

VICTORIAN DESALINATION PROJECT

FACT SHEET

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PROTECTING THE ENVIRONMENT

Minimising environmental impacts is one of the key objectives of the Victorian Desalination Project.

What kind of environmental studies were completed prior to awarding the contract?



The Victorian Government completed a comprehensive Environment Effects Statement (EES) prior to awarding the contract for the project.

More than 80 environmental studies were completed as part of the EES, and covered flora, fauna, cultural

heritage, hydrology, geotechnical, landscaping, design and visual analysis.

The Victorian Government also obtained a Commonwealth Environment Protection and Biodiversity Act approval and an EPA Works Approval application before contract award.

What sort of environmental management practices have been put in place since?

The findings of the EES were incorporated into AquaSure's contract for the project as 221 strict environmental performance requirements across 38 different areas, including flora and fauna, waterways and wetlands, cultural and historical heritage, waste management, acid sulphate soils, resource efficiency, visual amenity and economic impacts.

In response to these requirements, an Environmental Management Plan (EMP) was developed, identifying key environmental issues, management strategies and controls and providing a reference point for day-to-day works.

The EMP is a publicly available document and can be found on the AquaSure website: www.aquasure.com.au



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What is being done to protect the marine environment?

A marine monitoring program for the design and construction phase was developed in accordance with requirements set out by the Minister for Environment and Climate Change.

The program included habitat and ecosystem mapping, flora and fauna surveys and water quality monitoring.

The monitoring was carried out to help inform the location of the intake and outlet structures and to provide 'baseline' data about the marine environment prior to the desalination plant beginning operation, against which future monitoring can be compared.

A marine monitoring program for the operation and management phase of the project is currently being developed.

Who is monitoring the project's environmental performance?

The EMPs are implemented by a specialist team of environmental personnel based at the desalination plant and along the pipeline and power alignment.

These teams are an important part of the construction team, helping to ensure environmental impacts are minimised during day-to-day construction activities.

AquaSure has also appointed its own Environmental Management Representative, who serves as the environmental leader for the project and ensures that all work is carried out in compliance with the EMS and EMPs.



Supporting this role, for the first time on a major project in Victoria, is an Independent Reviewer and Environmental Auditor (IREA), who has been appointed to review the design, construction and environmental management of the project as it progresses, to seek to ensure safety is maintained and to assist in ensuring compliance with the numerous technical, environmental and social requirements of the contract documents.

The IREA will continue in its role as environmental auditor during the operation and maintenance phase of the project through to the end of the 30 year term of the contract.



Other organisations, such as the EPA, are involved in the approval and monitoring of environmental management.

What kind of waste will the plant produce?

The desalination process will generate two main waste streams – liquid waste (in the form of seawater concentrate or ‘brine’) and solid waste (in the form of a sludge cake).

Seawater concentrate will be returned to the ocean at the end of the desalination process, while solid waste will be trucked away and disposed of at an offsite waste facility.

Will the seawater concentrate harm marine life?

Research predicts that the point at which 99% of marine life in the local ecosystem will be protected lies within a short distance of the outlet structures.

How will the seawater concentrate be diluted?

The outlet structures have been designed to mix seawater concentrate with standard seawater quickly and efficiently.

Seawater concentrate will be discharged through specially designed diffuser nozzles at a rate of approximately six metres per second.

Due to the open ocean currents of Bass Strait and the efficiency of the outlet design, the salt content of the mixed water is predicted to drop back to standard seawater concentrations within a short distance of the outlet structures.



Further Reading

- Understanding the Marine Environment Fact Sheet
- Water Treatment Processes Fact Sheet

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Hooded Plover chicks head out for a stroll on Williamsons Beach.

Photo courtesy Kailash Willis and Ecology Partners Pty Ltd

Partnership breeds success for Hooded Plovers

The combined efforts of the Bass Coast Friends of the Hooded Plover and Thiess Degrémont has helped ensure the ongoing survival of hooded plovers on Williamsons Beach, near the plant site.

As few as 400 Hooded Plovers remain in Victoria, with populations continuing to decline due to low breeding success and availability of habitat. In 2010, 335 chicks hatched across the state, but only 10% survived to fledge.

They nest in highly exposed areas, often on the sand just metres above the high-tide mark.

Their nests can be washed away, or their eggs and chick can be stolen by hungry foxes, cats, ravens, raptor predators and other scavengers.

The contract for the Victorian Desalination Project includes strict performance requirements relating to habitat protection and monitoring programs for the Hooded Plover.

The Bass Coast Friends of the Hooded Plover and environmental staff from Thiess Degrémont Have worked together to record Hooded Plover numbers, behaviour, movement, nesting success and survival rates of chicks.

The knowledge and expertise of the Friends of the Hooded Plover is vital, helping to identify nests, the most effective ways to protect them and how to interpret their behaviour if they have a nest or chicks nearby.

That knowledge means nests can be identified faster and protective measures taken, giving the chicks the best possible chance of survival.

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