

Raft foundations – edge detail

(January 2024) (Third issue – supersedes June 2022)

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Question

Does a raft foundation slab require a ‘toe’ for support of the outer leaf of a cavity wall and to provide weather-proofing at the floor/wall junction (as shown in NHBC Standards clause 4.4.13)?

Considerations

- NHBC Standards clause 4.4.13 states ‘the foundation design shall prevent the passage of moisture to the inside of the home’ and shows how this can be achieved with a stepped edge on a raft foundation.
- NHBC Standards clause 4.4.13 refers to dpc cavity trays not being an acceptable method of weather-proofing the edges of specialist foundations such as rafts and ground beams. This is to avoid details where a failure of the stepped tray would lead to a direct leakage of water into the building.

Answer

Raft foundations can be accepted without a toe provided it can be shown that there is adequate weather-proofing at the junction of the wall and the raft.

The detail shown below is one acceptable method of achieving this. It uses a combination of a stepped cavity tray and dpm together with pre-formed corner trays and sealed lap joints.

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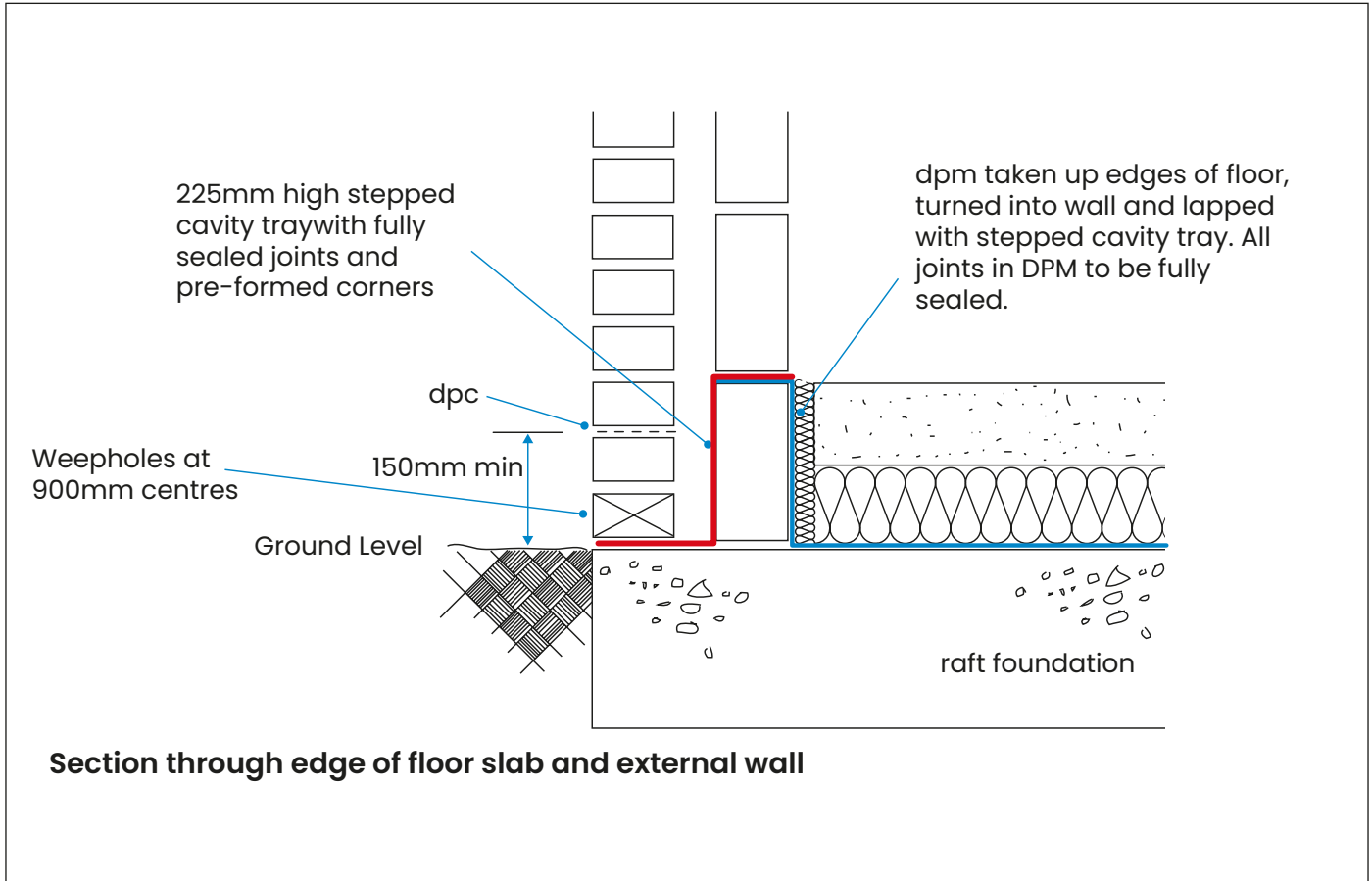


Figure 1 – Flat slab rafts (i.e. without downward toe) should only be placed on non-frost susceptible base or soil.