

Waterproofing basements

During April and early May, BRANZ ran a seminar series throughout New Zealand on domestic concrete floor and basement construction. Some of the subjects that kept cropping up during question time all around the country related to concrete basement waterproofing.

A failure of basement waterproofing is likely to prove very expensive to put right and the cost of consequential damage may be high. Don't take risks – get it right first time!

Figure 1 illustrates the essentials for successful basement waterproofing. They are:

1. Ensure that the ground surface falls away from the building (minimum fall 1:30).
2. Maintain the proper clearance between floor and ground level as required by the NZ Building Code Acceptable Solution E2.
3. Install a continuous damp-proof membrane (DPM).
4. Provide protection to the DPM against damage by the backfill.
5. Use full depth of clean drainage metal.
6. Use a slotted drainpipe (to carry the water away) which is laid with a fall and is capable of being cleaned.

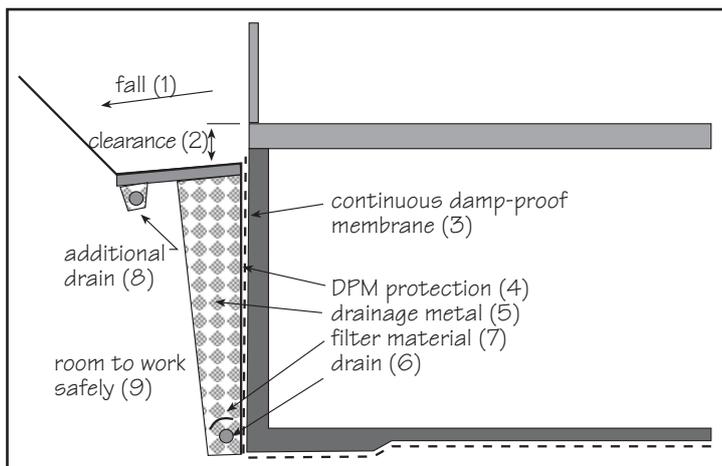


Figure 1. Basement waterproofing.

7. Install filter material above drain to prevent fine material from clogging it.
8. Install extra drain for surface drainage on very wet sites.
9. Allow sufficient space to work in safety during construction.

More detailed information is contained in the BRANZ Good Concrete Floors and Basements Practice book.

Does the seam seem seemly ?

An old chestnut is how to join a polythene sheet membrane to other types of damp-proof membrane in a concrete basement. The short answer is DON'T. The reasons are:

- Polythene is too easily damaged during the construction process to be used in a situation where it is expected to keep out water which may be under pressure.
- Unless you can obtain a written assurance from the manufacturer of the other DPM that the polythene can be successfully joined to their product, don't risk failure of the joint.
- Use one type of membrane through the whole basement including the slab and the walls.
- A polythene sheet membrane is usually chosen for its 'economy' but there is no 'cheap' solution to waterproofing a basement.
- Always use a membrane of which the manufacturer is willing to state in writing that it is suitable for your specific situation and install it in complete accordance with the manufacturer's instructions.

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