



BIOSOLIDS



BIOWASTE



BIOREFINERIES

PLANT
SHEETS

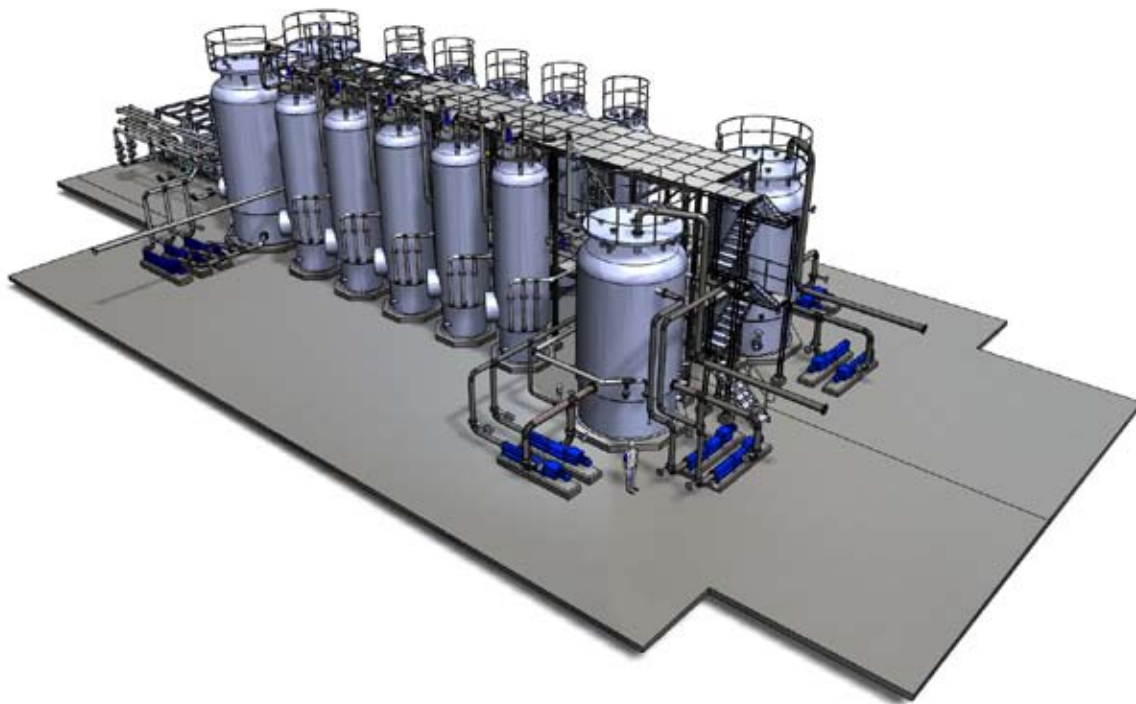


BRAN SANDS

Tees Valley, UK

Plant capacity and expected performance:

- 40,000 metric tonnes DS/year
- 3 x 6,300 m³ digesters transport
- 8-reactor Cambi THP
- 4.7 MW electricity + cogen steam
- Pasteurized product
- Reduced energy for drying and transport
- 50,000 tons less carbon emissions
- High performance digestion
- Half the original cake volume



Bran Sands, Tees Valley

In June 2007 Aker-Kvaerner awarded Cambi AS a contract for the supply of a Thermal Hydrolysis Process (THP) plant as part of the Bran Sands Advanced Digestion Project.

Northumbrian Water Ltd (NWL) awarded the Bran Sands project to Aker Kvaerner in the same month; a GBP 28 million contract to design, construct, install and commission a facility to extend the treatment capabilities of the existing regional sludge treatment centre (RSTC) at Bran Sands in the Tees Valley, north-eastern England (Middlesbrough area).

Bran Sands is one of Northumbrian Water's largest sites, and the current raw sludge drying is maintenance and energy intensive. NWL therefore reviewed existing sludge treatment assets, which led to the recommendation of an advanced

sludge digestion treatment centre at Bran Sands, based on the Cambi THP technology.

The centre will treat sludge from the existing wastewater treatment plant at Bran Sands and raw sludge delivered mainly as dewatered cake to the site from the southern half of NWL and can treat up to 40,000 dry tonnes of sludge per year.

The installation of the Cambi plant and subsequent digestion and dewatering will significantly reduce the overall amount of sludge cake to be dried and/or recycled directly to land as an enhanced treated product as well as greatly reducing NWL's carbon footprint by about 50,000 tonnes and generating up to 4.7 MWs of renewable electricity from biogas.

The benefits of the Cambi process are:

- Compact digestion plant
- Reuse of existing dewatering assets
- Reduction in volume of cake to half of before situation
- Cost savings in reduction of energy consumption for drying
- Cost savings from green electricity production
- Reduction of carbon footprint by 50,000 tonnes CO₂
- Reduction of inter-site transport costs of sludge as raw cake
- Flexibility of Cambi cake of dried product – both Class A products