CASE STUDY

PROJECT	GRIT REMOVAL FOR TRUCK WASH
PRODUCT	Screw Separator
INDUSTRY	Infrastructure
LOCATION	Bunbury, Western Australia

mak water
water | wastewater | sewage

BACKGROUND

A large truck washing company was having problems with sludge accumulation in its source water pits that it was using for vehicle wash-down. This sludge accumulation was so high that it was reducing its water storage capacity and thus impacting on operations.

MAK Water was asked to review the operation and recommend a long term solution that reduced its ongoing costs whilst resolving its current water storage issues.

SOLUTION

It quickly became clear during bench testing that due to the fast settling qualities of the solids, a customised grit removal system inclusive of dredging pumps and a screw separator would be the optimal solution.

REKO Screw Separator

SMART DESIGN

- In-house bench testing of raw water samples to determine the optimal treatment process

SCREW SEPARATOR

- Compact construction
- Minimum operation and maintenance costs
- No bearings as the shaftless screw conveyor rotates in a highly molecular weight polyethylene (HMPE) liner with a low rotation speed
- The shaftless design means that larger particles can be separated easily

CUSTOM GRIT REMOVAL SYSTEM

- Innovative sludge removal system installed which involved a partial pit redesign to remove the solids to the separator
- Onsite installation and plant commissioning

Innovative sludge removal system installed on site in Bunbury

RESULTS AND BENEFITS

- **Plant Reliability.** The high quality equipment and robust design has provided reliable operation with minimal maintenance.
- **Reduced solids handling and disposal costs.** The screw separator separates and dewaters wastewater solids outside the pits, producing dry output that is easy to handle and dispose of. Costs associated with pit desludging have been eliminated.
- **Landfill ready solids output.** The screw separator outputs grit and other solids with low organic content that is suitable for landfill disposal.