

2011-2012

Wingecarribee Shire Council State of the Environment Report



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INTRODUCTION

This report has been produced in accordance with Section 428A of the *Local Government Act* (1993) which outlines the State of the Environment (SOE) reporting requirements. Early in 2012 the Division of Local Government sent a circular to Councils (No.12-06) outlining new requirements for State of the Environment reporting, aligning it to the Integrated Planning and Reporting (IP&R) framework. The circular stated "Council's should utilise the performance measures, indicators and assessment measures identified in their Community Strategic Plans as the basis for reporting on the State of the Environment."

The 2011-12 SOE report reflects the new reporting requirements, having a different format and covering different topics to previous SOE reports prepared by Wingecarribee Shire Council. It has been structured to address the key environmental areas of interest to our community as outlined in the Wingecarribee 2031+ Community Strategic Plan, and reports on Council's actions to improve, manage, or preserve aspects of these environmental focus areas. The report also addresses aspects of the environment of which Council has a high degree of influence or interest.

ENVIRONMENTAL OBJECTIVES

of our Community

Council's Community Strategic Plan: Wingecarribee 2031+ Our Future Our Choice (2031+) outlines the community's vision for the shire in 2031 as "A healthy and productive community learning and living in harmony, proud of our heritage and nurturing our environment". It also outlines the aspirations, goals and priorities of our community, and the challenges we face.

Goals from the 2031+ plan that relate directly to the environment include:

Goal 4.1 Wingecarribee's distinct and diverse natural environment is protected and enhanced.

- 4.1.1 Conserve the key natural resources of the Shires water catchments, arable land, key wildlife corridors, vegetation and scenic landscapes.
- 4.1.2 Maintain and enhance biodiversity.
- 4.1.3 Ensure no net loss of the natural resources of the Shire by replacement and/or offset of the unavoidable loss of trees, vegetation and other resources using an effective and transparent offset formula.

Goal 4.2 Wingecarribee communities live sustainably by choice.

- 4.2.1 Establish mitigation and adaptation plans and imagine a very different world in 2031. Take into consideration the realities of peak oil, climate change, steady state economy and population growth.
- 4.2.2 Ensure that no development takes place in Wingecarribee that would threaten the underpinning natural resources of the area as a water catchment, food bowl, and tourist and recreational attraction.
- 4.2.3 Engage and encourage community by developing programs to explore ways by which we may all live more sustainably.
- 4.2.4 Educate the Community about how to live sustainably
- 4.2.5 Regulate and encourage the Community to maximise sustainable living through best building practice.

Goal 4.3 Wingecarribee achieves continuous reduction in waste generation and disposal to landfill.

- 4.3.1 Minimise waste through education, promotion of alternatives, financial incentives, prosecution of dumpers and Council's own waste management program.
- 4.3.2 Promote Product Stewardship (PS) and Extended Producer Responsibility (EPR) at a local level.
- 4.3.3 Continue to reduce, reuse, recycle and return to maker.
- 4.3.4 Promote alternatives to single use packaging and other disposables.

Goal 4.4 Wingecarribee community has a carbon neutral economy.

- 4.4.1 Promote the type of development that would reduce the use of fossil fuel.
- 4.4.2 Encourage residents and businesses to source goods locally.
- 4.4.3 Promote local sources of renewable energy.
- 4.4.4 Monitor and publish performance of the reduction and offsetting of greenhouse gas emissions.

Goal 3.2 Wingecarribee has maintained a distinct character of separate towns and villages.

- 3.2.1 Retain the rural landscape between towns and villages.
- 3.2.2 Retain and make more distinctive the special qualities that make each town or village unique.
- 3.2.3 Ensure growth of towns and villages does not compromise separation distance between those towns and villages.

Goal 3.5 Wingecarribee is recognised as a place of significant heritage conservation.

- 3.5.1 Identify and promote buildings, places, trees, gardens, landscapes and other areas of significant cultural heritage value.
- 3.5.2 Ensure that the unique heritage qualities of towns, villages and special areas are protected.
- 3.5.3 Recognise where the Shire's cultural heritage contributes to its character and manage change appropriately to reinforce local distinctiveness.

Specific actions taken by Council to address the environmental goals of the community are presented throughout this report.



Continuation of the **ENVIRONMENT LEVY**

Wingecarribee Shire Council (WSC) secured an Environment Levy for a further seven years from 2012, increasing its capacity to deliver environmental works.

Wingecarribee Shire Council was successful in its application to the Independent Pricing and Regulatory Tribunal (IPART) for an extension to the Environment Levy. The Environment Levy is a special rate variation, formerly approved by the Minister for Local Government. It enables Council to raise funds to support the communities' keen interest in the environment, and maintain its existing level of environmental service. IPART approved the Levy for a further seven years, generating around \$1M/year to be dedicated to environmental works.

WSC has had an Environment Levy in place since 2000, when it was identified that the Shire's natural environment had reached a critical stage.

The Environment Levy has funded numerous projects including:

- the Wingecarribee Biodiversity Strategy which provides practical information on the distribution of significant flora and fauna, and acts as a blueprint for ecologically sustainable development (ESD) and environmental management in the Shire
- Council's Bushcare program
- the development of a new Environment Strategy 2012-2017. This strategy will guide the delivery of a comprehensive program of works and collates:
 - the programs from the previous Environment Strategy 2010-2015 Part 1
 - direction and feedback from W2031+
 - reviews of previous SOE reports
 - feedback from community surveys.

The Environment Levy will continue to provide seed funding to secure state and federal grants, and has enabled Council to implement a program of planning and 'on the ground works' aimed at:

- protecting river health and wetlands
- conserving biodiversity
- supporting community environmental initiatives and educational events.



Towards SUSTAINABILITY

The concept of sustainability integrates nature and society. To implement sustainability initiatives people need to understand the environment they live in, and endeavour to limit their impact on its health, diversity, and productivity to protect it for current and future generations.

Resource use, waste generation, pollution, biodiversity protection, and climate change are all issues that Wingecarribee Shire currently faces, and will continue to face into the future.

Both the Federal and State Governments promote sustainability initiatives through the provision of policy, leadership and grant funding. The NSW Government's Sustainability Policy (OEHa 2011) sets targets and strategies to promote sustainable water use, reducing greenhouse gas emissions from energy, waste and fleet management, and sustainable purchasing.

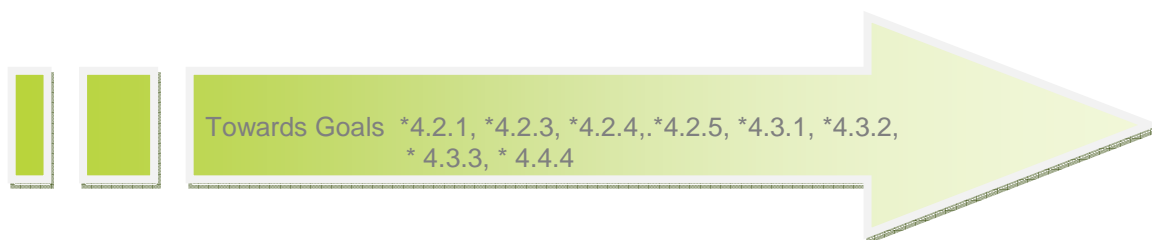
Several community groups that promote sustainability operate within our shire. Local action group CANWin actively engages with council and the community and holds regular public events, such as speaker nights, film nights and workshops.

Under the Protection of the Environment (waste) Regulation the NSW Government has made funding (WaSIP funding) available to local Councils to invest in programs to improve:

- o waste avoidance and management outcomes
- o resource recovery and the use of secondary resources
- o environmental sustainability across the local government area. (OEHa 2012)





Council has utilised WaSIP funding, grant funding, general funds and funds generated by the Wingecarribee Environment Levy to implement sustainability initiatives that support both the focus areas of State and Federal Governments, and also the goals from Council's Community Strategic Plan 2031+.








Council's SUSTAINABILITY SCORECARD














A snapshot of Council's sustainability achievements against Council's goals and WaSIP requirements is presented in Table 1. Further detailed information relating to the environmental goals in 2031+ is included in subsequent chapters.

Table 1 Sustainability Scorecard table

Actions/Goal	2011-12 Performance summary	Progress Rating
Facilitate a Chemical Clean-Out event to reduce contamination to the environment and landfill	Council partnered with the Sydney Catchment Authority (SCA) to hold a Chemical Clean-out day in February 2012 where unwanted household chemicals, highly toxic and hazardous chemicals, were collected from householders. 477 people attended the event held at Council's Moss Vale Depot surrendering 20,905.6kg of chemicals.	
Implement re-use programs for problematic waste materials.	Council's Resource Recovery Centre (RRC) & Reviva Store have been remodelled to accommodate the collection of problematic waste. During 2011-2012, problematic waste sorted & recycled included: <ul style="list-style-type: none"> • Paint – 470 litres recycled • Plastics - 44.48 tonnes recycled • Mattresses - 36.32 tonnes collected & recycled • E-waste - 100.22 tonnes recycled The RRC continued mulching and recycling wood waste on site with 1789.25 m3 sold to the community.	
Enhance procedures and surveillance to reduce the risk of contamination by hazardous waste in recycled products.	Surveillance cameras were installed at Council's RRC weighbridge to assist with the inspection of incoming waste. This supports ongoing measures to reduce illegal dumping of asbestos, gas bottles and chemicals at the RRC.	
Enhance the existing E-waste recycling scheme to maximise recovery.	Council continues to negotiate with service providers to facilitate the implementation of the National Product Stewardship scheme in this region. Delays in its establishment are attributed to issues surrounding the current viability of this scheme for the service providers, given our regional location. Ultimately the scheme aims to establish e-waste drop off facilities where the disposal cost of the e-waste is covered by the manufacturers. In 2011-12 Council planned for a TV surrender week for the community to dispose of the televisions at no cost. This commenced in July 2012.	

Enhance sorting operations for construction and Demolition (C&D) waste and Commercial and Industrial (C&I) waste streams.	A feasibility study for a Material Recovery Facility (MRF), with enhanced waste sorting capabilities, for construction and demolition (C&D), and commercial and industrial (C&I) waste is in the planning stage. Progress has been hampered by limited resources, however some capital investment has been made in project consultancy in June 2012.	
Achieve full accreditation /compliance for all organic products from the RRC.	The RRC has its premium mulch certified under AS 4454. This standard refers to how the materials are processed and handled. The RRC will be seeking the same certification standard for a premium composted product. Raw materials for these products are sourced from green waste disposal deposited at the site.	
Develop a market strategy to compliment RRC recycled products program. Introduce a wider range of reused / recovered goods for sale at the RRC.	Strategies to increase sales of reclaimed and recycled goods at the RRC Reviva Centre (Council's reused products retail outlet) will be rolled out over 2012-13 in conjunction with the development of a Strategic Plan for the Resource Recovery Centre. Council is investigating a business model that would see the Reviva Centre outsourced to Mission Australia. Benefits envisaged are : <ul style="list-style-type: none"> o broadening the range of goods available o Increased hours of operation to make it more accessible to the public. 	
Benchmark processing cost of recycled products program at RRC.	Annual Waste data figures on the tonnage of dry recyclables, garden organics and recycled residual domestic waste collected are provided to the Office of Environment and Heritage annually.	
Develop a Waste / Resource Recovery Education Strategy	A Waste Resource Recovery Education Strategy was developed but not adopted due to a staff restructure resulting in the loss of the waste education officer position. Several workshops were delivered including: Schools Workshop : <ul style="list-style-type: none"> o "Let's Keep the Trees" puppet show for K-2 (basic) 3-6 (advanced) has been delivered to 5 primary schools in the Shire. This workshop shows how the recycling of paper products and metals can save rainforests in SE Asia and Africa. This show was also an activity at Council's Schools Environment Day 2011. Organisation workshop: <ul style="list-style-type: none"> o How To Recycle workshop and tour of RRC: a presentation was given to Scouts at their environment camp in Berrima. Public Workshops: <ul style="list-style-type: none"> o Composting and worm farming at Penrose Sustainable Living Festival. More than 30 adults received group or individual workshops and were provided printed information. 	
Maintain levels of organic material recovery and expand by developing strategies for recovery of local sewage grit and screenings and domestic / commercial food waste	Council's vertical composting unit was decommissioned due to the cost of processing, and the lack of a market for recovered sewage grit compost.	
Identify Council's top 10 water and energy using sites.	Council actively investigates the top water and energy use facilities in its property portfolio using an environmental score keeping database, Planet Footprint. Billing information is readily available for analysis which has led to targeted planning of water efficiency projects and a greater awareness of resource consumption for site managers.	

Reduction in GHG emissions	Council achieved a reduction in its total for Scope 1 & 2 Greenhouse gas emissions in 2011-12. This can be attributed mainly to a reduction in electricity usage for this period. Refer Graph 1	
Develop and implement water and energy saving plans as part of Sustainable Action Plans (SAP) for Council's main building and community facilities.	<p>Key Council staff completed a CERT IV in Carbon Management in late 2011 to provide them with the knowledge and skills to implement carbon reduction initiatives and monitor Council's greenhouse gas emissions.</p> <p>Council has developed a Sustainability Action Plan template and procedure to be applied to selected facilities. Targeted sites will include community facilities where users will be able to integrate their sustainability ideas with those of Council, to come up with achievable actions.</p> <p>Council has undertaken several energy and water efficiency initiatives during 2011-12 including:</p> <ul style="list-style-type: none"> • development of a Revolving Energy Fund pilot project using WaSIP funding to secure energy efficiency project funding for Council facilities • installation of a rainwater water tank to service the Council truck and car wash-bay at the Moss Vale depot. • installation of digital controls for the air-conditioning system in the Civic Centre to provide greater control and timed operation. • installation of a 29.7kW solar panel system, incorporated into the upgrade of the Saleyards in 2011. There have been some initial performance problems with this system, but the issues are being investigated • Zip hot water taps have been installed at the Civic Centre reducing the need for conventional hot water heaters • 48 water efficient shower heads were installed in Council facilities. 	
Develop and implement energy saving plans (SAP) for small-medium businesses in the Shire	<p>Council has developed and implemented Sustainability Action Plans to 3 businesses within the Southern Highlands</p> <ul style="list-style-type: none"> • Bundanoon Bowling Club • Bundanoon YHA • Bundanoon Deli. <p>Funding for this program was cut short due to a range of issues between WSC and OEH.</p>	
Develop a Sustainable Businesses Network	<p>Council is a judge for the Southern Highlands Business Awards for Excellence in the category of Environmental Sustainability.</p> <p>There are no immediate plans to develop a Sustainable Business Network, with Council deciding to focus on its own operations first. However as in-house sustainability knowledge and resources grow, Council plans to transfer /share this with the business community.</p>	
Upgrade water and sewer infrastructure with regard to climate change implications to increase energy efficiency and water security	<p>Council's Water and Sewer branch has a program to install variable-speed drives which enable greater control of pumping operations therefore reducing energy demands.</p> <p>Council takes advantage of off-peak and shoulder power rates at our main water filtration plant by running the plant at night where possible.</p> <p>In 2011 WSC was the joint winner of the Local Government and Shire's Association Excellence in the Environment Awards for water conservation efforts. Through the federally funded Water Loss Program, Council has made water savings through the fitting of water flow meters, leak detection surveys and leak repairs within 5 catchment</p>	

	<p>areas. Council estimates up to 90 million litres of water are being saved annually, which equates to savings of approximately \$112,000 pa.</p> <p>Budget allocations are ongoing to upgrade infrastructure with consideration to energy efficiency and expanding the capabilities of the pumping network to ensure water security.</p>	
<p>Fleet Management- All utilities and sedans purchased must have a minimum of 3 star rating under the Federal Government Green Vehicles Guide (GVG)</p>	<p>Council's Vehicle Purchasing Policy states: Vehicles shall be selected for operational needs whilst minimising the effects on the environment. Vehicle selection will aim to reduce green house gas emissions and other air pollutants. As a minimum all utilities and sedans purchased must have at least a 3 star rating under the Federal Governments Green Vehicle Guide (GVG). With the current vehicle changeover schedule it is envisaged that all council vehicles will meet these requirements within two years of the policy being adopted. Efficient technologies will be considered when purchasing new vehicles.</p>	
<p>Develop Policy for:</p> <ul style="list-style-type: none"> • Sustainable Purchasing • Sustainable Events Management 	<p>Council developed a Procurement Guideline in consultation with Local Government Procurement. Its objectives are to:</p> <ul style="list-style-type: none"> • ensure Council complies with the NSW Local Government Act 1993 and the NSW Local Government (General) Regulations 2005 • ensure value for money in procurement decision making (price, whole of life costs, quality, safety, service and reliability) • promote transparency, probity and good governance in procurement activities • promote sustainable procurement advancing environmental, social and economic objectives • promote innovation and process improvement . <p>The Wingecarribee Shire Council recognises it has a role in the economic development of the community and is committed to assisting local industry to do business with Council refer: Local Purchase Preference Policy WSC.</p> <p>Council's Event Management Policy states that Council events should be conducted "following the principles of sustainability".</p>	
<p>Protect and enhance the shires natural environment.</p>	<p>Council has undertaken a range of projects and measures to protect and enhance the shires natural environment. Details are contained throughout this SOE report particularly in the chapters on Water and Biodiversity.</p>	
<p>Take into consideration the realities of peak oil, climate change, steady state economy and population growth.</p>	<p>Council completed an Internal Climate Change Risk Assessment in early 2012 to identify the likely impacts and increased risk to Council under predicted climate change scenarios.</p>	
<p>Regulate and encourage the Community to maximise sustainable living through best building practice</p>	<p>BASIX (Building Sustainability Index) is a tool introduced by the NSW government to guide house design and construction so they use less potable water and are responsible for fewer greenhouse gas emissions. Council staff are responsible for checking development applications and building construction against BASIX Certificates to ensure compliance. (DPI 2007)</p>	
<p>Monitor noise levels and respond to complaints.</p>	<p>Council continues to respond to complaints about noise received from the community. The number of noise complaints has decreased in 2011-12 compared to previous years, however there has been a slight increase in the average recorded background noise levels in residential areas. Details are contained in Graphs 2 & 3.</p>	

Key



Expectations met or exceeded



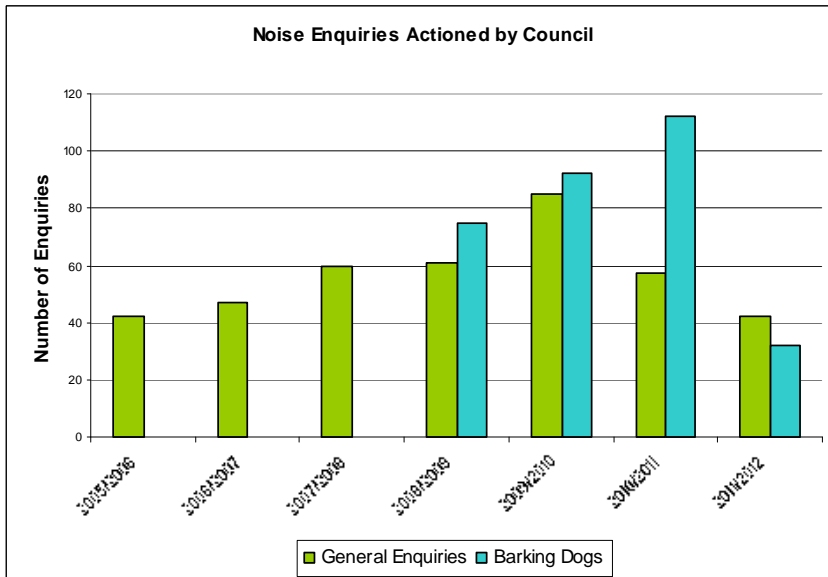
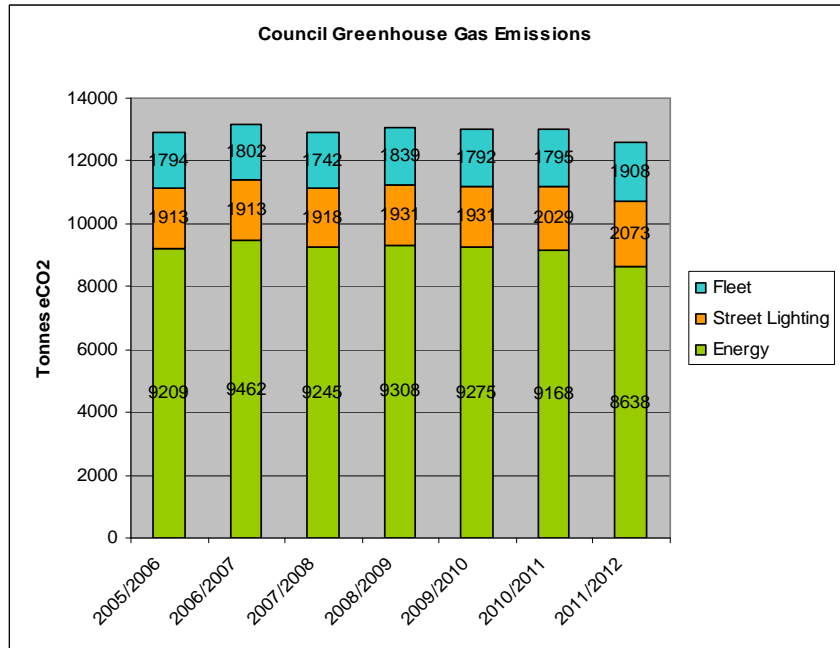
Areas to improve-



Negative long term trend

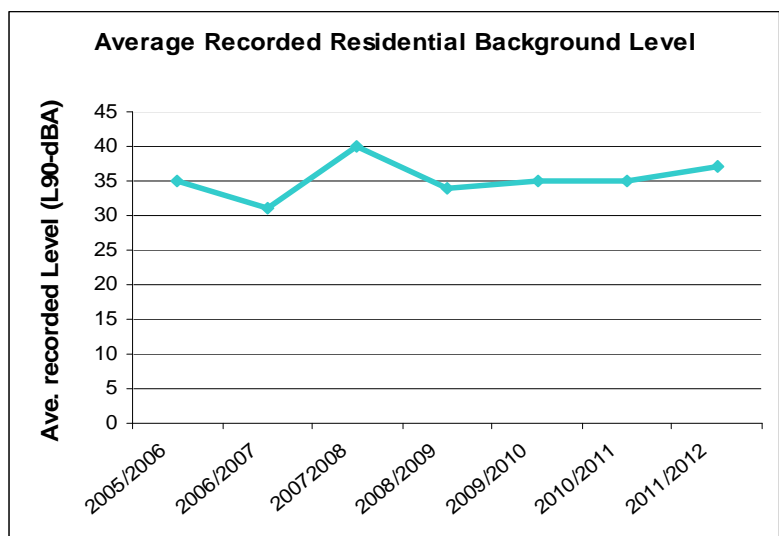


Graph 1 Trends in Council's Scope 1 & 2 Greenhouse Gas emissions.



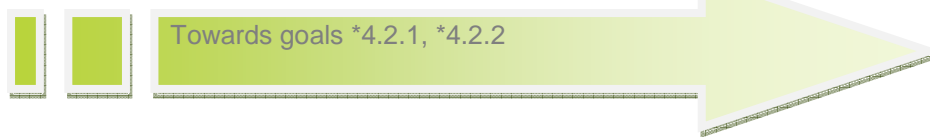
Graph 2 Noise enquiries actioned by Council.

Graph 3 Average recorded residential background noise levels.



ENVIRONMENTAL MANAGEMENT

COUNCIL'S ACTIONS TOWARDS ENVIRONMENTAL MANAGEMENT



LOCAL ENVIRONMENT PLAN 2010

A Local Environment Plan (LEP) is a legal instrument that imposes standards to control development within an area. It is used to reserve land for various purposes including:

- open space
- schools
- transport
- other public purposes

The LEP is also used to:

- provide zoning (e.g. residential, commercial, industrial)
- control activities such as advertising and signage
- protect items and places of heritage
- preserve habitat, trees and vegetation
- Identify regional wildlife habitat corridors and riparian lands. Development proposed within either of these areas is subject to additional controls which aim to prevent and minimise potential impacts.

Wingecarribee Shire Council's LEP 2010 utilises the NSW Standard Instrument and provides development controls accordingly.

ENVIRONMENTAL MANAGEMENT SYSTEM

Council acknowledges its responsibilities in relation to the protection and management of the environment through its Environment Policy which states "Council is committed to protection of our local environment, the prevention of pollution and improving the sustainability of our operations".

Council is in the process of developing an Integrated Management System (IMS) which will include an Environmental Management System (EMS). Our Operations Branch is well on the way to achieving this for all roads/bridge construction and maintenance activities. Third party accreditation of the operations EMS is scheduled for the 2012-13 financial year.

Council has also engaged the services of an environmental consultant to review the internal tools and procedures for the environmental assessment and approval processes. Environmental awareness training for staff involved in operational and development approval activities will continue into 2013.

PLANS OF MANAGEMENT

Councils must complete Plans of Management for all community land in order to meet its statutory requirements under the Local Government Act 1993 and Local Government Amendment (Community Land Management) Act 1998.

WSC's Plans of Management are used to outline the important features of community land. They articulate how Council will manage the land and how that open space is intended to be used, improved, and managed in the future.

The framework through which a Plan of Management is developed provides an opportunity for Council to engage with the local community, unlock the existing body of local knowledge and focus community discourse surrounding the role, values and expectations of the community in relation to the nominated parcel of community land.

WSC is currently in the process of completing a number of Plans of Management for community land identified as priorities under the Wingecarribee Land Rationalisation Strategy.

The status of commenced and completed Plans of Management for 2011-2012 appears in Table 2 below.

Table 2: Status of WSC Plans of Management

Site	Status
Leighton Gardens, Moss Vale	Completed
Bong Bong Common, Moss Vale	Completed
Bundanoon Oval/Jordan's Crossing, Bundanoon	Nearing Completion
Iron Mines Oval, Mittagong	Nearing Completion
Jurd park, Colo Vale	Nearing Completion
Church Road Playing Fields, Moss Vale	Nearing Completion
Hampden Park, Robertson	Nearing Completion
Stephen's Park, Bowral	Nearing Completion
Seymour Park,	Nearing Completion
David Wood Playing Fields, East Bowral	Commenced
Boronia Park, Hill Top	Commenced
Lake Alexandra, Mittagong	Commenced
Alexandra Square	Commenced

BUSHFIRE RISK MANAGEMENT PLAN

A Bush Fire Risk Management Plan has been prepared for the Shire, to identify the level of risks posed by bushfires to various assets including environmental and ecological assets. Climate Change predications indicate the threat of bush fires will increase in our shire into the future highlighting the need to review Risk Management Plans periodically.

All proposed hazard reduction burns must have an approved Hazard Reduction certificate in accordance with the Bush Fire Environmental Assessment Code(2003). Whist every effort is made to achieve dual objectives, management priority is necessarily given to the protection of life and property. Council works closely with both the Rural Fire Service and Fire and Rescue NSW to coordinate bushfire management activities. 81.8 ha of land was subject to bushfire management hazard reduction burns over the last year.

FLOOD MANAGEMENT

Council is developing flood studies and floodplain risk management studies in accordance with the NSW Flood Prone Land Policy and the NSW Floodplain Development Manual. Progress to date is presented in Table 3.

Table 3 Flood Management Studies & Plans

Site	Status
Mittagong Rivulet Floodplain Risk Management Study & Plan	Completed
Burradoo Catchment BU2 Flood Study- Floodplain Risk	Completed
Burradoo Catchment Floodplain Risk Management Study and Plan	In Progress
Whites Creek (Moss Vale) Flood Study -	Complete
Whites Creek Floodplain Risk Management Study & Plan	In Progress
Wingecarribee River Flood Study	In Progress
Gibbergunyah Creek Flood Study	In Progress
Berrima Floodplain Risk Management Study & Plan	Complete
Nattai Creek Flood Study	Scheduled for 2013

ENVIRONMENT & SUSTAINABILITY COMMITTEE

Council's Environment and Sustainability Committee has overseen the delivery of Environment Levy funded works since its inception in 2000. The committee consists of councillors, community members and agency representatives.

In early 2011, the Environment & Sustainability Committee increased its scope to include the monitoring and review of project progress beyond the Environment Levy funded projects, extending to the scope of the overarching Environment Strategy.

WATER

THE STATE OF OUR CATCHMENT

Wingecarribee Shire sits within Sydney’s Drinking Water Catchment. The Sydney Catchment Authority (SCA) is responsible for monitoring and protecting the water supply within the Sydney catchment area (DECCW and Water & State of NSW 2010). Under legislation the SCA is required to undertake an audit of the state of the catchment every three years. The most recent audit was conducted in 2010 and the resulting report provides the community with a valuable resource which describes the state, pressure and issues associated with the waterways within the Shire. In addition, the SCA produces an annual water quality monitoring report which presents the results of its extensive water quality monitoring program.

The SCA water quality monitoring program covers dams and reservoirs as well as key sites throughout the catchment. Within the Wingecarribee Shire, these catchment sites are predominantly downstream of our Sewerage Treatment Plants (STPs). Table 4 below presents a summary of catchment sampling results conducted in our shire. The results highlight the pressure urban settlement places on water quality.

Table 4: Summary results for catchment samples 2010-11. Percentage of samples outside of benchmark ranges, according to the SCA monitoring program (SCAa 2011).

Location	Site	pH	Turbidity(NTU)	Dissolved Oxygen (%)	Chlorophyll- α (ug/l)	Phosphorus total (mg/L)	Phosphorus filterable 9mg/L)	Nitrogen total (mg/L)	Nitrogen oxidised (mg/L)	Nitrogen ammoniacal (mg/L)	Manganese total (mg/L)	Aluminium total (mg/L)	Aluminium filtered (mg/L)
Gibbergunyah Creek at Braemar STP	Dry			89	44	100	33	100	100	100		100	44
	Wet		100	33	67	100	67	100	100	100		100	33
Nattai River at the Craggs	Dry	13		25	25	50	13	100	100			38	
	Wet		33			100	75	100	100			100	50
Wollondilly River at Golden Valley	Dry			55	18	18		100	18	9		36	
	Wet		100	100		74	100	100	100	100		95	100
Wingecarribee River at Berrima Weir	Dry	17		41	100	100	8	100	58	33		100	17
	Wet	ND	ND	ND	ND	100	ND	100	ND	ND		100	ND

KEY

	Percentage Samples within site specific standard range
	Percentage of samples outside site specific standard range
	No applicable benchmark

In 2011-12 Council began an in-house Water Watch program with five sampling sites established over 3 urban waterways in Mittagong, Moss Vale and Bowral. Visual monitoring is combined with in-situ analysis of turbidity, pH, and temperature. Average results collected for the period 2011-12 are presented in Table 5. Data will continue to be collected so long term trends can be determined. Dissolved oxygen and conductivity will be included in the monitoring in 2012 as Council increase its in-house monitoring capability.

Table 5: Average results for Councils Water Watch program sites.



Site	Water Temperature °C	Turbidity NTU	pH Unit
Mittagong Creek Bradman Avenue Bowral	14.87	16.05	7.42
Mittagong Creek Mount Road- Bowral	15.1	16.24	7.47
Lake Alexandra – Mittagong South	17.73	11.31	7.35
Lake Alexandra – Mittagong North	17.96	5.32	7.64
Whites Creek Cosgrove Park	13.81	4.83	7.49

RIPARIAN VEGETATION CONDITION

Riparian vegetation is essential for healthy waterways. The Shire has areas where there are intact stands of native vegetation along the riparian corridors, particularly in the special catchment areas and National Parks. There are other areas in the Shire with little or no standing vegetation cover. (DECCW and Water & State, 2010)

The intact stretches of vegetation provide an effective water quality buffer reducing the intrusion of pollution from land-based activities into waterways. Sediments are removed, nutrients sequestered and banks stabilised by riparian vegetation.

A major land use within the Wingecarribee sub-catchment is agriculture, most of which is confined to the upper reaches where water extraction and farm dams are common. Removal of riparian vegetation and damaging access from stock are two of the primary pressures placed on riparian condition from agriculture. Sections of the lower reaches of the catchment include reserved lands such as the Cecil Hoskins Nature Reserve, offering a greater level of protection for riparian land.

Waterways that run through our urban areas including Moss Vale, Bowral and Mittagong have sparse natural riparian vegetation and large stretches of environmental weeds (HNCMA 2008).

LAND-USE

Land along rivers and creeks are often the most fertile part of the landscape making this prime land for agriculture. Authorities and regulators now push for the repair of these environments, however costs associated with revegetation, fencing off these sites, alternate water sources for stock, and the apparent loss of workable land are barriers to their restoration.

Urban and industrial land-uses adjacent to waterways create additional issues for river health and water quality including:

- diffuse source water pollution which occurs predominantly when stormwater collects pollutants from a range of dispersed urban and rural land use activities e.g. fertilizers, pesticides, and oils make their way into the waterways
- risk of run-off from industrial processes
- exotic plants (garden escapes) establishing as weeds in the riparian corridor
- increased sediment & oil load from urban gutters and roads
- irresponsible use of stormwater drains for disposal of domestic liquid waste.

STORMWATER

Council's stormwater collection network consists of a mix of conventional drainage systems in the urban areas with grassed roadside verges and swales in non-urban areas. Within the shire there are around 184km of stormwater pipes/channels, and 245 stormwater discharge points to the environment.

Stormwater from the urban settlements flow to the following waterways:

- Bowral – Mittagong Creek -Wingecarribee River
- Mittagong - Nattai River
- Moss Vale - Whites Creek and Wingecarribee River
- Robertson - Wingecarribee River (majority), also Shoalhaven & Nepean
- Berrima - Wingecarribee River
- Bundanoon - Paddy's River and Shoalhaven River
- Southern Villages - Wingecarribee, Paddy's, Shoalhaven, & Whites Creek
- Northern Villages - Nattai & Nepean Rivers

MINING

The expansion of the mining and coal seam gas industry within the state has led to public concern regarding the possible environmental impacts on groundwater, water catchments, and agricultural land.

Wingecarribee Shire has coal seams present within the geology leading to increased pressure for exploration and associated extraction activities. Berrima Colliery already operates at Medway, and extraction operations based in the Illawarra enter the north of the shire. Currently 2 petroleum titles which permit coal seam gas exploration, and 12 coal titles are in place in the shire.

During the 2011/2012 period:

- the NSW Government granted approval for the continuation of the Berrima Colliery within the previously approved footprint, with a limit of up to 460,000 tonnes produced per annum.
- the Hume Coal Exploration Project commenced in and around the Sutton Forest area. This project is still in the feasibility stage which includes a 2 year groundwater and surface water impact assessment.

CLIMATE CHANGE

In a report prepared by the CSIRO (2007) titled "Climate Change in the Hawkesbury Nepean Catchment" it was reported that "Changes in rainfall and higher evaporation rates are likely to lead to less water for streams and rivers in the Hawkesbury-Nepean Catchment, which will have downstream consequences for storages and place strains on the catchment's water resources."

DRINKING WATER

The main source of drinking water for Wingecarribee Shire comes from the Wingecarribee Reservoir which is managed by the SCA. Council purchases the raw water from the SCA at an agreed quality, which is subsequently treated at Council's Wingecarribee Water Treatment Plant.

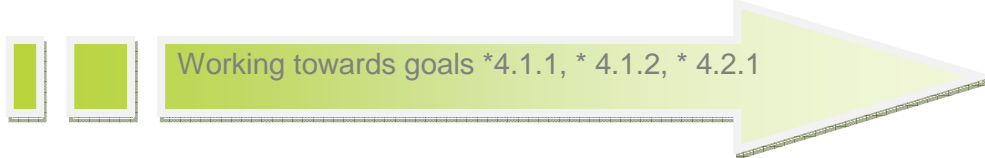
Additional water is sourced from Bundanoon and Medway Creek dams. The greater catchments for these two dams include agriculture, urban activities and roads. Such land uses increase the risk of nutrients, bacteria and toxicants being present in the reservoir. Nutrients in particular increase the risk of Blue Green Algae being present in the supply during the warmer months.

The Bundanoon Dam catchment is largely forested crown land which results in less pressure placed on the quality of the water. From the dam wall the nearest:

- public road access is 1.4km
- road crossing is 3.5km
- freehold land is 1.2km

Medway Dam is far less protected with freehold land adjoining the reservoir. Much of the reservoir has only a 75-150m bushland vegetation buffer separating it from pastureland.

COUNCIL'S ACTIONS TO IMPROVE WATER MANAGEMENT



PLANNING & MANAGEMENT

In 2009 WSC engaged a consultant to prepare an Integrated Water Cycle Management Evaluation Study and Strategy Plan. The plan was developed in accordance with guidelines set by the then NSW Department of Water and Energy (currently the NSW Office of Water).

This document provides a guideline for managing all components of the water system in an integrated manner so that water is used optimally to benefit both the environment and the community.

SUPPLY AND MONITORING

Council operates three Water Treatment Plants that supplied 2658ML of water to residential, and 584 ML of water to commercial customers during the reporting period. The supply network consists of 653km of pipe work supplying 19598 properties.

Some areas of the shire are still without reticulated water supply and therefore rely primarily on rainwater or bore water licences.

Council conducts on-going testing of both raw and treated drinking water in our system. 508 samples were collected throughout the shires reticulation system in 2011-12 as part of ongoing compliance monitoring required by the NSW Department of Health. Test results are monitored by Council, and the Department of Health, to ensure they meet criteria set in the Australian and New Zealand Drinking Water Guidelines.

Council has undertaken significant infrastructure works during the reporting period. Nine water operation & maintenance projects with a budget of \$696K, and 32 capital/renewal projects with a budget of \$5.28M are being actioned. Good progress was made on the majority of projects including:

- Bundanoon Dam ladder refurbishment to improve access to dam and ability to inspect
- Wingecarribee treatment plant alum tank installation to improve removal of contaminants
- Water management project (50% Federal Government funded)

In total 22 projects were completed and 19 have been carried forward to 2012/13.

The Local Government and Shire's Association's "Excellence in the Environment Award" was presented to WSC in 2011 for water conservation efforts associated with leak detection in our water reticulation system. Further detail is contained in Table 1 Council's Sustainability Scorecard.

Council recruited a Water Engineer from Thames Water UK who commenced work in November 2011 to oversee water treatment, improvements in process and procedures, and project delivery.

Council will continue to run its Water Watch program for our urban rivers and creeks extending it to include dissolved oxygen and conductivity monitoring. Monitoring of sites also includes recording instances of stormwater pollution and photo point monitoring to gauge site changes.

DEVELOPMENT

Development within Wingecarribee Shire is subject to the State Environment Planning Policy (SEPP) for Drinking Water which requires public authorities to consider whether any activity within the catchment will have a neutral or beneficial effect (NoBE) on water quality. Development applications received by Council are assessed using the NorBE criteria.(SCAb,2011)

The SCA provides Councils with a development assessment tools, and monitors, evaluates and reports on development assessment matters, concurrences and advice given. The SCA also monitors and evaluates the use and success of its development assessment tools by seeking feedback from councils through surveys and workshops. Council's planning and development application assessment processes are subject to periodic audits by the SCA in relation to NorBE requirements. The audits examine whether councils:

- properly apply NorBE to assess development applications in the catchments
- incorporate the SCA's conditions of concurrence into conditions of consent
- implement the SCA's concurrence conditions through compliance inspections.(SCA (b) 2011)

STORMWATER MANAGEMENT

Council has started placing Stormwater Quality Improvement Devices (SQIDs) throughout the stormwater network. SQID's are used to help protect creeks and rivers by trapping and collecting rubbish and pollution that ends up in stormwater drains. To date Council has installed 44 SQID's which are located in 15 stormwater sub-catchments. Council has not monitored the impact of installing these devices.

Stormwater infrastructure maintenance is an ongoing issue. While traditional infrastructure required relatively little maintenance, SQIDs are much more resources intensive. Maintenance cost need to be factored into SQID installations. Environmental protection comes at a cost, but this cost is offset by the benefits to the environment, community (social/civic pride), and possible deferral of maintenance and repairs downstream.

Funding for stormwater improvement works is raised through the Stormwater Management Service Charge. Stormwater management services are broadly defined as managing the quantity and quality of stormwater runoff from a catchment with the aim of:

- minimising stormwater impacts on aquatic ecosystems
- minimising flooding impacts
- utilising stormwater as a water resource

Within the reporting period, funds raised were spent on 6 capital works projects, maintenance works, and scoping works.

RIPARIAN WORKS

Council is responsible for managing over 130 km of waterways.

The Mittagong Creek Riparian Management Plan was developed in 2011-12 and was presented at a public forum in Bowral to obtain feedback. The plan sets the direction for future works within this riparian corridor to be supported by the Environment Levy. The plan was approved by the Environment and Sustainability Committee for exhibition to the wider community.

Council obtained grants in the 2011-12 period to conduct riparian works including a grant obtained from the Hawkesbury Nepean Catchment Management Authority (HNCMA) for weed control and bush regeneration works at:

- Berrima River Bend Reserve
- Iron Mines Creek
- Stingray Swamp
- Mittagong Creek upstream tributary.

Council's bush regeneration team continues to support the shires Landcare and Bushcare volunteers who work at riparian sites including Jordan's Crossing, Wingecarribee River at Berrima, Mittagong and Gibbergunya Creeks. Work at these sites focuses on the removal of noxious and environmental weeds, revegetation and regeneration of native bush all of which contributes to improving the water quality of these waterways.

Council also has a program that funds conservation activities on private land. This program aims to protect endangered vegetation communities and riparian corridors. The program complements programs run by the HNCMA and benefits the greater community as many of the shires waterways flow through private lands and act as corridors for biodiversity.

MINING

Council has adopted a policy of opposing all coal seam gas exploration and production, and all long wall mining in the Shire. This position is based on the lack of credible and conclusive scientific evidence that activities associated with coal seam gas extraction will not have a long term irreparable impact on groundwater reserves within the Shire, or upon Sydney's Drinking Water Catchment.

Council formed the Community Coal Reference Panel, in the 2011-12 period, to address community concerns regarding coal seam gas and new mining activities. Since its creation, the Community Coal Reference Panel has made several submissions to government authorities & private organisations on a variety of issues including to:

- the NSW Legislative Council inquiry into Coal Seam Gas
- the Department of Planning and Infrastructure, on the extension/continuation of the Berrima Colliery
- the Department of Planning and Infrastructure, on the Strategic Regional Land Use Plans, and the draft Aquifer Interference Policy
- the Department of Trade and Investment on the renewals of the Mining Authorisation 349 and Petroleum Exploration Licence 469
- a private mining company regarding a refusal of exploration activities on Council road reserves.

Managing WASTEWATER

ON SITE SEWERAGE MANAGEMENT SYSTEMS

The shire has a high proportion of on-site septic and effluent collection systems, referred to as On Site Sewerage Management Systems (OSSM).

Around 4500 OSSM Systems are providing sewerage management for residents outside the range of Council Sewerage Infrastructure. New systems need to meet strict guidelines however aging systems pose a pollution threat due to lack of maintenance and performance failure. Failure of an on-site sewerage system can lead to land and water contamination.

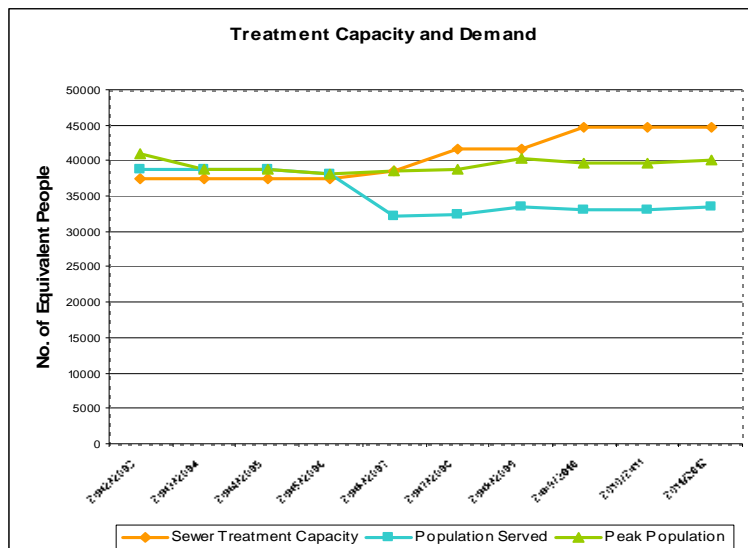


COUNCIL SEWER SYSTEM

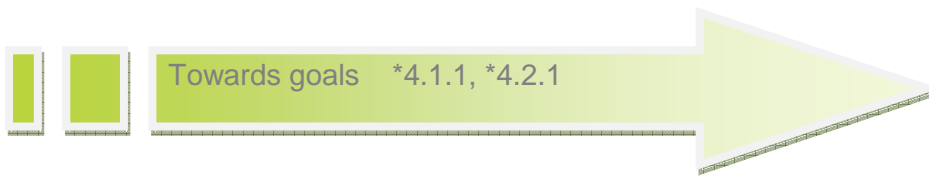
Council currently operates 5 Sewerage Treatment Plants (STP's) and maintains a network of approximately 515km sewer mains. The STP's operate under licence from the Environment Protection Authority (EPA) and discharge treated effluent into the waterways in accordance with the licence agreement which sets limits for quality and volume discharged.

The existing plants serve an estimated permanent population of 33,490 people, and have the capacity to serve a population of 44,800.

Graph 4- Council's sewerage treatment capacity and demand



COUNCIL'S ACTIONS TO IMPROVE WASTE WATER MANAGEMENT

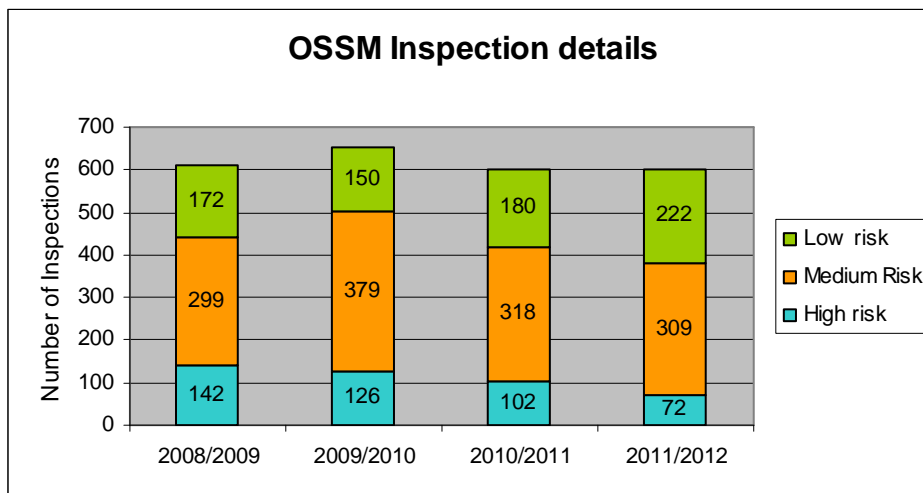


ON SITE SEWER MANAGEMENT SYSTEMS

Council has a proactive and systematic monitoring program for inspection of OSSM systems. 603 new systems were inspected in the last year, which identified 31 failing systems requiring major works

Graph 5 below shows details of Councils OSSM system inspections over time. Risk associated with the systems refers to the level of risk of environmental harm should the system fail. High risk systems trigger a more stringent inspection regime.

Graph 5



COUNCIL'S SEWER SYSTEM

Council conducts extensive monitoring and testing of treated effluent at its five STP's for a range of parameters including:

- Biological Oxygen Demand (BOD)
- Total Suspended Solids (TSS)
- Nitrogen
- Ammonia
- Oil & Grease
- Phosphorus
- Faecal coliforms
- Discharge flow

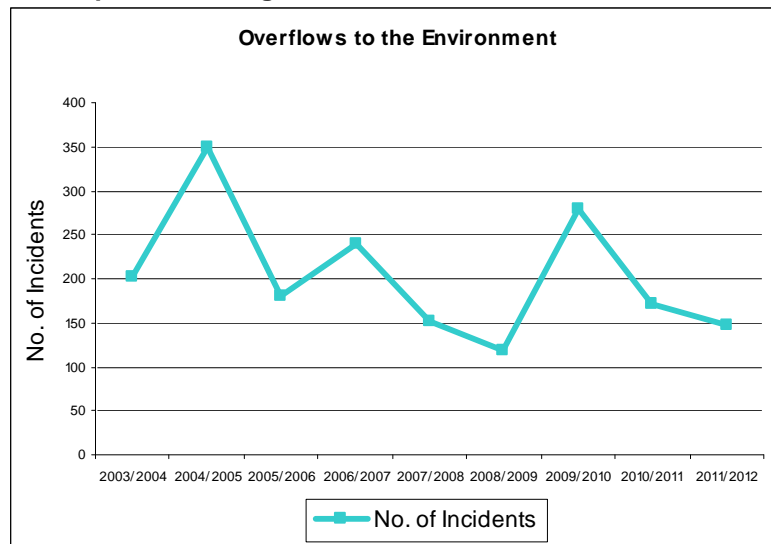
Within the reporting period Council obtained 100% compliance for effluent quality, against its licence requirements, at Berrima, Bundanoon and Mittagong There were some minor non-compliances against the licence conditions for Moss Vale and Bowral, which Council reported to the EPA. The reasons for the non-compliance events are known to Council, with projects in place to address these and other issues associated with the sewer system, including:

- a study into pollution reduction, finalised in 2010
- an infiltration study which is still underway in the Bowral STP sewerage catchment area. This will be extended to investigate illegal connections to our sewer system

- a manhole rehabilitation project which began in 2011
- improved practices and procedures at Berrima septic receiveal station
- increasing the capability of several sewerage pump stations in Bowral, Moss Vale and Hilltop
- an upgrade to Bundanoon STP to increase treatment capacity

Graph 6 below show a decrease in the number of sewerage overflows to the environment in the past two years. Several factors can influence these trends including weather conditions particularly rainfall.

Graph 6- Sewerage overflows to the environment



ROBERTSON SEWER SCHEME CONSTRUCTION

Construction of the Robertson Sewerage Scheme is underway with the construction of a new treatment plant, 25km of sewerage reticulation pipes and a storage dam for 47ML of treated sewage for reuse in irrigation.

This system will remove the reliance on on-site sewerage disposal in the village of Robertson and will result in a reduction of pollution to the surrounding environment.

The plant is due to be commissioned in early 2013.

BIODIVERSITY

The Wingecarribee Shire has significant biodiversity assets and a large percentage of protected lands in the form of reserves and national parks. Outside of these areas, biodiversity assets are under threat. The Wingecarribee Biodiversity Strategy (2003) identified approximately 63% of the Shire as being covered with around 49 different vegetation communities.



Within the shire there are thought to be around:

- 1558 species of flora
- 359 species of fauna
- 206 known or predicted threatened species.(OEHb 2012).

ENDANGERED ECOLOGICAL COMMUNITIES

Wingecarribee Shire has seven known Endangered Ecological Communities (EEC) listed under the NSW Threatened Species Act (1995), and several others predicted to exist in the shire.

The known communities are:

1. Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions
2. Mount Gibraltar Forest in the Sydney Basin Bioregion
3. Robertson Basalt Tall Open-forest in the Sydney Basin Bioregion
4. Robertson Rainforest in the Sydney Basin Bioregion
5. Southern Highlands Shale Woodlands in the Sydney Basin Bioregion
6. Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions
7. Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes Bioregions.

The seventh community from the list above was declared as endangered early in 2012 by the NSW Scientific Committee.

This community typically appears as an open-forest, woodland or open woodland that transitions into grassland with low tree cover. It is known to occur in several locations in the shire including:

- the western end of Sally's Corner Road- Exeter
- Southern Highlands Drive Wingello
- Golden Vale Rd Sutton Forest
- Werai Road in Werai,
- parts of Nowra Rd
- sites around Berrima and west Berrima, including Council managed land , plus environs along the Wingecarribee River.
- around Medway Rivulet



Pictured: Newly Listed EEC

In November 2011 the Federal Government declared *Upland Basalt Eucalypt Forests of the Sydney Basin Bioregion* eligible for listing as an “endangered community” under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) . This ecological community



incorporates the two state listed EEC's i.e. 'Robertson Basalt Tall Open Forest in the Sydney Basin Bioregion' and 'Mt Gibraltar Forest in the Sydney Basin Bioregion'. The federal listing highlights the significance of these vegetation communities and provides them with greater level of protection under legislation

Pictured: Federally Listed EEC Upland Basalt Eucalypt Forests of the Sydney Basin Bioregion

WILDLIFE CORRIDORS

The following important regional wildlife corridors have been identified in the Wingecarribee Shire:

- Nattai-Woronora
- Blue Mountains
- Wollondilly
- Joadja
- Shoalhaven

Wildlife corridors play an important role linking large areas of contiguous vegetation to provide pathways for migratory and nomadic species. Such corridors are of particular importance during times of environmental pressure e.g. drought, fire and storms.

The area between the Greater Blue Mountains and the National Parks of the southern escarpment and ranges is a critical connection for plants and animals to other natural areas on the east coast of Australia.

These areas are special because they contain significant woodland, grassland and wetland vegetation communities and are home to many threatened species. Remnant Southern Highlands vegetation plays a key role in this larger corridor. (HNCMA 2011)

WETLANDS

364 wetlands have been identified to occur within the shire with the highest value wetlands occurring within protected areas such as the Sydney Catchment Authority special areas, National Parks, and flora reserves. Lower value wetlands occur within intensely grazed, drained and cropped areas which have reduced biological and hydrological functions.



THREATS TO BIODIVERSITY

The main identified threats to the shires biodiversity include:

- clearing and fragmentation of habitats
- impacts from farming and grazing
- impacts from residential development
- fire regimes
- invasion by weeds and feral animals.

Herbicide and fertiliser use associated with various land uses can also affect ecological communities either directly or indirectly, and urbanisation results in impacts such as:

- invasion of bushland by domestic dogs and cats
- rubbish dumping
- invasion by garden plant escapes
- firewood collection
- impacts from vehicles
- the creation of informal trails by walkers and mountain bike riders
- arson.

Urbanisation also increases pressure to reduce bushfire fuel loads. Such actions may be detrimental to the ecology of a site, but are currently managed according to Bushfire Risk Management Plans that are aligned to legislation. (OEHB 2011)

WEEDS

Weed species can overwhelm native vegetation and dominate an area to the point where native species are excluded and/or arable lands are depleted. Noxious weeds are plants declared under the Noxious Weeds Act (1993) and are required by law to be controlled by all landholders.

Weeds that are declared noxious are those that have potential to cause harm to the community and individuals, can be controlled by reasonable means and most importantly, have the potential to spread within an area and to other areas. (DPI 2012)

According to the Department of Primary Industry's Noxious Weeds Database, there are 90 weeds declared as noxious in the control area of Wingecarribee Shire Council. Noxious weeds are classed in five categories requiring different control measures ranging from complete eradication to restrictions on the sale, control, and movement of existing plants.

Environmental weeds are those which readily colonise and overrun bushland areas. 48 plant species are currently classified as environmental weeds for the Shire.

Factors influencing the introduction and spread of weeds include:

- disturbing or clearing land (including pasture)
- decline in ecological processes through increased fire and nutrient loads, and climatic changes
- arterial roads and railways entering the shire from the north, south and west provide a pathway for weeds to enter the shire.
- introduction by livestock, contaminated feed and contaminated trucks movement
- lack of cooperation to coordinate efforts (100% corporation from all affected landholders is required to successfully eradicate weeds)

PEST ANIMALS

At least nine species of pest animals are contributing to the decline of native plant and animals in the shire. Impacts include predation by the fox, feral cats, wild dogs and pigs, plus competition for food and degradation of the landscape by rabbits, feral goats, and deer.

The introduced Indian Myna birds appear to be increasing, particularly in our urban areas. This feral species competes with our native bird and hollow-dwelling animal populations and can pose potential health risks to humans and livestock. Mynas are listed on the International Union for Conservation of Nature (IUCN) ISSG website (2008) as one of the world's 100 worst invasive species.

CLIMATE CHANGE

Climate Change is recognised as a key threatening process in the NSW Threatened Species Act (1995). In Wingecarribee Shire the key threats to biodiversity linked to Climate Change are:

- bushfire- Highly destructive to some of the shires forest communities including Robertson Rainforest and Mt Gibraltar Forest, and some individual species. Fire may not initially cause loss of ecosystem but rather result in loss of height and increases in pioneer species, resulting in a change to species composition.
- wind surges and extreme storms during summer rainfall events could cause tree fall and open up the forest canopy, thus increasing its vulnerability to invading species. Weed growth may also increase as CO₂ levels increase
- severe and prolonged rainfall could cause landslip and destroy patches of forest communities

- loss of mature trees with hollows due to storms, landslip etc would reduce fauna habitat. Increasing timber debris could increase fire risk
- changes in weed communities may alter the flammability of communities (especially grasses) and therefore increase the frequency and intensity of understorey fire, which has implications for burning of canopy and tree crowns
- Potential for changes in synergy of events. E.g. Christmas beetle larval emergence is linked to soil moisture and these pests are controlled by migratory birds – increased rainfall may mean larvae emerge before birds arrive leading to severe tree defoliation. OEH(2011)

DEVELOPMENT AND LAND-USE

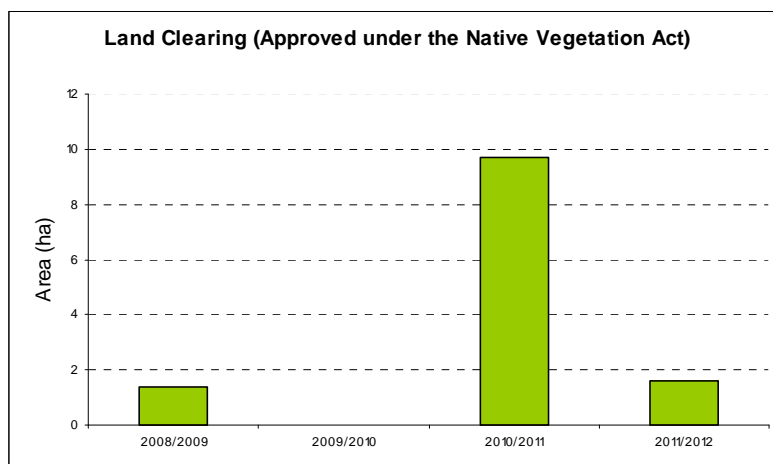
As the population of the shire and surrounding areas increases, so does the pressure for:

- infrastructure and services
- new recreation facilities
- subdivision of land for housing

In many cases the change in land-use will result in loss of vegetation and habitat.

Approval for land clearing for non urban areas is granted by the Hawkesbury Nepean Catchment Management Authority under the Native Vegetation Act (2003). Graph 7 present land cleared under this act for our shire in recent years.

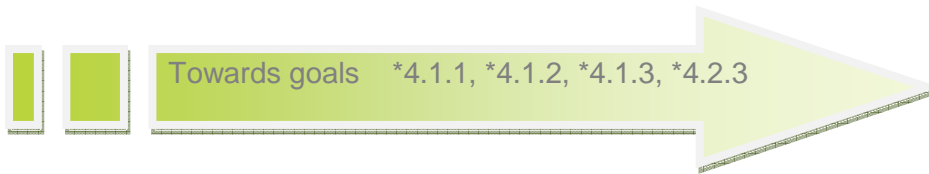
Graph 7



The Highland Source Project, which began in 2010 and was completed in September 2012, saw the construction of an 81 kilometre water pipeline from Wingecarribee Reservoir to Goulburn. The project was approved by the NSW Department of Planning to provide essential infrastructure and a secure water supply to the residents of the Goulburn Shire.

The construction of the pipeline resulted in the removal of 5ha of vegetation within the Wingecarribee Shire which included the EEC Southern Highlands Shale Woodland.

COUNCIL'S ACTIONS TO PRESERVE BIODIVERSITY



Wingecarribee Shire Council's Environment Strategy has key focus areas for Biodiversity, Conservation and Weed Management. Council's Environment Levy funds the majority of projects associated with these key focus areas.

Council's Bushcare team, along with community minded volunteers, youth groups, and contractors, are regenerating a diverse range of publically owned riparian and bushlands sites.

Programs such as Land for Wildlife and Council's private land conservation incentive program help extend the protection of biodiversity beyond council managed lands. These programs are important as much of the shires vegetation communities exist on private land. Wingecarribee Shire Council works closely with the HNCMA who run similar programs.

Council also runs a Community Nursery which produces local provenance plants. Volunteers assist Council to grow the plants which are provided to Bushcare groups for planting out at their sites, or used in community planting days and other council sponsored environmental initiatives.

Table 5 provides a snapshot of environmental works undertaken in 2011-12 to help protect and restore the biodiversity of the shire. The Environment Levy was the prime source of funding for these works.



Table 5 Snapshot of environmental works conducted 2011-12

Activity	Result for 2011-12
Number of native plants planted	7919 * Includes planting undertaken at community events including National Tree Day, Frensham end of school year plantings, and Conservation Volunteers planting days.
Hectares of significant native vegetation conserved under Council land holder agreements	4 new incentive agreements were made to conserve 34 hectares of significant vegetation communities on private land. (Cumulative total of 363.9 ha since program began)
Area of native vegetation under Council management improved by weed management	302.51 ha
Land for Wildlife (LFW) Agreements	12 new properties registered with this program in 2011-12 to conserve 38.2 ha of Land for Wildlife. This provides a cumulative total of 58 agreements and 377.95 ha since Council joined the LFW program.
# Bushcare Groups supported	16
# Bushcare Volunteer Hours	3818
# Bushcare Volunteers	155
Council reserves with EEC's under maintenance programs	Mt Gibraltar, Mansfield and, Hammock Hill Reserve
Vertebrate pest management undertaken	Approx 150 India Myna's caught by residents in the Indian Myna Program in 2011-12
Riparian management plans completed	Mittagong Creek Riparian Management Plan completed
Wetlands Maintained	<ul style="list-style-type: none"> • Paddy's River Wetland / Sting Ray Swamp - Penrose • Currabunda Wetland - Bundanoon • Jordan's Crossing - Bundanoon • Garland St Wetland - Bundanoon • Grearsons Rd Wetland - Bundanoon • Governors Rd Track – Bundanoon
Noxious weeds notices issues & inspections completed	<ul style="list-style-type: none"> • 224 inspections of properties where noxious weeds were suspected. • 183 weed notices mailed to property owners • 69 Fireweed courtesy letters send to properties to educate and inform of the issue.
Number of Environmental events held	<ul style="list-style-type: none"> • National Tree Planting Day – 47 community members attended this event at Whites Creek, planting 1165 native plants. Moss Vale Rotary Club also participated by preparing lunch for the volunteers. • 473 children from 14 schools attended School's

	<p>Environment Day at Lake Alexandra ,October 2011.</p> <ul style="list-style-type: none"> • Venturers and Scouts attended a workshop at Berrima camp ground on vegetation management and recycling. • 4 schools entered Council's environmental calendar competition, submitting over 50 artworks with an environmental protection theme. • 16 Conservation Volunteers conducted works Berrima and Moss Vale • Frensham students participated in an end of school tree planting at Berrima • Bushcare Network event • Mittagong Ck Riparian Management Plan public meeting. • World Environment Day film night screening • Council set up a stall and presented workshops at the Penrose Sustainability Festival
Community Support	In addition to the Bushcare team , Council recruited a Natural Resource Project - Community Support Officer in 2011.
Grant funded projects	The Environment Levy was used to leverage grant funding from State and Federal agencies including the SCA, HNCMA, NSW Environment Trust and Landcare Australia.

BUSHCARE PROGRAM AND BUSH REGENERATION TEAM

The Wingecarribee Shire Council Bushcare Program is designed to integrate the community with the management of bushland. Members of the community concerned with the declining health of their local bushland are able to play an active role in bushland rehabilitation and assist Council with management issues related to the reserves.

The Environment Levy Program funds the bush regeneration team who undertakes the following activities:

- Survey and maintenance works on Council owned bushland reserves.
- Programs with riparian zone restoration, habitat/wildlife corridor protection and environmental weed control.
- Assistance to volunteer Bushcare and Landcare efforts
- Education of community groups.

Council is committed to the long-term support of volunteers who play an important role in bushcare and community the nursery. Council supports the volunteer program by providing the necessary skills, information, support and direction.

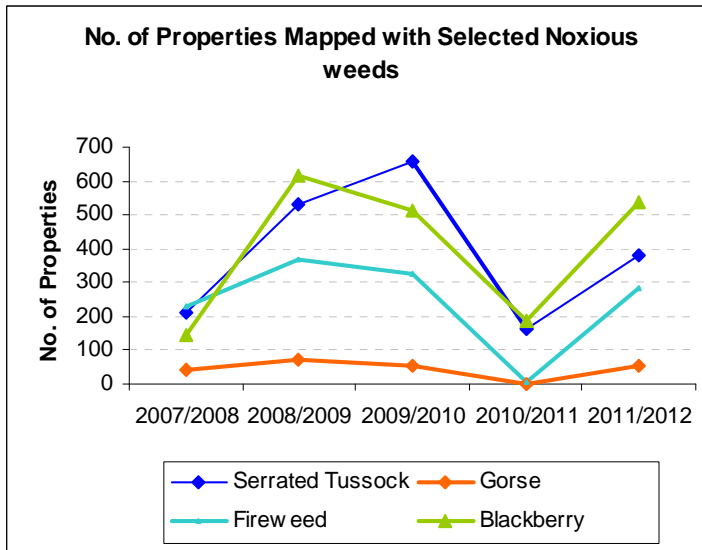
A Weed Management Plan, which provides a baseline set of weed data and management strategies has been implemented to help guide weed control at bushcare sites and provides a mechanism for determining the success of the control programme.

PEST ANIMAL AND NOXIOUS WEED CONTROL

Noxious weeds on Council land are managed by Council's operations branch. On private land noxious weeds are managed through the application of the Noxious Weeds Act (1993). Council conducts extensive inspections throughout the shire to locate properties with noxious weed outbreaks, and initiates control activities and enforcement procedures in compliance with legislation. Council maps areas of noxious weed outbreaks using GPS technology. Table 5 has further detail on actions in relation to noxious weeds.

Graph 8 provides detail of the number of properties identified with selected noxious weeds. Significant problems with Serrated Tussock, Blackberry and Fireweed still exist in the shire particularly in rural areas.

Graph 8



Council facilitates an **Indian Myna** control program to engage the community to participate in the control of this pest species. Council lends cages and provides educational material to interested residents plus provides facilities at the RRC to euthanise captured birds.

25 feral cats were euthanised by Council during the reporting period.

BIODIVERSITY CORRIDORS

In 2011-12 Council supported the HNCMA and OEH with the Southern Highlands BIOLINK project. This project is part of the Great Eastern Ranges Initiative which is a plan to strengthen the resilience of eastern Australia's mountainous ecosystems so they can better respond to the impacts and threats from:

- climate change
- development activities, including ongoing growth in our population
- invasion by introduced pests and weeds

Council has plans to develop a "Green Web Strategy" which will set priorities for developing biodiversity corridors. It is intended to inform planning decisions, revegetation activities and encourage private conservation efforts.

PROTECTED MIGATORY BIRDS AT THE BOTANIC GARDEN SITE

Early January 2012 Council was notified by a community member of a significant number of the migratory shorebird, Latham's Snipe, inhabiting the proposed Botanic Gardens site at Kangaloon Road, Bowral. This bird species is listed as a migratory bird species and protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). As this is a Council site, Council submitted a referral to the Federal Government to determine if the Botanic Gardens could go ahead as planned. The Federal Government notified Council that further information was required prompting the Southern Highlands Botanic Garden Committee to engage a consultant to conduct an independent bird survey of the site and other possible habitat locations in the shire. The completed study was forwarded to the Federal Government who determined that the original Botanic Garden plans needed modification to accommodate the birds. The Southern Highlands Botanic Garden Committee is modifying the original plans to comply with this requirement.

MANAGING THE REMOVAL OF TREES

Council no longer has a separate Tree Preservation Order (TPO) as such.

Controls for the preservation of trees and other vegetation throughout the shire are now provided by Clause 5.9 of the new Wingecarribee Local Environmental Plan 2010 (WLEP2010), and associated Development Control Plans (DCPs).

The objectives of the WLEP and DCP's in relation to tree/ vegetation are to:

- preserve the amenity, biodiversity and ecology of the area through the preservation of trees and other vegetation
- clarify the assessment criteria under which applications for the removal of trees or other vegetation will be determined.

BIODIVERSITY OFFSETS

Agreements were made for biodiversity offsetting for several projects over the reporting period.

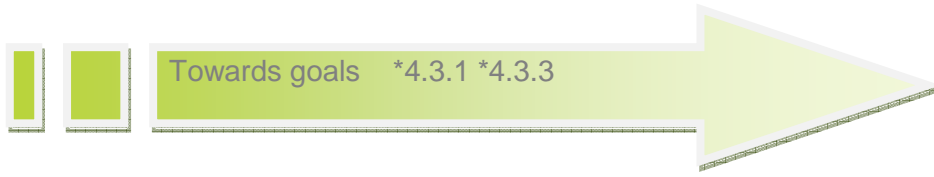
Council worked closely with stakeholders and project staff from the Highlands Source Project (HSP) to monitor the impact of the project on vegetation communities in Wingecarribee Shire. As part of the conditions of approval for the HSP by the Department of Planning & Infrastructure, Goulburn-Mulwaree Council had to prepare a biodiversity offset package to meet their legal obligation to offset impacts of the project on biodiversity.

The legal offsets for this project were determined using the Biobanking Assessment Methodology endorsed by the Department of Planning and DECCW (now known as OEH). By using this methodology it was determined that the offsets did not need to occur within Wingecarribee Shire despite the fact that several hectares of vegetation was removed from within it.

Wingecarribee Shire Council was keen to ensure that the vegetation removed from this shire should be offset here, and as such negotiated an additional "good neighbour" offset option which will involve the funding of an environmental project that will achieve conservation outcomes for the EEC Southern Highlands Shale Woodland.

Goulburn Mulwaree Council is still negotiating the final offset package with OEH and the Department of Planning.

WASTE



COUNCIL'S ACTIONS TOWARDS MANAGING WASTE

Council operates a Resource Recovery Centre (RRC) in Moss Vale. The RRC is a waste transfer and recovery facility with the following functions:

- Waste transfer to landfill outside the shire.
- Sorted material drop-off areas.
- Material processing areas.
- A re-use and repair centre.

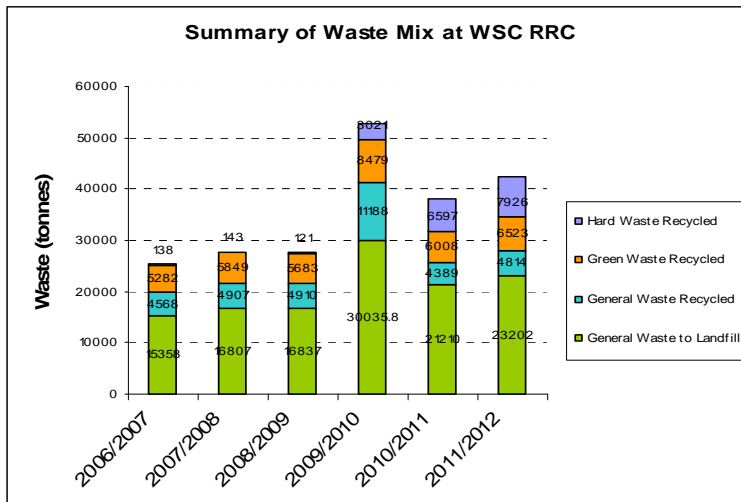
Council provides a waste collection service to around 17770 properties. The standard domestic collection services consist of either one or two 80L general waste service bins (collected either weekly or fortnightly), and a 240L recycling service (collected fortnightly).

In addition Council provides a drop-off service at the RRC for domestic waste and recycling, inert waste and sorted recyclable materials including garden organics and e-waste. Kerbside collection of hard and garden waste are offered for a charge.

Table 6 and Graph 9 provide detail of the break-up of waste we are receiving and recycling as well as the percentage that was put into landfill. Further details of Council's actions to reduce waste have been provided previously in Table 1- Council's Sustainability Scorecard.

Table 6 Details of Waste to Landfill

	2009/2010	2010/2011	2011/2012
Domestic Recycling	5110	5132	4748
Building Waste Diverted	3021	3475	7309
Green Waste Recycled	8479	5252	6253
Putrescibles Recovered	4457.2	4560	3939
Putrescibles Waste to Landfill	3646.8	4045	4814
Inert to Landfill	3701	3608	4308
Total	28415	26072	31350
Landfill	25.9%	29.4%	29.1%
Recovered	74.1%	70.6%	71.0%



Graph 9 Summary of Waste Mix.

ILLEGAL DUMPING

Council responds to numerous complaints every year relating to instances of illegal dumping. Table 7 shows the number of calls received that related to instances of major illegal dumping. An additional 190 calls were received in 2011-12 for small scale dumping.

Table 7

2011-12 Rubbish Dumping Complaints- Major Incidents					
Major Incidents	Pollution	Asbestos	Hazards	Large Quantities	Council Clean-up
Total	2	10	11	69	67

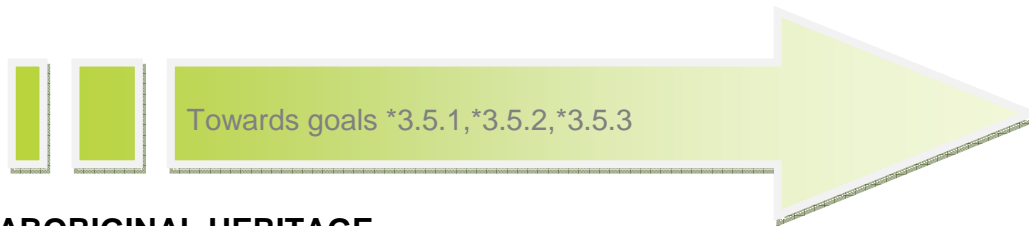


The cumulative effect of numerous instances of small scale dumping became evident when Council undertook a project in conjunction with the 2012 quarterly fire trail inspections to collect litter dumped in public reserves. Around 30 cubic meters of mixed litter was collected consisting of furniture, white goods, household rubbish and a quantity of bulk oil containers. This is roughly a semi-trailer load of rubbish.

Pictured: Illegally dumped waste collected from Mt Alexandra Reserve

HERITAGE

COUNCIL'S ACTIONS TOWARDS MAINTAINING OUR HERITAGE



ABORIGINAL HERITAGE

Council acknowledges that State Government records indicate approximately 400 significant Aboriginal sites within the Shire. This is not an exhaustive list and many more Aboriginal sites remain unrecorded including sites known to Aboriginal communities. Council makes reference to the Aboriginal Site Register, and contacts the Aboriginal Land Council and/or the Traditional Owners within the Aboriginal community who have knowledge of sites, prior to decision-making in relation to land use activities, development applications and the creation of management plans.

In spite of the impact of European settlement / colonisation of Australia, the D'harawal and Gundungarra Aboriginal heritage in the Southern Highlands has not been extinguished. Examples of Aboriginal sites and the legal and cultural requirement for their protection is available on State and Commonwealth websites, as well as those of the Aboriginal Land Councils.

OEH is responsible for the protection and preservation of all Aboriginal objects and places in NSW under the National Parks and Wildlife Act. It is an offence to do any of the following things without the permission (penalties can apply):

- disturb or move an Aboriginal object
- excavate land for the purpose of discovering an Aboriginal object
- knowingly destroy, damage or deface an Aboriginal object or Aboriginal place
- knowingly cause or permit the destruction, damage or defacement of, an Aboriginal object or Aboriginal place.

NON ABORIGINAL HERITAGE

Local government is the principal manager of heritage in NSW, mainly through local environmental plans.

Clause 5.10 of the WLEP contains the heritage provisions applicable across the Shire and provides protection for heritage items and buildings in heritage conservation areas.

The plan contain schedules or lists of properties, buildings, places etc considered to be of local significance.

The Environmental Planning and Assessment Act (1979) provides protection through a requirement to consider impacts on heritage in land use planning decisions.

There are 328 items of heritage identified in the Wingecarribee Local Environmental Plan (WLEP) 2010. Of these 43 items are of State Heritage Significance and also subject to controls under the NSW Heritage Act 1977. In addition to the listed heritage items, the WLEP 2010 also contains 8 archaeological sites and 16 heritage conservation covering the following areas:

- Berrima
- Berrima Landscape
- Bowral
- Bundanoon
- Anglewood, Burradoo
- Burradoo Landscape
- Burrawang

- Joadja
- Mittagong
- The Maltings, Mittagong
- Five conservation areas in the central section of Moss Vale, and
- Throsby Park, Moss Vale.

In 2008, Council commenced extensive investigations of a further 700 properties considered to have heritage significance and listed under Wingecarribee LEP 2010 as Heritage Items. The investigation has been completed and over half of these properties have been recommended to be heritage listed. Council is in the process of consulting with the owners and wider community on the proposed listings."

WINGECARRIBEE HERITAGE ADVISORY GROUP

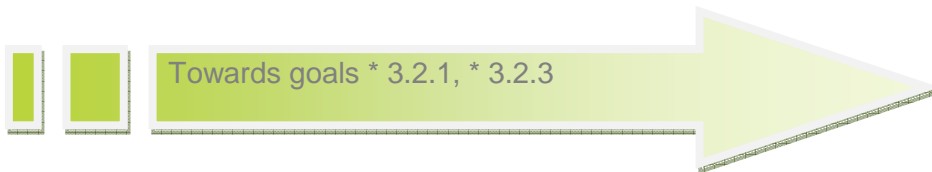
This Working Group of Council has been formed with the following objectives:

- to provide advice to Council on the management of heritage within the Shire (this includes reviewing Council or government policies which affect the Shires heritage);
- assist in the preparation and monitoring of heritage policy.

HERITAGE ASSISTANCE GRANTS

In the reporting period Council did not operate the Wingecarribee Local Heritage Fund which is usually jointly established between Wingecarribee Shire Council and the Heritage Branch of the NSW Department of Planning (now the NSW Office of Environment and Heritage) to provide financial assistance to owners of buildings which have heritage significance within the Shire, due to budgetary and time constraints. However, this Scheme will be run in the next financial year.

COUNCIL'S ACTIONS TOWARDS MAINTAINING A DISTINCT CHARACTER OF SEPARATE TOWNS AND VILLAGES



The Wingecarribee LEP 2010 which took effect on 16 June 2010 zoned the majority of land between the towns and villages as Environmental Management or rural land with minimum lot sizes of 40ha. Between Bowral/Burradoo and Moss Vale a Landscape Conservation Area was also included to preserve the semi-rural character of the area and recognise its heritage significance.

The Development Control Plan applicable to the rural areas also recognises the importance of the rural landscape and establishes guidelines and controls to protect and preserve the rural character particularly in locations where the towns and villages are closely located.

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ACROMYMS

BASIX	Building and Sustainability Index
CANWin	Climate Action Now Wingecarribee
EEC	Endangered Ecological Community
ESD	Ecologically Sustainable Development
HNCMA	Hawkesbury Nepean Catchment Management Authority
IMS	Integrated Management System
IPART	Independent Pricing and Regulatory Tribunal
IP&R	Integrated Planning and Reporting Framework
ISSG	Invasive Species Specialist Group
LEP	Local Environment Plan
OEH	Office of Environment and Heritage
RRC	Resource Recovery Centre
SCA	Sydney Catchment Authority
SOE	State of the Environment
SQUIDS	Stormwater Quality Improvement Devices
WaSIP	Waste and Sustainability Improvement Payment
WSC	Wingecarribee Shire Council