

# Decentralised on-site wastewater treatment including small scale reed bed treatment systems

## at municipality Thumby, Germany

Owner:  
Municipality Thumby  
D-24351 Thumby, Germany

Decentralised wastewater treatment by re-fitting the existing septic tanks with a biological treatment step inside small villages

Population equivalent:  
551 inhabitants

Planning: 1994-1995  
Construction: 1995-1998

Existing wastewater treatment:  
septic tanks

Re-fitting secondary treatment:  
104 reed beds (root zone process)  
27 open sewage lagoons  
4 sandfilters  
3 sandfilter trenches  
19 biological fixed bed reactors  
2 biological rotating contactors  
1 subsurface irrigation system

total gross costs:  
586.000,- EUR  
Estimated gross costs of an alternative central  
wastewater treatment plant:  
2 Mio EUR

Results of measurement:  
COD: Ø 69 mg/l n = 82  
(limiting value: 150 mg/l)

BOD: Ø 11 mg/l n = 82  
(limiting value: 40 mg/l)

