

Water Management Report



Melbourne Sports & Aquatic Centre (MSAC)

Aughtie Drive, Albert Park, Victoria



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C O N S U L T I N G E N G I N E E R S

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EXECUTIVE SUMMARY

The Melbourne Sports and Aquatic Centre (MSAC) engaged Hydrautech Designs Pty Ltd to prepare a Water Management Report for their facility. The purpose of the report is to address the following key issues with reference predominantly to the existing aquatic facilities;

- Document the current facilities and water practices
- Identify water recycling and water harvesting opportunities
- Identify how water and water related energy consumption may be conserved
- Detail the systems that may be provided to achieve the identified forms of recycling and conservation
- Detail how best to implement the proposed initiatives
- Provide the environmental and financial benefits associated with the proposed initiatives
- To provide budget estimates for the proposed initiatives with consideration to the environmental and financial benefits offered
- To provide a clear list of options for the stakeholders of the facility to consider

The recommendations and budget estimates outlined in the report may be summarized as follows;

- Recycling of backwash water for pool water make-up with heat recovery
- Rainwater harvesting for pool water make-up
- Solar pre-heat of pool water make-up (subject to funding only)
- Reduced plant flows during out of hours operation

These recommendations represent the following;

- | | |
|---|---------------------------|
| • A capital cost of | \$652,000 AUD+GST* |
| • An annual water saving of | 15,796,000 litres |
| • An annual power saving of | 116,690 kW |
| • An annual gas saving of | 982,875 MJ |
| • A CO ₂ emission reduction of | 222,510 kg |
| • An annual resource saving of | \$79,495 |
| • An average payback of | 5.3 years** |
| • Kyoto Protocol Compliance | YES*** |

*Including all options. The solar heating option is only recommended if funding is available.

**Excluding the solar heating option which is only recommended if funding is available.

***The stated reduction in CO₂ emissions exceeds the Australian Kyoto Protocol requirement of 108% of 1990 emissions.



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