How the school boys built a corbelled pit lining technique

(with leaky walls for side dispersion of nutrients)

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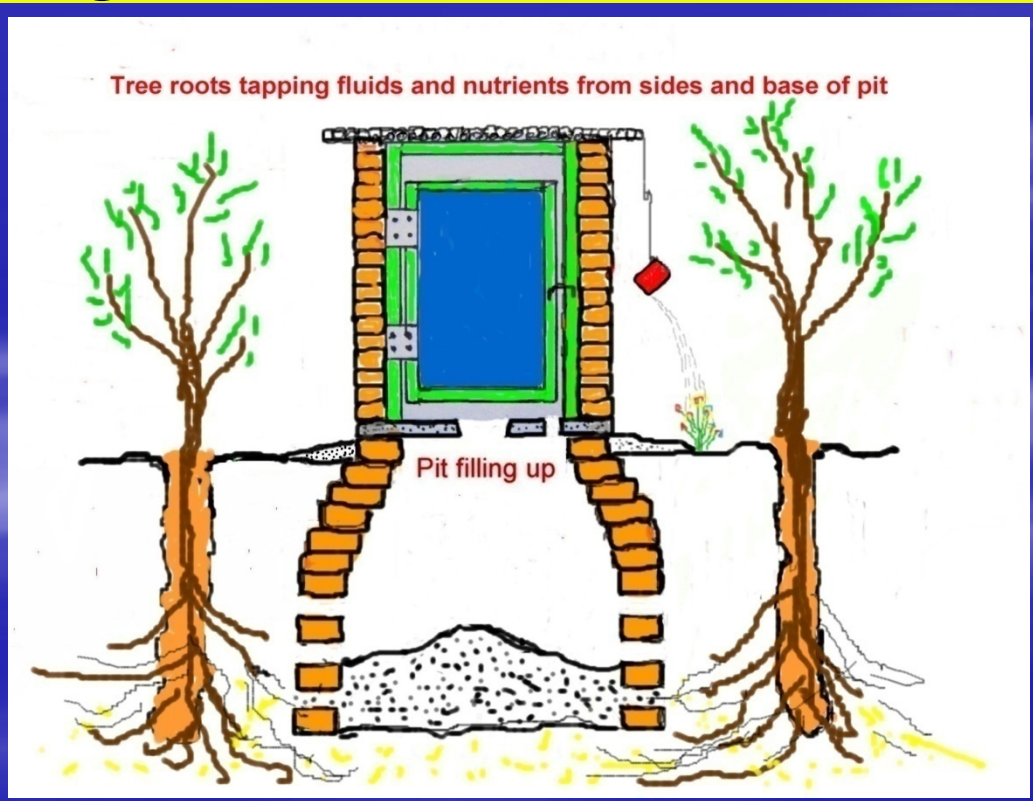
A method of lining medium depth pits with bricks using a corbelling technique and making the side walls leaky

This method increases the flow of nutrients from the pit sideways as well as downwards, thus allowing for the planting of useful trees around the toilet.



A Pit lining technique using corbelling

In this case the pit was dug 1.6m deep and 1.6m wide and was easily handled by two school boys. The pit could be slightly deeper and wider (2m deep and 1.7m wide), as described in other presentations.

A Pit lining technique using corbelling

In this case the walls of the pit were made deliberately leaky by leaving holes in the brickwork. These were made by placing alloy cans in the sidewalls as shown below. This allows seepage from the pit to flow both sideways and downwards. The alloy cans are removed as the cement mortar starts to harden

A Pit lining technique using corbelling

Bottles can also be used to make holes in the side walls of the brick lining. These increase the permeability of the wall in a side direction, nearer the ground level. The also By doing so they increase the nutrients higher in the ground, making accelerated tree planting and growth the toilet possible.

A Pit lining technique using corbelling

The cans can be reused again and again as they are used higher up the pit.

A Pit lining technique using corbelling

The leaky wall continues for about one metre from the bottom. Then plain brickwork is used and corbelling begins.

A Pit lining technique using corbelling

The brickwork is stepped in near the top of the brickwork. Each course is stepped in about 20cm inside the course below. The uppermost course should have an external diameter slightly greater than the diameter of the concrete slab.

A Pit lining technique using corbelling

The uppermost courses can be bricked from outside the pit. Once the brickwork is complete the space between the bricks and pit wall are filled in.

A Pit lining technique using corbelling

The concrete slab is then fitted and embedded in a weak cement mortar mix. It is important that the slab is supported all round and is level. Once the slab is fitted the construction of the superstructure can begin. Many variations in superstructure design are possible.