Stages of construction for a Water Harvesting Tank

1 Clear site

2 Mark out circumference of the foundation using a piece of string and two pieces of wood

3 Dig out the circle to a depth of approx 2 feet

4 Place large boulders in the base of the foundations infilling with smaller stones to obtain a level surface

5 Cut wire mesh to size of the circumference, joining pieces where required with wire ties

6 Mix cement, sand and aggregate

7 Place one bucket in the centre of the foundations and another at the edge of the circumference

8 Using an even piece of wood and a spirit level set the height

9 Repeat at intervals around the circumference using the heap of cement at the centre as the reference point

10 Allow to set

11 A pipe is fixed on the floor of the tank and extend beyond where the walls will be. This is where the tap will be fixed on the outside (see stage 28)

!2 Place base mesh on the concrete and infill by sections the entire base of the tank getting it level by using a flat piece of wood attached to a wooden pole (Puddling)

13 Fix walls of smaller mesh to the base mesh

14 Attach chicken wire to the outside of the walls securing with wire ties

15 Using thicker wire at top, middle and bottom secure the structure and support the shape

16 An overflow pipe is fixed into the wire mesh

17 Blue plastic is wrapped round the outside of the wire walls and secured by sisal string

18 The first layer of cement is placed on the outside of the tank and left to set

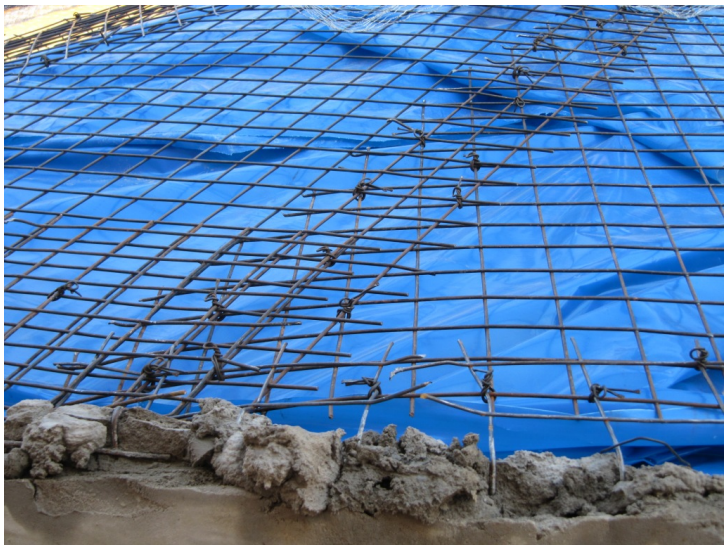
19 First layer of cement placed on the inside of the walls of the tank. Access is gained by a simple "A" frame ladder constructed on site

20 A second layer applied to the outside, left to set and then wrapped in blue plastic. The walls are watered for seven days so that the concrete can cure. The plastic is to delay evaporation of the water used in the curing

21 Facia boards are attached to the selected roof in readiness for the fixing of guttering

22 Wooden poles cut to size are placed around the inside of the tank walls and a central pole is held in position as the suporting dome pole is attached to the central pole and one of the supports and nailed into position. This is repeated until all the dome supports are in place.

23 Blue plastic is used to cover the dome (like a canopy)



24 Wire mesh, cut into sections is fixed to the protruding wire mesh of the walls and the sections wire tied together allowing space for an access panel and the incoming pipes from the guttering to be constructed.

25 Chicken wire is attached to the dome structure and the first layer of cement laid in sections. The sections marked by a length of string fixed to the central pole and held tight by a rock on the other end

26 A second layer of cement is laid in sections and given a smooth finish

27 The structure is left to cure for approx 7 days

28 To protect the tank "chipping" takes place. A hand operated machine is filled with mortar and when turned it throws a spatter of mortar onto the surface of the tank walls creating a rough cast appearance which deters graffiti.

29 A pit is dug, lined with concrete and a lockable tap fixed at the end of the protruding pipe work (see stage 11). The pit is deep and wide enough for a bucket to be placed under the tap.

30 Another pit is dug, connected by a pipe to the tap pit and lined with stones to act as a soak away.

31 After curing the internal wooden supports are removed through the access panel in the dome

32 A second internal layer of concrete mixed with a waterproof agent is applied to the internal walls and dome.

33 All the guttering and pipe work is connected and checked

34 We then wait and pray for rain