



## SEVERN TRENT SLUDGE DIGESTION SCHEME

VALUE: £35 million

CLIENT: Severn Trent Water

LOCATIONS: Redditch, Strongford, Barnhurst, Newthorpe, Toton, (various locations around Severn Trent's catchment area) UK

PROBLEM: Treatment plants needed to meet stringent ADAS safe sludge matrix.

CHALLENGES: Five sites to be treated as one individual project and interlinked. To provide sludge import facilities, thickening, digestion and dewatering to 25% - 30% dry solids for all sites

SOLUTION: Primary sludge thickening, anaerobic digestion and blending of sludges, sludge dewatering centrifuges, odour control system, sludge cake storage and skip loading.

START DATE: OCT 1998

COMPLETION DATE: MAR 2000

PROJECT STATUS: Completed



## DESCRIPTION & KEY FEATURES

The project is for new digestion and dewatering of sludge at 5 sites in Severn Trent Water. These are located at Redditch, Strongford, Barnhurst, Newthorpe and Toton. The scheme is part of the Water Industry's compliance with the ADAS safe sludge matrix.

Sludge liquors generated during dewatering of digested sludge are treated at the individual works or at Toton an extension of the works. At Newthorpe a purpose built liquor treatment plant is used.

### Project Brief:

To provide sludge import facilities, thickening, digestion and dewatering to 25 to 30% dry solids at 5 sites. The total throughput for all the sites is 150tds/day. Sludge cake is then stored for up to 3 months

### Key Features:

- Tanker import facilities for importing sludge
- Sludge screens
- Surplus activated sludge thickening
- Primary sludge thickening using picket fence thickeners
- Blending of sludges
- Anaerobic digestion , 16 digesters ranging from 2000-3700m<sup>3</sup>
- Sludge dewatering to 25 -30% using centrifuges (15-50m<sup>3</sup>/h)
- Sludge cake storage and skip loading
- Odour control facilities
- Control and automation
- Site buildings housing electrical control equipment
- Sludge liquor treatment at Newthorpe using CASS™ technology
- Construction of anoxic zone at Toton to increase STW treatment capacity