

Oxford Cold Storage achieves 50% funding for major rainwater harvesting project

SUSTAINABILITY COVENANT CASE STUDY

Since 2006, Ai Group has granted funding assistance for 25 sustainability and environmental projects involving 45 participating organisations.

More than \$320,000 was spent in the past two years, and just over \$600,000 has already been committed to projects in 2008/09.

Key Outcomes

GRANT \$10,000

PROJECT COST \$600,000

FUNDING \$300,000

TOTAL ROOF AREA OF SITE
65,122 m²

TANKS
460kl, 150kl and seven 27kl

WATER USE
200 kilolitres per day (73,000 kl pa)

WATER COLLECTION FROM
INITIAL BUILDINGS 28,331 kl pa

POTENTIAL WATER COLLECTION
FOR WHOLE SITE 40,900 kl pa

POTENTIAL REDUCTION OF
MAINS WATER USE 62%

COST SAVINGS WITH 2 X 500KL TANKS
\$28,331 pa

A feasibility study assessing stormwater recovery from extensive roof areas at Oxford Cold Storage, Australia's largest privately-owned cold storage plant, has resulted in 50% funding for a \$600,000 rainwater collection system that cuts mains water use by more than half.

The \$10,000 feasibility study, financed by the Australian Industry Group (Ai Group), set out to establish how much potable water could be sourced on the Oxford site.

Oxford's management had become increasingly concerned about the long-term water supply, particularly the likelihood of considerable price increases if the current water crisis continued.

The company uses 200 kilolitres of water every day, evaporating this in cooling tower systems that keep products refrigerated or frozen for major clients including Nestle, McCains, Simplot, Fonterra and CSL.

The company has the capacity for storing more than 115,000 pallets at temperatures ranging from +2 degrees C to -30 degrees C.

A number of potential options to reduce potable water usage had been identified including hybrid condensers, rainwater harvesting, storm water collection and the use of alternative water sources. The Ai Group-funded feasibility study looked at harvesting rainwater from the roofs of plant buildings.

The harvesting, from the two roof areas investigated, could capture up to 62% of potable water used at the plant in a year of average Melbourne rainfall. This would save almost \$26,000 in annual water costs and reduce the company's impact on the environment. The cost savings would

become even greater as the price of water rose due to water scarcity.

The downside was that it would cost \$600,000 to set up the harvesting system, with an initial payback period of 23 years. The proposed project comprised supply and installation of 28 tanks, major siteworks including new pipework and configurations of existing pipes and a centralised computer control of valves. But with the assistance of Ai Group, Oxford Cold Storage secured

"I am very grateful to Ai Group for funding the feasibility study and for their ongoing technical help and guidance in obtaining government funding to make the project financially feasible."

Gabor Hilton

\$300,000 in funding from City West Water and the Department of Innovation, Industry and Regional Development.

The funding effectively halved the project cost, making it more economically viable (11.5 years payback period) and convincing the company to proceed.

Early results from the rain harvesting system, which was completed this year, have made General Manager, Gabor Hilton, very proud of the project.

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Further information

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"Few projects in my 40 years as an engineer and manager in the cold storage industry have given me a greater sense of achievement," Mr Hilton said.

"Even after below average rainfalls of 54mm in May and 10.8mm in June, the reticulated water supply meter readings fell by 52% and 38% respectively.

"The volume of water harvested from the roof tops, and supplied to our refrigeration condensers over these two months, was almost five million litres. The water harvested was clean and did not require any additional water treatment," Mr. Hilton said.

Oxford is now looking at the feasibility of extending the rain harvesting to other buildings on site. Interest in the project has been shown by other cold storage companies.

"My pride in our achievement is also shared by many Oxford employees," Mr. Hilton said. "After rain, I am often asked by employees how much water we collected, and they tell me how proud they are to be working for a company that cares so much about water conservation and the environment.

