

*Case study:*

## **Alimak rack and pinion hoist used in tank construction at pumping station**



*Quakers Hill Wastewater Treatment Plant,  
NSW, Australia*

## Case study:

**An Alimak Scando rack and pinion hoist was used in the construction of a water tank at Quakers Hill Wastewater Treatment Plant. Alimak Hek engineered an 11m platform to enable the complete circumference of the pumping station tank to be formed up in stages.**

### Facility Upgrade

Quaker's Hill Wastewater Treatment Plant has undergone a \$52 million facility upgrade as part of Sydney Water's SewerFix program. The SewerFix initiative is aimed at protecting public health and the environment by reducing overflows in the wastewater system.

Included in the Quakers Hill project is the installation of a new pumping station and a systems upgrade to increase the capacity of the treatment plant. At present, the facility manages the treatment of approximately 1000 litres of wastewater every second. The new pumping station and facility upgrade will greatly reduce the frequency of wet weather overflows in the Sydney wastewater system.

### Gaining access to the pit

Alimak Hek installed an Alimak Scando rack and pinion construction hoist on site at Quakers Hill, providing access for men and materials during construction of the pumping station. The rack and pinion hoist was positioned in the centre of the 20m excavated pit, allowing the tank to be built up in stages. Four landing platforms were installed, complete with landing gates and meshing, enabling work to occur simultaneously at different heights.

Alimak Hek engineered, manufactured and installed an 11m platform to bridge the gap between pit embankment and hoist. The inclusion of this platform walkway enabled the construction hoist to be positioned in the centre of the excavation pit, avoiding any interference with the formwork. The pumping station was then constructed from the base up in stages, with multiple landings installed as work progressed upwards.



### DETAILS

Location:	Quakers Hill Wastewater Treatment Plant, NSW, Australia
Product Model:	ALIMAK SCANDO 450
Application:	Pumping station, tank construction hoist
No. of Landings:	4
Capacity:	1400 kg
Car size:	1.4 m x 2.0 m
Speed:	54 m /min
Lifting Height:	20 m

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