

# **SOLAR THERMAL COLLECTOR INSTALLATION REPORT**



**Location:** Katunje, Dhading

**Customer:** Future Village Charity Foundation

**Date of installation:** 8<sup>th</sup> May 2012 – 12<sup>th</sup> May 2012

**Day 1:**

We left for Dhading on a hired vehicle. Contact was established with Mr. Dambar Adhikari at 12:00 pm, who had arranged for the local transportation. We reached Katunje at 4:00 pm.



Picture 1: On our way to katunje

Once we were there, all we could do was sort out the equipments and carry them to the school.

## Day: 2

Started the work early



Picture 3: Tank stand was installed



Picture 2: Frames were set up

We had to break off some concrete to make sure that the tank stand and the solar water tank could fit at the top of the bathroom together. Once that was done, we quickly assembled the solar water heater support structure. Then we moved on to piping. PPR pipes were used for piping and proper valves were installed to control the flow of warm and the cold water.



Picture 4 External outlets for hot and cold water



Picture 5 Tiles were broken off to install the mixture

An external outlet for hot water and another one for cold water were installed. A wash-basin was installed for the cold water outlet as well. Another pipe was supplied to the kitchen, thus replacing the loose pipe that was installed there earlier.



### Day 3:

Procuring the cement was a big hassle because of the strike, but with the help of Dambar's contacts we finally managed to get hold of the cement. All the pipes and the broken tiles were then covered with the cement.



Picture 7: Covering the pipes with cement



Picture 6: The mixture supported with cement

Once the cement was set, the hot and the cold water mixture was fixed. We checked the water pressure from the shower and there was a substantial increase in the pressure compared to the last instance when we visited the school. So, we decided against using the electric pressure motor at the shower head and instead connected it to the black tank (500litres) on top of the tank stand. Because of the increase in height of the water-tank because of the tank stand, the natural water pressure was not sufficient to fill the tank. So, we figured that the motor was of more use there.



Picture 8: Piping network



Picture 9: Basin and the hot water outlet



Picture 10: After the installation was complete

Future issues with the installation:

- Since the cold water tank is only 500 litres and the hot water tank is 350 litres, most of the cold water would be directed towards the hot water tank. So, the size of the cold water tank should be increased to 1000 litres.
- The hot water tubes should be filled with water at all times. Lack of water could result in damage to the tubes. Keeping this in mind, extra tubes have been left at the site. This issue has been carefully explained to the house-owners.
- Extra pipes and joints have been left at the site, in case further piping is required.