



BIOSOLIDS

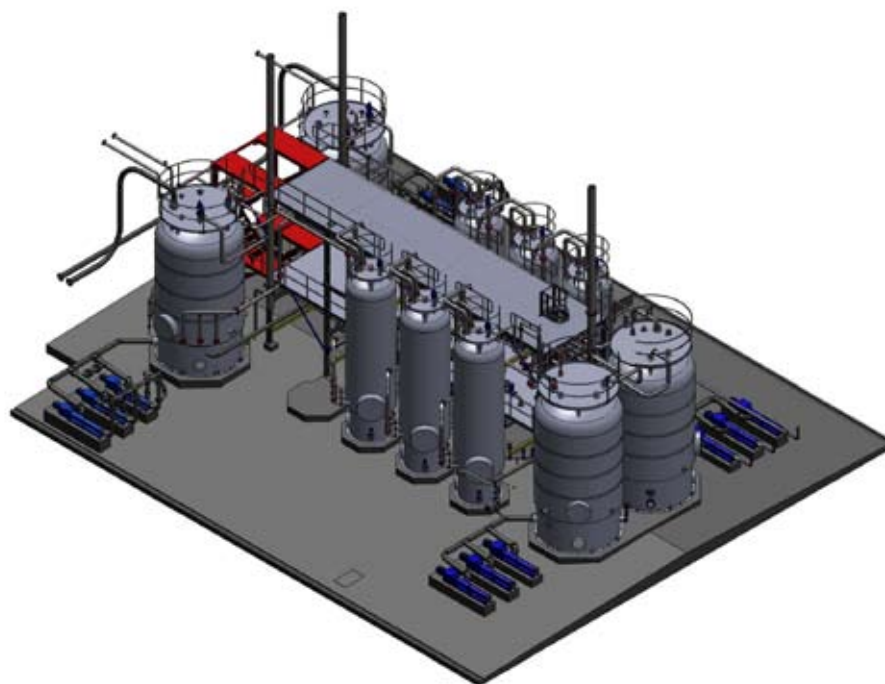


BIOWASTE



BIOREFINERIES

PLANT
SHEETS

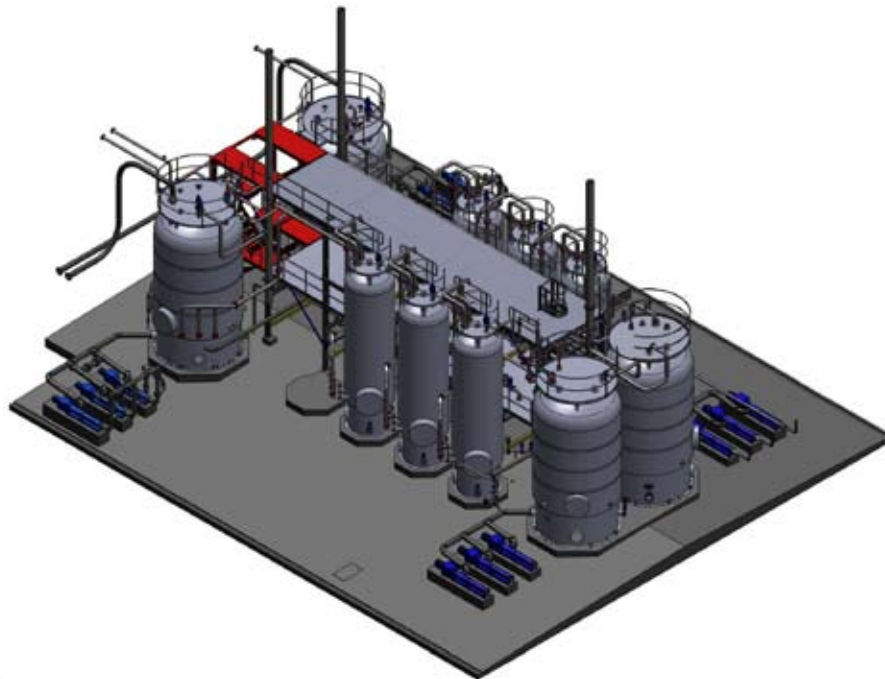


CARDIFF

Cardiff, Wales, UK

Plant capacity and expected performance:

- 35.000 metric tonnes DS/year
- 2 x 7.500 m³ digesters
- 2 x 3-reactor Cambi THP, expandable to 2x4
- 3.2 MW electricity + cogen steam
- Pasteurized product
- Reduced energy for drying
- Significantly less carbon emissions
- High performance digestion
- Final product > 30% DS
- Maximized VS destruction



Cardiff, Wales

The key challenge for the new AD plants (Cardiff and Afan) was to build them within the existing site boundaries at the two sites that are being converted to regional sludge centres. The two centres replace three raw sludge drying plants and allow import of other sludges that are not being digested at present. This gives major operational cost savings and benefits from reduction in drying costs, including fossil fuel, and substantial addition of green electricity for the sites' use.

This required very compact design and maximum productivity from the secondary biological sludge produced with the Cardiff SBR (Sequencing Batch Reactor) process. Following a review of pre-treatment technologies for AD, Imtech Process selected Cambi AS to provide THP pre-treatment.

The treated sludge will be dewatered and processed into a high quality sludge cake that is free of pathogens and will be used across South Wales as an agricultural fertiliser. The Cambi THP process encourages a well dewatered digested product in excess of 30% dry solids that is non smelly and easy to store and use.

After start-up the Cambi plants at Afan and Cardiff will play an important role in reducing Dwr Cymru Welsh Water's carbon footprint (a measure of a company's contribution to the greenhouse gas effect) by 35,000 tons of CO₂ equivalent per year.

The benefits of the Cambi process are:

- Increased plant capacity
- Compact digestion plant
- Ability to digest SBR biological sludge
- Reuse of existing dewatering assets
- Cost saving from stopping drying operation
- Cost savings in reduction of energy consumption for drying
- Cost savings from green electricity production
- Significant reduction of carbon footprint