Acoustic cladding for Theodore Water's **Irrigation Pump Station**

Sonic System V100 panels engineered for regional Queensland

INDUSTRY	Water Infrastructure
LOCATION	Theodore, QLD
CLIENT	Theodore Water, an irrigation authority in regional Queensland. The organisation required acoustic cladding for a new pump station on the banks of the Dawson River to manage noise impact on nearby residents.

THE CHALLENGE

A new irrigation pump station on the Dawson River required acoustic cladding to manage noise from large, high-capacity pumps and reduce its potential impact on nearby residents. The building's lift-off roof (designed to allow future crane access for pump maintenance) called for a split two-section wall panel design capable of accommodating roof removal while maintaining acoustic integrity. The site's regional location added a logistical dimension to an already technically demanding brief.

OUR APPROACH

Large-capacity irrigation pumps generate sustained broadband noise. The pump station's proximity to residential areas of Theodore meant acoustic design was needed to meet noise limits for the nearest affected receivers.

The lift-off roof added a further design constraint. The wall panel system had to be fully independent of the roof structure so that crane maintenance access would not require panel removal.

A pre-site inspection and structural alignment verification were completed prior to manufacture.

ON-SITE DELIVERY

All components were pre-manufactured prior to site delivery. Installation covered the rear wall and one end wall of the pump station structure, including a 300mm height increase and a 2000mm wall extension below the plant deck to address the flanking noise path through the deck.

The rear wall was designed as two independent sections to permit full lift-off roof removal without dismantling the acoustic cladding.

Installation was completed over four to five days on-site.

THE DELIVERED SOLUTION

AcousTech supplied and installed Sonic System V100 panels to the rear wall and one end wall of the pump station. The V100 panel delivers Rw37dB sound reduction and NRC 1.10 sound absorption, with a fire-rated and weather-resistant Rockwool core.

The rear wall was configured as two independent sections to accommodate full lift-off roof removal. A custom acoustic access door (2000mm high x 1120mm wide) with a 2-hour fire rating and Rw36dB sound rating completed the installation.

KEY FEATURES

- **Rear wall split into two sections** to accommodate lift-off roof removal
- **Custom acoustic access door:** 2000mm high x 1120mm wide, 2-hour fire rated, Rw36dB
- **Walls extend 2000mm below plant deck** to control flanking noise path
- **Panel fixed to provided steel purlin structure**
- **All products pre-manufactured off-site** for efficient delivery to this remote Queensland location

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PHOTO GALLERY

PRODUCTS USED

- Sonic System V100 Acoustic Panels (Rw37dB, NRC 1.10)
- Custom acoustic access door (2000mm H x 1120mm W, 2-hour fire rated, Rw36dB)

Talk to us about your infrastructure noise project

AcousTech engineers and installs acoustic products for water infrastructure, industrial and commercial projects across Australia. To discuss your project requirements, contact AcousTech on 1300 508 232.

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