

Decisions made early to minimise the impact of the project

The proposal to construct the plant as described in the PER has been developed to avoid, minimise, manage and mitigate environmental impacts. Some decisions made early in the project planning stage which significantly reduce both environmental and social impacts included:

- The purchase of Part Lot 8, a partly quarried site bordering the originally proposed Water Corporation owned land, which will allow us to reduce the plants environmental impact by having more space to choose where the buildings are constructed;
- The decision to construct all the marine works including the intake and outlets and the pipes to the full 100 GL/year capacity. This will result in less environmental and

social disturbance than if the construction had been staged to match the plant capacity (initially 50 GL/year);

- Design and test an effective outlet diffuser to ensure the brine mixes adequately back into the ocean. The Water Corporation has committed to the brine not causing an increase in salinity at the boundary of the Low Ecological Protection Area (LEPA) greater than 1 part per thousand (ppt) 95% of the time and greater than 1.3 ppt at any time;
- The commitment to purchase electricity to power the plant from renewable sources including all environmental credits. Additionally, 20% of this renewable power is being sought from unproven sources, so the project provides stimulus to a new market.



Southern Seawater Desalination Project

Public environmental review – a snapshot





What is the aim of the Public Environmental Review (PER)?

The Water Corporation is legally required to submit a Public Environmental Review under the Environmental Protection Act. The PER sets out what potential environmental issues could arise from the proposal to build the desalination plant and maps out strategies to minimise and mitigate these issues. This PER also looks at some of the social issues that may arise during the construction and operation of the plant and discusses some of the ways these issues might be reduced.

What should the community and stakeholders do with the PER?

Following the release of the PER on April 21, 2008, there is an 8 week review period where people are invited to make a submission to the Environmental Protection Authority (EPA) on the issues raised. A submission is a way for you to provide information, express your opinion and make suggestions about ways to improve the proposal.

What happens to my submission?

The EPA sends all submissions to the Water Corporation and the Water Corporation will provide a response to each submission back to the EPA. These responses will be considered by the EPA (along with the PER) when preparing their advice to the Minister for Environment, which will then be published for public review – this document is called the EPA bulletin.

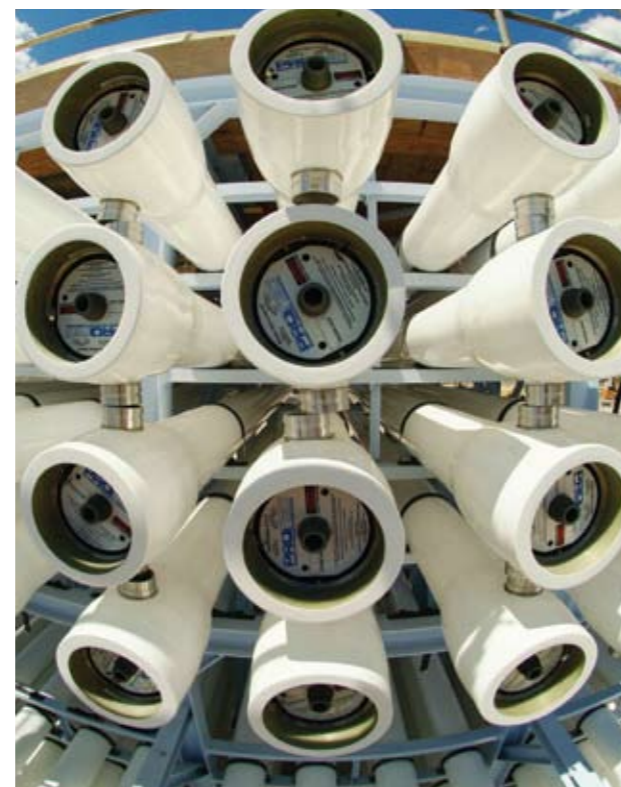
How can I get a copy of the PER?

There are a number of ways to get a hold of a copy of the PER:

- From the Harvey, Binningup, and Australind libraries.
- On our website at www.watercorporation/D/desalination_plant2.cfm
- Obtain a hard copy or a CD-ROM version by calling the Water Corporation on 1800 810 075 or emailing desalination@watercorporation.com.au

What were some of the main issues raised in the PER?

The PER considered the construction and operational impacts on terrestrial, marine, atmospheric, and social factors. The PER is very comprehensive and this information sheet aims to give you a brief overview of some of the main issues raised and ways in which those issues might be managed. A more in-depth assessment of the issues is contained in the full PER.



Key factors discussed in the PER

Some of the key factors the PER discusses include:

- **Terrestrial flora and vegetation.** The impacts on flora and vegetation at the site have been reduced as a result of the purchase of Part Lot 8. The selection of a pipeline route that results in minimal clearing (and will be rehabilitated following construction) will also ensure that flora and vegetation are not impacted on significantly. The Water Corporation has marked out non-construction areas on the plant site which conserves the high value vegetation. An offsets plan to enhance degraded areas on the site has also been proposed.
- **Terrestrial fauna.** As discussed above, minimising habitat loss and loss of native vegetation will result in a much reduced impact on fauna. Corridors on the plant site favoured by possums and cockatoos will either be avoided or rehabilitated to better than its current condition after construction.
- **Marine flora.** The mapping undertaken for the project showed that seagrass was sparse in the area, and was not present until about 1300m offshore, beyond the construction area for the pipelines and intake/outlet. The impacts of construction are not considered significant and the impacts of brine discharge have been reduced by adopting a diffuser design which will ensure sufficient brine dilution.
- **Marine fauna.** To minimise the impact on marine life the seawater intake will have a large screen which will prevent medium – large fish, seaweed and penguins etc from being drawn in. There will be no impact on dolphins and whales beyond a possible temporary change in their migration pattern to avoid the construction zone.
- **Hydrodynamics.** The brine from the plant will disperse and will result in increases in salinity up to 1 part per thousand close to the diffuser. This increase reduces with distance from the diffuser and studies show will not impact on marine life.
- **Coastal processes.** The marine pipelines will be buried under the beach and the seabed and the inlet/outlet structures will be appropriately located and designed. This means the seascape and landform integrity will be maintained.



- **Wetlands.** The impacts on wetlands of conservation significance has been reduced with the adoption of construction management strategies.
- **Marine water quality.** The overall marine water quality will be maintained during the operation of the plant. We know this through studying the impacts of the Perth Seawater Desalination Plant on the surrounding water quality.
- **Noise (operational).** Noise modelling under a worst case scenario using predicted noise levels from the Perth Seawater Desalination Plant (which is expected to be noisier than the proposed Southern Seawater Desalination Plant) showed that levels would comply with regulation requirements. Plant layout will take into consideration the location of the noisiest components furthest from noise sensitive premises, and a constructed berm (bund) will further reduce impacts.
- **Sustainability.** A review of the proposal against the Water Corporation's own sustainability business principles was conducted and found that at this early stage (ie planning and preliminary design) many decisions are yet to be made, making an assessment difficult for some aspects. It was found that overall sustainability of the project had been significantly enhanced through the early decisions and commitments made during the planning and approvals stage.

For all factors assessed, it is considered that with appropriate management and mitigation an environmentally sound plant can be built. The Water Corporation's full list of Environmental Commitments to achieve this are contained in chapter 14 of the PER.