

Reed Bed Treatment System

Wetland Treatment Center of Advanced Materials Changshu Industrial Park

Owner:
Changshu Industrial Park Administration,
Jiangsu province, China

Industrial wastewater treatment; reuse of treated wastewater; protection of the Yangtze river

Planning, tendering and construction supervision:
Blumberg Engineers, Germany and two German partners with DeHua Eco Tech, China

Daily wastewater volume: 4000 m³/d

Planning: 2010/2011
Construction: 2013/2014

Total constructed wetlands area: 6 ha

Treatment Cascade:

1.step:

Vertical subsurface flow constructed wetlands:
20.000 m²

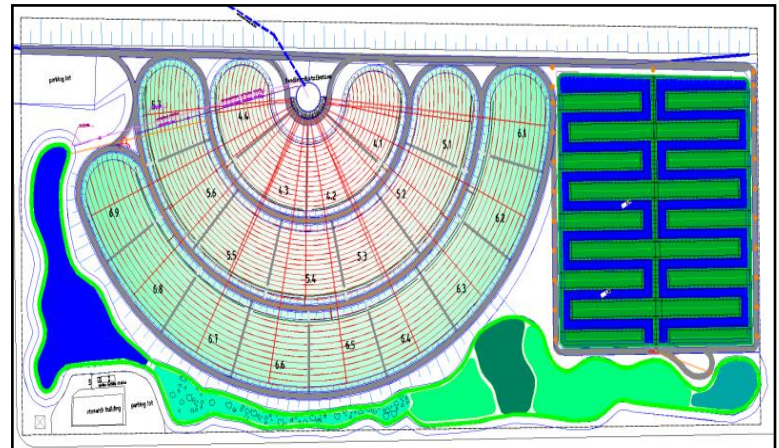
2.step:

Pond cascade:

- Deep pond with floating islands: 2.652 m²
- Rocky creek: 1.064 m²
- Shallow surface flow wetland: 4.019 m²

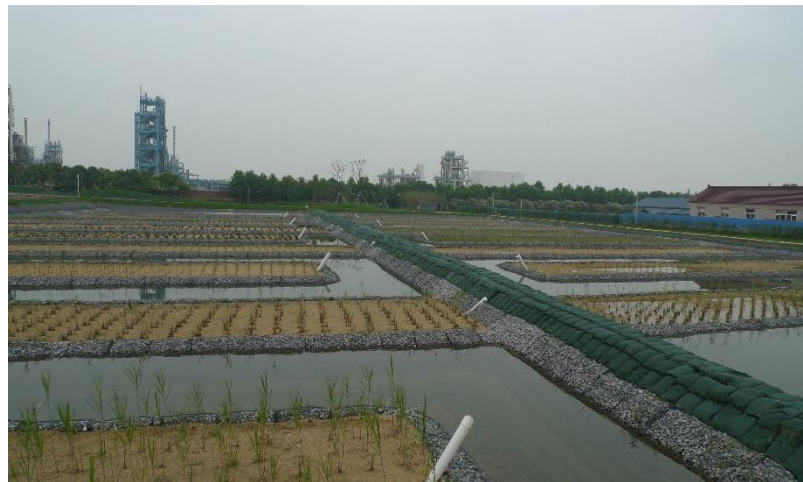
3.step:

Horizontal subsurface flow constructed wetlands:
10.062 m²



Special features:

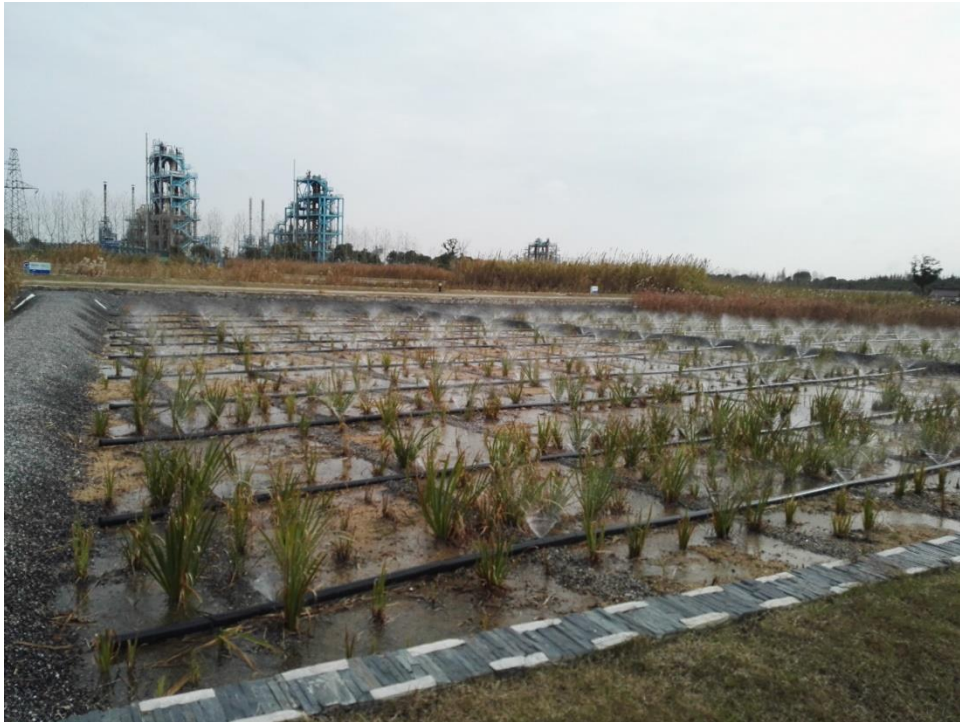
- Pretreated wastewater from Industrial Park (chemical companies)
- Reuse of effluent as process water within the industrial park.
- High salinity and fluoride content of the wastewater.



Horizontal subsurface flow constructed wetland



Vertical subsurface flow constructed wetland



Our spray nozzles in action.



Arundo donax , Operations and demonstration centre in the background.

Advanced Materials Industrial Park (AMIP) Changshu Treatment performance:

Year	Influent					Effluent				
	pH	COD	NH ₄ N	TN	TP	pH	COD	NH ₄ N	TN	TP
2015	7,4	52,3	3,1	6,7	0,15	7,4	20,9	0,27	0,93	0,04
2016	7,6	48,3	4,5	9,2	0,06	7,3	20,8	0,5	1,03	0,01