

Water Education Case Studies

Project Title: Tankscape – Schools Rainwater Tank Program
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Abstract

The Tankscape program links public art, 'water wise' messages and rainwater tanks within 10 Hornsby Shire schools. Local artists were partnered with schools and commissioned to paint murals, on or near the tanks. Each mural was developed during classroom water education activities in collaboration with students, artists, teachers and Council staff. The goal of the project was to utilise an opportunity to install water conservation infrastructure as a tool to promote water education and engage students and the school in the development of key messages. Principal funding for this project came from the Commonwealth of Australia acting through the Department of the Environment and Heritage, Australian Government Community Water Grants. Challenges were faced in the application of paints to some of the polymer surfaces of tanks and in some schools ongoing tank maintenance has been an issue. Overall, however the response to this project by the participant schools and the community more broadly has been very positive. As a result of the installation of the tanks many thousands of litres of potable water has been saved.



The Challenge

What need was being addressed?

The driving need for this project was evidenced by the small number of schools in the Hornsby Shire who had rainwater tanks in place coupled with the proportionally large areas of sporting fields and lawns requiring irrigation. Council had been working closely with schools for some time and a needs analysis and survey had highlighted that many schools required assistance to implement better water saving actions.

Council recognised that there was an opportunity to capitalise on the implementation of infrastructure in schools with the development of a program and discussion around water saving messages. Council sought to engage students and teachers in designing their own tank murals and to analyse the messages highlighted therein. Local artists were selected to partner with each of the 10 selected schools and work with students to bring their ideas to life.

This project also linked to other key environmental initiatives such as the School Environmental Management Plan (SEMP) and Sustainable Schools Programs, as well as Council's Sustainable Total Water Cycle Management Strategy and the Environment Division Education Strategy.

Stakeholders

Who participated in the project?

10 schools participated in the Tankscape project including; **Primary and Secondary Schools** as well as the local **TAFE**. **Hornsby Council** officers teamed up with the local **Hornsby Art Society** to promote the project to artists and solicit their participation. The project was funded through a \$50,000 grant from the Commonwealth of Australia acting through the **Department of the Environment and Heritage**, Australian Government **Community Water Grants**. The project received strong support from the **local media** who promoted the project activities as well as many of the key water saving messages. Since the project's conclusion, Council has continued to coordinate and engage with the **Hornsby Environment Network for Schools (HENS)**. Council also continues to work with a **local rainwater tank supplier** who participated in this project and he has been engaged to deliver practical workshops and act as a technical expert for Council in the delivery of their community education program. One of the murals showcased the Aboriginal flag and as part of the appropriate protocols, Council worked with the local **Aboriginal Land Council** to seek permission to use this image.



Project Steps

What methods and tools were used?

Local artists were asked to submit expressions of interest to participate in the project through the Hornsby Art Society. Once chosen, individual artists were linked up with a school to progress the project. Artists then partnered with students to assess what key themes or ideas they would like to see reflected in the murals. By engaging students in this way there was an opportunity to explore a range of environmental and water education themes and to hold discussion and presentations on a range of issues. Council education officers used these opportunities to promote water messages from both their own projects and from partners like Sydney Water.

Each school was asked to contribute up to \$1000 in kind support for the project as well as commit to the ongoing maintenance of the rainwater tank once installed. This commitment by the school helped embed the project into the ongoing life of the school. Students were able to see their own ideas reflected in the murals and as a result became champions within their schools and communities and were encouraged to enact behaviours highlighted in the murals as well as promote water saving actions with peers, other students and their families.

Project Outcomes

How persuasive was the project in addressing the need?

The “Tankscape” project was able to tap into the school community network by installing school rainwater tanks, conducting environmental education activities with classes, developing ‘water wise’ murals, providing take home information for parents, and promoting the project in school newsletters and local media. The murals ensure that the community awareness and education objectives of the project remain with the school after the installation of the tanks.

Schools are also identified as significant water users. Access to the expertise or resources required to action water conservation initiatives is sometimes limited. Rainwater tanks are an easy and efficient method of reducing water consumption with minimal disruption to the school environment. If schools are able to recognise the benefits and ease of water conservation initiatives, they will be willing to take further steps to reduce their water usage through behavioural change. Prior to the installation of rainwater tanks the schools were either not watering grounds or using potable water – limiting access by students to play areas. The school grounds now have a source of rainwater which means less demand on mains water and a step towards more sustainable water use.

The project has enabled Council to form ongoing partnerships with the schools which will assist with sustainability initiatives into the future. HENS acts as an ongoing critical friend group for Council and provides a forum to discuss existing concerns and potential new projects. Another outcome from this project was a general increase in community awareness about access to other water grants, and this has precipitated new water projects being developed.



Reflections

What lessons were learned?

The main structural difficulty encountered was the issue of paint adherence on poly-plastic (polyethylene) rainwater tanks. Discussions with paint companies revealed a general reluctance to guarantee the adherence of paint on polyethylene unless appropriate surface preparation was undertaken. Various techniques were suggested including sanding & priming, sandblasting, blowtorching, and treating with acetone - the prime consideration being to either scratch up and/or remove the shiny (chemically unstable) surface of the poly-plastic and provide a footing for the paint to grip on to. In the future a different choice of tank materials (concrete or corrugated iron) may be more appropriate

Ongoing maintenance within a school is usually left to the grounds assistant or a committed teacher. Without embedding the ongoing maintenance duties into annual plans of management there is the potential for the tanks to become poorly supervised or maintained. In a future roll out of this program it would be useful to include grounds and maintenance staff of the project at an earlier stage and ensure these staff also have a sense of ownership of the program. In some instances onsite tanks required the addition of a water pump to be effective. These costs were not provisioned for in the original budget. It would also be important going forward to do a thorough site assessment of each school prior to installing the tanks to ensure any structural risks are properly assessed.

The use of a critical friend reference group as part of the project and the ability to leverage educational opportunities off the implementation of an infrastructure project have been particularly important. Schools have been recognised as viable community networks to increase and disseminate environmental awareness throughout the community, and the relationship between Council and HENS has allowed more collaborative and informed progress towards ongoing programs.

