

## **Recycling our 'grey water' with a reed bed**

To save water (and money!) We decided to recycle our bath, sink and washing machine water – not our sewage.

If you store your grey water and don't use it immediately on the garden it will start to smell and if you aren't careful about the kind of soap and detergent you buy, regular watering can build up too many salts in the soil.



To avoid these problems we decided to build a small reed bed to purify the water before using it on the garden. Common reeds will use up the nitrate in the waste water as they grow. They also have the ability to provide oxygen to their roots and maintain a colony of aerobic bacteria to help with the cleanup process. We decided on a 4 square meter reed bed, 35cms deep raised above ground level to give the height to keep the water flowing. A reed bed is basically a pond filled with gravel with reeds growing in it and a collecting pipe buried at one end to let the water out after filtering. We made ours out of recycled lumps of concrete mortared together with mud with a triangular wall cross section. This construction was lined with old carpet and pond liner. A piece of perforated drainage pipe led the water to an old cold water header tank from which we could lead it to the pond or down to a tank outside our polytunnel. The reed bed is filled with gravel starting with a layer of about 10mm of pebbles then filling to the top with pea gravel. The reeds will take a year to establish themselves and their aerobic bacteria friends. In the meantime the water is cleaned by the gravel but is a little smelly due to the lack of aerobic bacteria. I hope the reed bed water will eventually pass thorough the pond but at the moment it contains too little dissolved oxygen to be good for the fish (we don't want to rely on an electric aerator).

To complete the system we installed a surge tank made from a (recycled) water tank to take the water from the house. This has a crude filter made from a pan scourer (which needs to be cleaned monthly). The water passes from the tank into a hose pipe which leads to the reed bed.

**More details on our website [www.ecodiy.org](http://www.ecodiy.org)**