



**WETPOL
2019**

Technical Tour: Constructed Wetlands, Bioreactors and Integrated Buffer Zones treating Agricultural Drainage Discharge

Date: 20 June 2019, 07.45 - 16.00.

Bus departs from: Kalkværksvej, 8000 Aarhus (parking space).

Meals: Lunch included.

Refreshments: Coffee can be purchased on the bus. Free snacks/fruits and water will be available.

Program:

07.45 Bus arrives at Kalkværksvej, 8000 Aarhus

08.00 Departure

08.45-10.15 Aarhus University, Test facility, 6 subsurface flow constructed wetlands – bioreactors - treating agricultural drainage discharge from a 85 ha drainage upland.

Location: Søndergade 70, 8883 Gjern

11.00-14.00 Surface flow constructed wetland treating drainage discharge from a 45 ha upland and an integrated buffer zone treating agricultural drainage discharge from a 30 ha upland.

- Including lunch

Location: Fillerupvej, 8300 Odder

14.15-15.15 Subsurface flow constructed wetland – bioreactor – equipped with a storage pond to handle peak flow events.

Location: Skovlyvej, Fensholt, 8300 Odder

15.15 Bus departing to Aarhus

16.00 Arrival in Aarhus, Kalkværksvej, 8000 Aarhus



DEPARTMENT OF BIOSCIENCE
AARHUS UNIVERSITY



This tour will highlight different measures to mitigate nutrient discharge from agricultural drainage water.

First, we will visit Aarhus University's test site at a local farmer housing six subsurface flow constructed wetlands/bioreactors. Each unit has the dimensions 10 x 10 x 1 m and three flow designs are tested: horizontal flow, vertical upflow and vertical downflow. Research is focused on ageing of the woodchips and side effects like sulfide production and re-oxidation of effluent water.

Nest stop will be at the village Fillerup close to Odder town, 28 km from Aarhus, where we will visit two facilities. Fillerup surface flow/open water constructed wetland with an area of 0.36 ha receiving tile drainage water from a 56 ha drainage upland and which features a special Danish design of open water constructed wetlands with alternating shallow and deep water zones.

In walking distance from the Fillerup wetland we will go to an integrated buffer zone – IBZ – located along the Odder stream. An IBZ intercepts tile drainage water, which was previously discharged directly to the stream. The IBZ consists of ditch/longitudinal pond receiving the cut tile drainage water and a narrow infiltration zone between the ditch and the stream.

Our final visit will take place 8 km from Fillerup, and again at a local farmer where Aarhus University has built a bioreactor combined with a pond for peak flow reduction in order to optimize the performance of the bioreactor.

Additional information for these three wetlands can be found at: <http://supremetech.dk/> and <http://idraen.dk/>

