

# Constructed wetland Silkerode, Germany

Owner and operating company:  
Wasser- und Abwasserzweckverband  
„Eichsfelder Kessel“  
Breitenworbiser Straße 1  
D-37355 Niederorschel

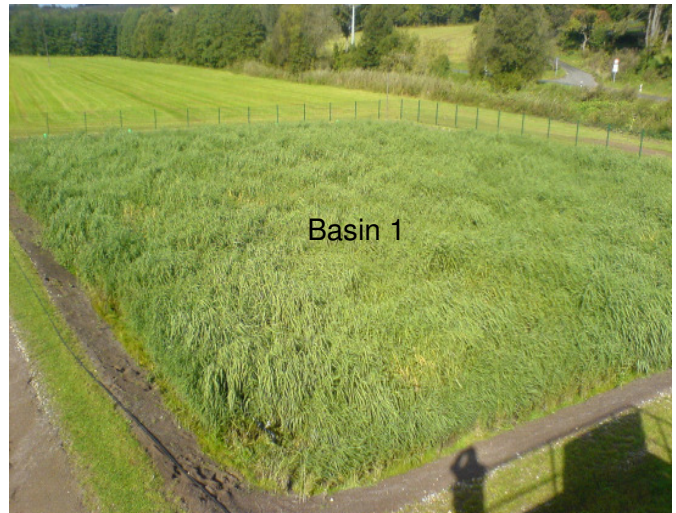
Construction of a reed bed treatment system  
(vertical subsurface flow) for the domestic  
sewage of the village of Silkerode

Planning: 2005 - 2006  
Construction: 2006 – 2007

Design capacity:  
500 PE (Population equivalents)

Design flow per day (maximum):  
94 m<sup>3</sup>

Sewerage system of the village:  
Separate system with gravity flow to a final  
pumping station in front of the sewage  
treatment plant



Pretreatment:  
Sedimentation tank (30m<sup>3</sup>)  
Sludge storage basin (25m<sup>3</sup>)

Wastewater distribution system for the constructed wetland:  
Storage tank for reed bed distribution pumps (20m<sup>3</sup>)  
Elevated PE-pipes with holes

Space requirement of the reed bed treatment system:  
2 hydraulic independent reed beds (*Phragmites communis*) with intermittent loading on a total area of 2.160 m<sup>2</sup>

Control system:  
Process, measuring and control technology remotely operated from the central sewage treatment plant.

Hitherto existing performance data (n=6):

	Inlet	Outlet	Legal discharge limits
COD	654 mg/l	31 mg/l	150 mg/l
BOD5	355 mg/l	7 mg/l	40 mg/l
NH4-N	77 mg/l	3 mg/l	None
Ntot.	n. b.	4 mg/l	None
Ptot.	11 mg/l	0,2 mg/l	None



Combination building  
with utility room

