



Bran Sands provides sophisticated treatment of effluents for nearby industrial companies and domestic sewage for a population of over three million people. A valuable resource to industry, Northumbrian Water's Tees Valley plant has also been a major contributor to the clean-up of the River Tees.

## World class facilities in Tees Valley

Bran Sands is a fundamental part of the £200m Tees Estuary Environment Scheme (TEES), providing a sustainable, modern industrial and municipal waste treatment facility for Tees Valley. The facility is capable of treating over 300,000 cubic metres of effluent per day and has the best and most cost-effective techniques for a diverse range of effluent treatment.

The regional sludge treatment centre (RSTC) at Bran Sands is the largest operational sludge drying facility in Europe. It can reduce a waste stream of in excess of 1.5 million m<sup>3</sup> of wet sludge to less than 136,000 m<sup>3</sup> of dried sludge.

We are confident that the Tees Valley has the capacity to cost-effectively handle all of your current and future waste water and effluent treatment needs.



# Waste **water** management

Bran Sands is just one example of how the Tees Valley has successfully used innovation in industry. The concept of drying sludge as a means of treatment was relatively novel in 1993 when Entec (Northumbrian Water) started investigations into the options for sludge disposal, with most water companies at that time opting to process sludge via incineration. Furthermore, the plant is relatively unique in Europe as it dries raw (unprocessed) rather than digested sludge. This maximises the potential for the dried sludge to be used as a fuel by maintaining a higher calorific value in the final product and negates the requirement for installation of expensive digestion plant. The majority of the UK water companies have since mirrored this concept in their sludge disposal strategy and in the design of their new plants.

The plant was the first sludge drying facility in the UK to be licensed under 'integrated pollution control' by the Environment Agency as a waste-to-fuel plant. The plant obtained this licence by demonstrating it provided 'best available technology not entailing excessive cost' and 'best practical environmental option', confirmation of which was endorsed by the granting of a licence for operation in 1998. Phase Two is designed to meet the expected requirements of 'integrated pollution prevention and control' legislation.

In other words, with Bran Sands, you're in safe hands.



Waste **water** management

## Fact File

### Project

Regional Sludge Treatment Plant

### Client

Northumbrian Water Limited

### Location

Bran Sands, Teesside, UK

### Capital Project Value

£144m

### Services

- Comprehensive review of sludge treatment processes employed worldwide
- Assessment of the economics of sludge treatment process (generic and site specific)
- Selection of appropriate drying plant technology via a design competition
- Production of an environmental assessment
- Design of a ground capping system to allow beneficial reuse of a contaminated site

### Geotechnical design

- Mechanical, electrical and civil engineering design associated with the integration of a sludge drying plant including a new jetty, sludge transfer system and sludge storage, drying plant building, HV and LV systems, ICA and SCADA and a Combined Heat and Power Plant (CHP)
- Application and approval of a licence to operate a 'waste to fuel' under integrated pollution control (IPC)
- Supervision of construction and coordination of multi-disciplined construction contracts
- Technical advice and assistance on the operation of the Plant to improve availability and enhance performance

### Strategic Investment Team, Tees Valley Regeneration

Cavendish House, Teesdale Business Park, Stockton-on-Tees, Tees Valley TS17 6QY  
 Tel: +44 (0) 1642 632000 Fax: +44 (0) 1642 632001  
[www.teesvalleyregeneration.co.uk](http://www.teesvalleyregeneration.co.uk)