

DAVEY INNOVATION CASE STUDY

Customer	WJ Pratt for Gumbuya World
Location	Tynong North, Victoria
Davey Product	Long and close coupled ISOspec pumps
Main Use	Water park filtration and flow rate management



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IT'S A WATERFUL LIFE

When you've got thousands of people splashing their way through a summer's day at a brand-new water park, you need to be certain that the water they're playing in is completely safe and that the equipment behind it is completely reliable – like Davey's ISOspec pumps.

A total of 9 Davey pumps have been installed at the Oasis Springs Water Park at Gumbuya World, outside Melbourne. They are used to filter water for rock pools, an artificial lazy river and a wave pool, as well as ensuring exact flow rates which are critical to the safety of the park's giant slides.

The team behind the design and construction of the two-stage water park element of Gumbuya World is from water project consultancy WJ Pratt, headed up by Managing Director Adrian Pratt. Adrian says a broad brief and a tight deadline made for an exciting project.

"Our first communications with Gumbuya World were in May 2017. We were onsite in June and the \$50 million stage one project was complete before Christmas. That included a 1.2 million litre lazy river, a 600,000-litre warm water pool and two slides, all spec'd to handle large crowds of thousands of people per day.

Stage Two, a wave pool, was delivered to a similar timeframe, with work starting mid-year 2019 and the pool open to the public on Melbourne Cup weekend in November. All up, the park boasts 3.5 million litres of water across its slides and pools and can now cater for thousands of visitors a day.

"There was a lot of trust from the Gumbuya World shareholders," Adrian says. "They shared their vision with us and then said, 'you make it work'."

"In our 50 years of trading I believe the Gumbuya project was one of the most challenging. The fact that it could only be built during the winter period and had exact start and finish dates added a level of complexity. There was simply no room for error. The concept was known up front but the detail evolved during construction. This meant we had to be flexible and have materials on hand to manage design changes on the fly."

With the timeframe so tight, Adrian and his team knew they had to partner with suppliers who could get the specs right and could supply reliable product fast.

"There were three things we needed from our pump supplier," Adrian says.

"First, we needed value for money. Second, we needed them to be able to supply products that were compatible with variable speed drives. And thirdly, we had to be confident there would not be one minute of downtime when the park is operating.

"As it turns out we haven't had a single second of pump downtime."



Pictured here: David Potts - Commercial Business Development Manager and Adrian Pratt - WJ Pratt Industries

Davey products are assembled in Melbourne and go through stringent testing. When you install a Davey, you have the support of an Australian brand – with local training and expertise.

The Davey Solution

Turning around a project this big, this fast, requires teamwork. Adrian and his WJ Pratt Project Manager Bryson Hales worked hand in glove with Andrew Roberts from Gumbuya World and Davey's team.

Between them, they agreed on a range of pumps that could be tailored to suit the specific needs of the project, including upgrading to stainless steel impellers and upgrading the shaft seal. A combination of long and close coupled pumps allowed the team to make the best use of the available space while ensuring performance and reliability. The pumps work with the system's variable speed drives which allow water flow rates to be adjusted for optimised sustainability. Flow rate management is also important for patron safety, with specific rates applied depending on how many people are using the slides – in some cases the pumps need to supply rates of up to 120 litres per second.

"The pump selection is absolutely critical to the project's success," Adrian says. "As the slides are designed to be run at very specific flow rates the pumps selected had to be sized correctly to achieve these. Too much water slows the rides down and not enough water can actually speed the slides up, which of course is an unacceptable safety risk."

The pumps form part of a remotely operable system.

"We can run the entire plant from anywhere in the world," Adrian says.

He says Davey struck the right balance between being responsive and recognising that there were many other facets of the project being handled at the same time. "They offered support without getting in the way," he says, noting that some other items essential to the project could not be ordered until the pump specs were locked in, so timeliness was very important.

In addition, Adrian says local service and support capabilities are vital.

"We needed to know someone could respond very quickly if there was an issue. But there hasn't been an issue at all, and in fact when it came time for stage two of the project, we went straight to Davey based on the performance of the products in stage one."

About WJ Pratt

Walter J Pratt Pty Ltd is a 100% Australian owned family business. It was incorporated in 1967 by the founders Walter and Lorice Pratt. Adrian purchased the business about 20 years ago.

The business concentrates on providing commercial water treatments across Australia and has completed 1000s of contracts over the past 50 years, from championship pools to aquarium and zoo exhibits.

About Gumbuya World

Gumbuya World is Victoria's newest and only water, wildlife and theme park. It has four themed areas: Oasis Springs water park, a new theme park called Oz Adventure, the Outback Explorers kids' area and a new animal area called the Wildlife Trail. The two major waterslides at Oasis Springs are the Boomerango and the Taipan. The site was originally a pheasant farm before being converted into a wildlife park called Gumbuya Park in 1978. Its current owners bought the property in 2016 and it has been full steam ahead developing the theme park, with more additions planned for the next few years.



Key Advantages of Davey's ISOspec Pumps

- > Heavy duty centrifugal pumps that conform to ISO2858
- > Sturdy, reliable and long lasting
- > ISOspec Single Stage Long Coupled Pump offers convenient design on painted steel or galvanised base, long coupled to an electric motor using a spacer coupling
- > ISOspec Single Stage Close Coupled Pump can handle flow rates up to 375m³/hr
- > Options include multiple ISO pumpset with common manifold and controller and ISOspec Boosters with Diesel Engine.

Why Davey is the right choice for pool and spa projects

- > Outstanding product quality with pumps wet-tested up to 100 hours
- > Easy to install and use
- > Innovative range which make it easy to remotely monitor and manage pool water to ensure pools are perfectly swimmable when they need to be.

For more information on the Davey commercial water solutions please contact:

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