

Do you need a cooling tower?

Remit

RMP AquaKlar were engaged to evaluate the efficacy of existing cooling towers in a West Melbourne Head Office building for a blue chip high profile organisation.

Scope of Works

RMP AquaKlar reviewed the existing cost of operation for the existing cooling systems and the potential for increased efficiency.

Findings

During the assessment of water use it became clear that the towers are operating at the top end of water use efficiency. That is within 10% of anticipated water use.

Further optimising the water treatment programme would potentially allow this usage to be reduced only marginally by 30m³/yr.

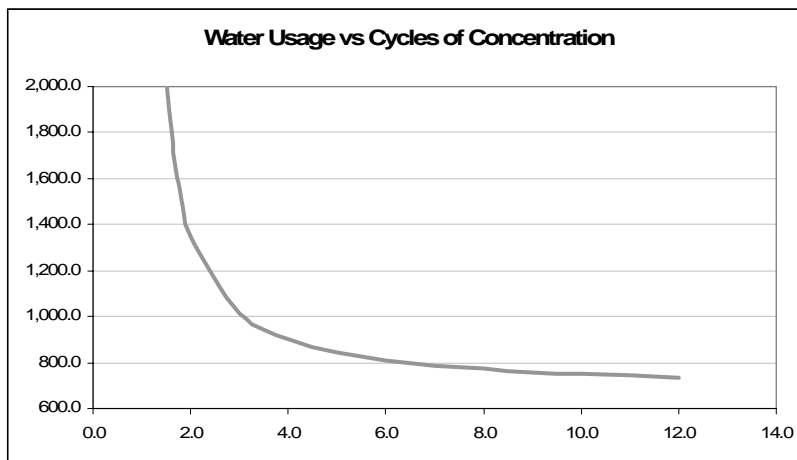
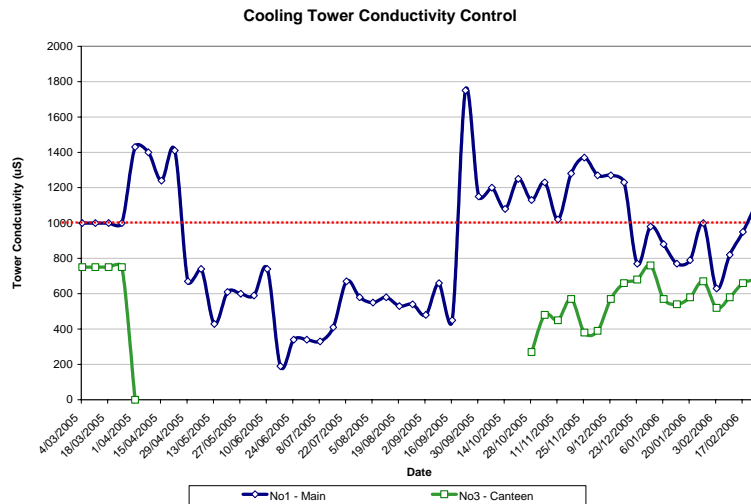
However, reviewing the water meter reading, it was clear the existing

cooling towers were substantially oversized for the load they are actually receiving. It was also noted the cooling towers were in excess of 20 years old and hence were approaching their design life expectancy.

Given the above, the potential for tower replacement as an option for efficiency gain was explored.

Using a life cycle cost analysis based on 12 year life expectancy and a net discount rate of 5.6% it was demonstrated replacement

as a method for water reduction and efficiency gain would realise a saving



Conclusion

By replacing the existing cooling systems with air cooled or water pre-cooled air cooled heat rejection devices it was demonstrated a **potential saving of over \$60,000** during a 10 year period would be realised.