approved by the designer or owner's representative (consultant). The reservoir roof shall have an access manhole with a minimum clear opening of 800 x 800mm covered by light duty access cover resting on 200mm high concrete upstand

1.69 Thermal effects due to temperature variations shall also be considered in the design. All reservoir components shall be constructed of reinforced concrete, and their form shall be determined by the allocated site dimensions and the need to allow for future storage and downstream distribution facilities.

1.70 Joints in reservoirs may be used in conjunction with a corresponding proportion of reinforcement, to control the concrete crack widths arising from shrinkage and thermal changes to within acceptable limits, and in accordance with BS EN 1992-3. Provision of expansion joints shall be made with caution and a minimum number of expansion joints is recommended. Joints in the floor slab of the reservoir shall be repeated on the screed below to avoid non-uniform movement. PVC water bars of approved size and make shall be provided at all joints.

1.71 Roof slabs shall be designed as flat slabs with all interior joints acting as construction joints so that the slab is structurally monolithic. Where roof and walls are monolithic, movement joints in the roof shall correspond with those in the walls to avoid the possibility of sympathetic cracking.

1.72 Tanks installed outdoors without a protective shed above them shall have a 1% minimum slope towards one or two sides, or any other effective system for draining the tank roof. No water shall be allowed to accumulate on the tank roof. For panelled tanks, the roof joints shall be made flush with the surrounding panel to prevent any type of accumulation.

1.73 The tank inlet and outlet connections shall be a complete arrangement of flanged water inlet and outlet fittings to BS EN 1092-1 and BS EN 1092-2 , along with a puddle flange either cast or welded on connection and shall be properly aligned both in the horizontal and vertical planes to ensure a watertight joint.

Reinforced plastic water storage tanks

1.74 The following information details the minimum requirements for design consideration when installing plastic water tanks.

Basic design consideration

1.75 Every tank shall be accompanied with a copy of the manufacturer's catalogue showing operational and maintenance instructions, and precautions to be taken by the end users. Certificates to indicate suitability of material for storing potable water shall be provided, as well as other test certificates as required by the Distribution Company. The Distribution Company may also request additional tests to be undertaken by the relevant international and national testing authorities.