

# Salisbury to tame wind for big desal project

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TIM LLOYD

AUSTRALIA'S largest wind-powered desalination plant is planned for Adelaide's north this year.

Litre for litre, the City of Salisbury's plant should far outperform the State Government's \$1.5 billion desalination project at Port Stanvac, because it uses brackish groundwater rather than seawater.

The plant will be located near the Greenfields wetlands and powered by one or more wind turbines, Salisbury city projects director Colin Pitman said.

"One of these wind desalination plants can produce 1.5 gegalitres per annum," Mr Pitman said.

"So two of them is three gegalitres. Adelaide's consumption though the Murray in a normal year is 80 gegalitres a year, so we are producing 4 per cent of Adelaide's needs from the River Murray."

Every litre extracted from the aquifer will be replaced with cleaned stormwater, so the aquifer volume will remain constant.

Mr Pitman said the wind desalination of brackish groundwater had cost and environmental benefits.

"It compares with seawater desalination, where you have to put a lot of energy into it because you have got very high salinities and you produce lots of brine," he said.

The brackish water has a salinity of about 2000 parts per

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- BARRIE HARROP

million, compared with about 500ppm in drinking water and 37,000ppm in seawater.

"It's our intention to pump discharge brine into a very saline aquifer at a depth of about 300m - so it does not pollute that aquifer but just puts in similar salty water," Mr Pitman said.

The system will plug into Salisbury Council's 30-year pioneering development of wetlands that clean stormwater for reuse.

Pilot trials preparing for the desalination plant are due to commence on April 2.

Barrie Harrop, executive director of SA's Windesal which will build the plant, said it would demonstrate the possibilities of green energy desalination.

"It is a showcase that will establish a new industry in SA, which we believe will employ upwards of 1000 people," he said.