

NANO BUBBLE TECHNOLOGIES

MAGENTA SHORES

SIGNIFICANTLY INCREASED ROOT MASS, REDUCED WATER CONSUMPTION
& FUNGICIDE / FERTILISER INPUTS USING NANO BUBBLE TECHNOLOGY

INSTALLATION DETAILS

Water Source: Class B Effluent

Dam Size: 4 Megalitres

Unit Type: 5-cell Injector



BENEFITS

Enhanced root development & improved disease management.
Demonstrated effectiveness of integrating NBT with fungicide programs to amplify water outcomes.
Notable improvements in water clarity & quality.

RESULTS

- 100% increase in root length ✓
- Significantly reduced water use ✓
- Improved uniformity course wide ✓
- Reduced fungicide & fertiliser inputs ✓

MAGENTA SHORES GOLF & COUNTRY CLUB

Magenta Shores Golf and Country Club is a links-style course located on the Central Coast of NSW, straddling the magnificent Tuggerah Lake and the Pacific Ocean. Magenta Shores uses Class B treated sewerage with an emergency bore water top up to feed the on-course dam. Like most golf courses, Magenta has faced some challenges over the years with disease plaguing their fairways, greens, and tees.



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The use of treated and bore water as the primary irrigation sources introduced issues related to low dissolved oxygen levels and elevated concentrations of chlorine and bicarbonates — both common by-products of chemical treatment. Water analysis results confirmed that the poor quality of the irrigation water was contributing significantly to turf decline.

In response, the team at Magenta actively sought a solution. In September 2021, they installed the NBT Sports Turf Solution — an advanced nanobubble technology system designed to enhance irrigation water quality and, in turn, improve turf performance.

The implementation was simple, with the system offering a convenient “plug and play” setup. At Magenta, the NBT unit operates independently of the existing irrigation system & returns, treated, back into the dam. A tailored treatment approach was adopted, using a combination of oxygen and ozone nanobubbles stimulate root growth & leaf development, while ozone nanobubbles effectively target bacteria and pathogens at the source.

This dual-action treatment has significantly improved both the condition of the turf and the quality of the water stored in the dam.

It is the hyper-efficient gas transfer achieved through the **patented** nanobubble technology which provides these results, with the **Australian-made** injectors producing the highest density of nanobubbles and smallest sized nanobubbles on the market today.

KEY BENEFITS AT A GLANCE

Revitalised Irrigation Water: Nanobubble oxygen dramatically enhances water quality — even when starting with low dissolved oxygen levels and the presence of fungal spores.

Healthier, Stronger Turf: Noticeable gains in root mass & improved disease resistance across fairways, greens, & tees.

Boosted Fungicide Performance: When paired with traditional fungicide programs, nanobubble technology delivers even greater results—working in harmony with existing turf care strategies.

Smarter Efficiency: Unlock potential cost savings while maintaining exceptional playing conditions.



“We went from average root growth of approximately 80mm across the course, to nearly doubling that!”

“We also save on water, fungicide & fertiliser inputs, and certainly see a more uniform turf quality across the course.”

James Newell, Superintendent

Nano Bubble Technologies Division

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