

2010-2011

Bushland and Biodiversity Annual Report



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1.0 Introduction and context

Hornsby Shire covers a total of 51,000 hectares of which approximately 69% is bushland. The Bushland and Biodiversity Team is responsible for management of 276 natural areas that are owned by Council and Crown land where management is devolved to Council. The natural areas are primarily bushland with some natural wetlands. Council also jointly manages the 3,830 ha Berowra Valley Regional Park with National Parks and Wildlife Service, and provides assessment, education and incentives to private landowners for biodiversity conservation. The Team is therefore responsible for management of 5,950 ha of public bushland and providing biodiversity incentives and advice for 29,240 ha of private bushland. Council protects, restores, manages the fire risk and promotes bushland recreation in its local bushland guided through legislation and its adopted Biodiversity Conservation Strategy, on ground bush regeneration, bushfire management and a large volunteer Bushcare Program.



Bushwalkers on Hornsby Heritage Steps

The more significant bushland reserves are:

Arcadia	Arcadia Park, Calabash Road Bushland, Calabash Point Bushland, Halls Creek Bushland
Asquith	Michigan Avenue Bushland, Mills Avenue Bushland
Beecroft	Beecroft Reserve, Byles Creek, Chilworth Reserve, Castle Howard Bushland, Edwards and Lamorna Bushland, Fearnley Park, Orchard Road Park
Berowra:	Berowra Community Centre Bushland, Combora Circuit Bushland, Evanda Street, Bushland
Berowra Creek	Bar Island, Neverfail Bay Bushland
Berowra Heights	Berowra Park, Cunio Point Bushland, Turner Road Bushland
Berowra Waters	Furber Park
Berrilee	Bay Road Bushland, Woolwash
Brooklyn	Brooklyn Park, Brooklyn Railway Bushland, McKell Park, Seymours Creek Bushland
Canoelands	Pumpkin Point Creek Bushland
Carlingford	Ray Park
Castle Hill	Upper Pyes Creek Bushland
Cheltenham	Cheltenham Bushland
Cherrybrook	Kanangra Crescent Bushland, Lakes of Cherrybrook, Pyes Creek Bushland
Dangar Island	Kiparra Park
Dural	Muraban Road Bushland, Pyes Creek Bushland
Epping	Dence Park, Midson and Plympton Road Bushland, Terrys Creek Bushland, Vimiera Park
Fiddletown	Bloodwood Road Aboriginal Area, Calabash Point Bushland, Collingridge Bushland Sunnyridge Road Bushland

Galston	Fagan Park (including Carrs Bush), Galston Park, Galston Recreation Reserve and Hayes Park, Knights Road Bushland
Glenorie	Campbell Crescent Bushland, Glenorie Park
Hornsby:	Florence Cotton Reserve, Hornsby Park, Manor Road Bushland, Reddy Park, Rosemead Road Bushland, Waitara Creek Bushland
Hornsby Heights	Crosslands, Ginger Meggs Park, Rofe Park Bushland, Somerville Road Bushland
Laughtondale	One Tree Reach Wetland
Maroota	Molesworth Reserve, Wisemans Ferry Lookout Bushland, Wisemans Ferry Tip (decommissioned – bushland parcel)
Middle Dural	Forsters Reserve
Mount Colah	Berry Park Bushland, Bimbil Avenue, Excelsior Bushland, Judith Ave Bushland, Murralong Road Bushland, Oxley Drive Park, Sue Place
Mount Ku-ring-gai	Mount Ku-ring-gai Park
Pennant Hills	Azalea Grove Bushland, Britannia Street Bushland, Observatory Park, Tristania Way Bushland
Normanhurst	Begonia Road South Bushland, Kenley Park, Normanhurst Park, Pine Street Bushland, Waitara Creek Bushland
North Epping	North Epping Oval, Woods Street Oval
Thornleigh	Dog Pound Creek Bushland, Larool Crescent Childrens Centre (bushland parcel), Larool Creek Bushland
Westleigh	Dog Pound Creek Bushland, Quarter Sessions Road Bushland, Western Crescent Playground (bushland parcel)
West Pennant Hills	New Farm Road Bushland
Wisemans Ferry	Singleton Mill Road Bushland and Wisemans Ferry Cemetery (bushland parcel)

2.0 Biodiversity planning and management

2.1 Biodiversity conservation strategy

The Hornsby Shire Biodiversity Conservation Strategy (2004, updated 2006) guides Council's priorities for undertaking conservation actions. Its objectives are:

- To conserve species, populations and communities of native plants and animals, and allow for their continued evolution and survival in the Hornsby Shire in context of the region.
- To achieve an improvement in the quality and extent of existing indigenous vegetation in Hornsby Shire.
- To collect and update biodiversity conservation information.
- To develop key community incentive and partnership programs to maintain biodiversity on private properties in the Hornsby Shire.
- To ensure Council activities integrate with other agencies to achieve biodiversity conservation outcomes.
- To ensure environmental planning instruments and processes provide a strategic approach to achieving biodiversity conservation outcomes.
- To maintain and improve the management of biodiversity on publicly owned land in Hornsby.
- To effectively mitigate threats to conserving biodiversity in Hornsby.
- To conserve and recreate connectivity across fragmented landscapes.
- To develop and implement effective systems to fund and manage biodiversity conservation actions.

In Hornsby Shire there are over 1,000 native plants and 388 terrestrial vertebrate animals. Of these, there are 26 threatened plants and 42 threatened fauna known or likely to occur.

Annually ten high priority actions are implemented from the Biodiversity Conservation Strategy. A review of actions for the period 2004-2009 was undertaken and the highest priority actions were planned for 2010-15 within that time frame. The major achievements for 2010-11 included:

- Bushland restoration of 231 ha equating to 16.3% of Council managed bushland compared to 12% last year:
 - contractors restored 160 ha in 63 Bushland Reserves through Council and grant funds, and
 - 777 Bushcare volunteers restored 71 ha at 123 sites.
- Completed upgrades to the nursery resulting in:
 - propagation of 38,705 plants representing 24% increase prior to commencement of the upgrade
 - plant production by 35 volunteers contributing 2505 hours
 - expansion into estuary plants and advanced tree production
 - provided 5433 free native plants to 1210 residents promoting biodiversity in local gardens
 - despatched a total of 32,465 plants for the year.
- Provided a refurbished Earthwise Cottage as a sustainable demonstration venue for the majority of the 29 workshops delivered to 444 residents.
- Commenced 2 studies to assist in adapting to Climate Change:
 - Native Flora and Fauna Conservation Study and Management Plan
 - Estuarine Wetland and Migratory Bird Survey and Priority Habitat Mapping

- Facilitated partnerships:
 - Year 2 of the Habitat Connectivity grant program
 - restored 7.6 ha of public and private bushland, over half included endangered Turpentine Ironbark Forest and Blue Gum High Forest,
 - revegetated 9,000m² to enhance connectivity and strengthen habitat corridors,
 - held 6 workshops on bushland restoration, property management and planning with 166 residents participating.
- Completed 'Greenstyle' in home advice on sustainability and backyard biodiversity:
 - 174 household assessments with 89% increasing sustainable activities, 66% were new participants in a Council program and 14% were from non English speaking backgrounds.
- Minimised environmental impacts on native flora and fauna through:
 - Rapid response to the Myrtle Rust preparing a best practice Action Plan, controlling outbreaks, protecting significant plant species and vegetation communities and educating staff, contractors and residents
 - Assessed 78 Development Applications, 50 Tree Applications and 30 breaches of illegal clearing
 - Responded to 399 private property Noxious Weed enquiries and requests inspecting 269 properties; undertook grant works for public land Noxious Weeds including Tussock Paspalum, vines and Boneseed.
 - Revegetated 10,900 sqm compared to 7,750 sqm lost to development
- Bushland recreation:
 - 32 guided bushwalks for 362 residents
 - 6 new self-guided bushwalk brochures and 1 translated to Korean and Chinese
 - upgraded walking tracks that link to the Great North Walk
 - constructed the new Bar Island Jetty
 - 12 tracks over 49 kms in length with interpretive signs
- planning for the Hornsby Mountain Bike Track
- planning for the Hornsby Heritage Step Restoration.
- Completed bushfire mitigation measures in a sustainable manner in Bushland Reserves:
 - Installed/managed 55 Asset Protection Zones and Works Access Lines affording protection to 220 properties along an interface length of 6,180m immediately adjoining Council bushland, compared to 10 APZs prior to the preparation of the Manual Works program
 - upgraded 12 Fire Trails including works on approximately 4.7km of trails, 4 new entrances and the provision of 6 new gates
 - completed 5 Hazard Reduction burns on Council land despite wet weather, 17 environmental assessments and on-ground works for burn preparation
 - issued 714 permits to burn on private land and 9 breaches
 - educated 60 residents at 7 fire prone locations.
- Completed the 'Native Vegetation Development Control Plan Chapter' and reviewed the Green Offsets Code to facilitate more flexible and improved biodiversity planning outcomes through the Local Environment Plan.
- Achieving additional income of \$1,441,428 to achieve bushland management, restoration and enhanced recreational experience of Hornsby Shire's bushland:
 - 25 grants and sponsorship commitments of \$1,308,173 being a 75% increase since last year
 - received 6 offsets of \$133,255 being a 50% increase since last year
 - 17 grants were implemented through grant funds of \$659,119.

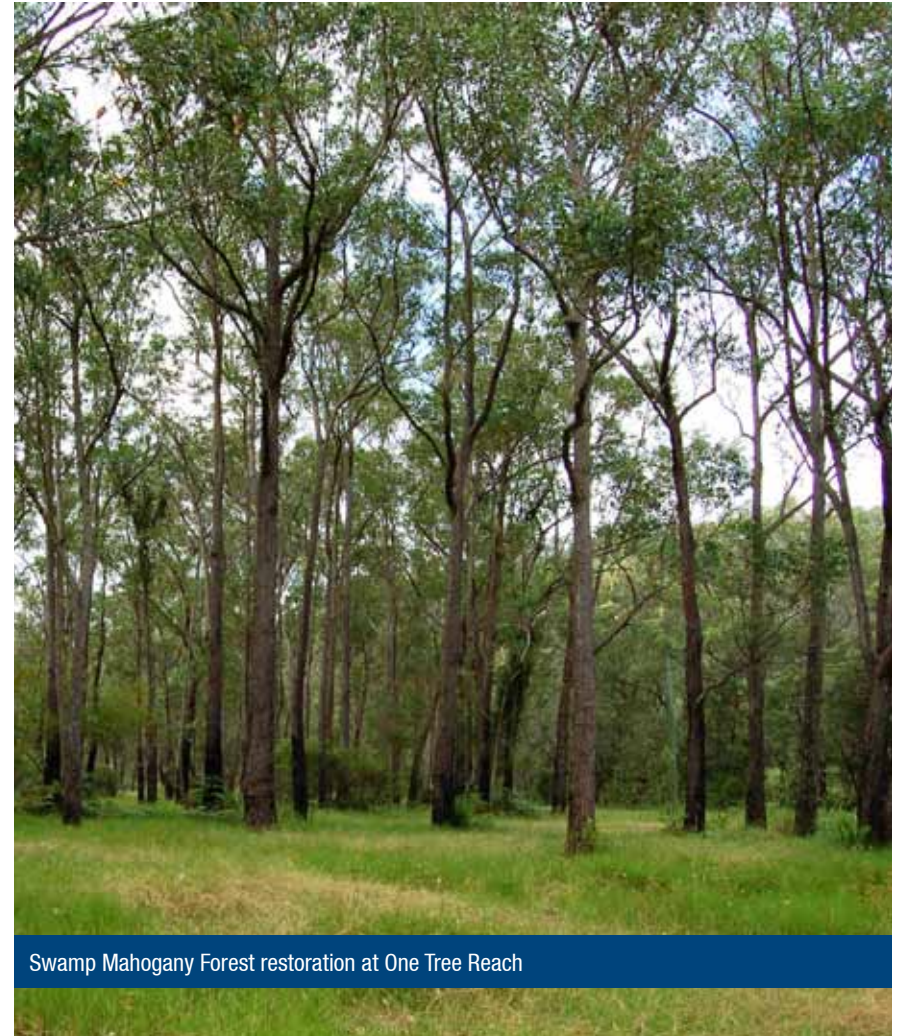
2.2 Plans of management for natural areas

In the 2010-11 year, actions identified in Plans of Management for natural areas covering 276 Bushland Reserves were implemented. One key action from the Bar Island Plan of Management was the reconstruction of the jetty through funding from the Better Boating Program and other grants sourced by the Bushland and Biodiversity Team. It facilitates access to the restored Island which has significant natural and cultural heritage, being the site of the former St John's Church, now represented by the remaining chimney, a historic cemetery which is the resting place of early pioneers and members of the Aboriginal community, an Aboriginal midden and a memorial. During the year contract bush regeneration of the woodland and endangered saltmarsh occurred through an Estuary Management Grant and a Coastal Communities Grant.



Bar Island Jetty reconstructed

Another action was the restoration of the One Tree Reach Wetland through two grants from the Fish Habitat Action Program and the Caring for our Country. The Crown land section had previous indications of the presence of acid sulphate soils and this investigation was expanded with a view to remediation. The Swamp Mahogany Forest area was restored with contract bush regeneration along the road frontage and propagation of long-stemmed Eucalypts for revegetating previously mown areas.



Swamp Mahogany Forest restoration at One Tree Reach

2.3 Development applications, environmental assessments and Land and Environment Court

78 development applications were assessed for their impacts on biodiversity by the Bushland and Biodiversity Management Team during the year, up from the 66 applications over the last financial year. Over 50 tree applications have been assessed which is a significant increase from under 20 received the year before on behalf of the Tree Management Team. This is a response the NSW Office of Environment and Heritage's direction to consider the impacts to the local population via and Assessment of Significance ('seven part test') for single EEC trees. The Bio-planning Unit has established a cooperative working relationship with the Tree Management Team for these assessments and further ecological advice. Three Reviews of Environmental factors were undertaken internally for other areas within Council.

The most significant issue facing biodiversity and DA assessment is the increasingly limited amount of land available for providing a complying building envelope in minimum sized lots constrained by the presence of large remnant isolated EEC trees. Therefore, a majority of the subdivision and dwelling house applications request the removal of singular isolated trees in addition to having cumulative impacts on remaining trees. These impacts are not addressed correctly within consultant reports which nearly all consider that the removal of a singular tree from an isolated patch of BGHF would not have a significant impact upon the local population of BGHF, contrary to bio-planning unit's assessment and external ecological advice.

This year has seen the application of the Green Offsets Code via the use of Voluntary Planning Agreements for 3 development applications in Beecroft involving Blue Gum High Forest. The Code was applied where Council considered that a favourable biodiversity outcome would not be achieved within the Land and Environment Court (LAEC). The Bio-planning Unit did not represent Council in LAEC this year which is change from previous years where on average 3 court proceedings with an ecological lead have taken place. However, just as much work has been required in negotiating offset works.

A working group between the bio-planning officers of other northern Sydney Council LGA's (Warringah, Hills, Kuring-gai, Manly and Pittwater) was initiated by HSC bio-planning unit this year to exchange planning tools and share experiences with development assessment and biodiversity conservation.

A significant project requiring environmental assessment by the team in the Hornsby Local Government Area in 2010-2011 was the M2 widening requiring compulsory acquisition of Council bushland in Beecroft Reserve, access to other parts of Beecroft Reserve for construction activities, the loss of Blackbutt Gully Forest locally significant vegetation, impacts on threatened bats, removal of *Rhodamnia rubescens* a significant plant species due to its infection with Myrtle Rust, loss of the orchid *Chiloglottis trapeziformis* and the relocation of the walking track.



Threatened Eastern Bent-wing bats in roosting in the M2 roadway affected by widening

2.4 Illegal land clearing and tree loss

The Bushland and Biodiversity Branch responded to over 30 illegal clearing breaches that had significant impacts on native vegetation, throughout the year. In addition to these The Bushland and Biodiversity Team have been assisting Council's Tree Management Officers when assessing the impacts of tree removal on threatened biota, especially in the case of individual and relatively small group of trees that form part of Critically Endangered Communities (CEECs) or Endangered Ecological Communities (EECs), such as Blue Gum High Forest or Turpentine-Ironbark Forest. Some of the key issues for conservation is that CEECs and EECs occur primarily on private land, are often heavily impacted and their condition severely compromised by urban development, are poorly represented in Council's parks and reserves and National Parks estate and there is little suitable area for replanting to offset their loss. Unfortunately there are regular occurrences of trees being illegally removed in urban and rural areas of the Shire, with particular difficulties in seeking to monitor and address compliance matters in the rural districts.

Significant large-scale illegal clearing issues observed in the rural areas have often involved the illegal dumping of soil and rock on sloping lands at the rear of dwellings. The impacts of this fill, associated works and compaction result in indirect tree loss, increase in weed growth and other potential environmental pollution problems (see photograph below). The team has assisted the Compliance Team with technical restoration advice for clean up and prevention orders administered under *Protection of the Environment Operations Act 1997*.



Indigenous species such as Sydney Blue Gum (*Eucalyptus saligna*) are at risk due to ongoing unapproved removal and require additional protection

2.5 Flora and fauna

The NPWS Wildlife Atlas indicates that 20 threatened fauna species (eight mammals, eight birds, two frogs and one reptile) listed under the NSW Threatened Species Conservation Act 1995 reside within the bushland of Hornsby Shire and a further ten threatened species occasionally visit. To better understand, manage and conserve the Shire's flora and fauna, two studies and community surveys were undertaken this year.

Estuarine and migratory wetland bird survey and priority habitat mapping: in conjunction with the Lower Hawkesbury Estuary Management Committee, Council has received a grant from the NSW Department of Environment, Climate Change and Water (DECCW) Coastal and Estuary Management Programs to investigate the impacts of climate change on estuarine wetland and migratory waterbirds in the Lower Hawkesbury Estuary.



Egrets near Wisemans Ferry

The Hornsby Shire Biodiversity Conservation Strategy (2006) and Bionet (DECCW 2009) identifies 5 bird species listed as endangered, 15 bird species listed as Vulnerable under the TSC Act 1995 and 3 species covered by the migratory provisions of the EPBC Act 1999 have been recorded around the Lower Hawkesbury estuary. Despite this data there are still significant data gaps in known estuarine bird distribution and abundance throughout Hornsby Shire. A comprehensive assessment of migratory species and potential habitat is therefore required in the Lower Hawkesbury. The final report is expected to be submitted to Council in 2012.

Initial results have identified over 30 individual shorebird, waterbird and migratory birds along the Lower Hawkesbury. This information will assist Council in developing appropriate future management actions to ensure the long-term survival of these and other bird species.



Glossy Black-cockatoo at Berowra Waters

Native Flora and Fauna Conservation Study and Management Plan: a Shire wide study was commissioned to survey, conserve and monitor terrestrial native flora and fauna in the Shire providing updated information and addressing a number of actions in the Biodiversity Conservation Strategy 2006, Threatened Biota Conservation Plan 1999 and DECCW Priority Action Statements (PAS) and actions from Recovery Plans for the Hornsby LGA. The study will provide information on species diversity and current range to assist the Hornsby Shire Climate Change Adaptation Strategy (2010) which requires the assessment of potential impacts of climate change on vegetation communities within the Shire.

Initial results have indicated the presence of isolated patches of Endangered Ecological Communities (Blue Gum High Forest and Sydney Turpentine Ironbark Forest). Endangered

fauna species have also been observed including the Gang-gang and Glossy Black-cockatoo, Swift Parrot and Little Lorikeet. The final report is expected to be submitted to Council in early 2012, the conclusions of which will direct the future management of Council's bushland reserves.

Council staff also contributed to the collation of data. Information gathered during various site inspections and assessments have provided valuable information on the location of endangered flora and fauna. Significant new populations of the threatened plant species *Tetradlea glandulosa*, *Lasiopetalum joyceae* and *Grevillea parviflora* ssp. *supplicans* have been identified by staff while undertaking vegetation surveys in the rural districts of the Shire.



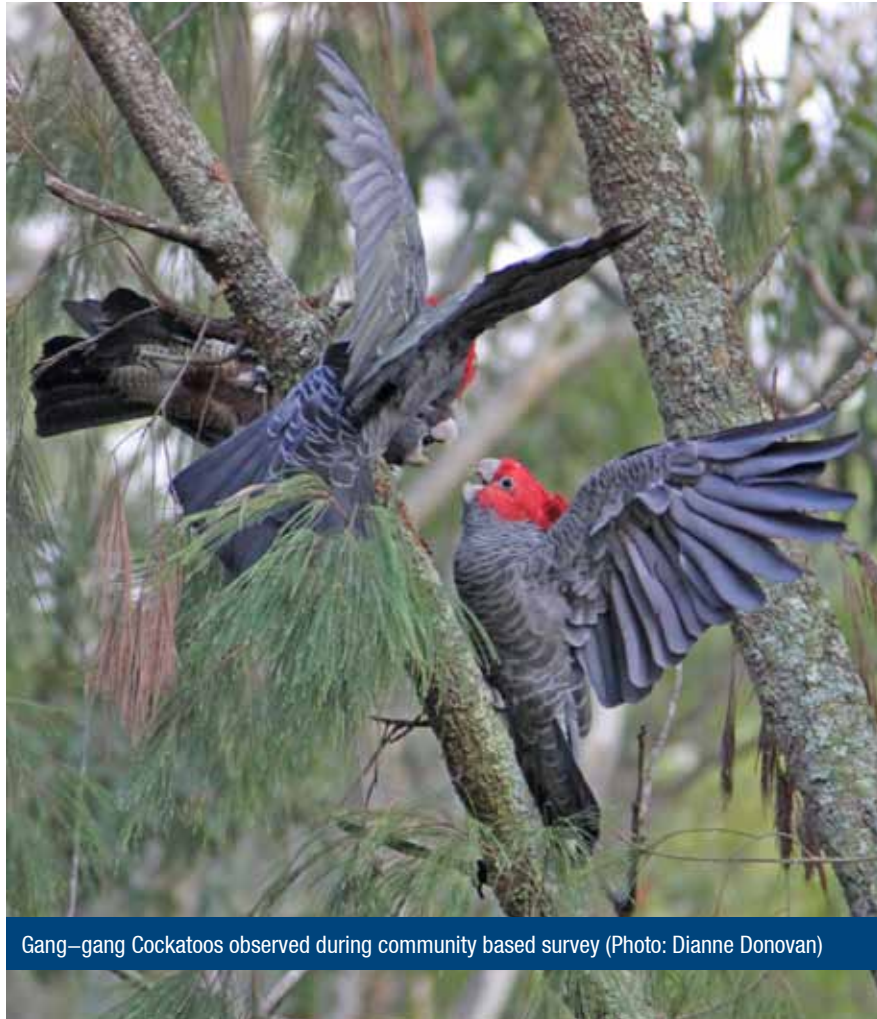
New population of *Grevillea parviflora* ssp. *supplicans* located in Berrilee



New population of *Tetradlea glandulosa* located in Berrilee

Endangered Gang-Gang Cockatoo population: a community-based survey was effectively implemented this year with up to 12 new observations within the southern areas provided by residents and will be uploaded onto the NSW Atlas of Wildlife (administered by NSW OEH) .

Council also sought input from the general community to assist with identification and sightings of rare species in their local environment. The flyer to the right was distributed to residents in the rural lands area in December 2010.



Gang-gang Cockatoos observed during community based survey (Photo: Dianne Donovan)



HORNSBY
SHIRE COUNCIL

Wanted

Bush stone-curlew

A photograph of a Bush stone-curlew standing in a natural habitat. The bird is tall and slender with long legs, a long neck, and a long, thin beak. Its plumage is mottled with brown and grey streaks. The background shows a forest floor with dry leaves and some green plants.

photo: Stewart Macdonald

Have you seen this bird?

Hornsby Shire Council is on the lookout for the bush stone-curlew in the Galston, Arcadia, Berrilee and Glenorie areas.

About the bush-stone curlew

The bush stone-curlew, also called the bush thick-knee, is an endangered species which is susceptible to predation by foxes, cats and dogs and modification of habitat by grazing, removal of timber, fire and the proliferation of weeds.

If you have seen this bird in your area, in particular roosting or nesting, we would like to hear from you. In the past year the species has been reported at Arrunga Road, Arcadia and it is possible it inhabits our local woodlands and grasslands.

Identifying a bush-stone curlew

- About 55cm tall
- Grey to light brown back, marked with black blotches, and a streaked rump. It has tan and white underparts with dark streaks and a black band that runs from near its eye down its neck
- Large, bright yellow eyes
- Hunch-shouldered stance on long, spindly legs
- When disturbed it lies flat on the ground with its head and neck outstretched
- Its call is a loud, eerie wailing "wee-loo", mostly heard at night
- Lives in woodlands and grasslands, particularly active on moonlit nights
- Feeds on insects and small vertebrates, such as frogs, lizards and snakes

To report sightings

Call Council's Bushland and Biodiversity Team on 9847 6832 or email bushland@hornsby.nsw.gov.au.

Significant and new fauna records have been identified during 2010-2011

(Common name):

- Barking Owl
- Powerful Owl
- Sooty Owl
- Eastern Pygmy Possum
- Feathertail Glider
- Spotted-tailed Quoll
- Varied Sitella
- Figbird
- Noisy Friarbird
- Eastern Bent-wing Bat
- Bush-stone Curlew
- Australasian Bittern
- Greater Broad-nosed Bat
- Gang-gang Cockatoo
- Glossy Black Cockatoo
- Yellow-bellied Sheath-tail Bat
- Large-footed Myotis
- Eastern Freetail-bat
- Giant Burrowing Frog
- Red-crowned Toadlet
- Square-tailed Kite
- White-bellied Sea Eagle
- Little Eagle
- Little Lorikeet

Monitoring of these species present is an important tool for the effective long-term management of their habitat. Development, land clearing, exotic species and climate change are some of the key threatening processes that are likely to impact on these species' long-term survival in our bushland. Council is designing a threatened Eastern Pygmy Possum nest box monitoring program in consultation with Warringah Council and State Forest NSW Ecologists that are undertaking a similar program.

2.6 Native tree and vegetation DCP chapter

Council resolved to adopt Clause 5.9 to protect Trees and Native Vegetation in the new Local Environment Plan (LEP) and through the new comprehensive Development Control Plan (DCP).

The adoption of Clause 5.9 in the new LEP provides for the development of a Preservation of Trees and Vegetation element within the new DCP. As a result of this a new Preservation of Trees and Vegetation element has been written in collaboration with Bushland and Biodiversity, Parks and Landscapes and Planning staff. The new DCP element outlines various control measures and standards that are required to be considered and implemented for the protection of trees and vegetation during design and development of land. It has been proposed that the tree preservation measures within this element be implemented through the current Tree Preservation Order (TPO) prior to the implementation of the new LEP and associated DCP. Bushland and Biodiversity and Parks and Landscapes staff have continued to work together to develop this amended TPO in order to provide adequate protective measures for the indigenous trees of Hornsby Shire while enabling the removal of non-indigenous trees without consent. Due to changes to the natural range of species as a result of climate change and the contraction of their range due to land clearing it is envisaged that the list of protected trees will be reviewed on a regular basis to ensure adequate protection for indigenous and threatened plant species as more information becomes available.

2.7 Offsets code

Within the 'Bushland Shire' there are significant areas of bushland located on private land and it is inevitable that development of these lands will have cumulative losses of native vegetation. Council has developed a Green Offsets Code in order to limit impacts of development and where development does impact on native vegetation that a form of offset is provided. This policy has been reviewed on a regular basis with valuable insights provided from some initial attempts to implement the policy. The updated policy was approved by Council In March 2011.

The principles of this policy are:

Table 1: Principles

The Principle of Avoid, Minimise and Mitigate: Offsetting should only be considered once all efforts to avoid, minimise and mitigate any negative impacts have been exhausted.

The Precautionary Principle: In conducting an offsetting action the precautionary principle should be applied so that a cautious and conservative approach is taken towards risk where there is uncertainty or lack of scientific confidence in an action.

The Principle of Net Gain: This code should lead to a net gain and improve the condition of the environment. The primary objective of an offset activity should be to create, enhance, or protect in perpetuity ecologically viable habitat for locally endemic species.

The Principle of Avoiding the Effects of Cumulative Impacts: Offsetting should not be used as a justification for granting approval to developments, where the cumulative environmental impacts of that development are greater than the benefit to be obtained from the offset action.

The key principle that is most often disregarded when attempting to implement this policy is the need to 'Avoid, Minimise and Mitigate'. It is essential that any development that may seek to implement the policy has demonstrated these principles. Council is the determining body when deciding if the implementation of this policy is suitable. If Council deems that these principles are not going to be upheld then offsetting is not an option.

Recent development proposals submitted to Council suggest that this key principle is often ignored by developers, with proposals already containing an offset without any discussion of avoidance or alternative options as is required under this policy.

Throughout 2010-11 over 120 applications for development that impact on native vegetation were referred to the Bushland and Biodiversity Branch. In the majority of cases vegetation impacts were minimal and offsetting could occur on site through appropriate landscaping. A minority of developments had a larger impact on native vegetation and these impacts were able to be mitigated on site through approved Vegetation and Restoration Management Plans. There were three developments where the impacts on native vegetation were of a significant nature and Council sought to implement the Green Offsets Policy to offset vegetation losses.

One of the offsetting options within this policy is the use of Voluntary Planning Agreements (VPA). VPA's enable the land owner to offset the loss by providing practical, managerial and financial offsets through a legally binding agreement. There are currently three VPA's being prepared to provide offsets on public land for development impacts on private land. The implementation of these VPA's is expected to begin in 2011-12.

In 2010-11 Council has implemented several offset projects as a result of development impacts. The construction of a new platform at Berowra railway station impacted on native vegetation and has been offset by providing for bush regeneration works on 0.45 hectares of Sydney Sandstone Ridgetop Woodland at Mount Kuring-gai Oval. Other offsets that Council is managing include Habitat Protection works for *Epacris purpurascens* var. *purpurascens* at Cheltenham Oval and Habitat Protection works for *Darwinia biflora* at Ron Payne Reserve (North Epping) and Berry Park (Mount Colah).

3.0 Bushfire management

The Bushland and Biodiversity Team has a significant responsibility for bush fire management in Hornsby Shire with 22,000 properties in the Shire being within bushfire prone land. A large proportion of Hornsby Shire has been rated as having extreme bushfire risk and a 47km interface occurs between public land and developed areas in the Hornsby LGA, with 27km being Council managed bushland. Council is the local authority under the Rural Fires Act and is responsible for the prevention, mitigation and suppression of bush fires in the LGA, which is delegated to the RFS through a service agreement. Council is also a member of the Bush Fire Management Committee (BFMC) responsible for identification, planning and treatment of bush fire risk management through the Bush Fire Risk Management Plan and the Annual Fuel Management Program.

The Bushland and Biodiversity Team is primarily responsible for addressing the bush fire risk on land managed by Council and for controlling burning on private land through the issue of permits.

3.1 Service agreement

Following the signing of the new Service Agreement with the NSW Rural Fire Service and the Zoning Agreement between Hornsby and Ku-ring-gai Councils in May 2010, the two Councils commenced discussions foreshadowed in the agreement for more equitable sharing of costs across the zone.

3.2 Implementing the bushfire risk management plan on Council bushland

Implementing the Hornsby Ku-ring-gai Bush Fire Risk Management Plan guided the hazard reduction, manual fuel reduction, education and other works, following adoption of the Plan earlier in 2010. During the 2010-2011 financial year the following activities were undertaken in the Hornsby LGA:

Manual hazard reduction

The Hornsby Shire Council Bushfire Risk Mitigation Manual Works Program 2010-2015 was endorsed by Council and tabled to the Hornsby Ku-ring-gai Bushfire Management Committee.

Under this program the following scheduled works were undertaken with assistance of grant funding from the Bushfire Mitigation Fund:

- Treatment of 44 Asset Protection Zones representing an interface length of 6,180m and affording protection to 220 properties immediately adjoining Council bushland; and
- 10 Permanent Access Lines were installed and completed.

Hazard reduction burns

During the year Council undertook preparation for all burns scheduled for completion under the Hornsby Ku-ring-gai Bush Fire Management Committee Works Program (Prescribed Burns) 2010-2011 including:

- Seventeen (17) environmental assessments completed for hazard reduction burns identified; and
- On-ground site preparation for the majority of the scheduled burns.

Due to wet weather only 5 burns were completed:

- Three (3) hazard reduction burns completed in Fire and Rescue NSW district:
 - Beecroft Park South
 - Mountside
 - Dence Park
- Two (2) hazard reduction burns completed in NSW RFS district:
 - Clovelly Road (partial)
 - Brooklyn

Of particular note were the three hazard reduction burns facilitated by Council working very closely with the NSW Fire and Rescue (formerly NSW Fire Brigades) as these are notoriously difficult to achieve being located in urban areas due to constraints of proximity to house, required road closures, smoke management issues and competing priorities.

During the period the Prescribed Burn Program for 2011-2012 was developed and endorsed.



Hazard Reduction burn on Council Bushland by NSW Fire and Rescue

Education: the Building Bushfire Resilient Communities Grant was successfully completed in July 2010 and reported to the State Emergency Management Committee and Hornsby Ku-ring-gai Bushfire Management Committee under the National Disaster Mitigation Program.

Seven sites were selected for the education program on 'How to prepare Bushfire Survival Plans':

- Beecroft
- Pennant Hills
- Dural/Cherrybrook
- Hornsby (2 sites)
- Hornsby Heights
- Berowra



Education of residents in preparing for bush fires on their properties

Over 200 residents were specifically invited to information nights and community barbeques through letterbox drops. Sixty residents attended educational activities across seven events and received information from NSW Rural Fire Service and NSW Fire and Rescue. Positive feedback was received from participants.

Education Subcommittee: Council supported the development of an Education Subcommittee with the appointment of a representative to the Sub Committee and extensive involvement in the development of the Hornsby Ku-ring-gai Bushfire Management Committee Community Education strategy during 2010-2011.

3.3 Burning on private land – clean air regulation

Breaches of the Protection of the Environment Operations Act, (Clean Air) Regulations 2010: Nine (9) inspections resulting from complaints regarding illegal burning have been undertaken by Council's Planning and Compliance Section in the 2010-2011 financial year.

Permits to Pile Burn: Council issued 714 'Approval to pile burn' permits issued under the Protection of Environment Operations (Clean Air) Regulation 2010. Fifty one (51) pile burn permit reports were forwarded to the NSW Rural Fire Service to assist with monitoring and control of illegal ignitions.

3.3 Council fire trail upgrades

Minor upgrades were made to fire trails including entrance improvements, surface upgrades or vegetation works during 2010-11 with assistance of grant funds from the Rural Fire Fighting Fund and Bushfire Mitigation Program:

- Gully Road Trail: works on approximately 25 metres of trail, drainage works and provision of 2 new gates.
- McCallums Trail: works on approximately 400 metres of trail.
- Old Mans Valley Trail: improved entrances, works on approximately 1 kilometre of trail, drainage works and the provision of 2 new gates.
- Simon Trail: drainage works on approximately 400 metres of trail, improved entrance and provision of a new gate.

- Rofe Park Trail: works on approximately 170 metres of trail.
- Larool Trail: works on culvert crossing.
- Keighran Trail/McKinley: new entrance.
- Ululo Trail: new entrance.
- Larool Trail B – Wareemba Trail: new entrance.
- Berkeley Close Trail: new entrance and 10 metres of concrete works on trail.

Major upgrades were completed in 2010-11 by Council through \$221,500 in grant funds in close cooperation with NSW Rural Fire Service, National Parks and Wildlife Service and Department of Lands at:

- Bambil Hamley Fire Trail – approximately 1.2 kilometres of work including the construction of a new entrance, reinforced concrete sections, crushed sandstone regrading and all weather creek crossings
- Fraser Road Fire Trail – construction of a new section on land newly transferred to Council by State Government and upgrades of approximately 750 metres of existing trail on Crown Land.
- Berkeley Close Fire Trail: 78 m of major upgrade of the fire trail where Council sponsored the works on behalf of the Bush Fire Management Committee.

The Bushland and Biodiversity Team facilitated the grants, project managed the majority of the site works and utilised Council's Works Division to carry out a significant component of the works.

3.4 Bushfire hazard complaints regarding Council bushland

Nine (9) Bushfire hazard complaints received by Council were referred to the NSW Rural Fire Service as required under the Rural Fires Act 1997. Seven sites (7) were treated as a result of complaints.

3.5 Council GIS support of the bushfire management committee

The Bushland and Biodiversity Team works closely the BFMC in particular the NSW Rural Fire Service (RFS) and Fire and Rescue NSW in all aspects of bushfire management to ensure optimum bushfire mitigation outcomes for the communities of the Shire.

One key project facilitated by the Team was the update of the Hornsby Ku-ring-gai Fire Trail Register commenced by Council's GIS Officer during 2010-11. The project entails updating land tenure details, data cleansing and determining areas of management responsibility along complex, multi tenure lengths of trail. The project is ongoing.

4.0 Bushland operations

4.1 Contract bush regeneration program

Council's bushland regeneration program treated 63 sites on Council owned land and Crown land where Council is trustee or where management devolved to Council. Some sites were on Office of Environment and Heritage land that is co-managed with Hornsby Shire Council in Berowra Valley Regional Park under an agreement. Additional bushland restoration sites included grant and offset projects on public and 2 sites on private* land. Approximately 90% of the sites were contracted to 11 bush regeneration companies under year 2 of a 3 year tender with contracts renewed in August 2010. Works covered 123 ha restoring small degraded urban bushland remnants to the mitigation of weed sources that threatened larger and more pristine bushland reserves.

Bushland regeneration sites

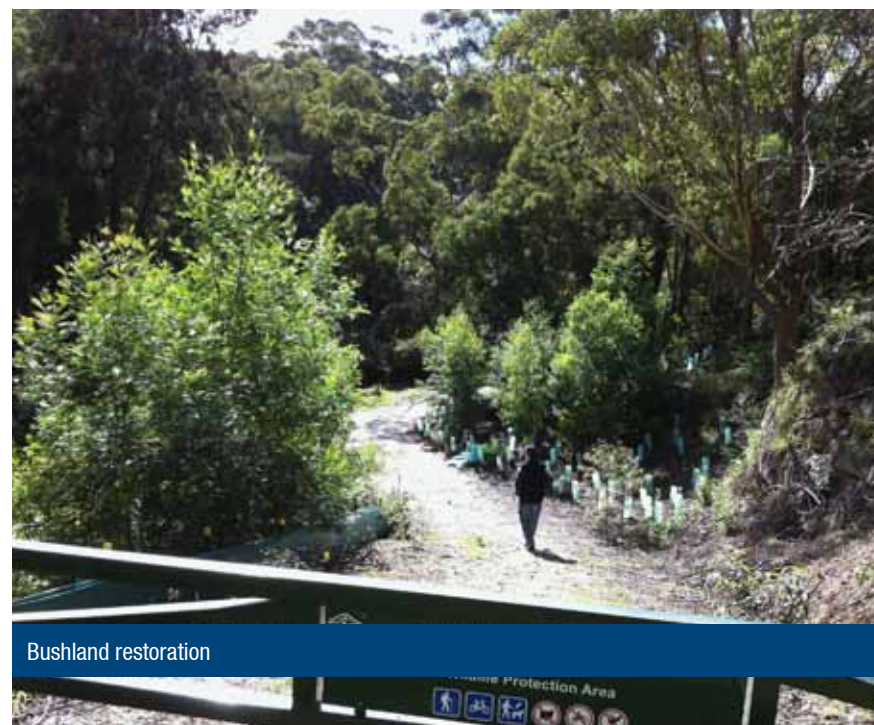
1. Arcadia Park, Arcadia
2. Arcadia Rd, Fagans Rd Arcadia – Roadside
3. Bar Island
4. Beecroft Reserve
5. Begonia Reserve, Normanhurst
6. Benedictine Monastery, Arcadia*
7. Berowra Park Bushland and Turner Rd Bushland
8. Cherrybrook Tech High School Bushland
9. Chilworth Recreation Reserve, Devlins Creek Reserve and Beecroft Reserve
10. Dog Pound Creek Bushland and Ginger Meggs Park – Bluegum Forest
11. Brickpit Park, Thornleigh
12. The Saltpan at Brooklyn – Cole Street
13. Byles Creek – Britannia St Bushland and Azalea Grove Bushland
14. McKinley Place and Lambe Place – Callicoma Walk, Cherrybrook
15. Murralong Rd – Calna Creek – Hornsby Heights
16. Fagan Park – Carrs Bush, Arcadia
17. Carrs Rd, Arcadia – Roadside
18. Carters Rd, Dural – Roadside
19. The Lakes of Cherrybrook Bushland
20. Cherrybrook Road Bushland
21. Crosslands Reserve
22. Dog Pound Creek Bushland, Westleigh
23. Edgeworth David and Neal Park, Hornsby
24. Epping Road Bushland, Epping
25. Fearnley Reserve, Beecroft
26. Fishburn Road and unmade Bevans Rd Bushland, Galston
27. Flame Tree Close Bushland, Cherrybrook
28. Florence Cotton Bushland Reserve, Hornsby
29. Florence Cotton, Rosemead Rd, Hornsby – Roadside
30. Galston Recreation Reserve, Galston
31. Mansfield Rd, Galston Roadside
32. Greenway Park Bushland, Cherrybrook
33. Hornsby Park, Quarry Rd, Hornsby – Roadside

34. Old Mans Valley and Rosemead Road Bushland
35. James Park, Hornsby
36. Kenley Park, Normanhurst
37. Kent Street Reserve, Epping
38. Kirkham Road Green Offset, Cheltenham
39. Malsbury Rd and Milsons Pde, Normanhurst – Roadside
40. Marymount Mercy College, Castle Hill*
41. McKell Park, Brooklyn
42. Mt Ku-ring-gai Hard Fill, Mt Ku-ring-gai
43. Netherby Street Bushland, Wahroonga
44. One Tree Reach Wetland, Laughtondale
45. Osborn Rd, Normanhurst – Roadside
46. Erlestoke Park, Upper Pyes Creek Bushland and Pyes Creek Bushland, Dural
47. Ray Park, Epping
48. Midson and Plympton Road Bushland, Epping
49. Reddy Park, Hornsby
50. Regional Projects Vines, Tussock Paspalum and Olive
51. Rofe Park Bushland, Hornsby Heights
52. Sams Creek, Berowra
53. Singleton Rd, Wisemans Ferry
54. Stewart Ave Hornsby
55. Sunnyridge Rd, Arcadia – Roadside
56. Upper Berowra Creek, Pennant Hills
57. Upper and Middle Terrys Creek Bushland, Dence Park, Stanley Road Bushland, Epping
58. Vimiera Park, Epping

59. Waitara Creek Bushland and Normanhurst Park, Normanhurst
60. Westleigh Drive Bushland and Duneba Drive Bushland South, Westleigh
61. Wisemans Ferry Recreation Reserve – Riparian zone
62. Wongala Crescent, Pennant Hills
63. Zig Zag Creek, Pennant Hills

In addition to regeneration of approximately 123 ha, maintenance of the native vegetation landscaped zones at 12 Catchment Remediation Rate (CRR) sites was carried out on behalf of the Water Catchments Team.

Funding included Section 94 contributions for capital upgrade of 17 sites at the cost of \$185,156, Council funds of \$50,000 were expended on ongoing bushland maintenance sites, grant and green offset funds totalling \$168,000 largely for Endangered Ecological Communities, and CRR funds of \$60,029 for Catchment Remediation sites.



4.2 Tree management in bushland reserves

Council responded to 90 Customer Service Requests from residents for tree assessment in Bushland reserves across the Shire from Epping to Wisemans Ferry. Contract trees works were undertaken subject to assessment.

Extensive works were undertaken on bushland trees adjacent to Beecroft Rd, Beecroft, Kirkham Rd, Beecroft and McKell Park, Brooklyn.

4.3 Myrtle rust

Prior to and following the outbreak of Myrtle Rust in Hornsby Shire detected in late December 2010, Council implemented an Interim Action Plan (see Appendix 5), reported suspected sites to NSW Department of Industry and Investment (I&I) Hotline and awaited advice from I&I.

Actions included preventative treatment of Nursery stock before and after an open day, targeted inspections of bushland sites where plants of extreme risk occurred, treatment of specific sites, hygiene protocols and communication to Parks, all staff, Bushcare volunteers, contractors and others including an item on Council's web page – www.hornsby.nsw.gov.au/environment-and-waste/bushland-and-biodiversity

4.4 Berowra Valley Regional Park (BVRP) working group

Gazetted as a regional park on 27 March 1998, the park is owned and primarily managed by the National Parks and Wildlife Service (NPWS) and Hornsby Shire Council undertakes specific roles within the park. A working group of NPWS (DECCW) and Council's Bushland and Biodiversity Team met regularly during the year to ensure the smooth running of the park by the two agencies for which Council prepared its annual service plan. Crosslands Reserve and its access road is managed by Council as 50% of the reserve is under Council's direct ownership. Stage 2 road works included sealing and guardrail at a cost of \$385,000. Crosslands Stage 2 amenities upgrade was completed during the year funded through Section 94 funds at a cost of \$72,495. The final work on the Crosslands water supply pipeline was done during 2010-11 at a cost of \$19,855 to Council. Council conducted interface activities where Council land adjoins BVRP, including maintenance of existing and installation of four new catchment remediation devices that treat stormwater draining into the Park, training and

coordination of 42 Bushcare groups with sites covering 5 ha, management of two strategic walking tracks and 10 contract bush regeneration sites over 36 ha.

4.5 Noxious weed control

Grants were received for noxious weed inspections and Regional Noxious Weed programs. This enabled the program to occur.

Target Regional Noxious Weed species included Tussock Paspalum mapping and monitoring and follow up treatment at Yatala Road, Mt Ku-ring-gai, Berowra, Old North Road, Dural, McKinley Road Bushland and three sites on the Pacific Highway under a Regional Noxious Weed grant. Follow up noxious vine control was carried out at Hull Road, Pennant Hills; Boundary Road, Cherrybrook; Pyes Creek, Cherrybrook and Malsbury Rd, Normanhurst. A grant also facilitated Boneseed control with other partners including NPWS and Councils.



The more common Morning Glory (*Ipomea indica*)

Responsive noxious weed visits and education: Bushland and Biodiversity received 82 service requests for noxious weeds on private property, undertaking 84 property inspections relating to these requests. An additional 120 property inspections were also undertaken related to general enquiries, DAs and TAs. An additional 197 phone and email enquiries were received. The majority of weeds observed on private property were Large-leaf and Small-leaf privet (*Ligustrum lucidum* and *Ligustrum sinense*), Morning glory (*Ipomea indica*), Lantana (*Lantana camara*), Camphor laurel (*Cinnamomum camphora*) and Trad (*Tradescantia fluminensis*), however Rhizomatous bamboo (*Phyllostachys* spp.) has become a contentious plant between adjoining properties. Council will be developing new and improved Management Plans for all of the 32 Class 4 noxious weeds declared for Hornsby Shire Local Government Area.

Two committee meetings of the Sydney North Regional Noxious Weeds Committee were attended to keep aware of new grant and regional weed priorities and initiatives.

Listed noxious weeds for Hornsby Shire Council – June 2011

Weed	Class
African feathergrass [<i>Pennisetum macrourum</i>]	5
African turnipweed [<i>Sisymbrium runcinatum</i>]	5
African turnipweed [<i>Sisymbrium thellungii</i>]	5
Alligator weed [<i>Alternanthera philoxeroides</i>]	3
Anchored water hyacinth [<i>Eichhornia azurea</i>]	1
Annual ragweed [<i>Ambrosia artemisiifolia</i>]	5
Arrowhead [<i>Sagittaria montevidensis</i>]	4
Artichoke thistle [<i>Cynara cardunculus</i>]	5
Asparagus fern [<i>Asparagus aethiopicus</i>]	4
Athel pine [<i>Tamarix aphylla</i>]	5
Balloon vine [<i>Cardiospermum grandiflorum</i>]	4

Bear-skin fescue [<i>Festuca gautieri</i>]	5
Bitou bush [<i>Chrysanthemoides monilifera</i> subspecies <i>rotundata</i>]	3
Black knapweed [<i>Centaurea nigra</i>]	1
Blackberry [<i>Rubus fruticosus</i> aggregate species]	4
Boneseed [<i>Chrysanthemoides monilifera</i> subspecies <i>monilifera</i>]	3
Bridal creeper [<i>Asparagus asparagoides</i>]	4
Broomrapes [<i>Orobanche</i> species]	1
Burr ragweed [<i>Ambrosia confertiflora</i>]	5
Cabomba [All Cabomba species except <i>C. furcata</i>]	5
Camphor laurel [<i>Cinnamomum camphora</i>]	4
Cape broom [<i>Genista monspessulana</i>]	3
Cape ivy [<i>Delairea odorata</i>]	4
Castor oil plant [<i>Ricinus communis</i>]	4
Cat's claw creeper [<i>Macfadyena unguis-cati</i>]	4
Cayenne snakeweed [<i>Stachytarpheta cayennensis</i>]	5
Chilean needle grass [<i>Nassella neesiana</i>]	4
Chinese violet [<i>Asystasia gangetica</i> subspecies <i>micrantha</i>]	1
Climbing asparagus fern [<i>Asparagus plumosus</i>]	4
Clockweed [<i>Gaura parviflora</i>]	5
Corn sowthistle [<i>Sonchus arvensis</i>]	5
Dodder [<i>Cuscuta</i> species]	5
East Indian hygrophila [<i>Hygrophila polysperma</i>]	1
Elephant grass [<i>Arundo donax</i>]	4

English broom [Cytisus scoparius]	4
Espartillo [Amelichloa brachychaeta, Amelichloa caudata]	5
Eurasian water milfoil [Myriophyllum spicatum]	1
Fine-bristled burr grass [Cenchrus brownii]	5
Fountain grass [Pennisetum setaceum]	5
Gallon's curse [Cenchrus biflorus]	5
Giant reed [Arundo donax]	4
Glaucous starthistle [Carthamus glaucus]	5
Golden thistle [Scolymus hispanicus]	5
Green cestrum [Cestrum parqui]	3
Harrisia cactus [Harrisia species]	4
Hawkweed [Hieracium species]	1
Horsetail [Equisetum species]	1
Hygrophila [Hygrophila costata]	2
Hymenachne [Hymenachne amplexicaulis]	1
Karoo thorn [Acacia karroo]	1
Kochia [Bassia scoparia]	1
Lagarosiphon [Lagarosiphon major]	1
Lantana [Lantana species]	4
Leafy elodea [Egeria densa]	4
Lippia [Phyla canescens]	4
Long-leaf willow primrose [Ludwigia longifolia]	3
Ludwigia [Ludwigia peruviana]	3

Madeira vine [Anredera cordifolia]	4
Mexican feather grass [Nassella tenuissima]	1
Mexican poppy [Argemone mexicana]	5
Miconia [Miconia species]	1
Mimosa [Mimosa pigra]	1
Morning glory (coastal) [Ipomoea cairica]	4
Morning glory (purple) [Ipomoea indica]	4
Mossman River grass [Cenchrus echinatus]	5
Ochna [Ochna serrulata]	4
Pampas grass [Cortaderia species]	3
Parthenium weed [Parthenium hysterophorus]	1
Pellitory [Parietaria judaica]	4
Pond apple [Annona glabra]	1
Prickly acacia [Acacia nilotica]	1
Prickly pear [Cylindropuntia species]	4
Prickly pear [Opuntia species except O. ficus-indica]	4
Privet (Broad-leaf) [Ligustrum lucidum]	4
Privet (Narrow-leaf/Chinese) [Ligustrum sinense]	4
Red rice [Oryza rufipogon]	5
Rhizomatous bamboo [Phyllostachys species]	4
Rhus tree [Toxicodendron succedaneum]	4
Rubbervine [Cryptostegia grandiflora]	1
Sagittaria [Sagittaria platyphylla]	5

Salvinia [Salvinia molesta]	2
Scotch broom [Cytisus scoparius]	4
Senegal tea plant [Gymnocoronis spilanthoides]	1
Serrated tussock [Nassella trichotoma]	4
Siam weed [Chromolaena odorata]	1
Smooth-stemmed turnip [Brassica barrelieri subspecies oxyrrhina]	5
Soldier thistle [Picnemon acarna]	5
Spotted knapweed [Centaurea stoebe subspecies micranthos]	1
St. John's wort [Hypericum perforatum]	4
Texas blueweed [Helianthus ciliaris]	5
Trad [Tradescantia fluminensis]	4
Tropical soda apple [Solanum viarum]	2
Turkey rhubarb [Acetosa sagittata]	4
Tussock paspalum [Paspalum quadrifarium]	3
Wandering Jew [Tradescantia fluminensis]	
Water caltrop [Trapa species]	1
Water hyacinth [Eichhornia crassipes]	2
Water lettuce [Pistia stratiotes]	1
Water soldier [Stratiotes aloides]	1
Willows [Salix species]	5
Witchweed [Striga species]	1
Yellow burrhead [Limnocharis flava]	1
Yellow nutgrass [Cyperus esculentus]	5

4.6 Feral animal control

Council undertook a Rabbit Calici-virus program at Arcadia Park, with very good bait take up and the Department Of Lands ran a program at Berowra. Rabbit traps were loaned to residents. Fox 'free feeds' were laid at Arcadia Park and Berowra Bushland Park, following results of last year's fauna survey indicating their presence, however numbers were too low at the baiting sites to lay poison baits. An Indian Myna workshop was held in the rural area on trap building.

4.7 Walking tracks and bushland access

Council has over 49 km of formal and informal bushwalking tracks. Formal tracks include:

- Beecroft-Cheltenham Link Track, Beecroft-Cheltenham
- Historic Pioneers' Track, Epping
- Bluegum walk, Hornsby
- Mangrove walk, Brooklyn
- Callicoma walk, Cherrybrook
- Carrs Bush walk, Galston
- Crosslands salt marsh walk, Crosslands
- Mambara walk, Pennant Hills
- McKell Park walk, Brooklyn
- Terrys Creek walk, Epping
- Bar Island, Berowra Creek
- Links to the Great North Walk

Audits: bi-monthly inspections and annual track audits were undertaken on all of Councils formal tracks.

Interpretive signage was installed along the Cheltenham Beecroft Link Track to complete project with Transurban Sponsorship. A track upgrade was completed with installation of a heritage style fence and interpretive signage was completed at the Great North Walk Link Track, Westleigh through a MetroGreenspace Grant.

Track control for Myrtle Rust also included closure, installation of barriers, signage and track monitoring at the Westleigh to Hornsby Link Track, Bevans Rd reserve and Tim Brownscombe Reserve, Galston in response to outbreak of Myrtle Rust. Trackside vegetation was treated at infected sites and locations where sensitive plant species occurred.

Bar Island Jetty construction was completed by Works on behalf of Bushland and Biodiversity providing safe water access to general public. With the increased public usage and visitation to the Island priority was given to develop a maintenance schedule to monitor track safety and carrying capacity.

Hornsby Heritage Steps: in 2010-11 grant funding was obtained, plans finalised and preliminary survey work completed in preparation for 2011-12 upgrade of the depression era Hornsby Heritage Steps at Hornsby Park.

Minor works and maintenance occurred on the Brooklyn Boardwalk, Terrys Creek track, and Callicoma Walk.

Walking track brochures were prepared for the Cheltenham Beecroft Link Track, Bar Island, Brooklyn Park, Crosslands Saltmarsh Boardwalk, Dangar Island and McKell Park with grant funds.



Interpretive sign on the new Great North Walk Link Track Photo: Robyn Cox

4.8 Mountain bike trails

During 2010-11 Council continued investigations of suitable locations for a Mountain Bike Track, following a preliminary report from World Trail Australia. Since then Council considered 15 sites and resolved that the best place for a mountain bike facility on Council managed land was a site at Hornsby, within Hornsby Park Bushland and Upper Old Mans Valley. The Hornsby Mountain Bike Trail Plan for this site was prepared by International Mountain Biking Association –Australia (IMBA Aus.) and was completed in June 2011 for subsequent public exhibition and comment.



Mountain bike track

5.0 Bushcare and community programs

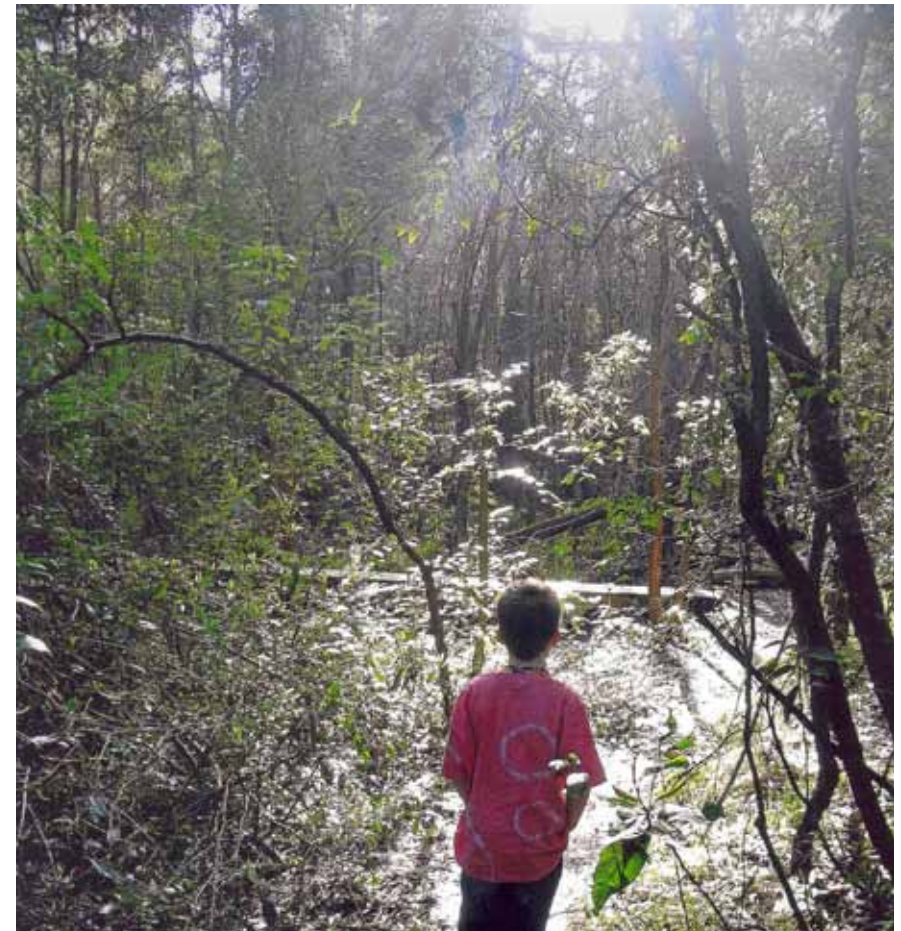
5.1 Bushcare

Bushcare volunteers restored and enhanced native vegetation and habitat in Council's bushland reserves across the Shire. 43 new Bushcare volunteers signed up during this period in 2010-11. In this same period two new bushcare groups were created and assigned trainers. Bushcare volunteers contributed over 15,700 hours of work during 2010-2011, which can be valued at \$471,000 making this one of the largest Bushcare programs of any Council in the Sydney Metropolitan Area. An audit of the program identified a number of retiring members and events such as Bushcare Month were held to recruit new members.

Bushcare celebrated its 21st year in Hornsby Shire at the Annual Workshop in December 2010. Two perpetual awards were presented, 'The Golden Trowel' to Terry's Creek corridor bushcare groups for achieving the most Bushcare hours and the Nursery Award for exceptional work was again won by Frances Scarano.



Bushcare Annual Workshop Christmas 2010 Photo: Barry Lees



Bushcare Photo Competition 2010 'Wonder on the M2 Link Track' Photo: Maureen Corey

Bushcare held 29 training and community events during the year and there were 566 attendances. Training is compulsory for volunteers to receive and retain their accreditation. Other training supports ongoing learning and is provided across Hornsby, Willoughby and Ku-ring-gai Councils. Training included six Bushcode Workshops, two Bushcode Refresher Workshops, one TAFE Bushcare Essentials Course and the Bushcare Annual Workshop. Community events included National Tree Day, one Build a Cob Oven Workshop, one Fauna Friendly Garden Workshop, one Threatened Species Workshop, one Bird Watching Workshops, one Grasses and Groundcovers Workshops, one Eucalypt Identification Workshop, one creating native grass pasture for your horse property workshop, one Myna Bird Control Workshop, one Seed Collection and Propagation series, one sustainable horse management workshop one Property management workshop, one Fire wise workshop and one Weed and Native Look-alikes Workshop.

Bushcare Month in October gave 9 groups the opportunity to promote their achievements and hold an open day. Council supported the groups through advertising open days in the local media, website, banners on site and through a pamphlet drop and assisting with a trainer and a barbeque or morning tea.

Earthwise cottage activities and projects

The Earthwise cottage was used as a venue to host plant giveaways, staff meetings and workshops. The site has undergone significant refurbishment to enhance it as a sustainable demonstration house and improve it as a facility for volunteers and staff activities. Retrofitting included ceiling insulation, green low VOC kitchen, inverter microwave, water based floor polish, conversion from continuous electric to instant gas hot water, installation of energy efficient sensor lights and new meeting room chairs of low VOC and entirely recyclable material. Reconfiguration of the meeting room allows for greater numbers of people to attend workshops and activities at the Cottage, previously restricted to 18 people, whilst showcasing sustainable improvements. This year it was the venue for 25 meetings, 8 Bushcare training events, two training workshops, three nursery open days, 74 nursery volunteer days, and four Ryde TAFE student tours.

Projects included Transurban and Roselea Grant. Transurban project included updating of the outdated Beecroft Reserve brochure to include updated map and track information following previous year's extensive track upgrades through the reserve.

The Roselea Bushcare Group were successful in early 2010 in receiving a second grant. With the \$18,000 received the group restored the damaged sections of the creek and extended

restoration work including terracing in the creek line and contract bush regeneration work. The group also worked closely with the local school attending school open day and also hosting school children at the bush regeneration site for educational activities.

5.2 Community nursery

The community nursery continued to provide high quality provenance grown stock to the wider community through open days with a total of 5,433 plants distributed to 1,210 residents. From 2009 onwards the nursery has provided plants to all residents of the shire on an annual basis. This year the nursery expanded into the area of advanced tree propagation. A total of 32,465 plants were despatched over the year.



Keep Australia Beautiful national award judge visiting the Nursery

The nursery showcased best practice operations across the wider community through many initiatives including full water recycling system capturing on site runoff rainfall, solar power, minimal waste production, recycling of materials and a low chemical reliance. Treatment for Myrtle Rust kept the nursery free of the disease in 2010-11. The Nursery was part of Council's overall winner status for Sustainable Cities Award in 2010 from Keep Australia Beautiful and a finalist in the National Awards.

Significant improvements in the nursery irrigation system achieved a more reliable delivery of water along with the installation of a remote on/off option for when staff are off site in order to save resources. Reliable rainfall events across Autumn once again allowed pre ordered stock to be planted into near ideal conditions for establishment in the field.

This financial year also saw the nursery continue to produce high numbers of units in excess of 38,000 plants. This figure is coupled with similar volunteer hours to the previous financial year in order to achieve this volume. The Community Nursery had 35 volunteers who contributed 2,505 hours work, valued at \$75,150 over 68 days.

The nursery continued to foster and maintain relationships with other councils and industry professionals including Fairfield Council with which there is a strong exchange program continuing, an ongoing educational partnership with Northern Sydney Institute of TAFE Ryde College and technical assistance to a variety of customers across the community within the Hornsby Shire. The nursery maintained its membership with the Nursery Garden Industry of Australia and remained an Accredited Nursery through the Nursery Industry Accreditation Scheme of Australia.

5.3 Guided bushwalks

Council's free Guided Bushwalks program continued strongly this year. A total of 32 activities were undertaken for the period with a total of 362 participants involved in the program from July 2010 to June 2011. A diversity of activities was undertaken within the program, including nature photography, new activities including a kayaking activity and Aboriginal heritage walk in Muogamarra Nature Reserve and a wide variety of general bushwalks of varying lengths and grades of difficulty in order to appeal to the wider community. The program continues to provide and promote the education of bushland themes to the wider community.

5.4 Habitat connectivity

The Habitat Connectivity Grant funded by Environmental Trust has progressed and exceeded our Stage 2 projections. The works undertaken as part of the program in 2010-11 has allowed Council to expand and improve on partnerships with local landowners with the aim of enhancing and strengthening vegetation connectivity on private and public land.

Overall a total of 7.6ha of public and private land has undergone on-ground restoration works in 2010-11. With over half this amount occurring within endangered and critically endangered communities of Sydney Turpentine Ironbark Forest and Blue Gum High Forest. A total of 0.9 ha has been revegetated to further increase canopy and riparian vegetation connectivity. On-ground restoration works on private and public property has continued at Cherrybrook Technical High School, Normanhurst (Gyler property), Arcadia (Benedictine Monastery), Castle Hill (Marymount Centre), road reserves at Galston, Arcadia and Normanhurst and seven private landowners as part of the Rural Lands Incentive Program.



Planting a habitat corridor at St Benedict's Monastery Arcadia, February 2011

Six workshops have been delivered on various environmental topics related to vegetation restoration. Seven residential Property Management Plans were prepared and 166 residents and land managers have participated in the program.

5.5 National Tree Day and World Environment Day

National Tree Day was conducted at Vimiera Park in July 2010, with a total of over 75 volunteers and 800 trees planted. This was one of our biggest years with 21 schools requesting plants for their school National Tree Day with 670 plants donated from the community nursery specifically chosen to suit their needs, soil type and area.

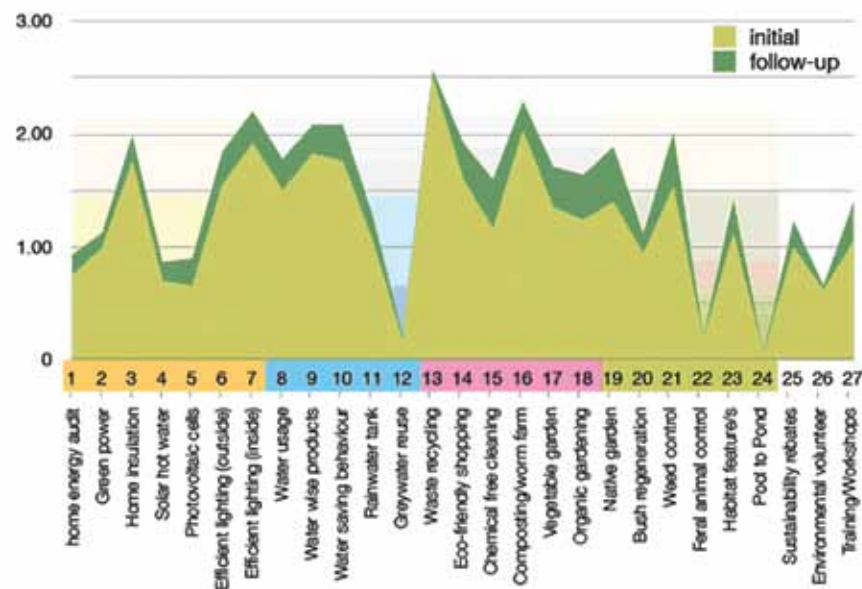
World Environment Day was also held at Vimiera Park in June 2011 which was attended by 150 adults and children who enjoyed a wildlife display, a free Tai Chi class, environmental stalls, tree planting by John Alexander Federal MP and a BBQ hosted by Epping Scouts. Groups contributing to the day were Hornsby Shire Bushcare, Sydney Wildlife, Transition Town Epping, Permaculture Hornsby, Ryde Flora and Fauna Society, Habitat Network and Terrys Creek Bushcare Groups.

5.6 Greenstyle

Funded by the NSW Environmental Trust Urban Sustainability Program, Greenstyle was a three year partnership between Hornsby, Ku-ring-gai and Willoughby Councils. It was designed to build on the successes and address the limitations characteristic of community environmental programs administered by each council.

With the community belief that local councils are one of the main groups that should take an active role to conserve native plants and animals, Councils are well placed to engage with the public on a broad range of environmental issues. Surveys have revealed that a lack of knowledge on household sustainability is a major obstacle in implementing sustainable products and practices.

By forming a strategic alliance across three adjacent LGAs, a regional approach was applied to engage residents in biodiversity conservation and sustainable lifestyle practices. Greenstyle aimed to apply the lessons learnt from past and present council programs to engage the local community in a wide range of biodiversity and sustainability issues including water and energy efficiency, waste reduction, recycling and general sustainable living.



The program has enabled positive change towards increased biodiversity and sustainability in individuals and their homes through:

- one-on-one home sustainability assessments
- advice tailored to individual needs
- an information kit
- access to discounts from local 'green' businesses and suppliers
- a website with information and program updates
- free native plants
- events, training and workshops

From the Hornsby LGA, 174 participants received a home assessment. Of these, 14% are from non English speaking backgrounds. 66% of participants in the program indicated they have not previously been involved in a council program.

Some features of the program included:

- a one-stop-shop Greenstyle website
- Greenstyle calendar of events for three council areas
- regular newsletter to participants from the three council areas
- an incentive program of giveaways (including native bee hives, free plants and compost bins) to residents undertaking projects in their homes

Participants had interests in waste recycling, composting and worm farming, home insulation, installing energy efficient lighting, water wise products and water saving. These actions were relatively inexpensive and easy to carry out, in contrast to more capital intensive practices like installing solar photovoltaic cells. Behaviour change following Greenstyle revealed that 89% of participants had increased their baseline score, 9% remained unchanged and 2% decreased. Activities with a gardening theme were the most common group of activities to be implemented after a Greenstyle visit. The graph below shows these behaviour changes over the three council areas (data was analysed at a single council level).

Follow-up visits and surveys were undertaken with 50 Hornsby Shire residents to evaluate positive/negative behaviour change during the project. Detailed qualitative follow-up was undertaken for case study participants. For quantitative behaviour change evaluation, telephone interviews and online surveys were conducted.

The following ongoing commitments to the program have been made by Hornsby Council:

- Add value to existing programs by providing sustainability advice to members of biodiversity based programs such as the Rural Lands Incentives Program.
- Facilitate linkages with inter-council programs such as Ku-ring-gai's WildThings
- Provide free plant vouchers to new Greenstyle participants where appropriate.
- Facilitate 2 bushland related workshops per year for Greenstyle participants.
- Communicate workshop dates with participants via email newsletter 'Greenstyle update'
- Continue to maintain and promote the Greenstyle website and provide content for the greenstylenorth YouTube channel.
- Continue promotion of Greenstyle on council's websites and at community events.
- Provide initial Greenstyle visits as needed, with a maximum rate of 3 or 4 per month.
- Contribute to a Greenstyle calendar of events for the three councils.
- Provide plant giveaways to residents undertaking projects in their homes.

6.0 Budget and strategic issues

6.1 Grants, income and expenditure

A record number of grants were received during 2010-11 to fund environmental works required by the adopted Council strategies and plans such as Biodiversity Conservation Strategy, the Bushfire Risk Management Plan, the Plans of Management for Community and Crown Land and the Unstructured Recreation Strategy. Administration costs were elevated, but later reduced by the Internal Service Review. Expenditure on permanent salaries of \$1.1m, works of \$1.4m (this includes approx \$80,000 CRR not in Bushland budget) and volunteer contributions of over \$470,000 reflects team functions of biodiversity assessment and planning, project manage specialised bushland and bushfire contracts and co-ordinate Bushcare volunteers.

Grants and offset income and commitments received include:

Bush Weed Management Grant	\$15,055
UTS Darwinia biflora Offset	\$4,558
Bushfire Mitigation Grant Funding	\$48,000
Fire trail Grant funding	\$96,500
Building Bushfire Resilient Communities Grant	\$71,469
Noxious Weed Inspectorial – Sydney Weeds Committee Regional WAP Grant	\$16,140
Bar Island Jetty Grant	\$67,596
Bushcare Community Grant – Roselea CFOC	\$18,629
Transurban Sponsorship	\$20,909
Greenstyle Grant	\$6,967
Great North Walk Links Grant	\$6,925
Habitat Connectivity Grant	\$40,545
Hawkesbury Nepean Caring for our Country Grant	\$18,182
37 Beaumont Road	\$10,000
Boneseed Control Grant	\$18,849
One Tree Reach Restoration Grant Stage 3	\$17,182
Berowra Car Park Offset	\$23,191

Bar Island Restoration – Woodland and Saltmarsh Grant	\$7,545
Upper Pyes Creek Walking Track CBP Grant	\$51,242
Upgrade of Pioneers' Track CBP Grant	\$16,500
Heritage Track Restoration – NSW CBP grant	\$60,000
UTS Darwinia biflora Offset	\$77,558
Floating Landcare Grant	\$9,091
Cottage renovations Grant	\$40,000
Hornsby Heritage Steps Restoration and Conservation – Federal RLCIP Grant	\$75,000 [#]
WASIP Grant	\$150,000 [#]
Heritage Track – Greenspace Grant (income not yet received)	\$60,000
Manboom M2 Advertising (commitment by RTA over 13 years)	\$400,000
Heritage Grant Wisemans Cemetery (income not yet received)	\$30,000
Estuary Bird Grant (income not yet received)	\$25,000
BGHF Offset Netherby Street	\$10,000
Maroota Way Hull Road Offset	\$9,450 [#]
TOTAL	\$1,437,540

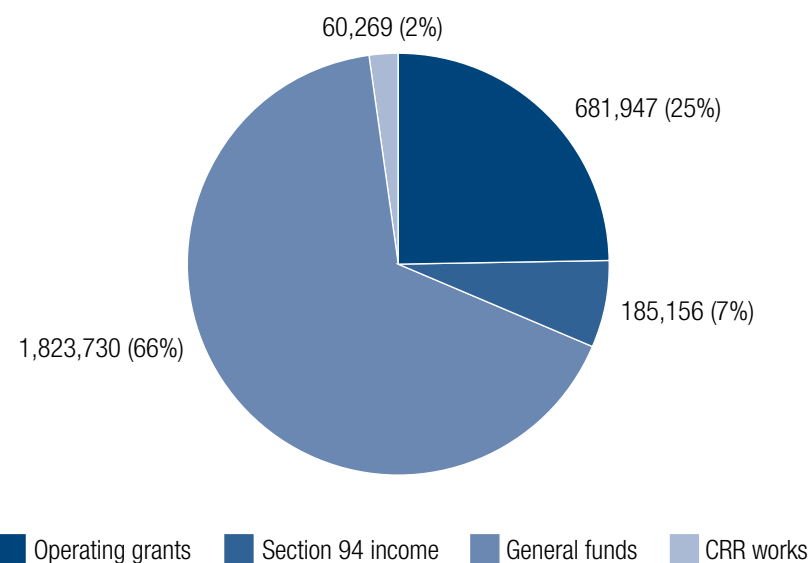
[#] Income received by other areas of Council on behalf of the Bushland and Biodiversity Team

Grant and offset works undertaken during the year:

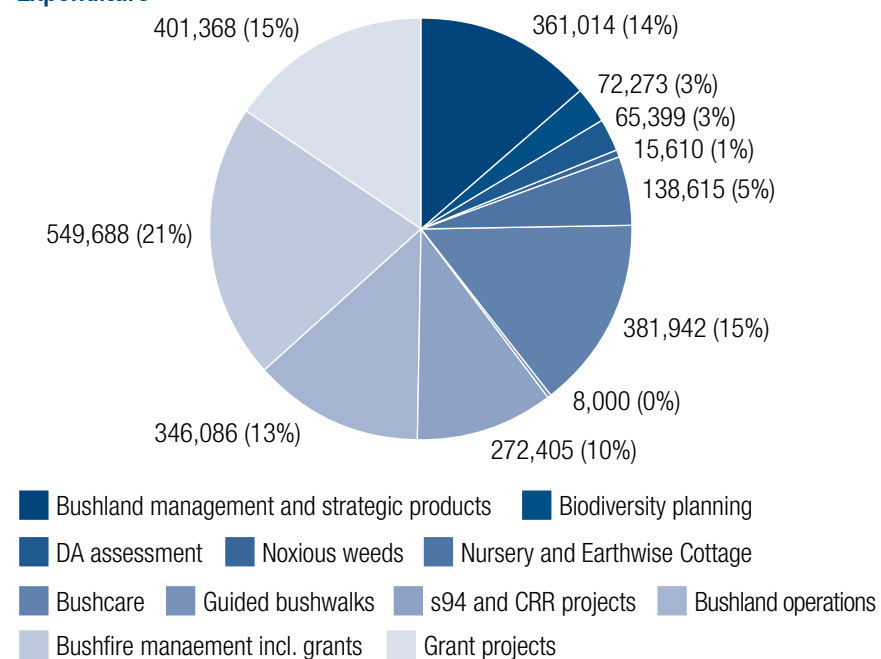
Project	Expenditure	Income
Noxious Weed Inspectorial	368	-16,140
Bar Island Jetty	129,049*	-123,609
Transurban Sponsorship Beecroft Reserve	7,622	-20,909
One Tree Reach Stage 2	6,800	-15,062
One Tree Reach Stage 3	1,200	-17,182
Bush Green Offsets	3,300	-3,300
Terrys Creek Walking Track	123	-123
Bushcare Community Grant – Roselea	17,014	-18,629
Greenstyle	14,882	-6,967
Habitat Connectivity	42,321	-40,545
Rural Lands	2200	-2,200
Great North Walk Links	6,203	-6,925
HNCMA Caring For Our Country Grants	46,647	-18,182
Fire Trails and Mitigation Grants	184,166	-144,500
Bushfire Asset Grant	41,675	-71,468
WASIP	152,860	-150,000
Kenley Park Offset	4,993	-4,993
Total	661,423	-659,119

* Additional costs for the Bar Island Jetty were met by Works Division

Income



Expenditure



6.2 Offsets

During the 2010-11 year Bushland and Biodiversity Team received an increased level of offset funds of \$133,255 as opposed to \$89,000 during 2009-10 representing a 50% increase. This source of income is becoming increasingly significant to fund environmental rehabilitation works. An ongoing issue yet to be resolved is the need for offset receiving sites for Blue Gum High Forest, which may be addressed through reviewing Council's Open Space Rationalisation Program.

6.3 Broader community consultation

Bushland Management Advisory Committee continued in its role to advise Council on strategic direction and projects. During 2010-11 it commented on the review of the Biodiversity Action Plan 2010-11, the review of the Green Offsets Code, the Mountain Bike Strategy and the Development Control Plan for Trees and Vegetation. BMAC also undertook site inspections to advise on strategic projects including: Terrys Creek Walking Track, Bar Island and the proposed Mountain Bike Track route in Old Mans Valley and Hornsby Park.

Local Government Preparedness for Climate Change presentation was given by the Manager of Bushland and Biodiversity at the Sydney Olympic Park Authority's Wetlands Education and Training (WET) Program on Sensible Adaptation Measures for Wetlands with a case study of the restoration of the One Tree Reach Wetland.

7.0 References

Hornsby Shire Council (2004) *Bar Island Plan of Management*. Prepared by PSB consultants for Hornsby Shire Council, Hornsby.

Hornsby Shire Council (2011). *Green Offsets Code*. Hornsby Shire Council, Hornsby.

NSW Office of Environment and Heritage (2005) PAS – *Priority Action Statements* – Threatened Species Web Page – accessed at www.threatenedspecies.environment.nsw.gov.au/tsprofile/home_PAS.aspx

Appendix 1: Map of Hornsby Shire



Appendix 2: Hornsby Shire Council Community Nursery Annual Report 2010-11





Keep Australia beautiful judge Shaun Rooney (right) speaking with nursery volunteers (L-R) Frances Scarano, Larry Magus and Di Redman

Executive summary

Hornsby Shire Council's Community Nursery is an integral part of the Hornsby Bushcare Program, operating within the Bushland and Biodiversity Team, (Environment Division).

The nursery aims to showcase best practice operations across the wider community. This is achieved through many initiatives including full water recycling system capturing on site runoff rainfall, solar power, minimal waste production, recycling of materials and a low chemical reliance.

This financial year saw an increase of 8% in the volume of plants leaving the nursery compared to the previous year. Strong increases in plant distribution were recorded through the Catchment Remediation Rate plant requirements and with the Parks Department of Hornsby Council.

Total production has been strong yet again with nearly 39,000 plants being produced.

Reliable rainfall events across autumn once again have allowed pre ordered stock to be planted into near ideal conditions for establishment in the field. Some notable changes in distribution rates were recorded for specific projects including a marked increase in the Cowan Creek catchment area of Hornsby Shire thanks to the Hornsby Creek Grant.

Significant foreshore works were also undertaken at Brooklyn which also saw a marked increase in plant distribution to this area.

Significant improvements in the nursery irrigation system has achieved a more reliable delivery of water along with the installation of a remote on/off option for when staff are off site in order to save resources.

The nursery also continues to foster and maintain relationships with other councils and industry professionals including Fairfield Council of which there is a strong exchange program continuing, an ongoing educational partnership with Northern Sydney Institute of TAFE Ryde College and technical assistance to a variety of customers across the community within the Hornsby Shire.

Overview

The Hornsby Community Nursery aims to provide native plants to the Hornsby Shire through Community programs such as the Bushcare Volunteer Program, Community Open Day/ Giveaway days, Greenstyle Program, Citizenship Ceremonies, Schools, community groups and a variety of environmental workshops, events and activities across the Shire including National Tree Day.

The nursery also provides provenance locally collected stock to bushland restoration projects including Bushland Operations' works, CRR Water Catchment devices, Parks Department projects and other projects that are run within Council's core business.

The nursery aims to encourage the community to learn about the values of native plants, for biodiversity conservation goals, and to support Councils projects with the provision of sound environmental restoration techniques and technical advice to Council and associated project staff.

The nursery operates under the main outcomes of the Hornsby Biodiversity Conservation Strategy, the Environmental Education Strategy and Bushland Education Strategy and the Bushland and Biodiversity Team Action Plans.

The nursery operates on a recurring budget of 16K (operational) per annum and aims to achieve an income of 15K per year to support the ongoing maintenance of the site and required resources. The nursery operates under the Bushland and Biodiversity Community Programs Team, with one full time Nursery Co-ordinator, and approximately 35 dedicated volunteers.

The nursery achieved accreditation with the NIASA (Nursery Industry Accreditation Scheme Australia) complying with strict standards of environmental best practice nursery management. It has maintained accreditation since 2005, and aims to continue accreditation as a showcase of best practice to other nurseries across NSW. The Hornsby Community Nursery was the first local government run nursery to achieve this accreditation.

The information recorded in this report is for the financial year 2010-2011 and illustrates the various areas that the nursery operates.

Volunteer and plant production statistics

Nursery volunteer program

Volunteer hours	Volunteer hours within the nursery
Wednesday volunteers (578 total individual participant visits by 21 people)	1,677.5
Saturday volunteers (199 total individual participant visits by 18 people)	625.5
Other hours	202.5
Total hours	2,505.5
Number of volunteers	
Active volunteers for the year (19 on Wednesday and 16 on Saturday)	35
New volunteers joined program	2

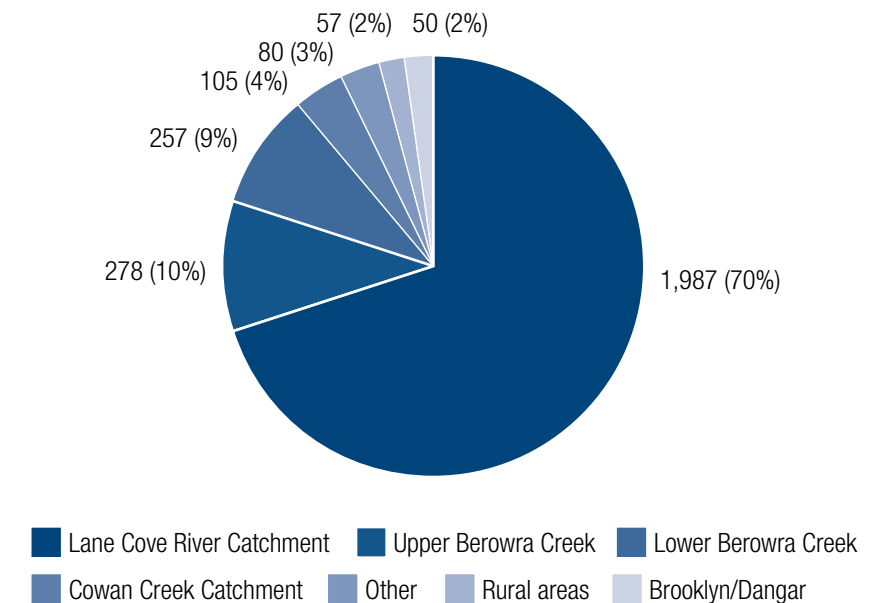
Plant production

Production	
Seed lots collected:	91
Number of seed lots propagated: (Provided 90% of total production)	169
Number of cuttings propagated (and no. of spp.): (Provided 10% of total production based on an average 93% cutting strike rate)	2,404 (24)
Total Number of tubestock produced July 2009 to June 2010	38,705

Plants Supplied	
Total Plants Dispatched for Year:	
Grand Total:	32,465
Total Number of residential properties that received plants through Nursery Open Days	
Grand total:	1,210 (5,370 plants)
Projected square metres Revegetated (An average of 1 plant per square metre)	
Grand Total:	3.2 hectares

Plant distribution

Fig. 1. Plants utilised by Hornsby Bushcare Program 2010-2011



Other Council programs and plant recipients

Table 1. Plant sales to internal Council projects and associated environmental programs

Customer	No. of Plants	\$
Catchment Remediation Rate	9,170	11,004
Bushland and Biodiversity	6,583	10,716
Open days – plants to residents	5,370	
Parks Department	4,115	6,285
Bushcare	2,757	
Other (incl. 'Greenstyle' and 'Landcare')	2,022	1,500
Schools	1,173	
National Tree Day 2010	670	
Donations	495	
Citizenship ceremonies	110	
Totals	32,465	29,505

Fig. 2. Total distribution of plants by customer area 2010-2011

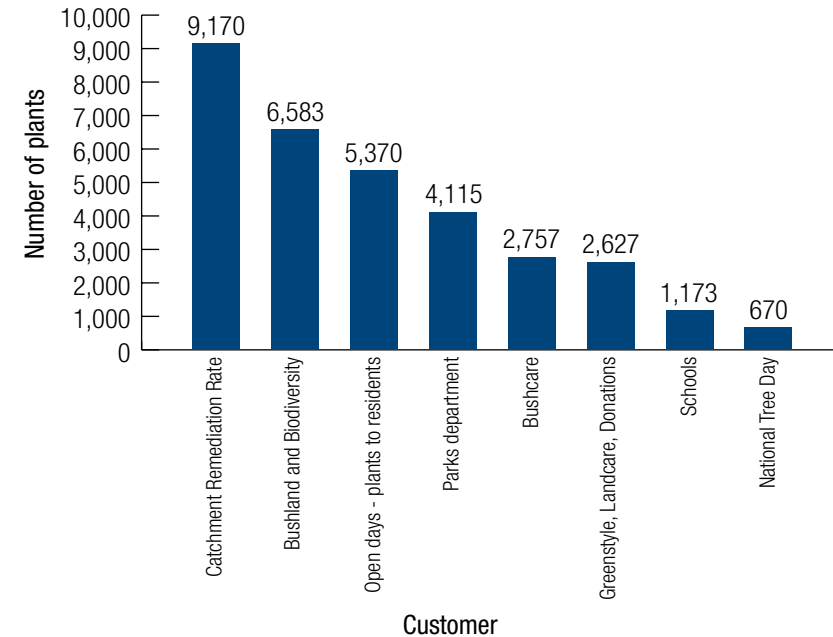


Fig. 3. Distribution of plants across the Hornsby Shire.

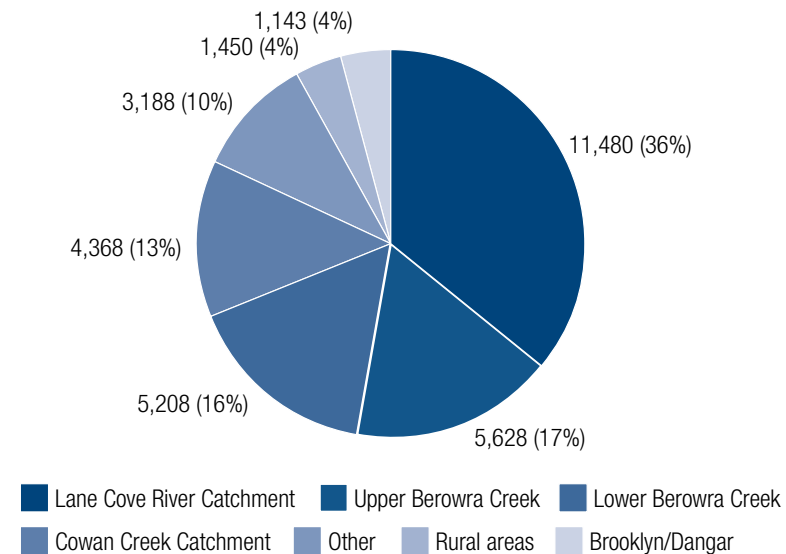


Table 2. Breakdown of plants by customer and area distributed to.

Catchment Remediation Rate	
Lane Cove River Catchment	4,550
Upper Berowra Creek	
Lower Berowra Creek	2,020
Cowan Creek Catchment	
Brooklyn/Dangar	1,000
Rural areas	1,600
Total	9,170

Bushland and Biodiversity	
Lane Cove River Catchment	2,018
Upper Berowra Creek	1,693
Lower Berowra Creek	
Cowan Creek Catchment	2,067
Brooklyn/Dangar	
Rural areas	805
Total	6,583

Donations, Citizenship, Greenstyle and Landcare	
Lane Cove River Catchment	473
Upper Berowra Creek	284
Lower Berowra Creek	23
Cowan Creek Catchment	
Brooklyn/Dangar	
Rural areas	1,115
Other	732
Total	2,627

Bushcare	
Lane Cove River Catchment	1,987
Upper Berowra Creek	278
Lower Berowra Creek	257
Cowan Creek Catchment	105
Brooklyn/Dangar	50
Rural areas	57
Other	80
Total	2,757

Open Days	
Lane Cove River Catchment	1,168
Upper Berowra Creek	986
Lower Berowra Creek	1,918
Cowan Creek Catchment	
Brooklyn/Dangar	
Rural areas	1,298
Total	5,370

Parks	
Lane Cove River Catchment	280
Upper Berowra Creek	1,899
Lower Berowra Creek	120
Cowan Creek Catchment	1,016
Brooklyn/Dangar	400
Rural areas	360
Other	40
Total	4,115

Schools	
Lane Cove River Catchment	334
Upper Berowra Creek	488
Lower Berowra Creek	30
Cowan Creek Catchment	
Brooklyn/Dangar	
Rural areas	30
Extras (National Tree Day)	291
Total	1,173

National Tree Day	
Lane Cove River Catchment	670
Upper Berowra Creek	
Lower Berowra Creek	
Cowan Creek Catchment	
Brooklyn/Dangar	
Rural areas	
Total	670

Accomplishments

- July 2010 *Juncus kraussii* collected for Catchment Remediation Rate works around Brooklyn
- July 2010 Preparation for National Tree Day (NTD) at Vimiera Park undertaken
- July 2010 *Eucalyptus robusta* seed collected at One Tree Reach Laughtondale for upcoming revegetation
- August 2010 New Greencorp Jobs Team Commenced; inductions completed for 6 participants
- August 2010 Land for Wildlife Training undertaken
- August 2010 New season seed sowing continued, fungus gnat biological control implemented for seedlings at germination stage
- September 2010 Loreto College school excursion to nursery to discuss indigenous food garden species from Blue Gum High Forest
- September 2010 Keep Australia Beautiful Awards Judging at Nursery. Large turn out of staff present, including Mayor and local Federal Member
- September 2010 Fairfield Council visit to nursery. Walk to Terry's Creek and inspection of NTD site undertaken
- September 2010 Site visit to Pacific Hills Christian School, Dural, undertaken to discuss tree planting
- September 2010 Pre fire vegetation quadrats surveyed at Gloucester Rd Bushcare North Epping
- September 2010 Site visit to discuss remediation/restoration of Epping Oval post storm water harvesting project
- September 2010 Seed collection and training with Greencorp undertaken at Peebles Road
- September 2010 25/9 Nursery Open Day Rural suburbs
- September 2010 Site visit to North Sydney Council to provide technical advise on new nursery implementation
- October 2010 Tumpinyeri Community Planting Day undertaken 14 volunteers attended
 - October 2010 Rural Land Incentive Program propagation workshops undertaken 9/10 and 23/10
 - October 2010 David Hancock from Natural areas Restoration in Western Australia visited for a nursery tour
 - October 2010 28/10 Chemcert training attended
 - November 2010 4/11 TAFE tour of nursery facility
 - November 2010 6/11 Open Day for Area 2 north 986 plants distributed
 - November 2010 Major seed collection activities undertaken. Includes full team field day for collecting 23/11
 - November 2010 20/11 RLIP propagation workshop concluded (3 part series)
 - November 2010 23/11 and 30/11 TVET students work experience at nursery from Cherrybrook Technology High School
 - December 2010 1/12/2010 Visit to Fairfield Council Nursery and reserves
 - December 2010 Myrtle Rust discussions, meetings held across month
 - January 2011 National Greencorp Job Graduation attended 25/1
 - January 2011 NSW State Myrtle Rust Meeting attended 29/1
 - February 2011 Saturday volunteer day 12/2 swapped for St Benedict's Monastery Planting Day – 25 volunteers attended
 - February 2011 Little casualties in nursery during record heatwave for Sydney basin (31/1 to 6/2)
 - February 2011 Myrtle Rust spraying in field continued, nursery remains free of MR
 - February 2011 22/2 *Eucalyptus* ID and Ecology workshop undertaken for volunteers
 - March 2011 Seed collection and training undertaken with Still Ck Landcare volunteers 14 and 22 March
 - March 2011 Fairfield Council visited for a tree tour of HSC rural areas 30/3
 - March 2011 Open day for Area 2 south held on March 26

- March 2011 New Lone Pines (2) potted up for Hornsby Aquatic Centre
- April 2011 Remote First Aid certification undertaken
- April 2011 Easter Show plants (3,000) sent on loan for combined council's Bushcare display
- May 2011 Rhodamnia rubescens plant rescue undertaken at M2 upgrade section 6/5
- May 2011 HENS propagation workshop presented 11/5
- May 2011 Bushfood plants donated to Transition Epping for community garden at North Epping
- May 2011 TAFE Tour of Nursery 7/5
- May 2011 CRR inspections of future sites undertaken
- June 2011 8/6 Visit to Fairfield Council Nursery with tour of Lansdowne Park
- June 2011 9/6/ Nursery tour by Ryde TAFE CLM students
- June 2011 20/6 Myrtle Rust Training Course undertaken through ANPC

Nursery facility improvements

- December 2010 Nursery water tanks works commenced, resealing of collection point baffles
- February 2011 Back up Sydney Water meter relocated for reasons to ensure irrigation safety
- May 2011 Seed storage room and nursery office renovated
- May 2011 New irrigation system and upgrades commenced
- June 2011 9/6 New shadehouse roof installed
- June 2011 21/6 Shadehouse Station 5 re netted on ends and new doors installed
- June 2011 25/6 Washing basin installed in nursery potting area
- June 2011 new heavy grade irrigation piping installed to all growing areas from recycling and recapture facility. Remote on/off system installed to control irrigation during rain events when off site.





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