

The Making of a recharge pit

A recharge pit allows the rainwater to replenish groundwater.

It can be built to recharge a borewell or just to help the water infiltration in an area.

A recharge pit can be totally invisible when finished. As it is filled of stones, it doesn't present any danger (contrary to an open well for example).

Therefore, the percolation rate of a recharge pit is much less than of an open well. The water percolates slowly because there is no hydrostatic pressure in the pit.

The cost of the pit will roughly depend on the cost of the filling materials (stones and sand).

Locality

If the pit aims to recharge a borewell, it should be built as close to it as possible. Ideally it should be in the valley of the surface layout.



Borewell and recharge pit

Site identification

The site should have a sufficient clean and large catchment.
It should also permit fast infiltration and percolation.

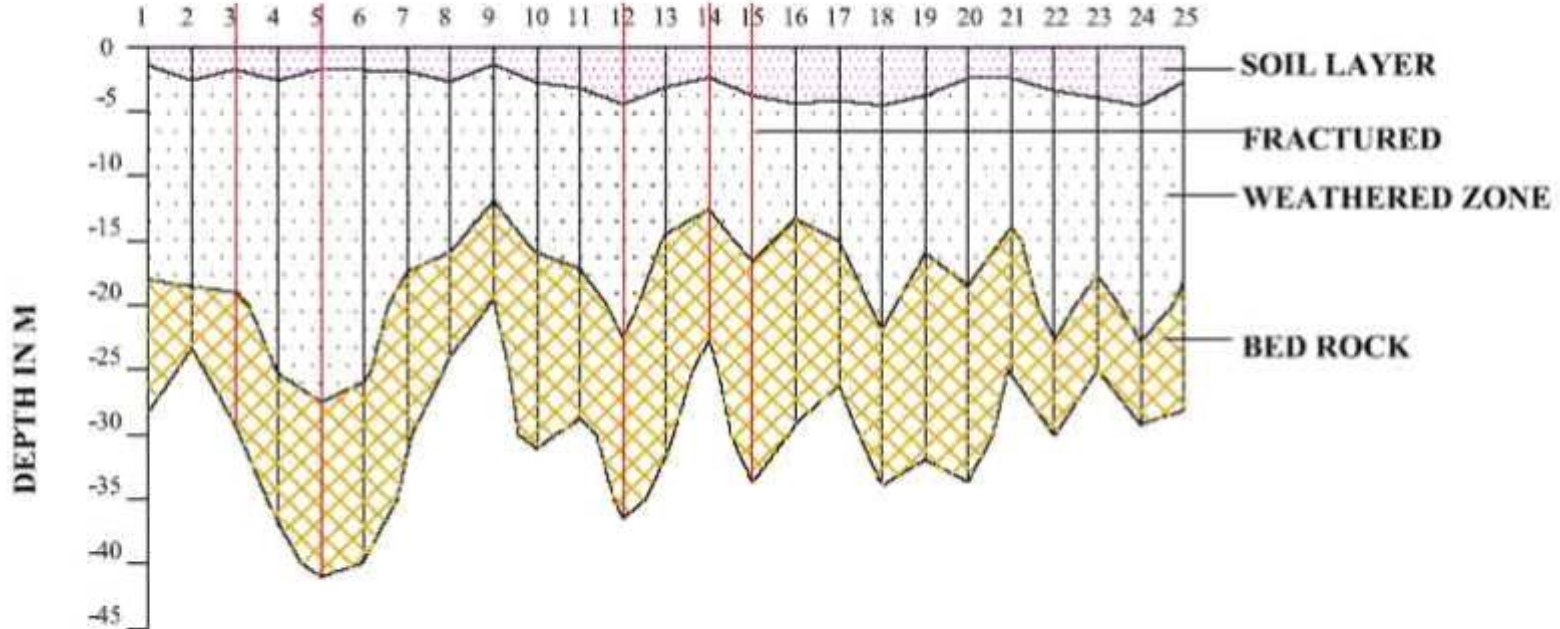


Site selection for infiltration

Many factors affect the suitability of a site as an infiltration facility for the disposal of recharge pit.

Among these, the following are most important : depth to groundwater, surface and underlying soil type.

For example the coastal areas, where there is an important layer of sand under the first layer of clay are fit to the doing of a recharge pit (sand has a high level of percolation).



Typical ground cross section of Bangalore

Excavation

The excavation should reach porous soil / weathered rock / fracture.

Generally it happens from 6 to 8 feet deep. The diameter of the pit will depend on the catchment area, the rate of percolation of the soil... It can vary between half a meter to 3 meters.



Digging the pit

Filling of the pit

You need jelly of different sizes and sand for the top of the pit. The big jelly at the bottom form big holes for the water. The smaller ones on the top of it will support the layer of sand. A mesh between the sand and the jelly will prevent the sand to escape below.

Instead of the sand, you can put a layer of soil (leaves or planted earth).

These materials will also filter the water.



Backfilling. Round hard material.



Smaller stones on top

Finished recharge pit

