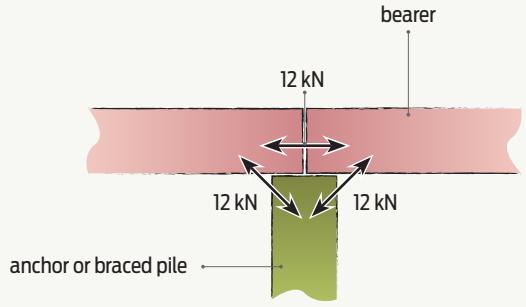

Figure 1 **Load paths need continuity.**

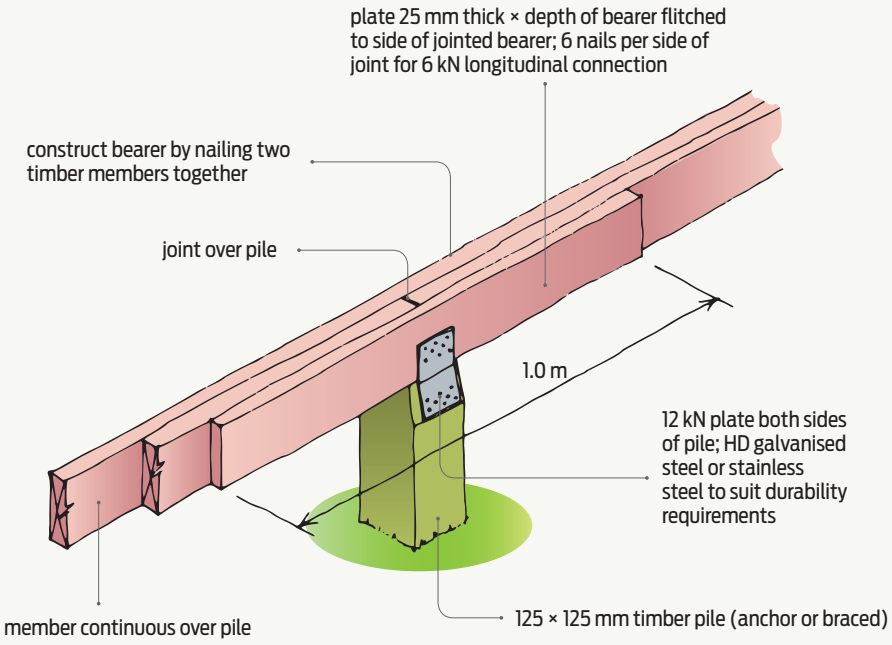

Figure 2 **Laminated bearer joint.**