



## Mono® NOV Completes Major Upgrade at Knapp Mill WTW

A major upgrade by Bournemouth and West Hampshire Water at Knapp Mill WTW, Christchurch, called for expertise to remove the existing old drum screens, and install reliable new screening equipment. The water company placed its confidence in Mono® NOV to provide a turnkey project management role, supplying and installing mechanical and electrical equipment, whilst protecting the surrounding environment and aquatic wildlife.

Mono Pumps' responsibilities included full risk assessment, temporary access and walkways, safety fencing to enclose the site from the public pathway, and craneage access. Mono co-ordinated all mechanical and electrical works, removing the old drum screens and installing six Mono L Series Discscreens to the main and lagoon intakes at the water treatment works.

The Discscreen was chosen by the customer because of its innovative operating principle. Constructed using a series of shafts that are fitted with overlapping and intermeshing discs, the rotation of the discs gently convey solids and debris across the face of the screen, whilst allowing the main water flow to pass through the disc stacks. The debris is then ejected back into the river flow by individual comb bars incorporated in the Discscreen design. This has removed the need to collect and manually dispose of extracted debris, significantly reducing the labour costs associated with solids disposal and equipment cleaning.

Mono commissioned a team of divers to remove the old drum screens and excessive debris that had built up around the intakes to assist installation of the new equipment. The Discscreen frames were assembled underwater and Mono used a

70 tonne extending crane to manoeuvre the Discscreens into place for installation.

The lagoon intake, fitted with four 14 shaft L Series Discscreens across an 8.8 metre wide section, is the preferred intake for the treatment works. Any fine unscreened debris settles in the lagoon before the abstracted water reaches the pumps feeding the filtering house. As the lagoon intake is alongside a popular public right of way, safety measures were put in place to offer protection to the public.

The Upper intake was fitted with two 10 shaft L Series Discscreens, across two inlet chambers over a 7.2 metre wide section. The screens did not require complex foundations and there is practically no structure on view above the bank level, enabling them to blend in well with the environment.

A spokesperson for Bournemouth and West Hampshire Water says: "We looked at a number of products for Knapp Mill WTW, and Mono was able to provide the most cost-effective and reliable solution. The previous drum screens required constant wet-washing, adding to their lifelong operating costs, whereas the Discscreens are self cleaning with low operating costs."

Screen Type: **2 off CL1B10BR and  
4 off CL1514ABL**

Product: **River Water**

Capacity: **Maximum 2740m<sup>3</sup>/h**

Drive: **3.7 and 4kW motors**



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**Mono® NOV**

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