

# Kvalvikodden - Sewage Plant

Sewage Plant for the Center of Bodø



# Background

- Master Plan Waste Water - 1989
- Discharge permit – County Governor of Nordland
- Bodø Clean Harbor - 1996
- User interests (recreation , Aquaculture , recreational fishing and water supply from sea water).

# Organisation of project Kvalvikodden

- External consultant ( COWI)
- Development plan
- 5 contracts
  - Site preparation and pipelines
  - Submarine pipelines
  - Expansion of access tunnel
  - Building Construction
  - Machine and process equipment
- The sewage plant was completed in 2008



Beliggenhet og høyder må oppfattes som orienterende. Santlige høyder i MGD



Bodo Kommune  
Kommunalteknikk

Dato: 2008.09.15  
Sign: IS

Ledningskart Bodo Havn



Skala: 1:10000

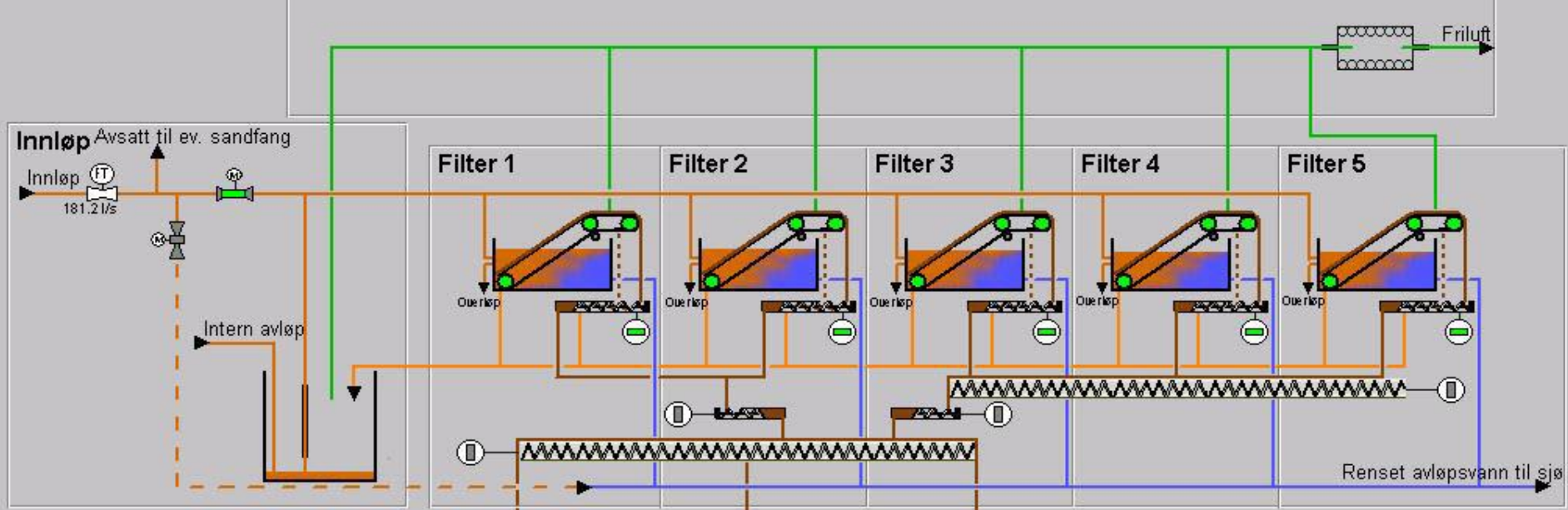
# Area



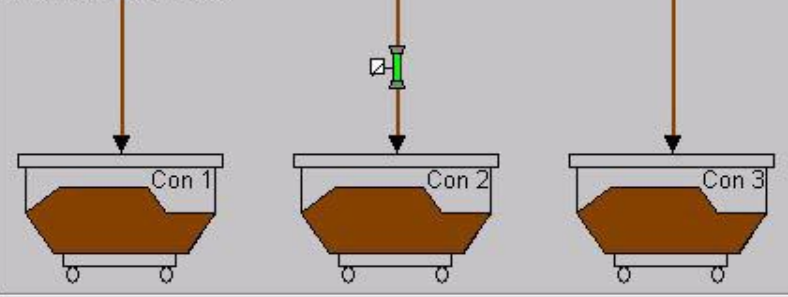
PLS Kommunikasjon RA500: OK

PC Kommunikasjon RA500: OK

Luktreduksjonsanlegg

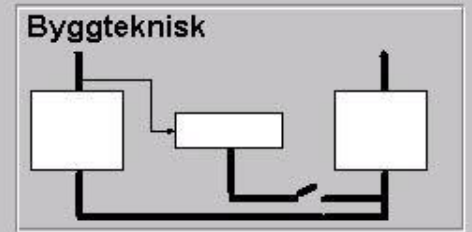


Slamcontainere



Setter modusvalg for RA500

Man



# Supply / wastewater volumes

- 4 major pumping stations
- Sewage from 16 100 pe (person equivalents)
- Ca 9000 people, rest from business / industry
- Originally 23 emissions in the inner harbor
- 95 % of added pollution to Bodø harbor transferred to Kvalvikodden Sewage Plant.

# Sludge volumes

- Capacity 500 l / s, at present max flow 400 l / s
- 40-80% of the solids/sludge are removed from the waste water
- Containers transported to Vikan garbage dump and sludge is composted
- Composted sludge used to cover landfills
- About 11 tons of sludge each week, with about 25-30% dry matter
- Annual production of sludge is approximately 600 tonnes

# Discharge Water

- Pipeline for discharge water is 245 meters long, and on 43 meters depth.
- Samples are taken from the inlet and outlet to document the degree of purification.

# Investments

• Former investments	ca 60.0 mill	(7,2 mill €)
• pipelines, submarine pipelines	ca 9.0 mill	(1,1 mill €)
• Site preparation + pipelines on land	ca 10.5 mill	(1,2 mill €)
• Tunnel	ca 1.5 mill	(0,3 mill €)
• Building / machinery equipment	ca 25.0 mill	(3,0 mill €)
• <u>Upgrading pumping stations</u>	ca 1,0 mill	(0,1 mill €)
• <u>Total</u>	ca 107 mill	(12,9 mill €)