

Case Study Water recycling plants reduce Branston's potato processing footprint

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“ Water recycling helps our sites contribute to long-term sustainability within their local environments, as well as contributing to our strategy of “low carbon = low cost.” ”

Vidyanath Gururajan, Projects Director, Branston Ltd



Branston, one of the UK's largest buyers, packers and distributors of potatoes, handles around 400,000 tonnes of fresh potatoes a year at sites in Lincoln, Scotland and the South West.

The company has already made a significant reduction in its water use at two sites by investing in water recycling plants. Branston recently signed up to the Federation House Commitment (FHC) to get further support and capitalise on their investments.

Water recycling at Lincoln site

In 2009, Branston invested £2 million in environmental initiatives at their Lincoln site, which integrates water recycling facilities with anaerobic digestion.

By working closely with the local Environment Agency office, Branston established the best long-term solution to water use at the site before commissioning the water recycling plant.

The recycling plant became operational in January 2010, and in its first year achieved a reduction of water use of around 44% and a further reduction of 20% in the second year.

By undertaking a mass balance as part of the FHC site visit, it was identified that the capacity of the recycling plant could be extended further, potentially reducing water use by an additional 12,000m³ per year.

Further savings at Ilminster facility

At Branston's South West site near Ilminster, growth in production has increased the volume of water needed for washing potatoes. Previously a combination of borehole water and mains water was used to meet the site's water requirements. Using around 80m³ of water a day meant the site was also discharging a considerable volume of effluent, so there were major cost implications for disposal as well as supply.

A better solution was required long term (from an environmental and financial perspective), and the success of the water recycling facilities at Lincoln proved that

significant savings could be made. The company invested £1 million in the new water recycling plant, which treats the waste water by removing soil and other impurities in a series of stages.

The water recycling plant has been designed to eliminate the need to use mains water for washing potatoes on site. The recycled water is stored and chilled to the optimum temperature for washing potatoes, and the debris from the recycling plant is mechanically pressed to remove any remaining water. This produces a compact 'cake' of soil, which is then taken off site by a local farmer.

The plant became operational in April 2011, reducing water use in the first year by around 60%.

As more production lines at the site are connected up to the system, the proportion of recycled water in the system will increase. A simple mass balance during the FHC site visit confirmed that the site could reduce its reliance on mains water (17,500m³ per year) and achieve its aim of only using borehole water and recycled water for washing potatoes in the future.

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