

# Constructed wetlands by vertical flow reed bed treatment and unaerated Lagoons at the village of Berel, Germany

Owner and operating company:  
Wasserverband Peine  
Horst 6  
D-31226 Peine, Germany

Strengthening and enhancement of an existing unaerated pond system for municipal wastewater treatment by constructed wetlands.

Existing wastewater treatment plant:  
Unaerated lagoon system  
(3 ponds with a surface of 6.800 m<sup>2</sup> from 1989)

Population equivalents:  
700 PE

- Renovation measures in 2008:
- New screen (3 mm)
  - New process, measuring and remote control system
  - Two newly established constructed wetlands with a pumping station (vertical subsurface flow, 1.200 m<sup>2</sup>)
  - New floating islands (260 m<sup>2</sup>)
  - New volume flowmeter (Venturi)
  - New buildings for maintenance and control

Planning and design: 2007 – 2008  
Construction: 2008 – 2009

Efficiency (2011):

	Influent	Effluent
CSB	369 mg/l	43 mg/l
BSB5	209 mg/l	8 mg/l
NH4-N	55 mg/l	3 mg/l
NO3-N	3 mg/l	4 mg/l
Nges.	n. b.	7 mg/l
Pges.	12 mg/l	3 mg/l

