PROPOSAL TO IMPLEMENT RAIN WATER HARVESTING SYSTEM AT MAHINDA COLLGE GALLE.

Objective:

To design a rain water harvesting collection system for use at Mahinda College Galle.

Observation

Following a visit and awareness program on rain water harvesting conducted for the students in May 2009, the following suggestion are made to implement a RWH system for the college.

- There is a National Water Supply Board connection to school for dinking needs, however, due to high water bills and usages as well as to introduce water conservation practices to students it is suggested to implement a RWH system to the school
- Rain water collected can be used for toilet use and gardening
- Good rain water collection potential due to large roof sizes (Roof area was not estimated) and good rain fall in Galle. Ave. annual rain fall is 2400 mm. Average annual rain fall collected from 100 m^2 roof area is 192 m^3.
- Due to terrain a gravity fed distribution system can be designed to cut down on energy use.

Proposal

Taking in to account the above observation and discussion with the Principal and Vice Principal, it is proposed to design the implementation of RWH system in stages. Therefore, this proposal is made accordingly.

Stage 1

Construct a RWH system collecting from Building No. 3 in the diagram (attached) to serve the two toilets located below.

- Construct 2 x 8 m^3 Ferro cement tanks, collecting roof water from building No. 3
- Or place 2 x 5 m^3 Plastic tanks, collecting from roof water from building No. 3
- Connect the tanks with the toilets below

Estimated budget

Item	Estimated Cost SL Rs.
1. Ferrocement tanks no. 2 x 8 m^3 or Plastic shell tanks no.2 x 5 m^3	100,000
3. Down pipes and distribution lines	10,000
4. Coordination and administration 15%	16,500
Total	**126,5000**

Stage 2

Construct a RWH system collecting roof water from Building No. 2 for the toilets near by

- Place plastic shell tank above the toilet roof (assuming that the roof can hold the capacity of the tank)
- Connect to toilets below

Estimated budget

Item	Estimated Cost SL Rs.
1. Plastic shell tanks 5 m3	50,000
3. Down pipes and distribution lines	10,000
4. Coordination and administration 15%	90000
Total	**69,000**

Stage 3

Construct large capacity tank 20 m3 below the Hall and collect roof water from the hall roof Building No. 2

- Construct 20 m^3 above ground or under ground tank near the Hall building
- Collect roof water from one side of the hall building and connect to the tank
- Distribute to Building below by gravity

Estimated budget

Item	Cost SL Rs.
1. Under ground tank 20 m3 (Ferro cement)	160,000
3. Down pipes and distribution lines	20,000
4. Coordination and administration 15%	27,000
Total	**207,000**

Stage 1 Installation completed Sponsored by OBA Colombo