

PREVENTING CRACKS AND DAMP IN YOUR HOUSE



HOAP

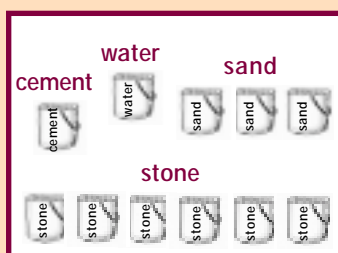
HOME OWNERS' ADVICE PAMPHLETS





PROBLEMS WITH DAMP

Dampness can rise from the ground into the floors, through cracked walls or leaking roofs. Damp can cause health problems such as 'flu and lung problems, as well as damage to the bricks, plaster, carpets, furniture and clothes. When your house is built, make it damp free by avoiding cracks and by making the roof, floor and walls waterproof.



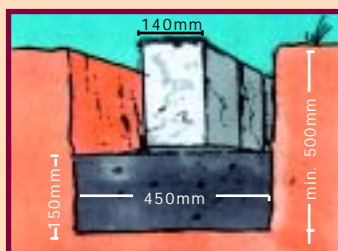
• Check on the workmanship

Make sure that the digging, mixing and pouring of the foundations is done properly. The concrete must have the correct mix (6:3:1). That means that for every 1 portion of cement add 3 portions of sand and 6 portions of stone. Avoid adding too much water as this will weaken your mixture. Add $\frac{1}{2}$ portion of water for every 1 portion of cement.



• Build foundations that reach down to the firm layers in the ground

If other houses in your area have cracks, your plot might have soft ground, or clay that will expand when it gets wet. Ask experienced people to advise you about good foundations.



• Make sure that the foundation is the correct size

The foundation should be big enough to spread the weight of the walls across the ground. A general rule is that the foundation should be three times the width, and the same height as a block. For example, the foundation should be 450mm wide and 150mm high for a 140mm wide concrete block wall, or 600mm wide and 200mm high for a 190mm wide concrete block wall.



• Strengthen walls at the weak positions

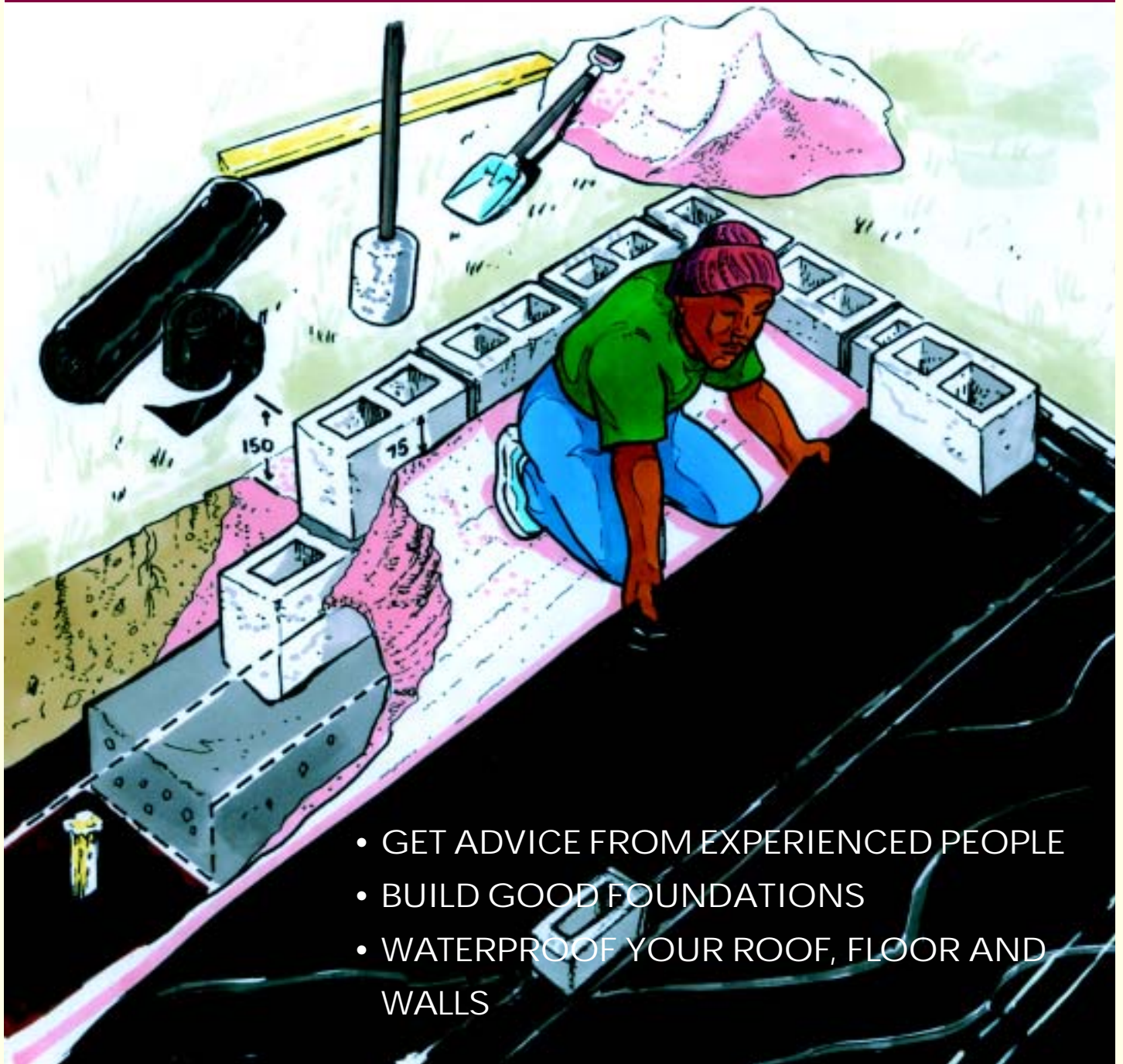
Build two rows of brickforce between the rows of blocks across the top of the windows and doors. Brickforce comes in rolls and is used to reinforce blockwork at the tops of walls, and sometimes above and under windows and doors.



• Build movement joints between walls that will settle (move) separately

The blocks or bricks of your walls must not overlap at the joints between indoor and outdoor walls and between old buildings and new walls. Joints need to be straight and vertical if the different walls will settle separately. The small cracks in the vertical joint can be patched and repainted afterwards when they have stopped settling.

THE MOST IMPORTANT ADVICE IS



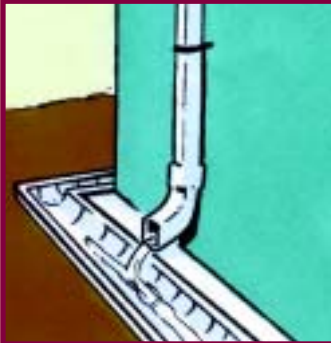
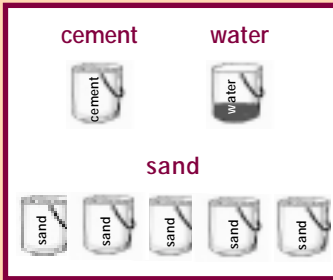
- GET ADVICE FROM EXPERIENCED PEOPLE
- BUILD GOOD FOUNDATIONS
- WATERPROOF YOUR ROOF, FLOOR AND WALLS



MAKE THE ROOF WATERPROOF

- The slope of your roof must suit the type of materials used.
- Ensure that the roof-sheets overlap each other by the correct amount as recommended. They must overlap away from the direction of the rain.
- Drill, rather than punch holes into the sheets for the roof screws.
- Take care not to hammer the screws in too far, as this could dent or crack the roof-sheeting. Hammer the screws in just enough to fit closely and firmly.
- Make sure you use the correct number of screws, and that they are paced in the correct positions. Check that each screw's rubber washer is in place.
- Make sure that the correct ridge pieces are properly fitted to the top of the roof.

MAKE THE WALLS WATERPROOF



- If you can afford it, use cavity brick walls. These are two layers of brick with a 50mm air gap between them. Keep the cavity clean during construction and make sure the wire ties slope to the outside of the building.
- For concrete block walls, the mortar (dagha) must be mixed with the correct mix (1:5) or 1 bucket of cement to 5 buckets of sand. It must be used within two hours of being mixed. Add at least $\frac{1}{4}$ portion of water for every 1 portion of cement. The mixture should not be too runny, like lumpy porridge.
- In wet areas such as the Western Cape, you should take extra care when plastering and painting your walls.
- Lay a damp-proof course or DPC on the first block row at least 150mm above the finished ground level. DPC is thick plastic sheeting available from hardware stores or builders' suppliers. Choose one with a SABS mark. Overlap joints and corners to make sure there are no spaces left open. Pour a layer of mortar onto the DPC for the next row of blocks.
- Construct good roof overhangs of at least 200mm, especially on the weather side.
- Good air ventilation inside your house prevents moist air condensing on cold walls. Insulate your house by building a ceiling.
- If the ground slopes towards your house, concrete 'aprons' (paved strips about half a metre wide) or drainage channels can drain rainwater away from your walls.

TIPS:

- Always use good building materials.
- Follow the instructions of the manufacturers carefully.
- Planting a garden can help rainwater soak into the ground.



ALSO SEE OTHER PAMPHLETS ABOUT:

- Plastering your house
- Using a building contract



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