

Precast concrete floor planks to ground floors

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Question

Is it acceptable to install precast concrete floor planks over a DPM on a fill without an under floor void or under floor ventilation?

Considerations

- NHBC Standards clause 5.2.10 refers to the provision of damp-proofing to suspended precast floors and the provision of a minimum 150mm void and under floor ventilation.
- On sites with shrinkable soil a ventilated void should be formed under the slab to accommodate possible ground swell.
- The fill may settle and cause the DPM to sag and pull away from the DPC in the walls or become torn allowing water vapour from the ground to migrate into the concrete floor structure.
- If the fill settles an unvented void would form under the slab which on certain sites could lead to an unacceptable build up of gas under the building.

Answer

Where precast concrete floor planks are used over a DPM laid directly on fill the fill should be inert and non-expansive, e.g. not clay, raised up to the underside of the floor slab and be well compacted to avoid future settlement. Where this is carried out it is not necessary to form a ventilated void under the precast floor.

On shrinkable soil where heave could take place a ventilated void should be formed under the slab to accommodate the ground swell. A separate DPM may then be required over the floor slab.

Note: This option does not apply to precast concrete beam and block floors, which should be installed with a ventilated void beneath.