



BIOSOLIDS



BIOWASTE



BIOREFINERIES

PLANT
SHEETS

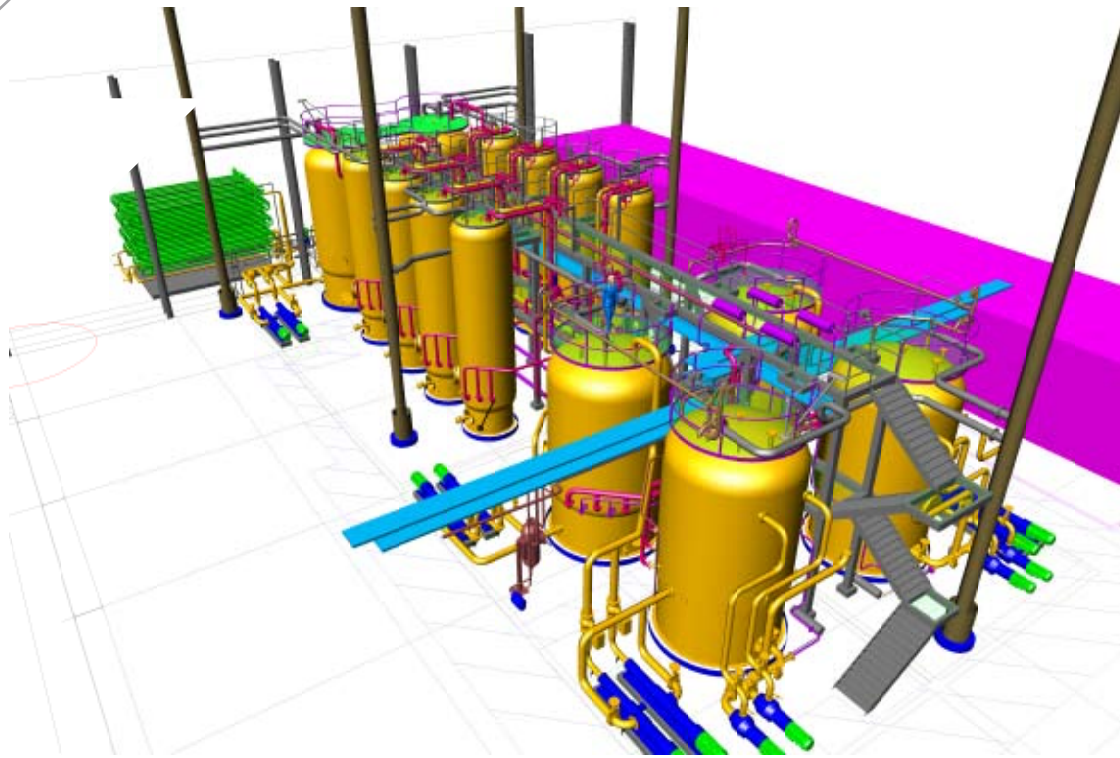


RINGSEND

Dublin, Ireland

Plant capacity and performance:

- 36,000 tonnes DS/year
- Digester loading 6 kg VS/m³/ day, 2-3 x normal
- 3 x 4,300 m³ digesters
- ~10% DS feed to digesters
- Cogen: 4 MWe + steam
- >60 % VS reduction
- 2x4 reactor Cambi THP
- High dry solids Class A cake



Ringsend, Dublin

The Cambi 8-reactor THP plant is designed to treat 36,000 tonnes DS sewage sludge annually to be digested and then dewatered and dried.

The WWTP was originally operating a two-train drum drying systems of the raw primary sludge to meet the requirements of pasteurisation in Ireland.

The plant was extended by adding SBR biological secondary treatment reactors to the existing primary treatment plant, doubling the sludge quantity and reducing sludge dewaterability.

This would normally have led to a tripling of dryer expansion because of the much greater water evaporation requirement.

However, by adding Cambi THP the digested cake volume was reduced and the dryer project was only expanded by 50%. Also, the required digestion volume was reduced to less than half the conventional: Three 4,300 m³ digesters are fed at about 6 kg VS/m³/day and routinely achieve 60% VS conversion with 45,000 m³ per day of biogas.

The benefits of the Cambi process are:

- Compact digestion project: ½ to 1/3 of conventional digester volume
- Reduction in dryer evaporative capacity required to 50%
- Cambi digested cake is Class A and is used in agriculture to avoid using dryer
- Biogas energy is used for up to 4 MWs electricity production