

R B Organic, Yaxley

Horizontal subsurface flow: Vegetable wash water



Project

RB Organic, Cambridgeshire

Location

Yaxley, Peterborough

Project type

Design and construct

Wastewater type

Vegetable wash water

Completion date

September 2007

Treatment

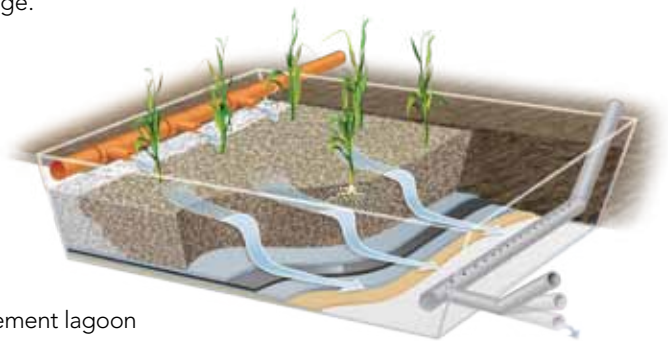
Surface and subsurface
horizontal flow wetland

Need

RB Organic process and supply over 30,000 tonnes of organic vegetables every year. As part of the process soil is washed from the vegetables and the resulting dirty water requires treatment prior to discharge. Historically, the water was treated with chemicals and passed, by batch process, through clarifiers where solids were settled out. Being faithful to the philosophy and ideals of organic farming, RB Organic were keen to eliminate the use of chemicals and reduce the level of labour associated with desludging and chemical dosing operations. The site produces 170m³ of wash water per day which has to meet a standard of less than 30mg/l Suspended Solids and 50 mg/l BOD prior to discharge.

Solution

ARM designed and constructed a 3 stage wetland treatment system to achieve the required removal of solids and BOD from the vegetable wash water. A settlement lagoon drops out the solids and is followed in series by two 800m² wetland systems which provide further settlement of suspended solids and reduction of BOD. The first is a surface flow system with a soil substrate planted with *Typha latifolia* and the second a subsurface flow horizontal reed bed with a gravel substrate planted with *Phragmites australis*.



Benefits

This system provides RB Organic with a wash water treatment system that operates continuously, eliminating the need for costly ongoing chemical use and reducing operational and maintenance labour requirements whilst securing discharges within consent.

