

Rendering Plant & On-Site Treatment, Pakenham



Location

Australia

Client

G & K O'Connor

Project Value

AUD\$12.0 Million

Office Responsible

Cardno Grogan Richards

Responsibilities

Structural, Civil, Hydraulic, & Traffic
Engineering

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Project Scope

The existing Pakenham Abattoir development and pre-treatment facility, pumped effluent to the Pakenham treatment plant, which was controlled and managed by South East Water (SEW) at a cost to the owners.

In the development of the rendering plant, the proposal to treat and dispose of on-site effluent was undertaken, evaluated and approval obtained. The existing pre-treatment facility consisted of screens, aeration lagoon, settling lagoon and effluent pump station to the SEW treatment plant.

The existing plant was significantly upgraded to accommodate the new rendering plant and increase the capacity for the existing abattoir. The new plant significantly reduced the need to discharge trade waste off-site and provided suitable quality effluent for on-site irrigation.

The treatment facility was upgraded to a 5-lagoon system including aeration, settling, stabilisation and storage lagoons in series. The primary system allows organic waste to stabilise by micro-organisms and long detention periods. The pond system is completely lined to prevent infiltration to ground water.

The overall site management plan approved by the EPA includes provision for stormwater cut-off drains, external

bunded areas and sump drains to prevent stormwater contamination. The stormwater system discharges to an on-site detention facility prior to discharging into the local creek.

The irrigation of the treated effluent in dry periods, to an area of 25ha of pasture north of the treatment plant, provides nutrients for the establishment of ryegrass pastures. These in turn are harvested and used as stock feed. The ability to pump to the SEW treatment plant has been maintained for periods when irrigation is not possible.

Cardno Grogan Richards were pleased to have been involved in this uniquely innovative and successful development.