



Contract facts

Contract: 3 years

Population:

Around 907,000

125,000,000m³

wastewater treated each year

60,000

tonnes of waste sludge recycled per year

ALMOND VALLEY, SEAFIELD AND ESK (AVSE)

Wastewater Treatment

Veolia AVSE (Almond Valley, Seafield and Esk) is a 30-year performance based contract, awarded in 1999 to Stirling Water Seafield under the Government's Private Finance Initiative (PFI) for the operation of a number of Wastewater Treatment Works in Edinburgh and the Lothians.

Whilst the assets are owned by Stirling Water Seafield over the contract period for Scottish Water, Veolia is responsible for the operation of 15 sites in Edinburgh and Lothians. This includes five treatment works, 11 storm water sites, one trunk sewer, one pumping station, two combined heat (CHP) and power plants and two advanced digestion plant.



70% self-sufficient in electricity.



ALMOND VALLEY, SEAFIELD AND ESK (AVSE)

The Challenge

The AVSE project area is equivalent to a population of 907,000 and involves treating over 125,000,000m³ of wastewater each year. In addition to operating the 15 sites, Veolia was also required to improve operational efficiency including regulatory and health and safety performance, communication and stakeholder engagement and financial and asset performance.

The Solution

Veolia tackled the challenge on a number of fronts. Utilising the sites at its disposal, enhancing a combined heat and power plant (CHP) and constructing an advanced digestion plant, has provided AVSE with valuable income streams. Electricity is sold to the National Grid and reducing the disposal of sludge has made significant savings of £2m per year.

Minimising asset management costs was crucial. The process is now proactive to ensure regulatory limits are not exceeded, thereby reducing contract deductions. A focus on operational excellence has also lowered costs by reducing downtime and lost man hours, with an increase in productivity contributing around £1m in efficiency savings.

Veolia also identified key stakeholders and actively engaged with them to build stronger community relationships and to operate in a more transparent manner.

A number of environmental initiatives have also been implemented. Participation in the Carbon Reduction Commitment (CRC) has resulted in improved carbon emissions reporting, the best ever performance of the CHP plant, the construction of an advanced digestion plant at Seafield, a review of alternative means of power and the establishment of the East Calder Biodiversity Project.

The Result

Eliminating breaches of regulatory limits was crucial to the success of the contract. Veolia has made great strides in improving site performance in partnership with Scottish Waster. In the contract year 2012/13, the sites achieved a 99.52% compliance score and 100% regulatory Bathing Water compliance.

Converting waste sludge into a marketable product has enabled Veolia to recycle 60,000 tonnes of waste sludge per year and provide 30,000 tonnes of treated sludge for agriculture.

Creative use of waste products maximises the project's financial opportunities and, thanks to the increased efficiency of the CHP plant, it is now 70% self-sufficient in electricity.

The AVSE carbon footprint was analysed to understand the sources of its greenhouse gas emissions. As a result, a significant number of environmental improvements have been made including recycling aggregate from the transportation of materials, which has reduced by 75%.