



There is nothing new about collecting rainwater. Storage jars used for water collection some 2000 years ago have been found as far away as Thailand. All that has changed is an ever pressing need to help save our most precious resource and as a bi product save money. It is possible to save a substantial amount of water by the simple fitting of a rainwater tank or an above/ below ground storage tank. This stored water can have a variety of uses from watering of your garden, washing of vehicles or to add to the mains water to your house, this however should be filtered. Rain water is naturally devoid of minerals chlorine, fluoride and other chemicals and is better for plants, trees etc. It is surprising how much water can be collected from a standard roof, patio, driveway or any hard-standing surface around the home. For every inch of water that falls on a surface of 1000 square feet it is possible to collect approximately 600 gallons of water. It is a simple task to work out the rainfall on average for your area:-

### Available Rainfall

= Annual rainfall for your area (mm) \*\* x Roof area (m2) x Evaporation Factor\* x Filter Loss Factor\*

\* assumed as 0.9

\*\* Example rainfall

E.G., Typical 3 bedroom house (4 people), the yield would be;  $800^{**} \times 120m^2 \times 0.9^* \times 0.9^* = 77,760$  litres

Expected usage 45% of 150 litres per person per day

E.G.,  $150 \times 4 \times 365 \times 45\% = 98,550$  litres

If you calculate 5% of the lower value, then a tank size of 3,888 litres or one that is closest to that figure would be the most suitable tank size. One of the benefits of a modular system is that additional tanks can be joined to the existing at a later date with ease.

If this water is put to use washing the car, watering the plants, washing the windows and even flushing the toilets, imagine the savings on water rates and the benefits to the environment. There are many methods of rainwater harvesting, barrels fitted to a downspout from a roof come in many shapes and sizes, some practical and some aesthetic. Thought should be given to sturdiness, child friendliness and safety, a cheap system will crack when the frosts come and would be a waste. Also run off of excess should be considered. Underground tanks can store anything from 1000 litres to as much as 10,000. Although a common size would be 2800 litres. A special pump will deliver the water to a hose pipe on demand or to a header tank in the loft. A flotation valve automatically shuts off the pump if the tank is emptied.