

A decorative graphic at the top of the page featuring blue water with bubbles on the left, a curved perforated metal screen in the center, and more water with bubbles on the right.

CASE STUDY

CLIENT: Wessex Water

Site: Holdenhurst STW

Date: April 2012

Background

Three inlets at the Holdenhurst works were causing operational problems due to consistent breakdowns, incurring significant maintenance and repair costs. An additional unit had also failed completely. The inefficiency of the units and number of motors driving them was also resulting in higher energy consumption and therefore unnecessary additional running costs.

Challenges

- Limited access for maintenance and screenings removal via skip
- Replacement applications needed to manage peak screenings & launder loads as standard
- Operational downtime needed to be minimised
- New applications needed to fit seamlessly into the existing Holdenhurst STW infrastructure
- Due to complete failure of one of the existing streams a temporary screening application was urgently required

Implementation

Looking at a variety of wash press solutions M&N created a 3D simulation model to test various units within the confines of the Holdenhurst STW works. This ensured that the designated solution would not only easily manage the screenings & launder loads, but could also be easily accessed and maintained to ensure operational efficiencies.

Following extensive simulation tests our engineers selected 4 Kuhn KWP400/1200 (8m³/hr) and 2 Kuhn KWP300/1200 (4.5m³/hr) Wash Presses to meet the operational requirements of the works. The 3D simulation also enabled our engineers to modify the discharge chute and create bespoke inlet hoppers to suit the existing launder layouts.

Temporary screens were rapidly deployed to site from M&N's extensive Hire Fleet, minimising further downtime and improving operational capacity. These were situated to ensure that they did not impact on the installation of the new permanent Kuhn units.

Special Considerations

Our engineers selected the Kuhn KWP400/1200 (8m³/hr) and Kuhn KWP300/1200 (4.5m³/hr) applications due to the following key attributes that could be implemented to meet the specific operational requirements of the Holdenhurst STW works:

- The Kuhn units could be supplied with a hardened shaft to cope with the high grit loads at the works, providing the best whole life costs for the customer.
- Drain pan could be supplied to suit the drainage available.
- Bespoke discharge chutes could be created to match the sizes of the existing skips, ensuring all discharge chutes discharged into the centre of the skips.
- Each hopper could be designed to suit the specific launder design.
- The launder designs could be modified to ensure easy access for regular maintenance and monitoring.



Cert No. 9923
ISO 9001
ISO 14001
OHSAS 18001

National Inspection Council for
Electrical Installation Contracting

