Building a brick VIP toilet with a door. Method 2

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The VIP toilet is used in many African countries for use in schools.

Whilst the spiral door-less structure is more durable in the school environment, a simple structure made with a door can work if the hinges and door frames are durable.

This power points shows how a simplified unit which allows for recycling of both the hardware and the pit compost has been designed and this can be made by school children.

Because of its special shape the unit is called a “Horseshoe Blair VIP” in Zimbabwe.
In this presentation the pit has been lined with bricks and the slab fitted already.

The Blair VIP toilet with corbelled brick pit lining

- In this case a self closing door has been fitted attached to a door frame which is linked to the brickwork through nails.
- The superstructure can be built with fired bricks and traditional mortar (anthill etc).
- The pit lining is built with fired bricks and cement mortar.
- The corbelling technique involves stepping in the upper courses of bricks so the top is narrower than the base. This allows for a smaller slab to be placed on a larger pit.
- The vent pipe can be made of several materials.
- A hand washing device is important.
- Wash water can irrigate flowers, herbs etc.
- Pit filling time depends on pit volume, number of users and type of additions made to pit.
Preparing the parts

Once the slab has been mounted the size of the door and roof frames can be measured. The door frame and roof frame are made of timber (brandering).
Preparing the parts

The roof and door frames are measured up against the slab. Two pressure treated gum poles (1.4 – 1.7m long) are mounted in front of the slab. These will act as guides for building the brickwork and also the door frame will be attached to one of the poles. Holes are drilled with an earth auger for the poles.
Mounting the two treated gum poles

These are mounted in the drilled holes so the door fits neatly between them
Starting the brickwork

Once the poles are mounted and secure they act as good guides for the construction of the brickwork. A weak cement mortar using 20 parts pit sand and one part Portland cement is used. The brickwork is built around the rim of the slab.
Linking the brickwork to the poles

The bricks are mounted against the poles. Wires can be placed around the poles on a few courses to hold the brickwork more firmly.
The brickwork continues

A spirit level can be used to ensure that the brickwork is built vertically. In this case the brickwork was built by eye. However the shape of the structure gives it a great strength even if it is not built perfectly.
Building up to about 20 courses
As the wall gets higher the pupils need something to stand on the
do their brickwork
The inside of the toilet

Some cement work is built around the poles at the entrance. The squat and vent holes are spaced apart so the vent does not interfere with squatting.
Mounting the door

The door frame is covered with a suitable material (heavy duty shade cloth, plywood etc) and rubber hinges made from car tyres are used as hinges. Later the hinges were replaced by more durable polyurethane units.
Mounting the roof

The roof frame was covered with a plastic sheet and then a thick layer of grass and mounted over the structure.
Mounting the roof
The roof timbers are attached to the poles with wires
Mounting the vent pipe

Various types of vent pipes can be used. In this case a vent made from cement filled hessian material was used. A hole is made in the roof through which the pipe passes.
Mounting the vent pipe

The pipe passes through the roof and is mounted in the vent hole in the slab
The completed toilet

A proud group of pupils stands in front of their building achievement