

## PUBLIC FACILITIES PROGRAM ROUND ONE PROJECT SUMMARIES



The following 53 projects have been allocated \$10.7 million from the Climate Change Fund Public Facilities Program, saving more than 170 million litres of water and 10,000 tonnes of GHG emissions a year.

### **Blue Mountains City Council**

**Project name: Blue Mountains Leisure Centres – Energy Savings on Pool Heating**  
**Funding: \$27,500**

The Blue Mountains Leisure Centres will install three Thermal Pool Blankets on the 25 metre pool, the program pool and the spa at the Springwood Aquatic and Fitness Centre.

These blankets will be used for 10 hours each night to contain heat, saving up to 200 megawatt hours of electricity and 212 tonnes of greenhouse gas emissions a year.

### **Sydney West Area Health Service**

**SWAHS – Western sector energy efficiency projects**  
**Funding: \$325,000**

The Sydney West Area Health Service (SWAHS) will install micro-cogeneration units at the Blue Mountains Hospital in Katoomba which will provide electricity, hot water, domestic hot water and steam more energy-efficiently.

The project will also involve lighting upgrades in Blue Mountains, Lithgow, Springwood, Portland and Westmead Hospitals and is expected to save 14,290 megawatt hours of electricity and more than 1,300 tonnes of greenhouse gas emissions a year.

### **City of Botany Bay Council**

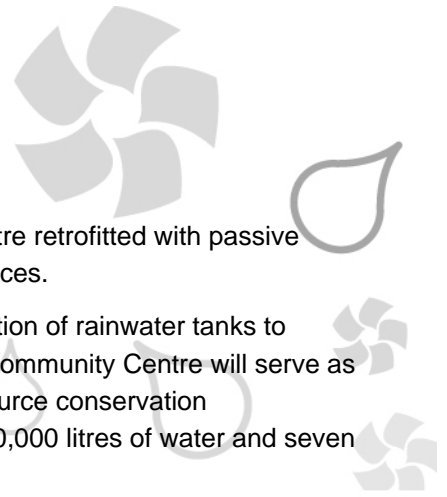
**Water Saving Initiatives for Botany Aquatic Centre**  
**Funding: \$97,000**

Botany Aquatic Centre will save drinking water and limit discharge to the sewer by retrofitting the centre's amenities with 4-star water efficient products, including dual flush toilets and flow restrictors on showers and taps.

The Centre will harvest rainwater from roof areas, which will be used for flushing toilets and urinals and water gardens. An automatic backwash system will also be installed, helping to save 1.5 million litres of water a year.

### **Randwick City Council**

**Randwick Community Centre's (RCC) Sustainability Makeover**  
**Funding: \$211,700**



A Sustainability Makeover will see the Randwick Community Centre retrofitted with passive solar design technology, solar panels and energy efficient appliances.

The facility will also become more water efficient, with the installation of rainwater tanks to harvest and reuse water to flush toilets and water gardens. The Community Centre will serve as a demonstration site, with educational signage, to showcase resource conservation technologies and techniques in practice. This project will save 170,000 litres of water and seven tonnes of greenhouse gas emissions a year.

### **City of Canada Bay Council**

#### **Saving Energy and Water by using the weather**

**Funding: \$220,950**

City of Canada Bay Council will use a high-tech communications network tool coupled with data collected from an existing weather station, to make water and energy savings at local playing fields and golf courses.

The system will automatically adjust irrigation and lighting settings if the linked weather station detects rain, evaporation and high levels of wind. The system is expected to save 20% on current water and energy use, which equals savings of almost 20 million litres of water a year.

### **Department of the Arts, Sport and Recreation**

#### **Water and Energy Savings at Narrabeen and Jindabyne Sports Centres (two projects)**

**Funding: \$1,447,500**

Two major NSW sports centres will be slashing their water and energy use through efficiency upgrades to sports halls, playing fields and accommodation facilities.

These two projects at the Jindabyne Sport and Recreation Centre and Sydney Academy of Sport and Recreation at Narrabeen involve the installation of insulation, energy efficient lighting, controls, motion sensors, water-efficient fixtures and fittings and rainwater tanks.

The two sports centres offer state-of-the-art sport and recreation facilities and accommodation, with a combined occupancy of more than 350,000 bednights a year. The project will save 37 million litres of water and almost 1,400 tonnes of greenhouse gas emissions a year.

### **Newtown High School of the Performing Arts**

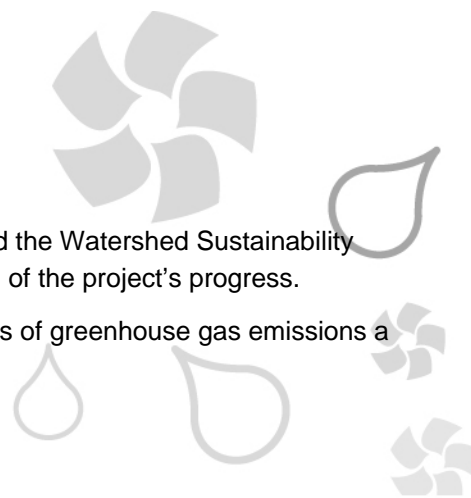
#### **Energy and water savings project**

**Funding: \$76,727**

The 865 students from the Newtown High School of the Performing Arts will soon be enjoying the benefits of new water and energy saving technology with the support of the NSW Climate Change Fund.

Following water and energy audits, the school will install a solar PV and rainwater harvesting systems and replace 25 toilets on the campus with waterless urinals and water efficient cisterns.

A water and energy monitoring system will also be established with students collecting data as curricular activities for mathematics, science and geography.



In collaboration with the Parents and Citizen's Association, and the Watershed Sustainability Resource Centre, students and the community will be updated of the project's progress.

This project will save 1.6 million litres of water and three tonnes of greenhouse gas emissions a year.

**Petersham Bowling Club Ltd**  
**Shades of Green Energy Project**  
**Funding: \$23,450**

Petersham Bowling Club aims to become a model club in sustainability by implementing a raft of savings measure identified in its energy audit. The 'Shades of Green' Energy Project involves installing ceiling insulation, awnings on the north east windows and installation of new Solar Venti technology, which negates the need for electricity-powered air-conditioning.

The project will save 12 tonnes of greenhouse gas emissions a year.

**Oberon RSL Outdoor Lawn Bowls**  
**Project name: Oberon Synthetic Bowling Green and Storm Water Re-use Project**  
**Funding: \$138 000**

Oberon RSL Outdoor Men's Lawn Bowls Club will overcome water restrictions and secure its long-term viability by installing a synthetic bowling green and underground water storage tanks.

The synthetic green provides a cost effective, long term solution to enable the club to maintain its greens in top condition and host bowls tournaments, school sports activities and community events. The project will save more than a million litres of drinking water a year.

**Parramatta City Council**  
**Public Facility Energy & Water Saving Project**  
**Funding: \$35,358**

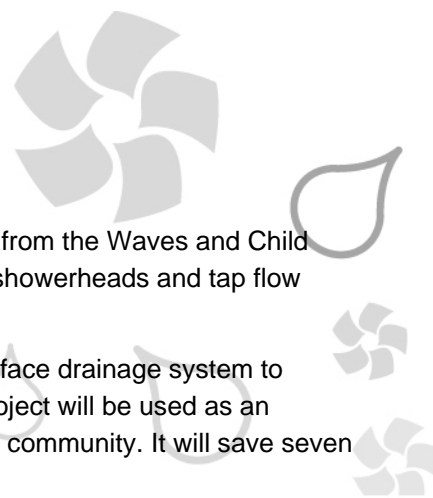
Water energy and water saving upgrades will be undertaken at eight Parramatta City Council public facilities, including the Riverside Theatre, City Library and the Parramatta Heritage and Information centre.

With a focus on lighting upgrades and installation of water-efficient fixtures and fittings, the project is estimated to save 95 tonnes of greenhouse gas emissions and 650,000 litres of water a year.

Local artists will be commissioned to produce artworks which communicate the benefits of energy and water savings to be displayed in the centres, which are visited by around 625,000 visitors every year.

**Baulkham Hills Shire Council**  
**Making Waves (stage 1: water efficiency)**  
**Funding: \$154,000**

Baulkham Hills Shire Council will improve water efficiency at the Waves Swimming Centre, and adjacent Rose Garden, Child Care Centre and Alfred Henry Whaling Reserve.



Rainwater tanks will be installed to store and recycle water runoff from the Waves and Child Care Centre buildings. Water efficient products such as low-flow showerheads and tap flow restrictors will also be installed to save drinking water.

Water captured in rainwater tanks will also be reused in a sub-surface drainage system to irrigate the playing field at Alfred Henry Whaling Reserve. This project will be used as an educational tool to showcase water saving technology to the local community. It will save seven million litres of water a year.

**Baulkham Hills Shire Council**

**Community Environment Centre - Sustainable Home Demonstration Site**

**Funding: \$49,650**

Baulkham Hills Shire Council will be transforming its Community Environment Centre into a model Sustainable Home to demonstrate household sustainability in action and teach visitors how to do the same.

The project includes the installation of a solar power system, a solar hot water system, insulation, rainwater tanks, a wet composting system and insulated window shutters. The centre will also host education initiatives, including workshops, site tours, online information and displays. The project will save five tonnes of greenhouse gas emissions a year.

**Bland Shire Council**

**West Wyalong stormwater capture and management project**

**Funding: \$510,000**

To drought proof West Wyalong in Central Western NSW, Bland Shire Council is building a major stormwater harvesting system to irrigate several of its public facilities, including sporting fields, parks, gardens and street landscaping.

The project will establish a partnership between Bland Shire Council, Lake Cowal Conservation Centre, the Lachlan CMA, local schools and the Tidy Towns Committee to regenerate a local wetland to return it to the bird sanctuary that it once was. The project will save 15 million litres of water a year.

**Carrathool Shire Council**

**Carrathool Shire Water Saving Project**

**Funding: \$41,600**

Carrathool Shire Council will implement water savings in its public facilities to improve efficiency and raise community awareness of climate change.

Four swimming pools in Goolgowi and Hillston will be fitted with pool blankets to save water from evaporation. Carrathool Shire Council will host school tours of the sites to teach students about climate change and the technologies available to reduce to water, energy and greenhouse gas emissions.

The project will save one million litres of water a year.



**Castle Hill RSL Club Ltd**  
**Castle Hill RSL Club Co-generation Project**  
**Funding: \$285,500**

Castle Hill RSL will be installing a new co-generation plant which will enable the RSL to self-generate all its energy requirements. The new co-generation plant will eliminate grid electricity demand and save more than 2,400 tonnes of greenhouse gas emissions a year.

The RSL will educate the local community and the club's 3,000 visitors a day about the new environmental benefits of the technology.

**Chillingham Community Association**  
**Community sustainability showcase**  
**Funding: \$48,409**

The Chillingham Community Centre will be transformed into an information hub for sustainability to showcase renewable power and water and energy efficiency.

The project involves installing solar power, solar hot water and a solar-driven Climate Control System which will negate the need for electricity-powered heating or cooling.

The project will complement the Chillingham Community Association's broader environmental education program and create a showcase for water and energy efficiency and will save four tonnes of greenhouse gas emissions a year.

**Cobar Shire Council**  
**Water reuse and solar heating for Cobar Memorial Pool**  
**Funding: \$150,000**

The Cobar Memorial Swimming Pool will receive a water and energy efficiency overhaul with the help of the NSW Climate Change Fund.

The project involves the installation of 720 square metres of solar panels to heat the water for the pools and extend the swimming season.

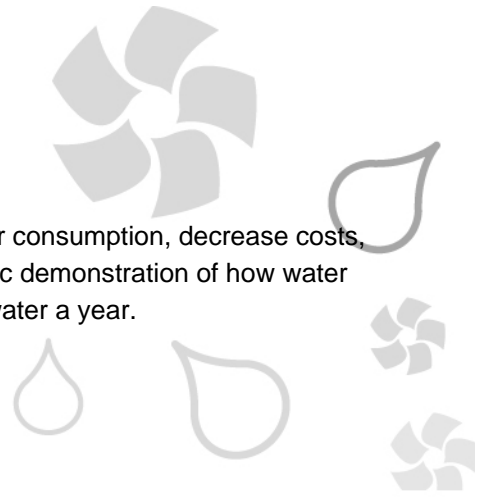
A rainwater harvesting, treatment and reuse system and new cartridge filter system will provide an alternative water source for the pool and save town water. The project will save two million litres of water and 200 tonnes of greenhouse gas emissions a year.

**Coffs Harbour City Council**  
**Botanic Gardens reclaimed water irrigation project**  
**Funding: \$218,486**

Treated sewer water will be captured for reuse in the Coffs Harbour Botanic Gardens as part of a major program to wean the parklands off town water supplies.

Covering approximately 20 hectares and supporting dense communities of native and exotic plants, the Coffs Harbour Botanic Gardens currently use an average of 10 million litres of potable water a year.

The reclaimed water will be sourced from the new \$96 million Coffs Harbour Water Reclamation Plant, which is capturing, treating and recycling sewer water which would once have been discharged to the sea through deep ocean outfalls.



The project will significantly reduce the Gardens' potable water consumption, decrease costs, provide a buffer against water restrictions and stand as a public demonstration of how water recycling can work. The project will save nine million litres of water a year.

**Coffs Harbour City Council**  
**Rigby House Green Retrofit**  
**Funding: \$735,000**

The Coffs Harbour region will soon have its first solar public building. Rigby House accommodates the two most patronised public facilities in the region - the Coffs Harbour Regional Gallery and the City Library.

This initiative involves installing a solar grid feed system on the roof to supply up to half of the energy requirements of the building and save more than 120 tonnes of greenhouse gas emissions a year.

As a venue for a new Business and Industry Network and other community activities, the building's green retrofit will be used to increase understanding of the practical application of sustainable technology among the Coffs Harbour community.

**Comboyne Community Association**  
**Mid North Coast Centre for Sustainability**  
**Funding: \$60,953**

The Comboyne Community Association will establish a centre for sustainability to showcase practical water and energy savings in action.

The refit of the Mid North Coast's Centre for Sustainability will save potable water from the Comboyne Village water supply by installing tanks to harvest rainwater for reuse indoors. Photovoltaic solar panels will be installed on the roof to generate power for the building, with excess power fed back into the grid.

To reduce the energy demand, the lighting and hot water systems will be upgraded and skylights will be installed to bring in natural light. The project combines practical initiatives with education to make the centre a showcase public demonstration site for energy and water savings. It will save 11 tonnes of greenhouse gas emissions and 40,000 litres of water a year.

**EcoSave Pty Ltd**  
**'Learning by Doing' at Charles Sturt University**  
**Funding: \$77,019**

The 'Learning by Doing' project at Charles Sturt University's Wagga Campus combines practical water and energy saving measures with education to raise awareness of water and energy management among students and the Wagga Wagga community.

The project includes lighting, air conditioning and water efficiency upgrades across the campus, saving 443 tonnes of greenhouse gas emissions and more than four million litres of water a year.



**Fairfield City Council**

**Project name: Save4Future - Rainwater tanks at Early Learning Centres**

**Funding: \$81,180**

Fairfield City Council will demonstrate their commitment to water conservation and sustainability through demonstration and education projects in 12 early learning centres.

The project involves installing rainwater tanks in the 12 facilities to harvest water for the grounds and gardens.

It will provide an alternative water supply to keep playgrounds clean, green and safe for children to play and allow gardens to be established with a water supply for plants to grow.

The project also aims to educate children and their parents about water and natural resource conservation and will save 200,000 litres of water a year.

**Hornsby Shire Council**

**Demonstrating how HVAC Predictive Maintenance can reduce CO2 Emissions**

**Funding: \$131,000**

Hornsby Shire Council will use the CSIRO's newly developed predictive maintenance software to maintain heating, ventilating and air conditioning (HVAC) systems in five public libraries.

Currently the libraries' HVAC systems are maintained on a fixed schedule and by the next due date, the system is often operating below optimum efficiency, wasting unnecessary energy and related greenhouse gas emissions.

The new software will automatically alert maintenance staff when the HVAC system starts to degrade so they can pro-actively maintain the system, restoring optimum efficiency and saving 124 tonnes of greenhouse gas emissions a year.

**Junee Shire Council**

**Junee Library**

**Funding: \$80,773**

The new Junee Library in an historic 1890s brick shop will become a flagship green building for the town.

The building will use a night sky cooling environmental control system to negate the need for electricity-powered air-conditioning. The system works by using water jets to spray a fine mist of water over the roof for several hours late at night or early in the morning. As the water runs across the roof surface, it is passively cooled by the air and typically chills to 5-10°C below the minimum night air temperature.

The cooled water is collected from the roof, filtered and stored in insulated tanks for use in two chilled water air handling units which provide cool fresh air for the building. The cool air is channelled via ductwork running down the length of the building at low level. Warm air rises up to the glass louvers that can be opened to allow it to escape. The project will save 32 tonnes of greenhouse gas emissions a year and 198,000 litres of water.

**Kingsgrove to Revesby Rail Quadruplication (K2RQ) Alliance  
Photovoltaic Integrated Noise Barrier Initiative  
Funding: \$1,030,000**

Photovoltaic solar cells are being investigated and trialled as a sustainable initiative for use on the Kingsgrove to Revesby Quadruplication (K2RQ) Project. The Project is part of the NSW Government's Rail Clearways Program, designed to improve capacity and reliability on the CityRail network.

The project involves the installation of solar cells onto some noise barriers inside the rail corridor between Kingsgrove and Revesby.

The solar cells convert sunlight into electrical energy, which will then be distributed into the local power grid, with the potential to save up to 900 tonnes of greenhouse gas emissions a year.

Transport Infrastructure Development Corporation is delivering this project through an alliance with Leighton Contractors, Maunsell Australia, Sinclair Knight Merz, MVM Rail and Ansaldo STS (the K2RQ Alliance).

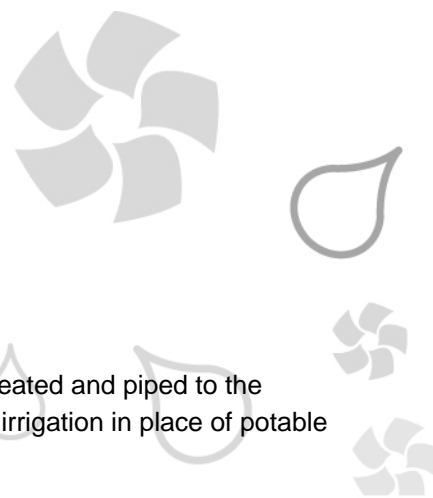
**Ku-ring-gai Council  
A partnership for sharing alternate water supplies  
Funding: \$112,900**

With the help of the neighbouring Roseville Golf Course, Ku-ring-gai Council will use harvested rainwater to keep Roseville Chase Oval in top condition.

The project involves the installation of a solar powered pump and transfer line to tap into a 21 million litre dam on the adjacent Roseville Golf Course.

The oval is widely used by cricket and rugby clubs, local schools and residents and using water from the golf club's new dam provides a cost-effective way to meet its irrigation needs. The recycled water will also be used to flush the toilets in the amenities block.

This project demonstrates the significant advantages of organisations collaborating to address the challenges of water shortages and will save 1.8 million litres of water a year.



**Ku-ring-gai Council**

**From Waste Water to Valuable Water: Reusing Leachate**

**Funding: \$488,600**

Leachate from the former St Ives Vegetation Landfill site will be treated and piped to the adjacent St Ives Showground and Council Nursery to be used for irrigation in place of potable water.

The St Ives Showground is 47ha of bushland and developed areas, consisting of a variety of buildings, amenities and sporting ovals. The site has more than 360,000 visitors a year and is host to many community events.

The Council Nursery supplies native and exotic plants for all Council's planting and re-vegetation needs. This project will save almost 11 million litres of water a year.

**Lake Macquarie City Council**

**Happy Campers: Energy & Water Savings in Lake Macquarie Holiday Parks**

**Funding: \$93,124**

The Happy Camper initiative will save energy and water in four Lake Macquarie holiday parks.

The project involves replacing hot water systems with energy efficient models, lighting upgrades and the installation of tanks to harvest rainwater to use in toilets and on gardens.

Water-efficient fixtures and fittings will also be installed and an education program will be developed to promote the water and energy savings to holidaymakers.

The Belmont Pines, Swansea Gardens, Wangi Point and Blacksmiths Beachside Holiday Parks attract 100,000 visitors a year.

The project will save 1.8 million litres of water and 31 tonnes of greenhouse gas emissions a year.

**Lake Macquarie City Council**

**Civic and Cultural Energy Savings in Lake Macquarie**

**Funding: \$89,573**

Lake Macquarie Council will improve energy efficiency in 28 civic, cultural and community buildings.

Savings will be made by upgrading electric hot water systems to solar models and adjusting and improving air-conditioning settings at the local library and other council buildings.

Night lighting around the council administration building will be upgraded, with existing floodlights to be replaced with more efficient technology.

The project includes 16 community halls, three senior citizens centres, five public libraries, council's administration building and an Art Gallery. It will save 114 tonnes of greenhouse gas emissions a year.



**Manly Council**  
**Manly Oval Energy Saving Lighting Project**  
**Funding: \$154,000**

State of the art energy saving floodlighting will be installed at Manly Oval to improve the quality and efficiency of night time lighting.

Manly Oval hosts many sports and community events and currently needs to bring in temporary lighting to hold events after dark. The new energy efficient floodlights will provide enough lighting coverage, while improving the focus of the lights on the playing fields rather than surrounding areas. The project will save 17 tonnes of greenhouse gas emissions a year.

**Marine Discovery Centre Bondi**  
**Project name: Energy saving by example at the Marine Discovery Centre Bondi Beach**  
**Funding: \$25,460**

Fresh air coming into the Marine Discovery Centre Bondi Beach will be cooled by the chilled air coming out under this project to make the popular environmental education centre a demonstration site for energy efficiency.

To meet public facilities standards, the Marine Discovery Centre must replace the indoor air with 10 litres of fresh air per second per person – effectively replacing the entire air volume of the centre every 11 minutes. The air change technology to be introduced at the facility maximises efficiency by cooling the air coming with the cool air coming out.

The project also includes installing bulk insulation the centre, will save a further 15 per cent of annual air conditioning energy use. The centre will also implement changes in their aquarium, such as installing a more efficient drive pump and insulation pipes which will reduce the use of the chiller in the main aquarium and save up to 66 per cent of annual energy us

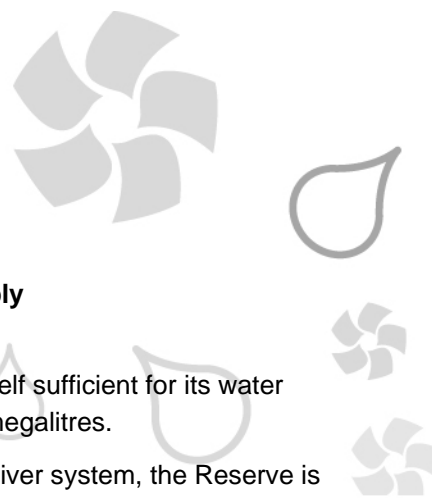
The project will save 34 tonnes of greenhouse gas emissions a year.

**Mogo Zoo**  
**Integrated Water Cycle Management Project**  
**Funding: \$499,000**

Mogo Zoo will capture, treat and reuse wastewater to clean animal enclosures as part of a major program to save more than 2.5 million litres of potable water a year.

A water treatment system will be installed to recycle waste water for cleaning and irrigation. Rainwater tanks will also be installed to harvest rainwater to reuse in toilets, laundry and hose taps.

This project will significantly reduce potable water use at the Zoo and will be complemented with an education program to showcase the water recycling facilities to school groups, local businesses and visitors.



**Murray Shire Council**

**Moama Recreation Reserve - Self Sustainable Irrigation Supply**

**Funding: \$87,500**

Murray Shire Council will make the Moama Recreation Reserve self sufficient for its water needs by expanding an existing stormwater dam from five to 20 megalitres.

Currently reliant on the Shire's water allocation from the Murray River system, the Reserve is considered to have the best playing surfaces within the region but standards have been difficult to maintain during the current drought.

By increasing the dam capacity, the council will be able to take full advantage of the typically higher summer rainfall to store water for the drier months.

The project will save 30 million litres of water a year.

**North Sydney Council**

**Forsyth Park Stormwater Reuse Project**

**Funding: \$396,000**

North Sydney Council will install a tank and pump at Forsyth Park to harvest, treat and reuse stormwater for the playing fields and park lands.

The project will save five million litres of drinking water a year.

**NSW National Parks and Wildlife Service**

**Energy-wise community facility**

**Funding: \$259,120**

The new National Parks and Wildlife Service community building at Narooma will showcase the latest water and energy efficiency technology in new building design.

Accommodating the NSW National Parks and Wildlife Service, the Marine Park Authority NSW and NSW Maritime and hosting more than 5000 visitors a year, the building will have no need for air-conditioning, maximise natural lighting and harvest rainwater to flush toilets and irrigate grounds.

A combination of an underground cooling labyrinth, natural ventilation, sun shading and reverse masonry construction will moderate indoor comfort to negate the need for electricity-powered air-conditioning.

Other components of the project are the use of energy-efficient fixtures and fittings, installation of three water tanks with storage capacity of 16 million litres and the retention of existing vegetation to shade the north side of the building. The project will save 31 tonnes of greenhouse gas emissions a year and 103,000 litres of water.

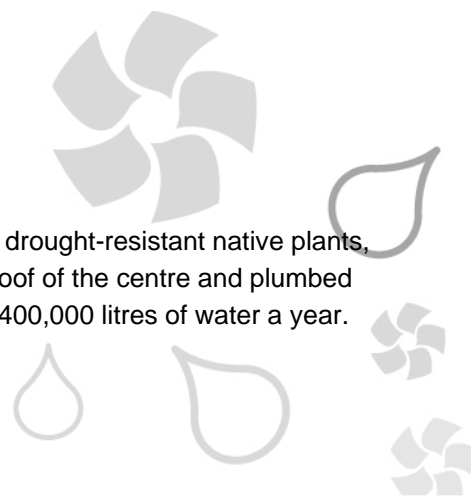
**Police & Community Youth Clubs NSW Ltd, Griffith**

**Project name: Greening PCYC Griffith - with water-saving irrigation**

**Funding: \$18,728**

The Griffith PCYC will become a greener and more water efficient facility, with the installation of a rainwater tank and automatic water-saving irrigation system.





The grounds of the centre will be landscaped and planted with drought-resistant native plants, which will then be watered using rainwater captured from the roof of the centre and plumbed through the irrigation system. This project is expected to save 400,000 litres of water a year.

**Port Macquarie-Hastings Council**  
**Port Macquarie Historic Amenities Education Model**  
**Funding: \$39 800**

Port Macquarie-Hastings Council will introduce water and energy efficient technologies to the historic Port Macquarie cemetery.

A rainwater harvesting system will reduce demand for potable water by collecting and reusing rainwater to flush toilets. The project also includes the installation of solar panels to power sensor lights and potentially feed energy back into the grid.

An amenities building will be set up as an educational model to demonstrate practical ways to use environmentally friendly technologies in everyday life. This project will save 76,000 litres of water and two tonnes of greenhouse gas emissions a year.

**Port Macquarie-Hastings Council**  
**Water capture at Port Macquarie transfer station**  
**Funding: \$14,500**

Port Macquarie waste transfer station will harvest and reuse rainwater to suppress dust generated from the resource recovery of concrete waste.

The station's waste concrete crushing and reclamation plant currently uses potable water for dust control. This project will provide an alternative, renewable source of water through the installation of two rainwater tanks and related plumbing upgrades.

The project will save 150,000 litres of potable water and provide a working example of sustainable water management in a facility used daily by the community.

**Stockland Development Corporation**  
**Stockland Yennora/Guildford Leagues Club Rainwater Harvesting Project**  
**Funding: \$380,804**

Stockland Development Corporation will collect and reuse rainwater collected from the roof of the Yennora Distribution Centre to share with its neighbour.

The project involves the installation of rainwater tanks to capture and store rainwater from the 30,000m<sup>2</sup> roof of Stockland's Yennora warehouse to water the gardens and playing fields at the neighbouring Guildford Leagues Club. The project will save nine million litres of drinking water a year.

**Sutherland Shire Council**  
**The Ridge Sports Complex Club House ('The Hub')**  
**Funding: \$52,800**

Sutherland Shire Council's new Ridge Sports Complex Club House, to be known as the Hub, will use innovative geothermal air conditioning technology to harmonise indoor temperatures.

The multi-purpose complex will incorporate a range of sporting facilities including a new 18-hole golf course as well as change rooms, a café, a pro shop and coaching studios. The geothermal air conditioning and ventilation system is an innovative technology which uses the earth's stable temperatures via 90 metre deep bore holes to heat or cool the air for the complex.

The system is around 60 per cent more efficient than traditional air conditioning systems and will showcase the benefits of renewable energy to the wider community. The project will save 68 tonnes of greenhouse gas emissions a year.

### **Sylvania Public School**

#### **Retrofit hall to create outcomes same as aircon without use of power**

**Funding: \$103,951**

Sylvania Public School will ditch traditional air-conditioning for its school hall in favour of more energy efficient options.

The hall will be retrofitted with insulated roof panels, louvres and tinted windows, removing the need for inefficient electricity-powered air-conditioning. The school will also upgrade existing hall lighting with energy efficient technology. The project will save one tonne of greenhouse gas emissions a year.

### **TAFE New England Institute**

#### **Electricity consumption reduction, Gunnedah Campus**

**Funding: \$111,995**

The New England Institute of TAFE will reduce energy consumption at its Gunnedah Campus by installing new lighting, motion sensors and timers.

The campus will replace its old linear fluorescent tubes and magnetic ballasts with T5 Tri-phosphor tubes and electronic ballasts.

To reduce the unnecessary use of lighting throughout the campus, occupancy detectors, including motion and infra-red, will be installed in classrooms and large areas such as the library. Timers will also be installed on hot water heaters, toilets and security corridor lighting. This project will save 114 tonnes of greenhouse gas a year.

### **TAFE New England Institute**

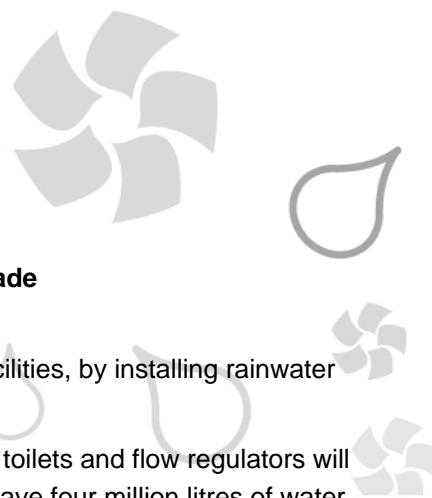
#### **Project name: Reduction in electricity use and CO2 emissions Tamworth TAFE Library**

**Funding: \$59,300**

Tamworth TAFE will undergo an energy efficiency overhaul that will reduce annual electricity use and greenhouse gas emissions by 273 tonnes a year.

The upgrade will include a new air-conditioning unit which will utilise external air and reduce the need for condensers heating and cooling, as well as an isolating switch that will restrict air-con activity to when a room is occupied.

The TAFE will also be re-fitted with high efficiency lighting and timer switches for the toilet lights and instant hot water heaters. Smart metering will be installed on-campus in a bid to monitor detailed electricity use, savings and to identify additional efficiency opportunities down the line.



**The Association for Christian Education Blacktown  
Water Harvesting and Sustainable Washroom Facilities upgrade  
Funding: \$98,800**

Tyndale Christian School will save drinking water in its student facilities, by installing rainwater tanks to harvest and reuse rainwater for toilet flushing.

Each of the four toilet blocks will also be retrofitted with dual flush toilets and flow regulators will be fitted on taps to improve efficiency. The project is estimate to save four million litres of water a year.

**Tweed Shire Council  
Sustainable Living Centre's Natural & Urban Water Cycle Interactive Wall  
Funding: \$40,000**

Visitor's to Tweed Shire Council's new Sustainable Living Centre (SLC) will be able learn about the natural water cycle and understand how urban water management works through an innovative interactive wall.

As a centrepiece for the new environmental education facility, the interactive Wall will provide a pictorial representation of the natural and urban water cycles to help visitors understand the complex processes at play.

The project is one element of a major interactive exhibition to engage visitors in sustainability issues, including climate change, energy and transport, water, waste, biodiversity and natural resources.

**University of New England  
Reducing GGE & Saving Energy Onsite in a cool climate NE Region  
Funding: \$250,000**

The 30,000 users of the University of New England's (UNE) indoor swimming pool will soon be kept warm with water heated by solar energy collection and heat recovery equipment.

The project at the cool climate Armidale site will save 20 per cent of the energy currently used in the pool facility and will be a showcase for the technology for the many other indoor heated pools in the New England region.

It will also provide an on-campus example of sustainability initiatives that will be incorporated into the University's curricula and demonstrate the University's commitment to its signature to the International Talloires Sustainability Declaration. This project will save 50 tonnes of greenhouse gas emissions a year.

**University of NSW  
Water conservation measures at UNSW Lifestyle Centre  
Funding: \$131,065**

UNSW will continue its commitment to water and energy conservation through a series of efficiency upgrades to its Lifestyle Centre.

The project includes the installation of a series of wall mounted pool covers to reduce evaporation from its 50m Olympic pool and waterless urinals and timer taps in the bathrooms.



Hot water heaters will be replaced and moved closer to the shower facilities to minimise cold water wastage.

The UNSW has already cut water use on the Kensington campus by a third since 2000. The Lifestyle Centre is patronised by approximately 40,000 students a month and includes, sports halls, squash courts and fitness studio, as well as swimming facilities.

The project will save 650,000 litres of water a year and 81 tonnes of greenhouse gas emissions.

**University of New South Wales**

**Cogeneration Facility - Lowy Cancer Centre – UNSW**

**Funding: \$500,000**

A gas fired cogeneration unit will be installed on the roof of the new Lowy Cancer Centre to provide hot water and electricity for the building and heat for an absorption chiller.

The building is currently under construction at the University of New South Wales and is scheduled for completion by September 2009.

The centre will provide a world class research facility for the Children's Cancer Institute of Australia and the adult cancer research activities of the UNSW Faculty of Medicine.

The cogeneration facility will reduce peak power demand by 770 kW, and save 1700 tonnes of greenhouse gas emissions a year.

**Willoughby City Council**

**Project name: Backwash recycling at Willoughby Leisure Centre**

**Funding: \$148,650**

Willoughby City Council will install a pool backwash recycling system at Willoughby Leisure Centre to treat, clean and reuse the water.

The system will complement the heat pump, solar heating, rainwater storage and co-generation system at the centre and support the sustainable vision for the building to become a demonstration site. The project will save 700,000 litres of water a year.

**Willoughby City Council**

**Chatswood Civic Place – Innovative sustainable energy savings initiatives and environmental education centre**

**Funding: \$121,000**

The Chatswood Civic Place Project, a major public facility and entertainment centre, will save 55 tonnes of greenhouse gas emissions a year through innovative energy savings.

The facility will include a chilled-beam air conditioning system and specialised energy efficient lighting in the Concert Hall, Theatre and Civic Hall. Combined with natural ventilation, passive solar design, it will be a showcase sustainability centre.

Residents can also learn about the importance of energy-efficiency at Environmental Education Centre in the library and through tours of the Civic Place Project's sustainable design.



**Wollongong City Council**

**Project name: Toward a Sustainable Botanic Garden**

**Funding: \$60,000**

Wollongong City Council will implement a number of energy and water efficiency measures at the Wollongong Botanic Gardens.

Inefficient equipment such as gas generators and electric hot water systems will be assessed and replaced with greenhouse friendly models and visitor facilities will be upgraded with more efficient dual flush toilets. An additional rainwater tank will be installed, with captured water reused for irrigation throughout the gardens. This project is expected to save 32 tonnes of greenhouse gas emissions and almost 1 million litres of water a year.

**Woollahra Municipal Council**

**Sustainable Woollahra – Water saving challenge**

**Funding: \$79,427**

Woollahra residents will be encouraged to adopt water saving practices by seeing them in action at council community facilities.

The Holdsworth Community Centre and garden will become a showcase for water efficiency with the installation of rainwater tanks, water saving fixtures and dual flush toilets. The centre will be fitted with interpretation materials explaining the water conservation measures in place and host a series of workshops and community events promoting waterwise practices around the homes. The project will save 700,000 litres of water a year.