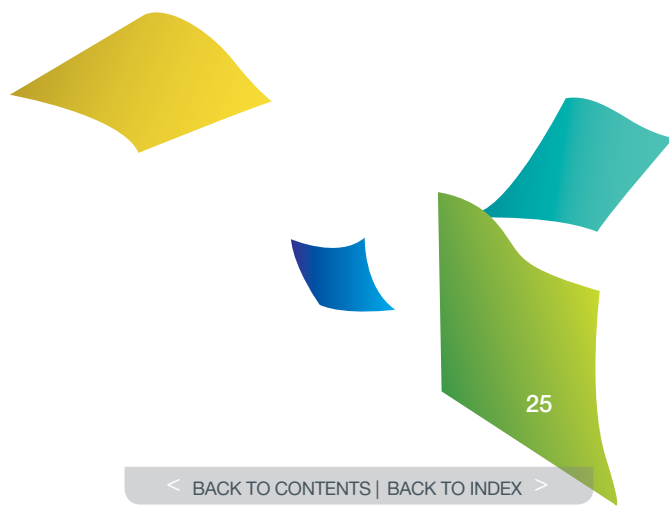




# Caring for our Environment



# Caring for our Environment

A rapidly growing population base provides a variety of challenges when ensuring the region's unique environment and wildlife are protected for future generations. Community consultation continues to indicate the high priority residents place on environmental sustainability.

*To help create a better environment for all, council in 2010/11 conducted:*

- ◆ educational programs aimed at both adults and school children
- ◆ environmental information sessions
- ◆ programs and activities to encourage sustainable living
- ◆ monitoring and detailed environmental mapping to better understand the quality and quantity of our natural resources and what is needed to preserve or enhance them
- ◆ initiatives to reduce the impact of council's own carbon footprint
- ◆ strategies to address predicted impacts of climate change

# Environmental Programs

From encouraging residents to take an active role in nurturing their own local environments, to fun and interactive programs with local schools, council promotes environmental sustainability across the region.

## Land for Wildlife

This voluntary conservation program, supported by council and SEQ Catchments, provides resources to private land holders and community groups that manage land over one hectare. The Land for Wildlife program, through which council currently assists with the management of 5,813 hectares of private land, promotes the development of existing wildlife habitat, as well as the re-establishment of habitat through revegetation and restoration projects. An additional 717 hectares of land was added to the program in the year to 30 June, 2011. A total of 427 properties are registered in the program. The aim of the Land for Wildlife program is to encourage people to know and love their region, its native plants and animals, landscapes and natural history and to share their expertise and experience.

## Backyards for Wildlife

This voluntary conservation program covers land less than one hectare and helps preserve local wildlife habitat and link corridors in the urban environment. To be part of the program, land holders must intend to protect, restore or enhance the biological value of their properties. As at 30 June, 2011, there were 136 properties registered with the program. Interest in the program remains strong.

## Voluntary Conservation Agreement Program

The Voluntary Conservation Agreement (VCA) is a legally binding conservation partnership program in which council assists landholders to establish a registered covenant on the title of their land to provide perpetual environmental protection.

The key objective is the protection of high value environmental land. Benefits to landholders include council assistance with weed management and plantings. The covenant on their land is registered under the Lands Title Act, future vegetation clearing is prevented and council oversees ongoing best-practice management of the property. Council has 11 VCAs with land owners in Moreton Bay Region covering a combined area of 192 hectares. It is working with more residents to finalise covenant documentation and management plans on their properties.

## The Don Perrin Bursary

For the second year, council awarded a \$2,000 bursary to a graduating high school student to support their tertiary environmental studies. The award went to Jackie Hines of Burpengary, who began her Environmental Management degree at The University of Queensland this year. Council provides the bursary to promote environmental studies and to build a well informed and skilled community that actively conserves and lives sustainably within Moreton Bay Region.

## Living with the Environment

Council's environmental education centres – the Caboolture Region Environmental Education Centre (CREEC) at Burpengary, Kumbartcho Sanctuary at Eatons Hill and Osprey House Environment Centre at Griffin – hosted 25 Living with the Environment workshops during the year. Topics presented included making your own nest-box, gum tree identification, ways to save energy at home, native plant propagation, nature photography and insect identification. Council's new Yuraba conference centre, which opened at Kumbartcho during the year, will be used for future workshops.

## Environmental Expos

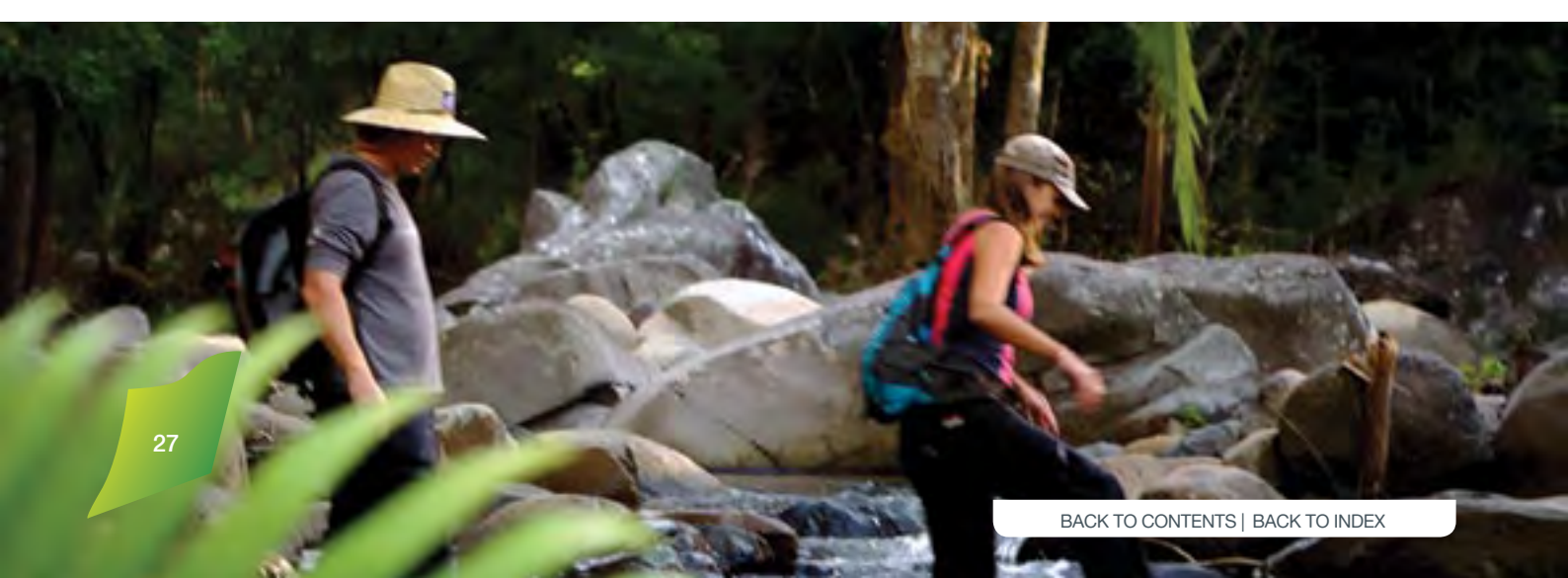
Council promoted several environmental activities at the Lowlands Festival at Osprey House in August and the Sustainable Living Expo at Caboolture Region Environmental Education Centre (CREEC) in June. Both events provided family-focused activities and entertainment and were well supported by the community.

## Clean Up Australia Day

Despite rain affecting some sites, Moreton Bay Region's 2011 Clean Up Australia campaign resulted in 9,800 volunteers collecting 130 cubic metres of litter from 111 sites.

## Natural Areas Management Team

This team undertakes weed control and revegetation programs covering 984 hectares of wildlife habitat throughout 227 parks. The team also has responsibility for regional Bushfire Management and organising special events including National Tree Day.





## Bushcare

Council supports a network of volunteer bushcare groups that revegetate and maintain 60 sites throughout the region. In the year to 30 June, the groups planted about 50,000 plants and removed weeds from large tracts of bushland. The program has grown significantly and the most challenging aspect for council is keeping up with community demand.

## BushPark Neighbours

Residents near urban bushland parks assist council to maintain wildlife habitat by removing weeds and planting native plants. There are currently 32 residents involved and for the year to 30 June, 5,500 plants were planted under this program.

## National Tree Day

This year the annual event attracted 285 volunteers who helped council plant 5,680 trees at nine locations throughout the region.

## South Pine River Project

This ongoing project has now resulted in 111,374 native plants being established as well as effective weed control across 74 hectares. In the year to 30 June, 93 volunteers supported by council planted about 4,400 native plants along nine kilometres of riverbank from Cash Crossing, Albany Creek to Church Road at Eatons Hill, to help restore endangered rainforest.

## Talobilla Park Koala Project

During the year a Green Army workplace trainee team planted 5,000 plants to improve wildlife habitat in Talobilla Park at Kippa-Ring. This activity achieved the targets identified in the Talobilla Park Master Plan.

## Bells Creek Rainforest Project

In 2011 a Green Army team planted 2,500 rainforest plants along the creek bank on the north side of Duffield Road at Clontarf. This work will help improve water quality, attract wildlife and also benefit those who enjoy walking along the creek.



## Education

In-school education modules on biodiversity and energy were provided by council to classes throughout the region.

120 **Biodiversity Education Program** presentations were delivered to 26 schools, which meant about 3,350 students were involved in the program, learning about the value of natural areas and biodiversity.

10 schools benefited from 32 separate **Energy Education Program** presentations. More than 870 students learned about greenhouse gas emissions, energy efficient behaviours and how to reduce energy consumption.

Council's waste education program continued to operate across the community and its **ResourceEd** schools program was a finalist in the 2011 Premier's Climatesmart Sustainability Partnership awards.

*During the financial year the program delivered:*

- ◆ 90 school presentations reaching 6,178 students, eight Materials Recovery Facility school tours and six landfill tours
- ◆ 10 community presentations to 308 residents
- ◆ three community Materials Recovery Facility tours and two landfill tours
- ◆ donations of 22 compost bins and 39 worm farms to schools or community groups

Presentations on sustainable waste practices, recycling, composting, worm farming, reducing packaging and litter, waste facility tours and information on other waste diversion strategies are available to the community and schools as part of council's waste education program. Council works with schools to develop environmental management plans aimed at reducing their waste output by 50 per cent.

# Monitoring and Mapping

Whether it is koala habitat or the health of our waterways, council monitors, records and tracks key species in our natural and built environments. This important information helps council plan and allocate resources to assist biodiversity within the region.

## Protecting Biodiversity – Sustainable Environment Strategy

Council is developing an environmental strategy for managing, protecting and conserving biodiversity in the region. The initial information gathering and drafting phase of the project is complete. Further work will be undertaken in 2011/12 to ensure the strategy aligns with the Moreton Bay Region's Community Plan and other planning documents.

## The Total Water Cycle Management Plan

Council is developing a Total Water Cycle Management Plan that covers waterways, water supply, stormwater networks and wastewater networks. Due for completion by June 2012, it will aim to ensure these resources and systems are managed sustainably into the future.

By identifying the relationships between water catchment areas and council networks, the plan will help balance the water and waste needs of residents and the health of the local environment.

Council is the first local government authority in South East Queensland to begin work on its plan, which is a requirement of the State Government's Environmental Protection (Water) Policy 2009.

A number of existing council projects will be incorporated into the Total Water Cycle Management Plan. These include:

- ◆ The Caboolture River Recovery Plan, which has been developed over the past two years to recommend key actions to assist the river's recovery.
- ◆ Council's stream health monitoring and mapping program which covers all major catchments of the Moreton Bay Region. In 2010/11, the program produced reports and maps of streams with high biodiversity value as well as pollution hot spots.

## Priority Species Report

Council commissioned an independent report to identify species of conservation significance in the Moreton Bay Region. The report recognises 111 species and prioritises them for conservation action planning and monitoring. In 2011/12 council will use the report's findings to help it manage priority flora and fauna species.

## Koala Conservation Partnership

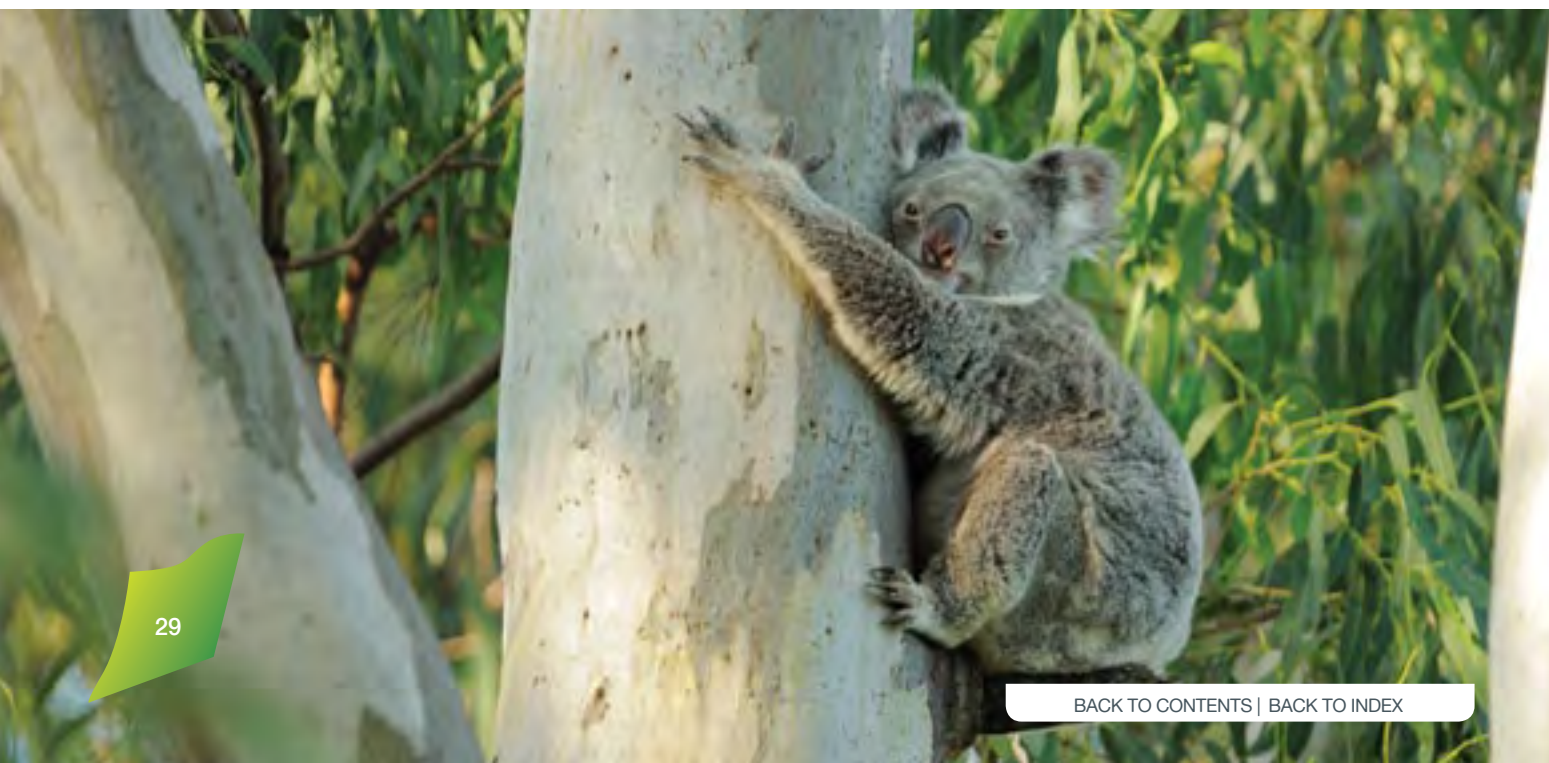
Council has continued to work closely with its partners (South East Queensland Water, South East Queensland Catchments, the Department of Environment and Resource Management (DERM) and the Department of Transport and Main Roads (DTMR)) to coordinate activities and share information on koala conservation issues.

This year the focus was on reinforcing community engagement activities such as boosting attendance at community group meetings, increasing data exchange on koala deaths and seeking feedback from the community on the success of road retrofits, installed koala safety fences and signage. Council also proposed changes to existing local laws to reduce the threat of dog attacks on koalas. The feedback received led to changes in the management of dog off-leash facilities, better signage in koala habitat areas aimed at dog owners and improved information on the locations of important koala corridors.

Council also provided a submission to a national inquiry on local koala populations and the threats facing koala conservation.

## Community Koala Survey Day 2010

Each year residents help council by recording koala sightings. The voluntary survey promotes greater awareness of koalas and the information gathered helps council identify current koala habitats. This year's survey was conducted on 10 October 2010.





## Research partnerships

Council's Research Partnerships Program continues to support collaborative scientific research with educational institutions, community groups and government agencies on issues affecting the environment.

*In 2010/11 council continued its work with:*

- ◆ the University of Queensland to investigate the impact of habitat loss and bushland fragmentation on small mammals and develop planning solutions to mitigate these impacts
- ◆ the Glossy Black Cockatoo Conservancy to increase regional knowledge of this vulnerable species and work towards its long-term conservation in Moreton Bay Region
- ◆ the Queensland Wader Study Group to map and monitor shorebird roosts and wader bird populations along the Moreton Bay coastline
- ◆ the Community and Regional Partners to identify and protect key koala habitat sites and movement corridors
- ◆ the Southern Cross University and the University of Western Australia to investigate the ecosystem health of the Caboolture River and determine sources of nutrient pollution entering the waterway. This project will receive close to \$400,000 in federal funding over the next three years to trace nutrients found in the Caboolture estuary back to their source of origin
- ◆ Griffith University and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to investigate climate change adaptation and model the economics of coastal inundation under climate change scenarios for the Moreton Bay Region



## Bushfire hazard management strategy

Council allocated \$80,000 and received a further \$80,000 in National Disaster Resilience Project funding from the Queensland Department of Community Safety, for the creation of a region-wide bushfire strategy.

This strategy will identify bushfire hazard areas within council's planning scheme and provide comprehensive guidelines for bushfire hazard management on council-managed properties.

The strategy, due for completion before December 2011, will also include community education programs to inform residents about what they can do to make themselves less vulnerable to bushfire threats.

## Acid sulfate soils mapping

Council contributed \$43,636 towards the Queensland Government's detailed Acid Sulfate Soils Mapping project in the Pine Rivers district. Council will use the information in development assessment, strategic planning, infrastructure design and operations, and environmental education activities.

## Beach monitoring

Following the January floods, the Redcliffe beach monitoring program was expanded to include popular swimming areas on Bribie Island. Council's monitoring results continue to be shared with State Government agencies.

## Vegetation mapping

Vegetation mapping – which determines the extent and condition of woody vegetation in the region – has been conducted for the entire council area. The project uses Light Detection and Ranging (LiDAR) technology, a remote sensing technique that transmits short laser pulses to the terrain below. The results will assist council to identify and interpret trends in native vegetation cover, habitat fragmentation, the extent of vulnerable regional ecosystems and areas of riparian vegetation.

## Healthy Waterways

The annual Healthy Waterways Partnership report card delivered in October 2010 found that water quality in Moreton Bay Region had improved in most areas, despite heavy rainfall which caused additional sediment and nutrient run-off into waterways throughout the region.

*Report card results for the Moreton Bay Region:*

- ◆ Caboolture catchment, C plus (from C in 2009)
- ◆ Pine catchment, C (same)
- ◆ Caboolture estuary, D (D minus)
- ◆ Pine estuary, C minus (D+)
- ◆ Deception Bay, D+ (D minus)
- ◆ Bramble Bay, D plus (F)
- ◆ Pumicestone Passage, D plus (C+)
- ◆ Moreton Bay, overall C (D)

# Climate Change

Council adopted a climate change policy in June 2010 and has continued to develop a strategy which will help it reduce greenhouse gas emissions.

Addressing climate change requires a whole-of-council approach and includes areas such as disaster management, strategic land use planning, infrastructure planning and construction.

Council's commitment to reducing greenhouse gas emissions is being actively addressed through various programs and initiatives.

## Gas extraction flares

In 2010, gas extraction flares were installed at Bunya, Caboolture and Dakabin landfill sites as part of a \$3.2 million project.

The flares better manage greenhouse gas emissions from council's waste operations while also reducing potential impacts on the environment and local communities.

The Bunya, Caboolture and Dakabin landfills represent the largest source of greenhouse gas emissions across all council activities, due to the methane produced as buried waste material decomposes.

The Bunya site gas extractor was completed in late August 2010 and started flaring in September 2010, while Caboolture and Dakabin were completed in October 2010 and started flaring in November 2010.

The extracted landfill gas is currently destroyed through flaring, which is an essential first step in both ascertaining and reducing the overall landfill gas emissions from council's facilities. It is estimated that more than 70,000 tonnes of carbon dioxide will be abated from landfills this year through the scheme.

The gas extraction systems at Bunya, Caboolture, and Dakabin have the potential to generate power and options are being investigated.

## Energy efficiency upgrades

Work continued to improve the energy efficiency of council's administration buildings. Towards the end of 2010/11, council upgraded lighting in the Strathpine administration centre. The upgrade involved replacing traditional fluorescent lighting with energy efficient alternatives. The new lights don't generate heat and are configured to direct light to areas where it is needed.

Council will monitor the energy use in the coming financial year to determine actual savings.

### *In the coming year:*

- ◆ Council is planning to upgrade air-conditioning at 33 King Street, Caboolture, which is expected to result in power savings of around 15 per cent.
- ◆ Redcliffe's council administration centre, cultural centre and library are to be connected to a new building management system in July 2011 to help reduce energy use.



## Street light alternatives

In 2010/11 council revised its guidelines on street lighting in consultation with other local, state and federal authorities as well as the private sector. The guidelines aim to improve the quality of the street lighting network without incurring additional expenses.

The region currently has around 42,000 street lights. This total is increasing by approximately seven per cent a year to service the region's growing population.

Street lighting audits are allowing council to maintain or improve current lighting standards while also identifying lights that can be removed or modified.

For every six lights removed or modified, council's emissions are reduced by the equivalent of a family sized four-wheel drive. To date, council has been able to remove over 4,000 lighting assets, resulting in savings of almost \$1.4 million. It has also identified a further 12,000 lighting assets that could be removed or modified to create a potential future saving of more than \$2 million.

In conjunction with other local authorities and Energex, council is examining other ways to reduce costs and emissions. These options include using solar panel arrays linked to the electricity grid, rather than stand alone solar facilities.



## New waste reduction schemes

Council introduced or trialled several new schemes during the year to increase the amount of waste being recycled.

**Palm Lake Resort Recycling Program:** A joint initiative with the Deception Bay retirement resort and the Department of Environment and Resource Management resulted in 420 residents now recycling their household waste. Statistics collated after five months of operation showed that recycling had reduced the resort's waste output by 37 per cent or the equivalent of 52 tonnes per year.

**e-waste collection:** In July 2010, council trialled e-waste collection at four waste facilities. A total of 26.44 tonnes was collected at a cost of \$29,500. Since the trial, e-waste drop off has been available as a free waste service at the Dakabin and Bunya waste facilities.

**Caboolture region transfer station resource recovery trial:** From 30 August to 31 December, large skip bins for the collection of residential and commercial waste from smaller waste facilities have been taken to Caboolture for sorting and recovery of e-waste, timber and cardboard, steel and concrete. More than 1,981 cubic metres of waste was collected and the trial is expected to include other Moreton Bay waste facilities.

## Environment

Key performance indicator	Target	Achieved
Percentage of planned environmental monitoring activities completed	90%	√ 99%
Reduction in energy consumption across major council buildings	3%	√ 7%
Percentage of waste collected at waste facilities that is recycled	45%	√ 51%

## Recycling and reducing our waste

*In 2010/11, Moreton Bay Regional Council serviced:*

- ◆ 136,992 household general waste wheelie bins each week
- ◆ 133,242 household recyclable waste wheelie bins every fortnight

During the year council was able to collect, manage and recycle 20 per cent of the total general waste collected from household wheelie bins. Council's recycling and recovery programs have contributed to an average of 45 per cent of recyclable waste being consistently diverted from landfills.

*Resource recovery programs at council's waste facilities cover:*

- ◆ green waste
- ◆ free mulch to residents
- ◆ timber
- ◆ clean fill
- ◆ metal (ferrous and non-ferrous)
- ◆ concrete
- ◆ e-waste
- ◆ goods donated to the Treasure Markets at Caboolture, Dakabin and Bunya
- ◆ the recycling of tyres, wet cell batteries, chemicals, used chemical drums, oil and gas bottles

In an ongoing partnership with the Department of Environment and Resource Management, council is also actively recovering recyclable items at major festivals and events.