

SA URBAN FORESTS MILLION TREES PROGRAM

Over six years of achievement 2003-2009



Government
of South Australia



Adelaide looking to the south-east

GROWING A GREAT FUTURE

Colonel Light's vision for Adelaide was of a city surrounded by park lands. This provided a foundation that has shaped our city as it has grown and we enjoy an enviable reputation for the quality of our urban environment.

Our vision is to significantly enhance our city's sustainability and liveability with a major greening effort targeting our parks and reserves throughout the entire Metropolitan Open Space System so that Adelaide's future is a green, healthy and liveable city.

In 2003, the Million Trees Program was established, which aimed to plant one million native plants across Adelaide's metropolitan area. With the help of all spheres of government, schools, industry and the community, this was achieved in 2006.

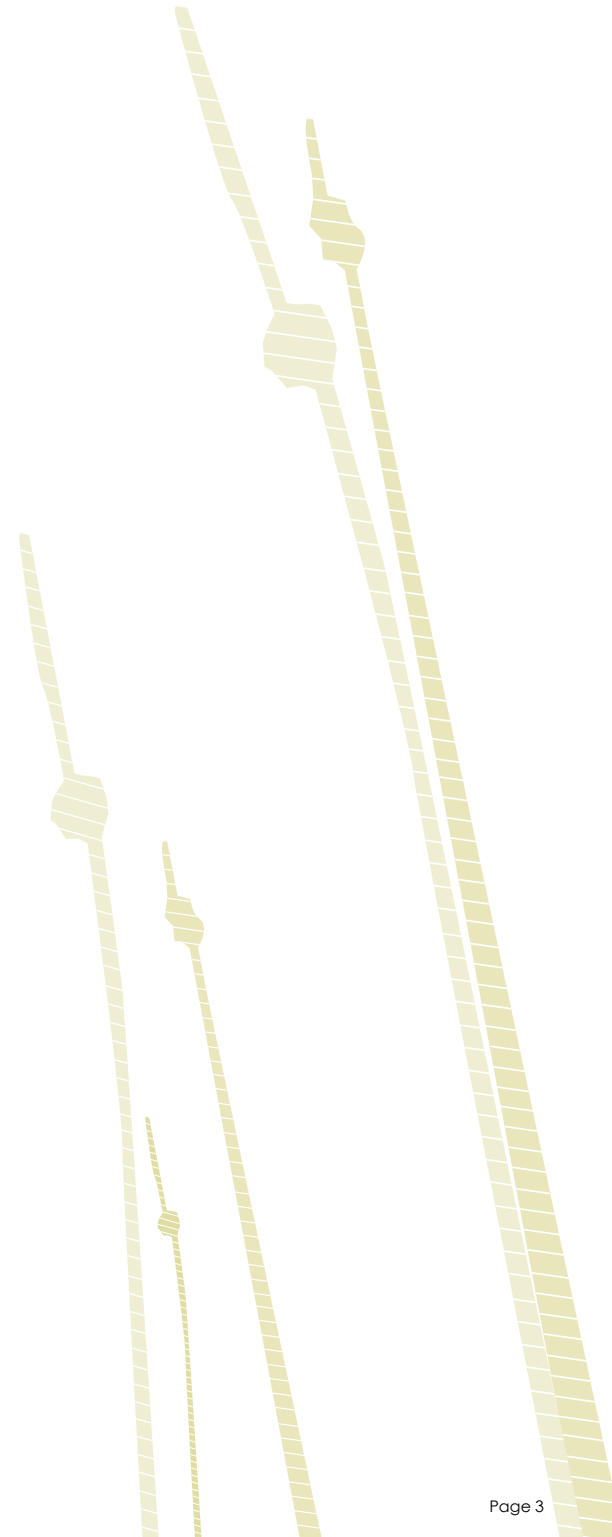
Since commencement, \$8 million has been invested into the various components of the program. This includes habitat reconstruction, community projects, education projects and resources, and activities to engage, inspire and involve people to grow a great future for Adelaide.

The next aim is to establish three million native plants across our city by 2014. An additional three million trees, shrubs and grasses will not only result in a leafier, more liveable city – it will reduce our greenhouse gas emissions by an estimated 600,000 tonnes of CO2 equivalents, and create and conserve habitat for precious wildlife.

This program is successful thanks to all the volunteers and partners who have contributed to the Million Trees Program and have been part of the excellent progress toward achieving goals.

We are not simply planting trees. We're creating a better city and building stronger communities as thousands of people work to help their local environment.

We look forward to continuing to work together as we grow a great future for our wonderful city.





Knobby Club-rush (*Isoetes nodosa*).

HELPING CREATE A SUSTAINABLE ADELAIDE

Vegetation is the Key

A report published in 2001 showed that approximately 97.3 percent of Adelaide's original vegetation has been cleared since European settlement. Land clearance and development has impacted significantly on native flora and fauna, with many species now locally extinct or threatened.

It is essential that suitable habitat based on Adelaide's original vegetation is reinstated to help reverse this concerning trend in species loss. It is also important for remnant vegetation to be protected and preserved so that the link to Adelaide's past is not lost forever. The seed from plants that hold local genetic history is a valuable tool for future revegetation efforts.

A Changing Environment

This pattern of land clearance has been repeated throughout the world and it has become evident that both our global and local environments are changing. Social responsibility in response to climate change is becoming increasingly important and governments need to lead environmental strategies and action.

Off-setting Carbon

It is estimated that the plants established by the Million Trees Program as an off-set action will sequester approximately 600,000 tonnes of CO² equivalents over their lifetime.

An Informed and Involved Community

People are becoming more and more attuned to living sustainably. Tangible, practical initiatives are needed to support our community's burgeoning interest in biodiversity conservation. The Million Trees Program provides many opportunities for learning and hands-on involvement through innovative activities designed to inspire and inform local and school communities.

Helping Reduce Water Use

While Adelaide offers a vast array of parks and reserves, many have been developed with plants that are not locally native. These plants often require greater watering and support to survive in the local hot and dry climate.

Redeveloping these amenity spaces in a more sustainable way will allow reduced water use and provide more natural areas – allowing them to be enjoyed by local wildlife, residents, visitors and future generations.

A habitat restoration program such as the SA Urban Forests – Million Trees Program can allow revegetation work to be done that is more in line with ecological processes, and help reduce the impact we have on our local environment.

The four themes of the program aimed at making all of this happen are:

- 1. Achieving on-ground results**
- 2. Working together**
- 3. Learning through action**
- 4. Combining our efforts.**



Adelaide Park Lands (Park 23) 2003.



Adelaide Park Lands (Park 23) 2005.

1. ACHIEVING ON-GROUND RESULTS

GOAL

Contribute to reducing Adelaide's ecological footprint by protecting, enhancing, and re-creating urban natural habitat through strategic planting of local native species.

Restoring Landscapes

Since the SA Urban Forests – Million Trees Program was established in 2003 it has planted over 1,900,000 local native trees and associated understorey plants. With the target of achieving three million by 2014, the on-ground planting and management activities are a major focus of the Program.

There are now more than 300 project sites across the Adelaide Metropolitan Area, ranging from large-scale revegetation sites, to smaller sites that often provide a link between remnant vegetation patches or create amenity value.

The transformation of these sites – some from bare paddocks – into evolving and lively ecosystems is very encouraging.

Site Management

Project sites are managed using three main categories:-

- major projects identified by the program as priority sites
- community involvement projects involving funding and support
- Grow a Great School projects that are developed with schools and education institutions.

These sites are planned and managed giving consideration to issues including original vegetation type and existing condition, habitat value, soil structure, weed management, fire risk and public access, current use and indigenous heritage.

Monitoring

Monitoring has also been established to provide information on survival rates, growth and site condition. Photo-points are used to record visual changes in sites and recently, more sophisticated monitoring methods have been developed to measure wildlife habitat values and ecosystem functionality.

“The transformation of these sites – some from bare paddocks – into evolving and lively ecosystems is very encouraging”

Buffering Remnant Habitat

Through targeted revegetation projects, the Million Trees program is also buffering and protecting Adelaide’s valuable patches of remnant vegetation.

Remnant vegetation is a unique link to our past. By using seed sourced from remnant species, the Million Trees Program is able to ensure that the genetic integrity of our native flora is conserved in the process of recreating Adelaide’s unique habitats.

PROGRESS HIGHLIGHTS

- Over 300 project sites have been established.
- Over 1,900,000 seedlings have been established.
- Over 1000 ha of land has been revegetated.
- Approximately 80% survival rate has been recorded over three years of monitoring.
- Natural seeding and regeneration is occurring.

Percentage of revegetation type.

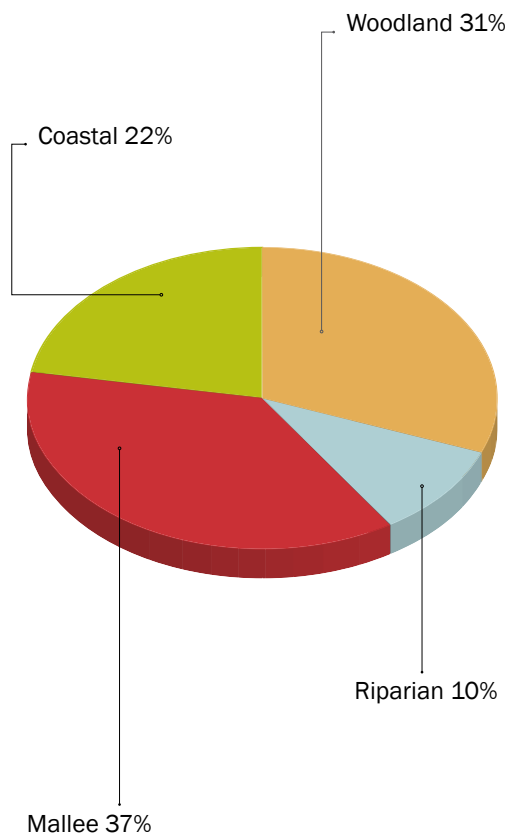


Photo-point monitoring.

PROTECTING AND RECONNECTING AT ONKAPARINGA

The Onkaparinga River park system is one of Adelaide’s largest and provides protection for some of the last remaining patches of remnant vegetation in the southern Adelaide region.

In total the parks contain 520 hectares of remnant vegetation and 448 indigenous plant species, including 132 of conservation significance at national, state and regional levels. They maintain important estuarine and freshwater fish breeding habitat and the ecological stability of Noarlunga Reef is linked to their management. Important Aboriginal heritage sites are also located within the reserve.

Since 2003 the Million Trees Program has returned over 220,000 local native trees and understorey species to the park, with restoration of former grazing land directly adjacent to remnant vegetation communities in the Onkaparinga Gorge and Hardys Scrub a major focus.

Added to the park in the mid-1990’s, the former grazing land forms part of an overall initiative to revegetate using local native plant species, control invasive weeds and ultimately buffer and connect areas of remnant vegetation.

To date the Program has undertaken large-scale revegetation projects at four main sites across this land.

The largest site near ‘Gate 10’, spans some 70 hectares, and was named the David Suzuki Forest in honour of the world renowned environmentalist who officially opened the site in 2003.

Bryn Troath from the Department for Environment and Heritage says that the contribution of the Million Trees Program has helped to protect and reconnect valuable remnant biodiversity through the revegetation sites.

“This creates increased habitat which builds on the landscape restoration values in a park of major significance south of Adelaide,” Bryn says.



“Our aim is to strengthen the connection between people and natural places by promoting awareness and understanding of our unique flora and fauna”

2. WORKING TOGETHER

GOAL

Inform, inspire and invoke the people of Adelaide to strengthen their connection with nature.

Inspiring and Facilitating Community Action

A greener more sustainable city is not achieved by just planting trees; it's about people and increasing our community's environmental awareness through action-based initiatives.

Our aim is to strengthen the connection between people and natural places by promoting awareness and understanding of our unique flora and fauna, and fostering a greater appreciation of natural biodiversity and the need to conserve it at a range of levels.

Community Funding

The program encourages community involvement by providing funding support to organisations or groups who aim to revegetate open space within the Adelaide area through biodiversity plantings and amenity projects.

To date over \$690,000 has been spent on over 200 projects that have been created in collaboration with the community and local councils.

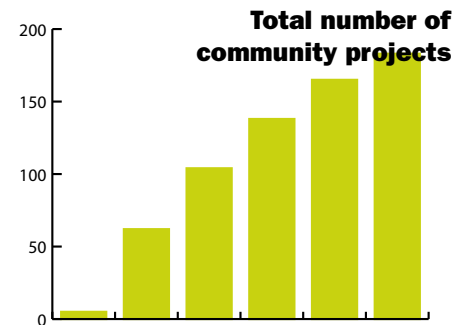
These projects have been developed using careful planning and assessment, allowing knowledge to be shared with the community and exciting projects to be developed that previously would not have been achievable.

Technical Support

Program staff also supply technical support for community-based projects, including telephone enquiries and fact sheets and other resources which have been prepared on a range of topics.

Community Planting Events

Since 2003 the program has organised around 85 community planting events across Adelaide. These events are held during the winter planting season and provide an opportunity for volunteers to get involved in planting some of the three million seedlings the program is working hard to establish.



2003 2004 2005 2006 2007 2008 2009

Community Displays and Information Sharing

The program is also involved in many major events to help promote its activities, encourage participation and share information. Some of these events include WOMAdelaide, World Environment Day, National Tree Day, Biodiversity Month and the Royal Show. It also actively seeks involvement in many other smaller events.

PROGRESS HIGHLIGHTS

- Over 200 community projects have been developed with more than 10,250 people involved.
- Over \$690,000 has been allocated to community projects.
- Over 4,000 children and adults have attended around 85 community planting days.
- Nearly 800 volunteers have signed up to help the Program.
- The Program has organised displays or given talks at over 70 public events.
- Up to 100 Trees For Life volunteers have been growing for the Program each year.

ENTHUSIASTIC COMMUNITY INVOLVEMENT IN THE PARK LANDS

An on-going partnership with Adelaide City Council and the Million Trees Program has seen over 130,000 local native plants to the Adelaide Park Lands, with community volunteers planting over 15,000.

Since 2003 the Program has worked with the Council to deliver large community planting events to celebrate National Tree Day, held annually on the last Sunday in July.

These events have become a popular volunteering opportunity for a range of people, including families, businesses and even a few high profile personalities including the Lord Mayor, Environment Ministers and the South Australian Premier.

With extra support provided by Planet Ark, CMI Toyota and Conservation Volunteers Australia, the National Tree Day events have allowed important conservation messages to be delivered through a fun and social planting event.

According to the Lord Mayor, Michael Harbison, National Tree Day events have been a fantastic way of involving the community with biodiversity activities.

“Each year we have seen an average of 200 people take time out of their day to come out and get involved in planting. Not only has this been a great contribution to our biodiversity projects but it has allowed them to connect with what we are trying to achieve in the Park Lands,” the Lord Mayor says.

According to the Lord Mayor the Council aims to enhance the Park Lands by returning more of its original pre-European vegetation, which will provide landscapes that are more resilient to climate change and provide habitat for local fauna.

It is hoped that through future projects and more community involvement even more plants will be restored.





Gillies Street Primary students at a planting event in the Adelaide Park Lands.

3. LEARNING THROUGH ACTION

GOAL

Foster a higher profile for sustainability and biodiversity in education, including school curricula, by providing opportunities for involvement in local projects.

Fostering Quality Learning Experiences

The Million Trees Program has developed several education initiatives to encourage student's 'ecoliteracy' and help to improve knowledge of Adelaide's native plant and animal life.

Growing Great Schools

The main education initiative is Grow A Great School (GAGS), which provides teacher training, curriculum resources, activities and funding for bush gardens and 'living' outdoor classrooms on school grounds.

To date, approximately 160 schools have undertaken GAGS projects, which have been integrated with the Sustainable Schools program jointly managed by the Department for Education and Children's Services and the Department for Environment and Heritage.

Projects have included frog ponds, butterfly and biodiversity gardens, sitting circles and bush tucker gardens to help promote indigenous cultural awareness.

To aid the integration of GAGS project sites into the school curriculum, participating teachers are provided with training and resources. Maps, species lists, educational activities and exemplars are available and an on-line forum is being developed.

Teaching aids such as BioWhat?, Zoom Lens, and native flora and fauna identification cards are also available to schools.

Community and School Events

To help reach schools that aren't involved in the GAGS initiative, the Million Trees Program has been involved in major school-focused events at places such as the SA Museum, the Adelaide Botanic Gardens and Cleland Wildlife Park.

Running native flora and fauna workshops and talks at these events has allowed the program to reach several thousand extra children.

“Projects have included frog ponds, butterfly gardens, sitting circles and bush tucker gardens to help promote indigenous cultural awareness”

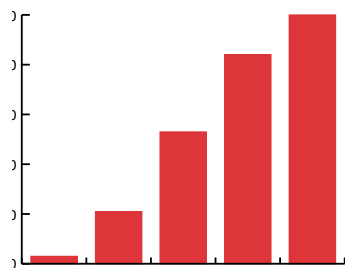


Planning a project with students at Eden Hills Primary School

PROGRESS HIGHLIGHTS

- Around 160 schools involved in GAGS.
- Over 215 school planting projects have been developed.
- Over 22,000 children and community members involved in GAGS projects.
- \$160,000 funded towards GAGS projects.
- Over 190 workshops and talks have been given.
- Teacher training and curriculum resources have been developed.

Number of schools involved



2003 2004 2005 2006 2007 2008 2009

BEING WATER-WISE AT STRADBROKE AND LE FEVRE

GAGS funding is open to schools at all levels of environmental learning.

According to Stradbroke Primary School Biodiversity Officer Linda Built “We have moved along the environmental path – from talking about it, to embracing, implementing, immersing and changing the culture within the school”. This statement characterises the long term and diverse efforts by the school over the last decade to fully integrate environmental programs into the curriculum, including rehabilitation and revegetation works along Fourth Creek, which is adjacent to the school.

Through GAGS funding they have added a frog pond and bog garden to the school grounds, surrounded by local native vegetation to attract all seven species of native frogs present in the area. A plant trail with identification plates familiarises students with water plant species and the pond is topped up in summer with water collected from shed roofs.

With Fourth Creek dry during these months, native fauna will benefit from this permanent water supply, and with the addition of bird, bat and possum boxes these species will be further attracted to this site.

Empowerment of students is a key benefit of Stradbroke’s sustainable initiatives. Children are learning that they can come up with ideas and then follow them through to achieve results.

At Le Fevre Peninsula Primary School the current trends for healthy eating and environmental awareness led the school to seek GAGS support to create both a sustainable and edible garden.

Proposed by several parents, the garden is used as an outdoor classroom and students are responsible for its planting and upkeep. It has been named ‘Yangadlitya’, a Kurna word meaning “For the Future”, reflecting the belief that children are our future, and recognising the need to grow the understanding of sustainability through them and the community.

A design theme of ‘Water’ was chosen to incorporate the environmental history of the site as former wetlands, the Kurna cultural history of the Black Swan Dreaming, the maritime history of the Port Adelaide area, and the current drought problems in Australia.

Involvement and education of the wider community is a strong component of this project. A range of funding grants has assisted with workshops engaging children and other community members on a range of subjects from art, cultural heritage and history to garden design, organic methods, water-wise gardening and healthy eating and cooking. Students are also involved in public consultation processes involving local Kurna elders and community artists.

School Principal Mark McKenzie hopes that having the site located at a busy intersection is giving good public exposure of the garden and it’s messages. “When parents and children learn about the environmental advantages of these plants, it might mean they have a go at growing them at home as well”, he says.



A strong partnership with SA Water has seen over 120,000 native plants established on retired grazing land at Mount Bold.

4. COMBINING OUR EFFORTS

GOAL

Facilitate collaboration among agencies at all tiers of Government to maximise effective and efficient delivery of projects and activities.

Facilitating partnerships to maximise outcomes

All Million Trees projects are undertaken in partnership with other groups, organisations, or agencies.

Effective facilitation and strong partnerships have been vital for success, with many excellent examples of collaboration and cooperation across all tiers of Government.

Working across Government

The program has worked collaboratively with 12 State agencies on several exciting projects. Large scale habitat sites are being developed around Adelaide's reservoirs with SA Water; new and existing parks are being enhanced with the Department for Environment and Heritage; and coastal dune systems are being improved through

involvement in the Department of Planning and Local Government's Coast Park to name a few.

The program is also committed to supporting the Youth Conservation Corps (YCC) which is an initiative of the State Government and managed by Conservation Volunteers Australia and other service providers.

YCC assists young people to gain employment and/or further training by providing them with skills and experience while they participate in projects that contribute to the conservation of South Australia's natural and cultural heritage.

Working with Local Government

Projects have been developed with 21 local councils. These include amenity plantings, display gardens and major biodiversity sites that provide valuable habitat and help raise the profile of native gardens and plants within the community.

Two project officers (northern and southern) are hosted with local councils to ensure the delivery of Million Trees activities is integrated across administrative boundaries.

“Strong partnerships across government are at the heart of the success of this innovative program”

PROGRESS HIGHLIGHTS

To-date Government partners include:

Local Government

- Adelaide City Council
- Adelaide Hills Council
- Campbelltown City Council
- City of Burnside
- City of Charles Sturt
- City of Holdfast Bay
- City of Marion
- City of Mitcham
- City of Norwood, Payneham & St Peters
- City of Onkaparinga
- City of Playford
- City of Port Adelaide Enfield
- City of Prospect
- City of Salisbury
- City of Tea Tree Gully
- City of Unley
- City of West Torrens
- District Council of Mallala
- District Council of Mt Barker
- Town of Gawler
- Walkerville Council

State Government

- Department of Planning and Local Government (DPLG)
- Adelaide and Mount Lofty Ranges NRM Board
- Department for Education and Children’s Services
- Department for Environment and Heritage (DEH)
- Department of Further Education, Employment, Science and Technology
- Department of Premier and Cabinet
- Land Management Corporation
- Office for Recreation and Sport
- Rural Solutions SA
- SA Water
- Transport SA
- Department of Water, Land and Biodiversity Conservation

In addition, the Million Trees Program has worked in partnership with Australian Government programs and several community-based organisations including Conservation Volunteers Australia, Greening Australia, Trees For Life, Landcare Australia and local Friends of Parks groups.



A Bearded Dragon sunning itself in the Coast Park dunes.

CREATING A GAWLER-PLAYFORD NATURAL GREENBELT

Cooperation between state and local government is allowing a unique opportunity to restore over 200 hectares of former cropping land to open woodland on the northern Adelaide Plains.

Owned by DPLG, the Gawler Buffer project sites are situated within the ‘Green Belt’ that separates the Council areas of Playford and Gawler. They are part of the Metropolitan Open Space System (MOSS) and are being developed in line with principles of conservation and passive recreation. The combined area of these land parcels totals 230 hectares and they contain important stands of native grassland and remnants of Mallee Box (*Eucalyptus porosa*) woodland.

The Million Trees Program is working with DPLG and the two councils to transform the land into a valued open space reserve and resource for local residents, as well as restoring the Mallee Box woodland using seed collected locally.

Landscape restoration techniques such as native grass establishment trials and use of on-site seed orchards are being

implemented. Community education on the importance of native bushland and the benefits in providing extended wildlife corridors is also a focus, with signage to be developed in the future.

In November 2008, Rick Gibki from DPLG said the Gawler Buffer projects are well on track, with further stages to get underway in 2009.

“These sites within the Metropolitan Open Space System are playing a major role in reducing the physical impact of our city on the local environment, and improving the quality of life for residents, visitors and future generations,” Rick said.

“Through the Million Trees Program, DPLG and DEH are working together to develop long-term approaches to habitat restoration and revegetation practices within several large-scale open space areas. This approach is allowing us to learn from each site and adapt our management to progressively reduce weeds and reintroduce local flora and fauna.”

LOOKING TO THE FUTURE

Reaching the milestone of 1.5 million plants established over 5 years has been caused for celebration and some reflection as we look forward to the next 1.5 million and beyond that. Many wonderful projects have been undertaken and many groups and individuals can take pride in our shared achievements.

Bare paddocks are being transformed into bio-diverse habitats that emulate the original vegetation of various landscapes and sites across the Adelaide region. The scale of the work is impressive, with over 300 project sites to date. However, an even greater challenge faces us.

Vegetation re-establishment across many thousands of hectares is required in order to redress habitat loss and absorb carbon emissions on the scale required to meet targets identified in South Australia's Strategic Plan.

The Million Trees Program represents an opportunity to take a long-term approach to habitat restoration and the achievements to date form a strong basis for continued success and sustained effort in the future.

Over the next stages of the program, future activities will include:

1. Achieving on-ground results:

- Information gathered by monitoring project sites will be used to continually improve management actions, through an “adaptive management” approach. This data and knowledge will also be used to guide the efforts of other similar projects as the scale of restoration works increases across the landscape.
- Increased monitoring of fauna and habitat research will help assess and improve revegetation methods to ensure effective habitat is being restored.
- A target of 200,000 native seedlings to be planted across approximately 150 hectares each year.

2. Working together:

- A continued focus on informing, engaging and involving the wider Adelaide community and finding new ways to do this, such as through the development and support of the Backyards For Wildlife initiative.
- A target of 30 projects per year to be developed in partnership with the community.

- Maintaining our strong involvement in public events to help provide information and raise awareness about the importance of returning our local native plants to our environment.
- Continuing to create opportunities for the community to get involved through events such as planting days.

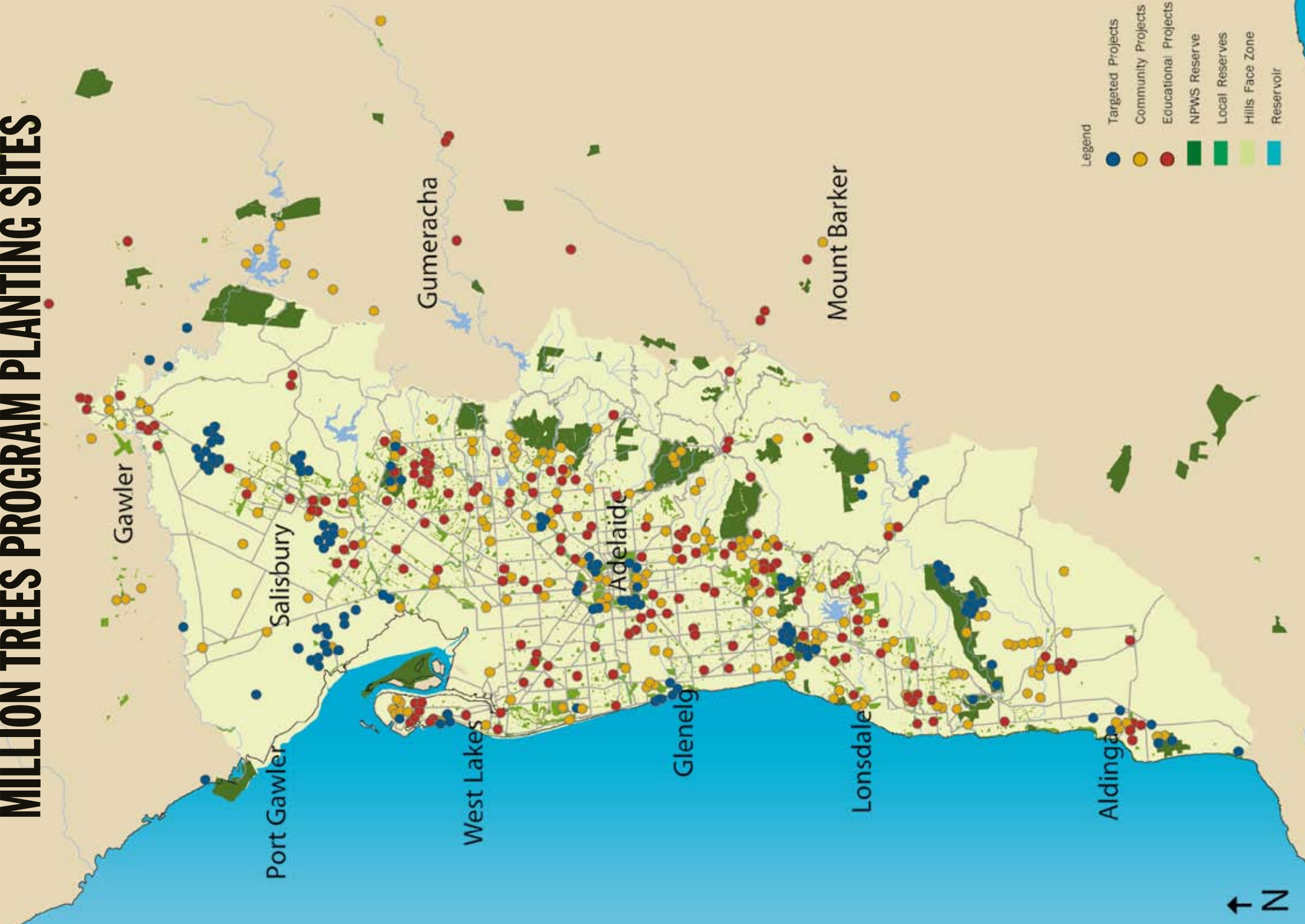
3. Learning through action:

- A continued focus will be put on working with schools to foster and develop greater environmental learning opportunities and improved curricula.
- Greater integration and partnerships with broader environmental education initiatives, including the Sustainable Schools Program and NRM Education.
- Continuing to support and encourage the 160 schools already involved in the Grow A Great School initiative to expand their projects and foster broader environmental learning.
- A target of 20 new school projects engaging 18 new schools each year through the Grow A Great School initiative.

4. Combining our efforts:

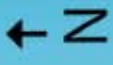
- Partnerships and joint delivery arrangements will continue to be of paramount importance and links will continue to be strengthened with all project partners at all levels.
- A continued emphasis on strategically planned conservation works across government landholdings under the banners of the Cape Borda to Barossa NatureLinks biodiversity corridor and Greenways.
- An increase in the number of research projects being undertaken on program sites by universities and specialist field-based volunteer groups.
- Supporting the State Government's No Species Loss strategy by helping to protect and restore habitat.
- Continuing to improve partnerships between the Department for Environment and Heritage and other major partners, in particular the Department of Planning and Local Government and the Adelaide and Mount Lofty Ranges Natural Resources Management Board.

MILLION TREES PROGRAM PLANTING SITES



Legend

- Targeted Projects
- Community Projects
- Educational Projects
- NPWS Reserve
- Local Reserves
- Hills Face Zone
- Reservoir



CONTACT DETAILS

The SA Urban Forests – Million Trees Program is an initiative of the South Australian Government, managed by the Department for Environment and Heritage, with support from other state agencies, local government, industry and the community.

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