

# Pool Water Heating and Management Report



## Eureka Swimming Complex

Ballarat, Victoria



**H Y D R A U T E C H   D E S I G N S**

Hydrautech Designs Pty Ltd  
Level 1, No.8 Rose Street  
Doncaster, Victoria, Australia 3108  
T: +61 3 9848 6566  
F: +61 3 9848 6644

[hydrautech.com.au](http://hydrautech.com.au)

**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

Ballarat City Council engaged Hydrautech Designs Pty Ltd to prepare a Pool Water Heating and Management Report for the Eureka Swimming Complex. The report addresses the following key issues with reference predominantly to the existing pool heating system for the largest pool system, the 50m and Toddlers pool;

- To provide an assessment of the existing water treatment facilities, amenity areas and water practices as the basis for the report.
- To identify the pool heating demand and existing heating systems.
- To recommend the most appropriate form of pool heating.
- To assess the existing pool water treatment systems and to make recommendations for the ongoing operation of the facility.
- To identify water recycling and rainwater harvesting opportunities.
- To identify the treatment considerations and requirements for recycled water.
- To identify the compliance issues applicable to the reuse of recycled water.
- To identify the public health and occupational health and safety issues applicable to the reuse of recycled water.
- To summarise the recommendations based on the findings of the report.
- To provide budget estimates for the proposed recommendations with consideration to the financial benefits offered by the proposed initiatives.

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

- Replacement of existing 50m and Toddlers pool boiler with new 720 kW Condensing Gas Fired Boiler.
- Replacement of existing 50m and Toddlers Pool Filter Pump.

These recommendations represent the following;

- |  |                         |
|--|-------------------------|
| • A capital cost of                              | <b>\$95,800 AUD+GST</b> |
| • A yearly seasonal gas saving of                | <b>308,280 MJ</b>       |
| • A yearly CO <sub>2</sub> emission reduction of | <b>20,390 kg</b>        |
| • An annual resource saving of                   | <b>\$3,780.00</b>       |
| • An average payback of                          | <b>7 years*</b>         |

\*Applicable for condensing boiler option only as compared to the conventional boiler option.



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