



**KalFos**

**SECANIM**  
SARIA Group

## Case Study 1

# Converting MBM into fertiliser and electricity

## SecAnim Bubbling Fluidised Bed Biomass Combustion Facility, Widnes, UK

The SecAnim facility safely disposes of Category 1 MBM produced from onsite rendering and external sources utilising fluidised bed combustion technology. The fluidised bed provides complete destruction of pathogens and protein. There is no waste and the < 0.1% carbon in the final ash, “KalFos” is used as a carbon neutral, high phosphate sustainable fertiliser. Renewable heat and power is derived from the biomass material, supplying steam and electricity for the site and electricity back onto the grid.

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## Unique, integrated, compliant disposal of Category 1 MBM

- MBM produced onsite is fed directly into the combustion plant, via a closed system, providing the safest possible disposal.
- The fluidised bed technology provides the complete destruction of pathogens and protein, with zero carbon remaining in the ash (KalFos).

## Disposal of high organic content liquid wastes

- The facility also provides disposal for high organic strength liquids produced onsite (and 3rd party), minimising any waste leaving the site.

## Production of renewable electricity; supplying both the site and exporting to the grid

- The facility produces up to 4 MW of renewable electricity using two steam turbines.

## Supply of renewable CHP heat

- Renewable heat is supplied to onsite rendering processes, offsetting natural gas.
- The renewable heat offsets 20,000 tonnes of CO<sub>2</sub> per year.

## Production of carbon neutral, high in phosphate sustainable fertiliser; KalFos

- KalFos contains 24% P<sub>2</sub>O<sub>5</sub> & 30% CaO and provides several important trace elements, including magnesium, potash, sulphur & zinc.
- KalFos offsets 160kg CO<sub>2</sub> per tonne when used as an alternative to traditional fertilisers.
- The phosphate found in KalFos is insoluble in water, meaning it provides a slow release of nutrients, and prevents any runoff into nearby water courses.

