



## Mono® NOV Demonstrates Savings For Yorkshire Water

Further developments at Yorkshire Water's Knostrop Sewage Treatment Works near Leeds, have seen both Munchers and progressive cavity pumps from Mono® NOV installed in a two stage project completed in 2004 and characterised by a focus on reducing whole life costs.

Five Mono TR Munchers were fitted in 2003 to replace existing high speed macerators, manufactured by a competitor, protecting five gravity belt thickener feed sludge pumps. The Mono TR Munchers installed, offer many benefits, including 3 year warranty on raw sewage, lower power requirements and low speeds, offering reduced wear rates and lower maintenance.

As the existing competitors' pumps were nearing the end of their projected life, they too were replaced in 2004 with five industrial progressing cavity pumps from Mono, driven by Brook Crompton variable speed motors (VSM's).

The Mono pumps were specified by Yorkshire Water's Contractor, Weir Engineering Services, after a positive experience of operating the Munchers and because of the high level of technical support and ready availability of spares from Mono, which has a framework agreement to supply Yorkshire Water.

Importantly, significant economies are resulting from the installation of the VSM's. This part of the project was handled by Mono's specialist partner Crompton Controls and calculating the costs of 24/7 operation over a year, it is

estimated that the new installation will save over 40% in energy bills. Even the most conservative estimates show that one Muncher per year is being paid for in energy savings alone, and Yorkshire Water's team won an award for their involvement in the project.

Space savings were also achieved because the three phase induction motors have an integral frequency inverter and panel space for the inverter was not required.

Furthermore this meant that existing cabling arrangements for both mains and control cable could be reused, whereas a separate motor/inverter solution would have required the use of new screened motor cable. Lastly the programming flexibility of the motor control inputs meant that none of the existing control components required changing.

The Mono Munchers and progressing cavity pumps were all installed by Mono's Projects Installation Team, giving Yorkshire Water the added benefit of design, supply, manufacture and installation of equipment from an experienced single source supplier.

Products:	5 x CT203 TR Munchers 5 x Industrial Pumps
Product:	Sludge
Capacity:	40m <sup>3</sup> /h
Drives:	2.2kW motor (Munchers) 7.5kW variable speed motors (pumps)
Pump Speed:	338 rpm



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**Mono® NOV**

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