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# Clearance under particleboard floor

Calls to the BRANZ helplines have revealed confusion created by differing advice in NZS 3604:2011 on the ground clearance needed for particleboard flooring. What is the ground clearance needed?

**WHEN THE FLOORING** of a suspended timber-framed floor is particleboard, NZS 3604:2011 *Timber-framed buildings* specifies a minimum clearance of 550 mm between the underside of the particleboard and the ground (paragraph 2.3.7).

However, paragraph 6.4.1.1 in NZS 3604:2011 allows a minimum pile height above finished ground level of 150 mm. So, in what situations may minimum pile heights apply?

## Particleboard needs larger clearance

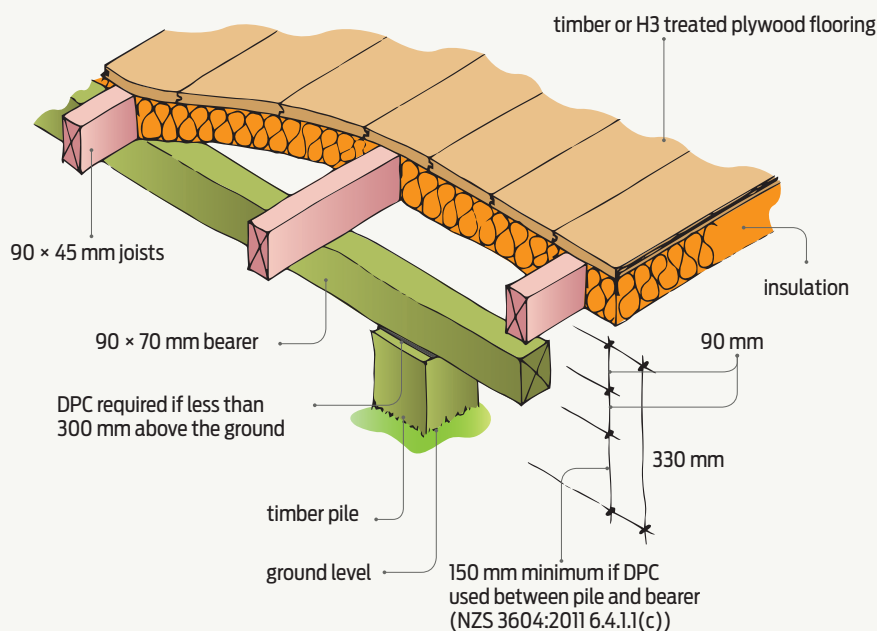
From Tables 6.4 and 7.1 in NZS 3604:2011, the minimum permitted sizes of bearers and joists are 90 × 70 mm and 90 × 45 mm respectively. If these sizes are used with piles 150 mm high, the underside of the flooring will be 330 mm above ground level (Figure 1).

## Timber strip and H3 CCA-treated plywood flooring

Timber strip and H3 CCA-treated plywood flooring do not have restrictions on the permitted installation height above ground, so these flooring materials may be installed over subfloor framing with ground clearance of less than 550 mm.

## Particleboard flooring

If the same sized bearers and joists are used with particleboard flooring, the pile heights above



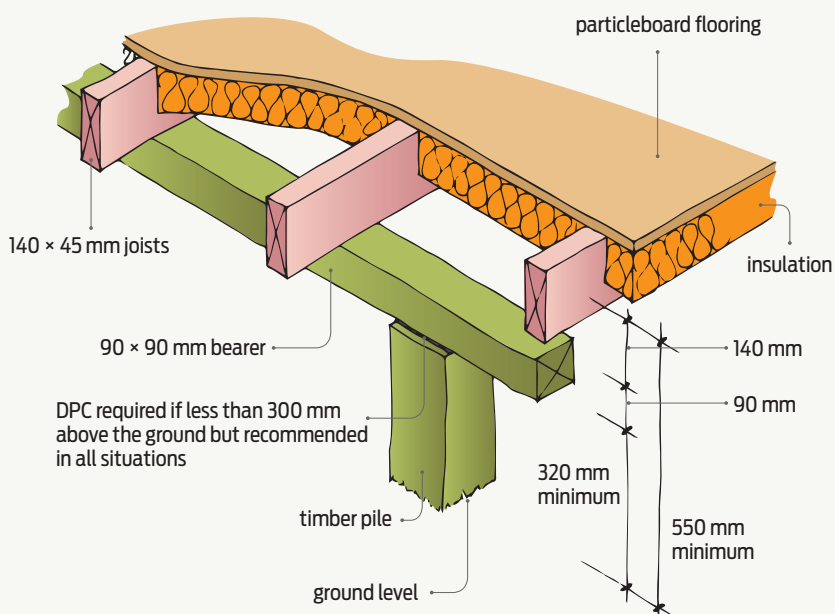
**Figure 1** Minimum permitted ground clearance under timber and plywood flooring.

finished ground level must be at least 370 mm.

Generally, larger joists are likely to be used, but regardless of the sizes of the subfloor framing, the clearance between the ground and the underside of the particleboard flooring must be at least 550 mm (Figure 2).

## Add more protection, use polythene sheet

Particleboard flooring must be protected from exterior exposure. Where damp soil conditions exist, it is recommended that the ground be covered with polythene sheet. This includes where the



**Figure 2** Minimum permitted ground clearance under particleboard flooring.

minimum subfloor ventilation requirements of NZS 3604:2011 paragraph 6.14.1 are being met – a minimum net open area of 3,500 mm<sup>2</sup> per m<sup>2</sup> floor area.

A polythene ground cover should also be used in any situation where:

- the subfloor ground is permanently or seasonally damp
- the airflow is obstructed by party walls, internal foundations or attached terraces
- the ground is more than 7.5 m from a ventilation opening. ◀