



## Case Study

### PIG FARM WASTE Greece

The Afatzanis family have a pig farm of 200 sows on 1ha, in a rural Northern Greece. Significant industrial work also takes place in the area around the farm.

In 1996, PLOCHER treatment began, treating farm waste, then applying it to a field where reeds (Phragmites Australis) were planted.



The disposal field is 1.3ha. Half is covered with reeds: a constructed reed-biotope has been developed with significant ecological value. Neighbours have not observed any odours or other impacts.

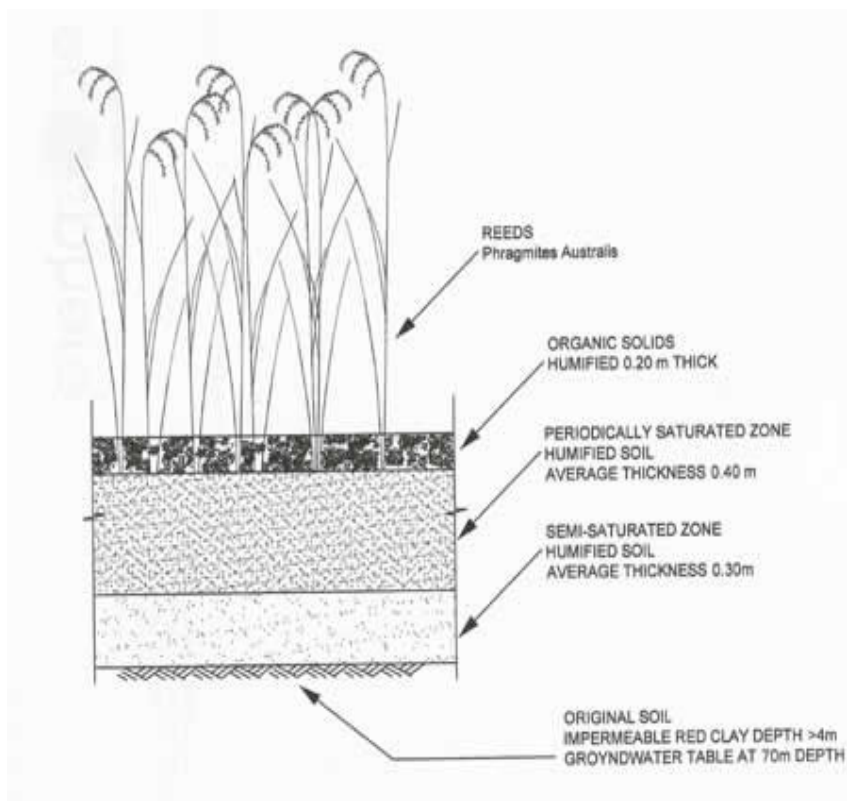
Waste treatment costs are compatible with farm finances.

Please note: pollution load from this farm is comparable to a human population of 2,000. The farm is responsible for its environmental impact.

## Result

The soil profile of the reed-biotope field is illustrated below.

Originally, soil was red clay which is impermeable. It is more than 4m thick.



On the surface a 0.20m layer of humified organic solids has developed. Solids are in the liquid waste and stay on the surface while liquids percolate through the layers of the soil.

Below this, a 0.40m layer of humified soil has built up over time. This layer is saturated with the periodic applications of the liquid waste.

Beneath that, there is a semi-saturated soil layer, 0.30m thick, which is also humified but it is less well decomposed and of poorer quality.

Below the semi-saturated layer is the original red clay soil matrix. This soil is virtually impermeable to water. The water table is at 70m depth, therefore, it is unlikely any pollution enters it.

Farm waste is applied on a rotation basis to sections of the reed-biotope until saturation of the upper layers is reached. The saturated area is allowed to dry through evapo-transpiration while waste is applied to other sections. The water holding capacity of the humified layers is considerable because of its humus content and structure.

5 June 2005