



environs



Main Oval's drought-tolerant surface reduces water consumption

Anyone who has visited Scotch in recent weeks will have been impressed by the carpet-like surface of the Main Oval.

The glorious condition of the playing field suggests large volumes of water must have been expended to establish and maintain such a rich surface.

Yet the Oval is the most impressive evidence of far-sighted planning by School Council and Management to save large amounts of water. Consumption of water to irrigate the Main Oval has already been cut by 50 per cent. In this latest edition of environs, we detail the completion of the first phase of the School's \$3 million water management plan and outline the planning already underway for the next instalment.

Cost and environmental savings in Main Oval resurfacing



Replacing Main Oval turf



Main Oval "has come up a treat"

As the largest playing surface, the Scotch College Main Oval had been the largest single consumer of irrigation water on the Hawthorn site. Originally, most of that water was potable (drinking-quality) mains water.

The Oval's cool temperature grasses had required almost continuous irrigation to survive summer months. The onset of severe drought and strict water restrictions had meant the Oval's surface died off in summer and the outfield became diabolically hard.

After the final cricket match last year, Curator Mick Smith and his staff removed the Oval's Poa Annuua and Rye grass surface and began preparing the arena for a new drought-resistant surface of warm season grass.

To ensure the best possible drainage and an even playing area, the Oval was laser-levelled and graded to give it a consistent one per cent fall from the centre to the boundary.

Then new Santa Ana couch rolled turf was laid over this base and carefully nurtured during the school holidays to produce the magnificent surface that has served our cricketers so well during the last part of the season.

"It has come up a treat," says Mick. "And already it's taking 50% less water to keep it in this condition. It really is a fantastic grass with a very high drought tolerance," he says.

During the cooler months, as the Santa Ana becomes dormant, Mick will over-sow the area with Rye grass to give the surface a good winter colour and help protect the couch root structure during the football season.

"Around August, when the soil temperature starts to rise, the couch will start to move again and then we'll selectively spray the Rye with an environmentally-sensitive herbicide to give the Santa Ana the room to re-establish".

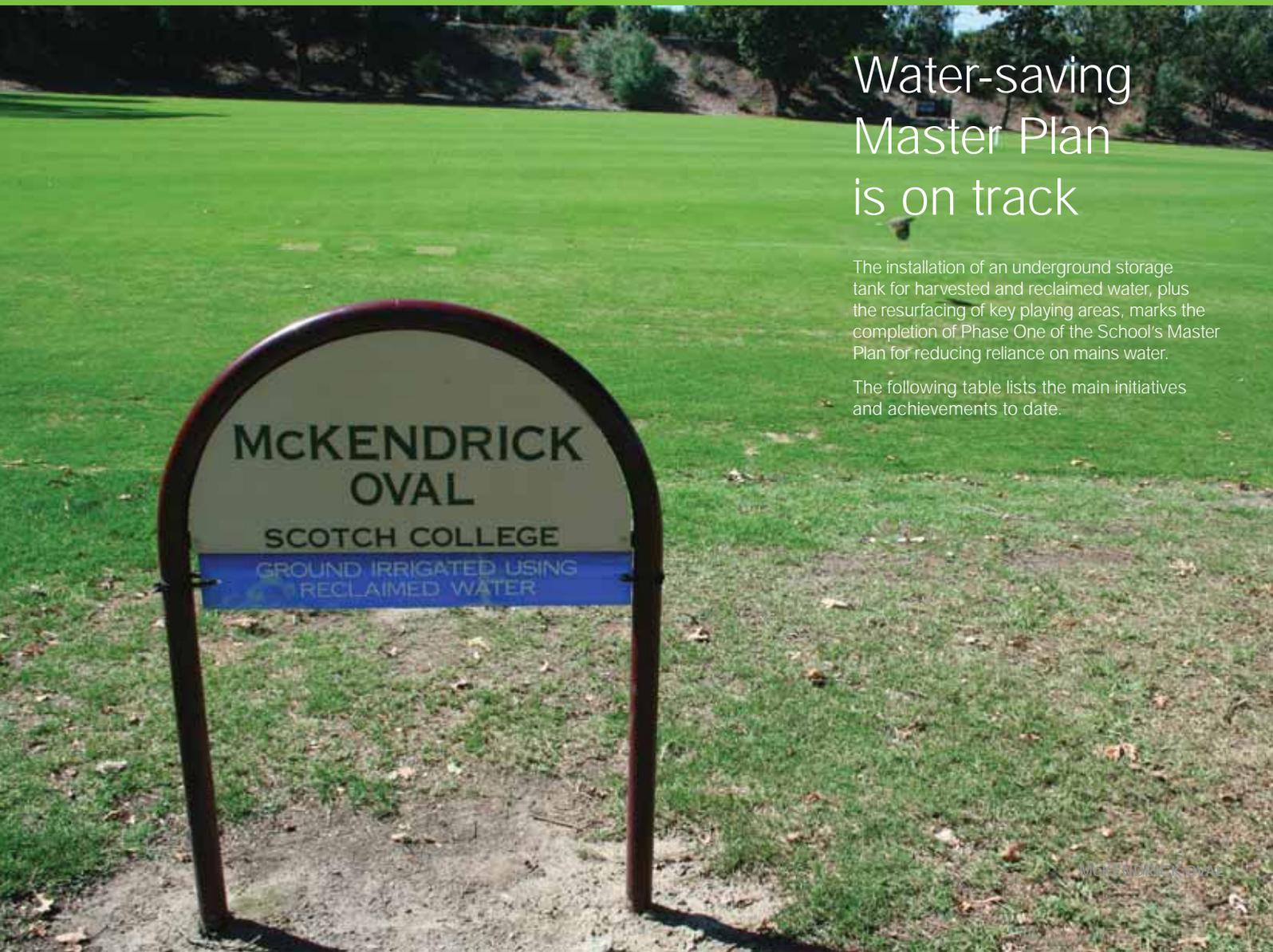
Mick says that even during the hottest weeks this summer, the re-surfaced Oval needed watering only around once a week. Its fertiliser requirements are also greatly reduced.

"With the water requirement cut in half, and the fertiliser requirement also reduced, this has meant significant cost and environmental savings," Mick says.

Water-saving Master Plan is on track

The installation of an underground storage tank for harvested and reclaimed water, plus the resurfacing of key playing areas, marks the completion of Phase One of the School's Master Plan for reducing reliance on mains water.

The following table lists the main initiatives and achievements to date.



McKENDRICK OVAL

Scotch College Water Management Plan Achievements So Far

- Hawthorn site mains water consumption reduced from 69 megalitres (2004) to 35 megalitres (2008).
- Main Oval resurfacing – irrigation requirement reduced 50 per cent.
- 2.4 megalitre storage tank installed under McKendrick Oval for harvested / reclaimed water.
- McKendrick Oval resurfaced with drought-resistant grass.
- Junior School Oval resurfaced with synthetic PolyGrass, saving 6 megalitres of water.
- Use of Gardiner's Creek water for grounds irrigation.
- Purchase of 4,000lt mobile water tank to apply harvested water.
- Improved turf & plant selection, improved mulching.
- Sub surface irrigation & enhanced watering regime.
- Water-efficient toilet fittings & urinals.
- Water-efficient shower heads, tap ware & fit out of basins/sinks.
- Water saving information stickers/ signs.
- Water-efficient clothes washing machines.
- Leak detection (education, incentives, regular inspection).

Property Manager, Bill Sciarretta, says these achievements are a tremendous start and the quality of the new playing surfaces is visible evidence of success. "It just shows what a bit of smart planning and hard work can do," says Bill.



Work in progress to install the underground tank



McKendrick Oval prepared for resurfacing



New McKendrick surface hides water storage



Pumping equipment beside McKendrick Oval

McKendrick surface hides water 'treasure'

You wouldn't know to look at it, but the School's soccer field, the McKendrick Oval, now covers a 2.4 million litre storage tank that holds the School's harvested Gardiner's Creek water and its reclaimed storm and drain water.

The McKendrick Oval itself has been resurfaced with Santa Ana couch turf, like the Main Oval, with similar irrigation water savings being achieved.

The tank has been in use since January, supplying irrigation water for the Main Oval, the rugby ground and the McKendrick Oval itself.

The tank has been equipped with pollutant traps and a pathogen-killing UV filtration system which ensure the water entering the tank meets health and safety standards. Both filters are located before the tank.

The School's rain and drainage water harvesting system feeds directly to the tank from a catchment of 3.5 hectares of roof and land area. An average 10 millimetre rainfall supplies 300,000 litres to the tank. An 80 millimetre fall will fill it.

Any over flow is returned to Gardiner's Creek and the tank's filtration systems mean the water going back to the Creek is cleaner than the water Scotch extracts from it.

"An average 10 millimetre rainfall supplies 300,000 litres to the tank. An 80 millimetre fall will fill it."



Junior School oval ready for new surface



Synthetic surface saves water - and work

Resurfacing playing areas as a water-saving measure and to ensure greater year-round availability has extended to the Junior School

In February this year, the Junior School's new main play area was re-commissioned with a synthetic PolyGrass sand-filled surface.

For the first few weeks of the school year, the Junior School boys were escorted to the Rugby Oval and other Senior School playing areas for play periods.

But Property Manager, Bill Sciarretta, says this was a small and temporary inconvenience while the new surface was completed.

"Everybody thinks the new surface is a great improvement and its makes this area useful for more purposes for a greater proportion of the year," says Bill.

The area is used daily for general play by Junior School boys and after school by Senior School boys for tennis & hockey - training and competition. The resurfacing will save about six million litres of mains water each year.

Bill says the conversion of the Junior School Oval to a synthetic surface has been a considerable investment, but it is paying off in both water savings and in the reduced requirement for maintenance.

The synthetic surface has a life expectancy of 15 to 20 years.

Junior School also contributes to water savings

"Everybody thinks the new surface is a great improvement and its makes this area useful for more purposes for a greater proportion of the year," says Bill.



Meares Oval

School management is looking ahead to next phase of water-saving work

While a huge amount has been achieved and the School's mains water consumption has already been cut in half, there is potentially a great deal more that can be done.

School management and consultants are examining the feasibility of the next phase of works to boost the School's reclaimed water storage and water saving even further.

Property Manager, Bill Sciarretta, says he is working toward the next phase of work which will see water storage doubled and all playing surfaces converted to drought-tolerant or synthetic surfaces.

"We have achieved a huge saving but there is more to come," says Bill.

New projects being examined are the resurfacing of the Meares Oval with drought-tolerant grasses, like the Main and McKendrick Ovals.

Installation of another water storage tank under the Meares is also being examined to harvest water from the remaining catchment available on the Hawthorn site.

And Bill says the backwashing of the swimming pool filter provides an opportunity to save approximately 15,000 litres a week.

"We are looking at the feasibility of treating the backwash water and using it in the irrigation system. An alternative would be to return it to the pool and create a closed system," Bill says.

Subject to final consideration and approval by the School Council, the next phase of work could be undertaken during the next summer and completed near the beginning of 2010.



Main Oval