



Part B

State of the Environment Report

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The New South Wales (NSW) Local Government Act 1993 (section 428 (2) (c)) requires all councils to produce an annual report on the State of the Environment.

This report covers the period from 1 July 2010 to 30 June 2011 and is a supplementary report to provide additional information to support the comprehensive report completed for the year 2008-09 and the supplementary report of 2009-10. As outlined by the Department of Local Government, a supplementary State of the Environment report must:

- identify any new environmental impacts since the last comprehensive State of the Environment Report; and
- update the trends in environmental impacts that are important to each environment sector.

State of the Environment Reports contain information about the condition of the environment (state), pressures on the environment (pressure) and measures taken to alleviate those pressures (response) during the reporting period. They

outline what has been done to address adverse impacts and whether those actions have been successful in delivering results.

This report is structured into several sectors in accordance with the Local Government Act 1993. These are:

- Towards Sustainability
- Human Settlements
- Land
- Air
- Water
- Biodiversity
- Heritage

“At a Glance” tables provided at the start of each section follow the usual State-Pressure-Response model (described above), giving a brief summary of the key points.



CLIMATE

The Cessnock Local Government Area is subject to a temperate climate, characterised by mild winters and hot summers (Advitech, 1996). Records of temperature and rainfall for 2010-11 are shown in Figures 1 and 2. The maximum temperature recorded for the year at Cessnock Airport was 43.1°C on 26 January 2011 and the minimum temperature was -3.2°C on 16 May 2011. Total rainfall for 2010-11 was 794.4mm (an 11% increase on 2009-10) and there was one day over 40°C.

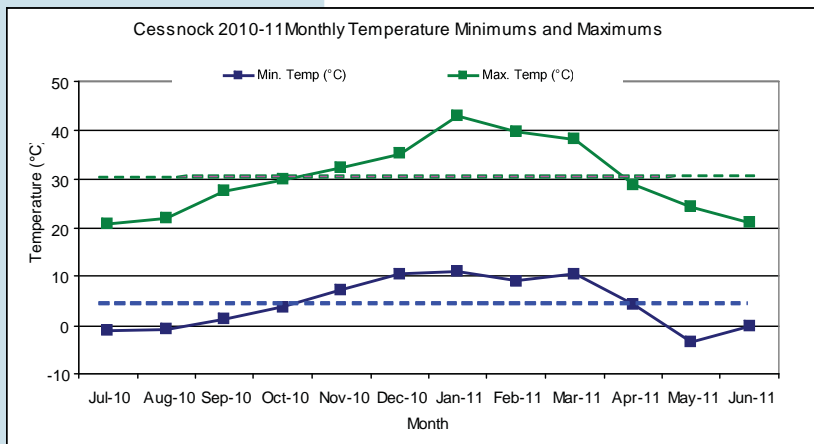


Figure 1: 2010-11 Cessnock monthly Minimum and Maximum Temperatures

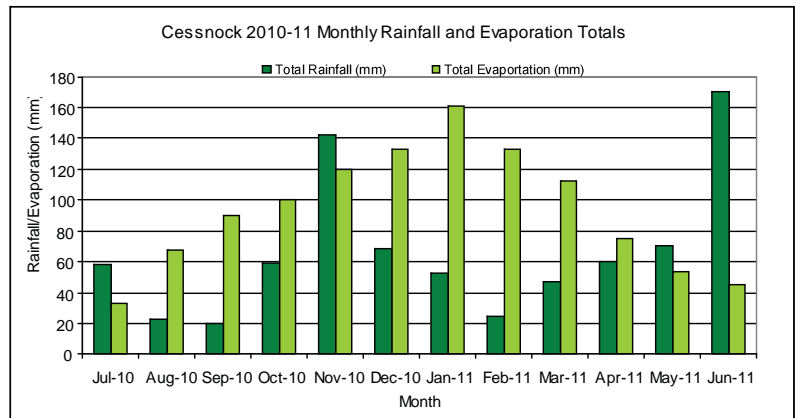


Figure 2: 2010-11 Cessnock Total Monthly Rainfall and Evaporation

ENVIRONMENTAL PROGRAMS

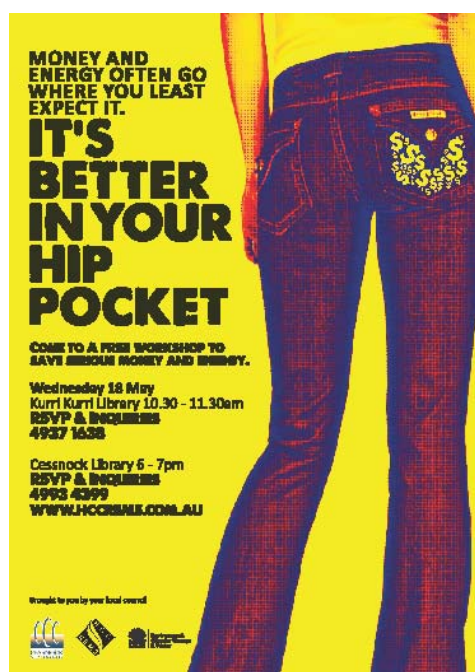
FOCUS ON ENERGY PROGRAM

FOCUS on Energy Reduction is a community education program that provides energy meters to residents through Council's library service.

The project is a regional initiative coordinated by the Hunter Central Coast Regional Environmental Management Strategy that provides a consistent environmental message for the Hunter, Central Coast and Mid North Coast communities.

The project will increase awareness of home energy use and provide helpful hints for households about how to reduce their energy consumption. Six meters are available at Cessnock and Kurri Kurri Libraries for borrowing by residents.

During 2010-11, these meters were borrowed 80 times with most months having a waiting list of borrowers. In support of this program, two energy and water reduction workshops were held on 18 May 2011 (see flyer below) attracting a small but interested group of community members.



COMMUNITY SHOWERHEAD EXCHANGE

In partnership with Hunter Water, Council held two community showerhead exchange on 18 March and 2 April 2011. In total, 205 showerheads were exchanged. All old showerheads collected were sold for scrap and the money raised donated to WaterAid which provides clean water supplies to poor communities all over the world.

SUSTAINABILITY TRAINING

Sustainability training conducted by the Urban Sustainability Support Alliance (run by the NSW Local Government and Shires Association) were held in two sessions during November 2010. The Councillor session was more generic, focussing on a high level of participation demonstrating Councillors' knowledge of Council's sustainability programs and measures.

A separate Environment Committee and Managers/Champion workshop included an overview of available tools to measure sustainability outcomes in each department of Council. A definition of sustainability to use in Council was also formulated.

ENVIRONMENT COMMITTEE

Nine community members and four Councillors were appointed to the Cessnock Environment Committee in 2010. The committee met six times in 2010-11 to discuss issues such as recycling at major events, illegal dumping, coal seam gas extraction and biodiversity. The group also facilitates environmental information distribution and networking in the Local Government Area as a whole.

“Places, Spaces and Faces: The Cessnock Local Government Area Social and Cultural Plan 2009-2014” - a five year strategic plan to develop cultural and social services within the Cessnock Local Government Area.

CESSNOCK SHED AND COMMUNITY GARDEN

Situated on one acre of fenced land the Cessnock Shed and Community Garden (a project auspiced by The Samaritans Foundation) opens all day Monday and Thursday, and most other days by arrangement. Membership is in excess of 60 participants and growing.

In operation there is a busy Men’s Shed with participants undertaking woodworking, metal working and horticultural pursuits - all providing health and well being support.

There is a line of bordered gardens and 10 raised beds specially prepared to suit any gardening oriented person. Separately there is an organic gardening section, a greenhouse and a hot house propagating plants, worm farms and tanks, composting bays, and a new “Aquaponic” project, all run by volunteers.

Outreach services are referring clients to the group to assist in the rehabilitation of depressed, mentally recovering and disabled men, and also those underemployed.

The open air, friendly and relaxed environment, sustainable directions, along with the diverse range of projects on offer presents a recognised and active not for profit community based group in this local government area.

COMMUNITY AND SOCIAL DEVELOPMENT

SOCIAL AND COMMUNITY PLAN

In November 2009, Cessnock City Council adopted “Places, Spaces and Faces: The Cessnock Local Government Area Social and Cultural Plan 2009-2014”. Throughout 2010-11, Council has worked consistently on implementing the plan and its 21 strategies. The strategies documented in the plan aim to provide both Council and agencies external to Council with a five year strategic plan to develop cultural and social services within the Cessnock Local Government Area.

The Cessnock Local Area Planning Team met on four occasions throughout the year. The team worked towards achieving a number of action strategies listed in the Social and Cultural Plan (2009-2014).

Highlights for the Local Area Planning Team include training with Community Service Providers in Effective Use of the Social Profile and hosting of the ‘Celebrating Partnerships, Creating Inspiration’ Symposium’.



COMMUNITY INITIATIVES AND EVENTS

The Cessnock City Council Access Advisory Committee has updated its Mobility Maps. Also the Committee worked in partnership with a local disability service to deliver the project 'Is your Business Getting Every Customer'. The aim of the project was to encourage local businesses to offer an accessible space to its customers.

The Community Development Scheme Expenditure Committee for the Cessnock Local Government Area allocated approximately \$90,000 for social, community and welfare projects.

All 2010 NAIDOC Week Events were well attended by both community members and service providers. The events included a Flag Raising Ceremony in a local park and a screening of Indigenous Short Films.

Activities held as part of the 2011 Seniors' Week were well attended by the local community. Approximately 700 people participated in Seniors Week 2011.

CRIME PREVENTION

During 2010-11, Council has worked consistently on implementing the strategies documented in the Cessnock Local Government Area Crime Prevention Plan 2009-12.

These strategies include:

- Design of a community education flyer, encouraging the reporting of crime.
- Working in partnership with NSW Police to deliver a youth crime prevention program. The program, titled 'Smart Choices', was presented by Cessnock City Council and the Central Hunter Local Area Command at a national youth crime prevention conference in Melbourne, March 2011. Approximately 350 students within the Cessnock Local Government Area have participated in the program.
- The research reports for Closed Circuit Television and Late Night Transport solutions were completed and reported to Council.
- Staff training was offered and delivered to sections within Council on the principles of Crime Prevention by Environmental Design.

EARLY INTERVENTION AND PREVENTION

The Cessnock Anti Violence Network continues to meet and is currently working on a range of programs that aim to reduce family violence within the Cessnock Local Government Area.

The Cessnock Healthy Lifestyle continues to meet and has a core interest in raising the profile and awareness of primary health issues. The network is represented by both government agencies and non-profit organisations, all of which deliver services within the Cessnock Local Government Area.

YOUTH SERVICES

In the past 12 months, the Cessnock Youth Centre and Outreach Service (CYCOS) had approximately 8,708 young people attend and participate in structured programs and drop-in services.

CYCOS also delivered a number of outreach activities targeted at youth including those relating to social, education and recreational opportunities. Outreach activities include events at local skate parks, bike and skate competitions and programs within local schools.

Furthermore, CYCOS and youth services across the Cessnock Local Government Area were involved in the delivery of a range of youth events as part of Youth Week 2011.

COMMUNITY FACILITIES

Each year Council implements a prioritised Community Facilities Capital Works and Planned Maintenance Program which incorporates the ongoing development and routine maintenance of Council's community halls and buildings. In 2010-11 the following capital works were undertaken within community facilities:

- Electrical upgrade, external painting and kitchen re-line at Abermain Plaza Hall.
- Install accessible toilet and ramp at Abermain School of Arts.
- Installation of awning and new back doors at Bellbird Community Hall.
- Water meter protection measures and installation of awning at Ellalong Hall.
- Construction of accessible car park at Greta Arts and Sports Community Hall.
- Window painting and door repairs at Greta Courthouse.

- Lift and roof upgrade at Kurri Kurri Community Centre.
- Water meter cover and sewer replacement at Kurri Kurri Senior Citizens.
- Kitchen repair at Weston Civic Centre.

Community Facilities \$ for \$ Program

Each year grants are offered to Community Building Management Committees and facility user groups for improvements to Council owned community facilities and/or the land surrounding community facilities including the purchase of minor plant. Projects funded in 2010-11 include:

- Play equipment for Aberdare Preschool.
- Painting building for Bellbird Preschool.
- New crockery and ceiling fans for Branxton Community Centre.
- Outdoor seating for Branxton Preschool.
- Club room refurbishment for Cessnock Gem and Mineral Club.
- Civic Centre fly screens for Cessnock Quilters and Embroiderers.
- Air conditioners for Kearsley Community Hall.
- Foyer recarpet and bathroom painting for Kurri Kurri Community Centre.
- Non-slip tiles for Weston Community Preschool.
- Tiles for Wollombi Community Hall.
- Laguna Hall steps and landscaping for Wollombi Valley Progress Association.

Recreation Facilities \$ for \$ Program

Each year grants are offered to local sporting groups to assist with development and administration of sport on a dollar for dollar basis.

Projects funded in 2010-11 include:

- Ride-on mower for Abermain/Weston Football Club.
- Top dressing of croquet lawn and purchase of a portable gazebo for Branxton Croquet Club.
- Field renovations for Cessnock Rugby League.
- Shipping container and refurbishment of referees' room for Cessnock City Hornets.
- Building, agility and grass cutting equipment for Cessnock Dog Club.
- Hot water system for Cessnock Netball.
- Super sopper for Cessnock Tennis Club.
- Concrete and top dressing for Greta Branxton Pony Club.
- Baseline repairs for Kurri Kurri Tennis Club.
- Line marker and fluid for Kurri Kurri Little Athletics Centre.
- Deep fryer for Kurri Kurri Rugby League Club.
- Shipping container and awning for Neath Target Archers.
- Concrete slab and awning for Pelaw Main Titans.
- Training aids and storage cupboard for Wollombi Tennis Courts.
- Show jump equipment for Wollombi Valley Pony Club.

Council has also been upgrading the Public Transport Stop Facilities to be Disability Discrimination Act compliant.

TIDY TOWNS – SUSTAINABLE COMMUNITIES PROGRAM

Council continues to support the Tidy Towns – Sustainable Communities Program through a Dollar for Dollar Grant Program, payment of annual fees to the Keep Australia Beautiful Council, supply of plants, paint and materials for approved maintenance works on public land and the promotion of the program.

During 2010-11, a new Tidy Towns group was formed in Gingers Lane, Weston bringing the total in the Local Government Area to 15.

Tidy Towns Projects funded from Dollar for Dollar Grants during 2010-11 were:

- Branxton for a garden bed in Lions Park.
- Greta for an information shelter at Greta Cemetery.
- Millfield for a garden bed at the cemetery entrance and whipper snipper.
- North Rothbury for a ride on mower.
- Weston for lawn mowing equipment.

In 2010-11, Community Environmental Care Initiatives Grants were distributed to:

- Wollombi for maintaining public areas.
- Weston for petrol and hardware to maintain Jock Stewart Park and George Smith Reserve.



As in previous years, Tidy Towns groups from the Cessnock Local Government Area received a variety of awards for outstanding community and environmental projects from the Keep Australia Beautiful Awards presentation in Lockhart:

- Overall Awards - Wollombi third in population category A.
- Gundfos Water Conservation Award – Cessnock highly commended in category E for Turner Park Soccer Field.
- Cultural Heritage Award – Bucketty winner population category A.
- Schools Environment Award – Kurri Kurri High School highly commended in Group 1 and Stanford Merthyr Infants highly commended in Group 5.

ECONOMIC DEVELOPMENT

WINE AND TOURISM 2010 YEAR IN REVIEW

By the start of year 2010, the Global Financial Crisis and supposed impact on the local economy and tourism industry had started to be felt in various sectors. It does appear from the year in review that the tourism sectors in Wine Country handled any direct issues to their business as best as could be expected.

The business tourism or conferencing sector appears to have been the hardest hit in terms of downturn in overnight conference delegate stays, impacting on the accommodation occupancy with a negative growth across the full year.

Cellar door sales remained steady with small growth over the year, and the wedding function business increased with a reasonable growth percentage. The restaurant data was estimated at the same growth as accommodation and is to be as a guide only.

Major outcomes for 2010 included:

- Accommodation occupancy decreased by 2.6% to 47.5% for 2010 compared to 2009, which was an improvement on the previous year's decrease of 10.6% including an increase in inventory of 102 additional units.
- Visitor day count numbers decreased by 2.2% to 2.711 million, although overnight visitors increased slightly by 0.2%.
- Cellar door weighted average sales was down 1.6% to \$70,640 average for 2010, with total tourism spend at the cellar door increasing by 0.5% to over \$94.8m
- There were more than 420 wedding receptions conducted in Wine Country for the year (up 17% on 2009), with over 34,279 guests consuming more than 27,185 bottles of wine of which more than 87% was Hunter branded. Note that not all wedding reception venues in the region participated in the program.
- Total restaurant revenue has been kept at the same estimate as last year.

All categories experienced a small growth in the number of businesses that contribute to the tourism dollar spend figures:

- Cellar door outlets remained unchanged from 2009.
- Restaurants and cafes increased by 1.0%.
- Accommodation units increased by 5.1% (102 units with 250 beds)



Visitation Rates:

There was a measured decrease in day trippers (1,724,099 visitors down 2.1% on 2009) and in overnight visitors (987,447 down 2.1% on 2009). The decrease in day trippers can be attributed to the economic slow down, and visitor nights can be attributed to the decrease in business conference overnight stays. The slight overall increase comes from weekend stay which may well be due to major concert stays.

Tourism Dollar Spend:

All figures were calculated using monthly results with separations and daily trading figures, and expressed as dollars over the number of businesses.

- 110 Cellar Doors
\$94,884,449 +0.5%
- 191 Accommodation facilities
\$74,118,382 -0.7%
- 60 Restaurants & Cafes
\$51,956,283 no change
- 31 Wedding Reception Venues
\$2,673,762
- 13 Golf Courses
\$3,232,000 (estimate)

HUNTER REGION BUSINESS EXCELLENCE AWARDS

Local winners of the 2010 Hunter Region Business Excellence Awards included Bink Creative (Business of the Year and Business Services Awards); Valley Fresh Flowers (Fresh Produce); Johanne's Hairtique (Hairdresser/Beautician); Hunter Valley Real Estate (Real Estate); Eye Design Graphics (Home Based Business); P&L Protection and Security Services (NEIS Business of the Year); and, Body & Mind 2000 (Customer Service Lower Hunter).

GRANTS

Cessnock City Council believes strongly in investment in community, demonstrated through participation in community, cultural and environmental activities, support of local business and preservation of heritage. Council aims to draw on these strengths and provide the support which will help them flourish and grow.

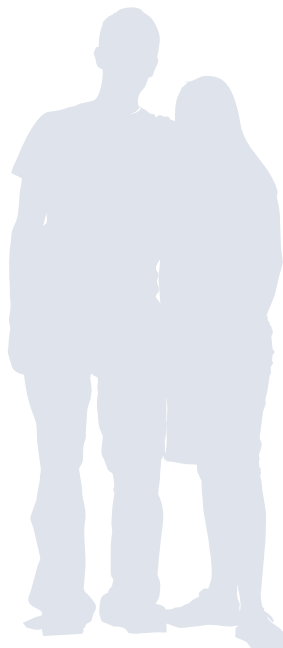
Council has a number of grants and a sponsorship program which provides funding across a range of activities encompassing community, cultural, recreational, environmental and economic. The funding and support provided through these programs supports a diverse range of services and projects that directly benefit the Local Government Area.

The provision of grants and sponsorships are also a mechanism for Council to further the aims identified in social, economic, environmental and cultural policies; applications are assessed against these policies and against broad Council objectives and plans.

Grants are defined as funds given to organisations to assist with the services or projects which they provide, where the Council or grant donor receives acknowledgement.

Types of Grants:

- Federal - Federal funds are all monies received directly from the Australian Federal Government, the expenditure of which is administered through or under the direction of any Federal agency.
- State - Tiered funding to other levels of government (local). These grants provide the main source of general revenue for local government.
- Local - a grant of Federal or State funds, allocated for specific programs, that a local council may use for initiatives it wishes to fund.
- Philanthropic - The effort or inclination to increase the well-being of humankind, as by charitable aid or donations by organisations or individuals.
- Charitable Foundations - A foundation is a legal categorisation of non-profit organisations. Foundations may also and often have charitable purposes.
- Community Trusts - Community Trusts are created for the purpose of providing money, property or benefits to or for eligible charities or for the establishment of eligible charities.



The Grants Officer at Cessnock City Council is available to assist community groups within the Cessnock Local Government Area to secure funding for the benefit of our wider local community. This role assists Council and community groups in order to maximise external funding, as well as generate partnerships within the community.

The Grants Officer researches funding opportunities and works with applicants; offering advice and support throughout the submissions process. The officer coordinates grants resources which are available to the public: such as current grants available, grant writing tips, and ongoing advice. These documents are available via the Cessnock City Council website under Grants and Sponsorships.

GOVERNANCE

INTEGRATED MANAGEMENT SYSTEM

Council is currently reviewing its Integrated Management System.

CESSNOCK 2020 COMMUNITY PLAN

During 2010-11 more than 1,000 people directly participated in the consultation activities that provided information to develop the Cessnock 2020 Community Plan. The extensive program of consultation activities included:

- A community survey of 500 residents.
- A public debate.
- 16 workshops held across the LGA.
- Online discussion forum.
- A school art project.
- A telephone hotline.

The Cessnock 2020 Community Plan was adopted by Council on 6 October 2010.

AT A GLANCE

Population and Settlement Patterns		
State	Increasing	Continued urban, rural and rural-residential expansion.
Pressure	Increasing	Demand for land in LGA is placing pressure on undeveloped areas. Few local employment opportunities, isolation and lack of public transport add to this issue.
Response	Good	Cessnock DCP 2006 adopted.
Drinking Water		
State	Stable	3,253,779kL of water consumed in the Local Government Area during 2010-11.
Pressure	Stable	Demand has stabilised with the 5yr average falling from 201kL per connection in 2009-10 to 194kL per connection.
Response	Limited	Hunter Water continues to undertake programs to reduce water consumption.
Transport		
State	Poor	46,256 vehicles registered in the Local Government Area. Private vehicles continue to be the main mode of transport in the area.
Pressure	Increasing	Lack of public transport and isolation are increasing pressure on this issue.
Response	Limited	Pathways Program constructed 0.25kms of pathway.
Waste Management		
State	Increasing	36,645 tonnes of waste landfilled; 3,990 tonnes of recyclables collected from kerbsides; a further 3,621 tonnes diverted from the landfill; and 6,109 ML of waste water treated during 2010-11.
Pressure	Stable	The amount of solid and liquid waste has remained constant on a per person basis.
Response	Good	Numerous waste reduction and recycling programs being undertaken.
Tranquillity and Noise		
State	Unknown	No noise quality monitoring has been undertaken in the Local Government Area. 246 noise complaints (65% barking dogs) were received by Council.
Pressure	Stable	Noise issues have remained stable on past years.
Response	Limited	Issues of noise are considered in the development consent process and the Environment Protection Authority regulates noise generating premises.

RESPONSES TO POPULATION AND SETTLEMENT PATTERNS ISSUES

STATE ENVIRONMENTAL PLANNING POLICIES

On 20 May 2011, stage 1 amendments to the State Environmental Planning Policy (Affordable Rental Housing) 2009 were implemented. The changes were made to remove certain provisions applying in low density residential areas, recognising the need for the NSW Government to work more closely with councils and the community on the issue of affordable housing. Stage 2 will include the formation of an Affordable Housing Taskforce which will assist in developing the methodology for the Affordable Housing Choice Strategies. The Department of Planning and Infrastructure is developing a new Affordable Housing Choice State Environmental Planning Policy to replace the current policy.

JOINT REGIONAL PLANNING PANELS

During 2010-11, one Development Application in the Cessnock Local Government Area qualified for determination by the Hunter and Central Coast Joint Regional Planning Panel and was approved.

BRANXTON F3 LINK

The four-lane Hunter Expressway is being constructed under two contracts. The eastern section (F3 Freeway to Kurri Kurri) is being built under an alliance contract with the Roads and Traffic Authority, Thiess Pty Ltd, Parsons Brinckerhoff and Hyder Consulting, and the western section (Kurri Kurri to Branxton) under a design and construct contract with Abigroup Contractors Pty Ltd. Currently about 800 staff are employed directly on the project and more than 400 subcontractors. Major construction for the eastern section started in August 2010 and for the western section in April 2011. The 40 kilometre Hunter Expressway is scheduled to be open to traffic at the end of 2013, weather permitting. The entire project will be completed and then opened to traffic at the same time.

RESPONSES TO DRINKING WATER ISSUES

Domestic water consumption for the Cessnock Local Government Area was 3,253,779kL averaging out to 190kL per household and 110kL per flat/unit. Industrial, Commercial and Agricultural users consumed another 1,853,856kL. This data was supplied by Hunter Water based on the water year which is 20 April 2010 to 19 April 2011. This represents a decrease in water consumption in the Local Government Area from 2009-10 as displayed in the Figure 3.

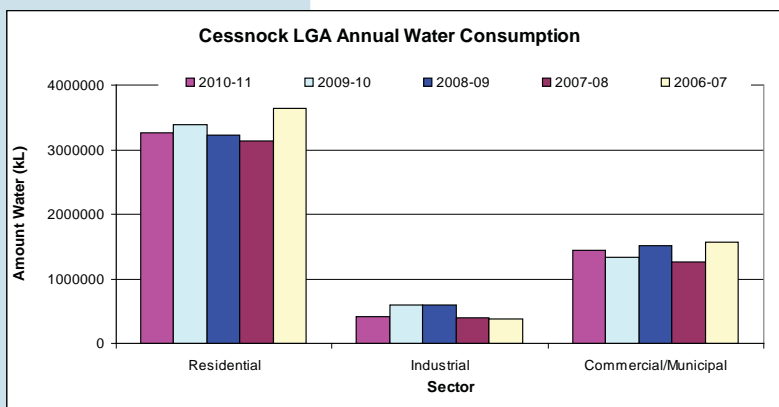


Figure 3: Annual Water Consumption in the Cessnock LGA

RESPONSES TO TRANSPORT ISSUES

VEHICLE REGISTRATIONS

During 2010-11, there was an increase of 1,562 vehicles registered in the Local Government Area from 2009-10. Figure 4 shows a breakdown of the types of vehicles registered in the Local Government Area as at 30 June 2011 and Figure 5 shows a comparison with 2009-10 and 2008-09 registrations. Additional data on fuel types of registered vehicles was also provided by the Roads and Traffic Authority for 2010-11, and is displayed in Figure 6. It is interesting to note that the number of vehicles that run on leaded fuel dropped 11% from 2009-10.

LGA PATHWAYS PROGRAM

During 2010-11, 250m of cycleway on Wollombi Rd, Millfield was constructed.

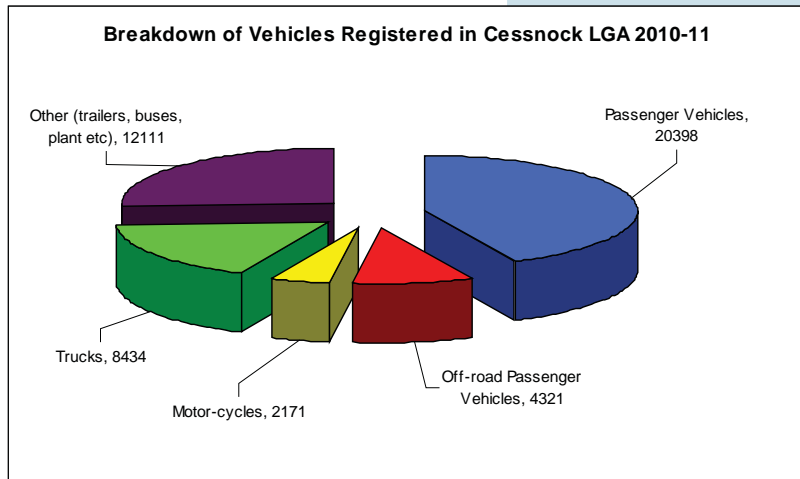


Figure 4: Breakdown of types of vehicles registered in the Cessnock LGA.

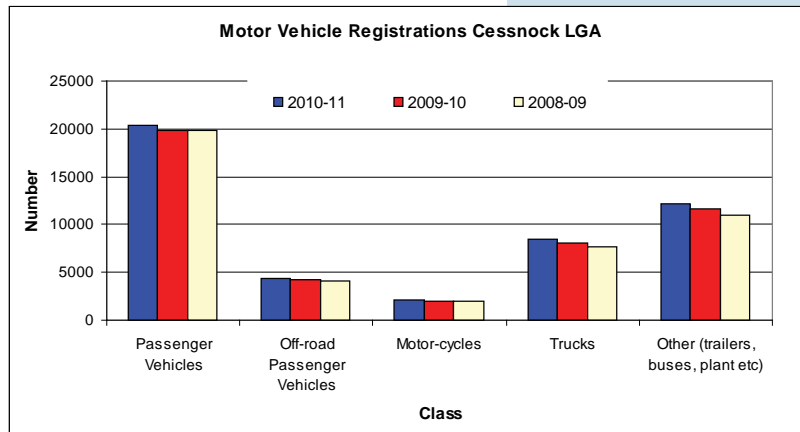


Figure 5: Comparison of vehicles registered in Cessnock LGA over time

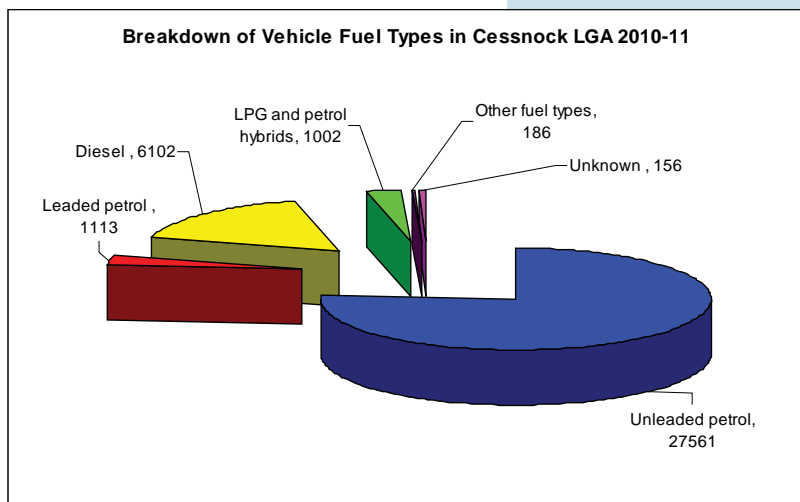


Figure 6: Breakdown of fuel types used by vehicles registered in the Cessnock LGA 2010-11.

RESPONSES TO WASTE MANAGEMENT ISSUES

SOLID WASTE MANAGEMENT

Waste Disposal

During 2010-11, 36,645 tonnes of waste was landfilled at the Cessnock Waste and Reuse Centre. Domestic waste expressed per person (using 2007 population) is equivalent to 0.79 tonnes (a decrease of 90kg per person on 2009-10) of waste produced during 2010-11. Note this does not include green waste, reprocessables or recyclables.

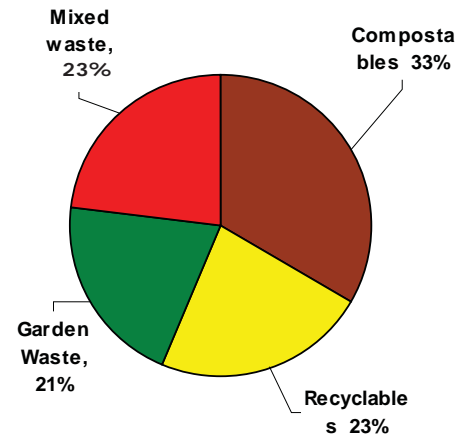
In early 2011, waste bin audits were undertaken to determine the average composition of waste bin contents for development of further waste diversion strategies. The summary results of this audit are displayed in Figure 7 at right with comparison to the 2008 audit information.

Waste Minimisation at the Cessnock Waste and Reuse Centre

During 2010-11, approximately 108 tonnes of paper and cardboard, 1,753 tonnes of greenwaste, 656 tyres, 766 mattresses, 128 tonnes of electronic waste and 1,668 tonnes of concrete waste was reprocessed and diverted from landfill. In addition, approximately 200 tonnes of metal was recycled at the Waste and Reuse Centre.

Kerbside Recycling saved enough electricity to power 3,700 homes; enough water to fill 25 Olympic swimming pools; and, removed 655 cars' worth of greenhouse gas emissions from the roads for the year.

Audit 2011



Audit 2008

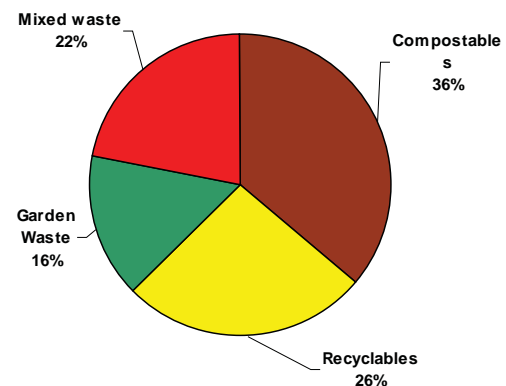
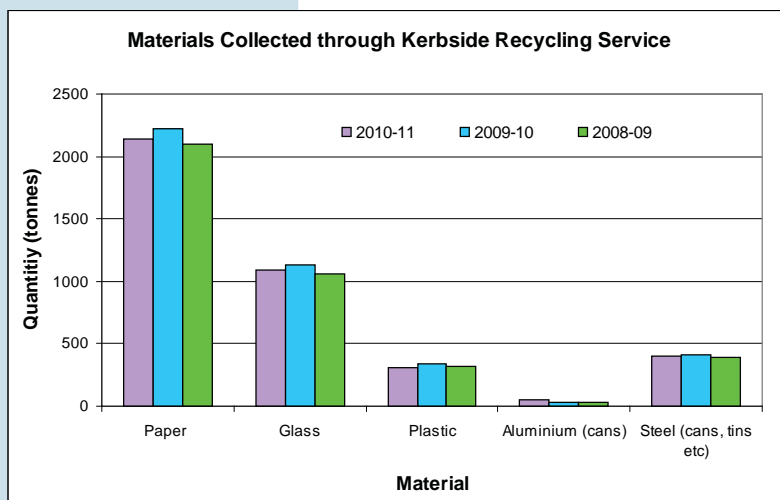


Figure 7: Summary of Domestic Waste bin contents 2011 and 2008

Kerbside Recycling

During 2010-11, 3,990 tonnes of recyclables (down 3% from 2009-10) were collected through the kerbside service. The breakdown of the types and amounts of recyclables collected from the Cessnock Local Government Area are shown in Figure 8 (along with a comparison to 2008-09 and 2009-10 collection amounts). The recycling of these materials equates approximately to saving enough electricity to power 3,700 homes; enough water to fill 25 Olympic swimming pools; and, removing 655 cars' worth of greenhouse gas emissions from the roads for the year.

Figure 8: Cessnock LGA Recyclables Stream (tonnes for 2010-11 displayed and compared to 2009-10 and 2008-09 collection)



Hunter Resource Recovery Activities

Over the past 12 months, Hunter Resource Recovery has carried out a number of programs and activities aimed at increasing recycling recovery rates including:

- Schools Program - 20 schools in the Cessnock Local Government Area now participate in the free schools recycling service.
- Advertising Program - advertisements were placed in newspapers, radio and TV. In addition Hunter Resource Recovery purchased space in the White Pages Directory with the "How to Recycle Correctly" advertisement and the 1800 number appearing.
- Sponsorship – of the Mayoral Academic Awards in 2010 was undertaken and a contribution to the Mayoral Academic Challenge was made.
- Lifecycle Program – e-waste and Second-hand Saturday collections in Cessnock Local Government Area resulted in 20,680 kgs diverted from landfill. E-waste recycling at the Cessnock Waste and Reuse Centre resulted in an additional 107 tonnes of e-waste being collected and recycled.

For more information about Hunter Resource Recovery please go to www.hrr.com.au.

Clean Up Australia Day

Approximately 200 community volunteers took part in Clean Up Australia Day activities on Sunday 6 March 2011 across 20 registered sites in the Cessnock Local Government Area, cleaning up roadsides, parks, bushland and waterways. In addition, seven schools across the Local Government Area registered for participation in the schools' Clean Up Day activities conducted on 4 March 2010.

This year, 11 tonnes of rubbish was collected and taken to the Waste and Reuse Centre as a direct result of Clean Up Australia Day activities. The total waste received at the Waste and Reuse Centre on the day was 101 tonnes (down 24 tonnes on 2010). As in previous years, residents getting into the Clean Up spirit were able to take waste to the Centre free of charge.

drumMUSTER Collection

During 2010-11, the drumMUSTER program resulted in a total of 4,130 drums being collected ready for recycling. For further information about the drumMUSTER program please go to www.drummuster.com.au

Waste as Art

The 2011 Waste as Art Competition was delayed due to issues with the exhibition venue and took place after 30 June 2011.

Adopt-a-Road Program

The program currently has 22 sponsors covering 50.9kms of roadside throughout the Local Government Area. A program of sign renewal (as some signs are more than 15 years old) has been commenced and will continue to be rolled out for another year.

ILLEGAL DUMPING PROGRAMS

During 2010-11 Council received 35 reports of illegal waste dumping on public land.

LIQUID WASTE MANAGEMENT

Wastewater Treatment Plants (WWTP)

Hunter Water operates five wastewater treatment plants in the Cessnock Local Government Area and treated 6,109 ML of effluent during 2010-11. Of the wastewater treated in the Cessnock Local Government Area, 4% was reused for irrigation.

Refer to Water Section for further information on volumes of wastewater treated.

On-site Sewerage Management

During 2010-11, Council's On-site Sewerage Management Officers have undertaken the following inspection and regulatory functions:

- A comprehensive internal audit of all systems within the Local Government Area to provide an accurate record of all on-site sewerage management systems and their risk classifications. This process has resulted in a more accurate record of system numbers and risk classification.
- There are 4,319 systems in total, low residential risk (3117), medium residential risk (701), high risk (128) and commercial risk (372).
- 1,272 inspections were completed in 2010-11. At the completion of the inspection, an inspection report is provided to the occupant outlining the results of the inspection. Matters of a more serious nature

may receive a written request for actions or an order.

- Eight formal documents (orders or notices of intentions to serve an order) have been served directing that certain works be undertaken.
- 27 complaints relating to wastewater effluent discharge and odours from On-site Sewerage Management Systems have been received and investigated.
- 20 complaints relating to stormwater discharge have been received and investigated.
- Council officers continued liaising with Hunter Water Corporation officers in relation to the Kitchener, Ellalong and Millfield priority sewerage schemes, enabling the officers to provide up to date information to residents. There have been 38 disconnections for the Ellalong and Millfield area.
- Seven pre-purchase inspections of On-site Sewerage Management Systems have been undertaken, upon request. Pre-purchase inspections provide prospective purchasers with a report on the condition of the system and any works required.

In addition to these regulatory functions, a number of educational initiatives have commenced, including:

- Regular newspaper advertisements titled 'Lifting the Lid' to provide short messages on the effective operation and management of On-site Sewerage Management Systems. The first advertisement in this series was placed in the Advertiser on a monthly basis. These advertisements will be placed



in a variety of local and regional papers on a rotational basis.

- 237 residents' kits have been distributed to residents who moved to a property that has an On-site Sewerage Management System. This kit provides information sheets and tips on how to effectively manage systems, cost effective options, appropriate cleaning materials, and information on Council's On-site Sewerage Management team, its functions and where to go for help. Council officers have issued 40 kits to existing residents to educate those owners on their On-site Sewerage Management systems.
- Design a poster competition with local schools participating. Primary school students were invited to design a poster about On-site Sewerage Management Systems, conservation and/or reuse of water and keeping water ways clean. Six local schools participated – St Patricks Primary School, and Kurri Kurri, Millfield, Kearsley, Cessnock and Weston Public Schools. First prize received \$500 for the school, an 8GB iPod Touch for the student designer and a professionally framed copy of the winning poster. Two consolation prizes of \$200 cash for the school and an iPod shuffle for each of the students. It was a great response from the schools and students with 50 entries received. The winning student was

Alex Flood from Kearsley Public School.

- Two information days were organised for educational purposes for residents with On-site Sewerage Management Systems. Council officers set up an information stand at Cessnock Plaza on 19 May 2011. There was a great response from residents on the day with information handed out including information sheets and tips on how to effectively manage systems, cost effective options and appropriate cleaning materials, along with brochures obtained from Hunter Water. The second information day at Wollombi Markets scheduled for 13 June 2011 was unfortunately postponed due to wet weather and the Markets being cancelled. Council officers are looking forward to attending the Wollombi Markets on an alternate date in 2011.

These initiatives have been designed to raise community awareness in regard to On-site Sewerage Management Systems. It is important that owners of On-site Sewerage Management Systems understand the need to effectively manage their system to avoid adverse environmental consequences.

The On-site Sewerage Management program initiatives address the problems being encountered by the On-site Sewerage Management officers during their regular file inspections and in response to feedback from residents.



RESPONSES TO TRANQUILITY AND NOISE ISSUES

During 2010-11, the number of complaints received by Council in relation to noise pollution totalled 246. Complaints were received in relation to a variety of areas, but the greatest majority of complaints related to barking dogs (65%), followed by motor cycles and trail bikes (15%), and birds (4%).

Council is an active member of the Hunter Illegal Trail Bike Riding Working Group in an effort to reduce the level of complaints and disturbance from motorbike/trail bike usage. This working group has produced a brochure on 'Trail Bike Riding in the Hunter' informing bike riders on a range of safe trail bike riding issues including noise.

In October 2010, the Department of Environment, Climate Change and Water released a new Noise Guide for Local Government.

The Guide aims to provide practical guidance to council officers in the day-to-day management of local noise problems and in the interpretation of existing policy and legislation. It focuses on how to assess and manage noise issues dealt with by council officers, such as neighbour-to-neighbour problems and those resulting from commercial or industrial premises.

The Guide is also aimed at planners. It outlines planning considerations that can have a significant bearing on prevention of future noise problems. It is advisory in nature and council officers are encouraged to use it to develop council procedures or policy to deal with noise issues relevant to local circumstances.

A copy of the Guide can be viewed at www.environment.nsw.gov.au/resources/noise/10799nglgfull.pdf



AT A GLANCE

Land Use Change		
State	Increasing	Continued development with 1,043 applications in 2010-11.
Pressure	Increasing	Demand for land is placing increased pressure on undeveloped areas.
Response	Good	Cessnock CityWide Settlement Strategy 2010 was adopted in September 2010.
Open Space		
State	Decreasing	No change to the area of land under Council Management.
Pressure	Increasing	Growing population continually demanding open space for year round recreation.
Response	Unchanged	Continuing to implement Recreation and Open Space Strategic Plan 2009.
Vegetation Removal		
State	Increasing	Catchment Management Authority did not approve any clearing applications during 2010-11.
Pressure	Increasing	Demand for land is placing increased pressure on clearing land for other purposes.
Response	Limited	Landcare groups are active in many areas and several strategies/plans have been developed and are being implemented.
Soil Salinity		
State	Unknown	Salinity identified as an issue in Black Creek and Wollombi Brook Catchments.
Pressure	Unknown	Little data is available on salinity in the Local Government Area.
Response	None	
Contaminated Land		
State	Unknown	Full extent of contaminated land unknown.
Pressure	Unknown	Activities posing contamination risk regulated by Protection of the Environment (Operations) Act 1997.
Response	Limited	Clean up of Hebburn No. 2 Colliery site.
Soil Erosion		
State	Increasing	Soils mapping GIS layer provides information to staff and community.
Pressure	Unknown	No data available.
Response	Improving	Catchment Management Authority and community groups implementing strategies and plans.

Council's Recreation and Open Space Strategic Plan (2009) aims to guide the provision of recreation and open space areas within the Local Government Area.

Some of the key issues addressed in the Plan are integration of cycleways/footpaths; addressing high levels of obesity and heart disease in the Local Government Area; guidelines and minimum standards/sizes for parks and sporting facilities and rationalisation of open space.

RESPONSES TO LANDUSE ISSUES

NEW ASSESSMENT SYSTEM FOR STATE SIGNIFICANT PROJECTS

On 16 June 2011, the New South Wales Government introduced a Bill into the Parliament to repeal Part 3A of the Environmental Planning and Assessment Act 1979 (the EP&A Act) and replace it with an alternative system for the assessment of projects of genuine State significance.

The Bill, which has now been passed by the Parliament, is known as the Environmental Planning and Assessment Amendment (Part 3A Repeal) Bill 2011 and will result in around a 50% reduction in the number of projects dealt with by the State, with those that do not qualify as State significant to go to the local council for assessment. The Bill also makes a number of changes to the operation and make-up of the Planning Assessment Commission and Joint Regional Planning Panels, including providing for additional transparency and greater local government input.

WATER MANAGEMENT (GENERAL) AMENDMENT (AQUIFER INTERFERENCE) REGULATION 2011

This 'interim' aquifer interference regulation amends arrangements for water use in new mineral and petroleum exploration activities from 1 July 2011 (amending the Water Management (General) Regulation 2004).

In particular, the regulation:

- Puts in place a three megalitre annual cap before a water access licence is needed under the Water

Management Act 2000 (NSW).

- Removes a previous exemption that allowed holders of an aquifer interference approval to take water from a water source without a licence.
- Inserts transitional provisions to retain certain entitlements under the Water Act 1912 (NSW) to take water for exploration activities (until 1 February 2012).

MARINE PARKS AMENDMENT (MORATORIUM) BILL 2011 (PER SHOOTERS & FISHERS)

The Upper House passed this Bill on 23 June 2011. It is now in the Lower House. The bill would suspend the creation of new marine parks and prevent the Government from making a regulation to extend sanctuary zones for five years. The Government has proposed amendments linking the length of the moratorium to the conclusion of the forthcoming independent review of NSW marine parks. The Government anticipates the audit will be completed by 31 December 2011.

DEVELOPMENT ACTIVITIES

During 2010-11, Cessnock City Council determined a total of 1,043 applications, which included:

- 798 Development Applications with a construction value of \$125,408,896.
- 161 Section 96 Applications.
- 84 Complying Development Certificates with a construction value of \$2,689,034.

LOCAL ENVIRONMENT PLAN

Council considered the draft Local Environmental Plan 2010 over two Ordinary Meetings on 15 September and 6 October 2010, resolving to complete and submit the draft Local Environmental Plan 2010 to the (then) Minister for Planning.

The draft Local Environmental Plan 2010 was subsequently submitted to the (then) Department of Planning in November 2010 and is being considered by the Minister.

OPEN SPACE

Recreation

Council's Recreation and Open Space Strategic Plan (2009) aims to guide the provision of recreation and open space areas within the Local Government Area. Some of the key issues addressed in the Plan are integration of cycleways/footpaths; addressing high levels of obesity and heart disease in the Local Government Area; guidelines and minimum standards/sizes for parks and sporting facilities and rationalisation of open space.



VEGETATION CLEARING

During 2010-11, the Hunter Central Rivers Catchment Management Authority did not approve any clearing applications in the Cessnock Local Government Area.

Native Vegetation Regulation

Information on Property Vegetation Plans from the Hunter Central Rivers Catchment Management Authority did not report any Property Vegetation Plans undertaken in the Cessnock Local Government Area during 2010-11.

LANDCARE ACTIVITIES

Please refer to the Biodiversity Section for detailed information for Landcare activities.

FIRE HISTORY AND MANAGEMENT

In 2010-11 there were 179 incidents of bushfires in the Cessnock Local Government Area (of which 32 affected areas greater than one hectare) making a total of 205 hectares lost to fire.

There were 56 hazard reductions carried out (10 by fire and 46 by mechanical means) treating 260 hectares. There were five total fire bans.

Air (atmosphere)

AT A GLANCE

Greenhouse Gas Emissions		
State	Increasing	276,328 MWh of electricity was consumed in the LGA (a decrease of 2.3% on 2009-10).
Pressure	Increasing	Electricity consumption is assumed to increase in line with population growth. Heavy reliance on motor vehicles for transportation.
Response	Limited	Council Energy Improvement Program, REMS Climate Action Project and pathways program being implemented.
Diffuse Air Pollution Sources		
State	Limited	41 odour complaints reported to Council. National Pollutant Inventory identified 71 substances from 12 sources.
Pressure	Unknown	Difficult to identify sources of pollution and odour but assumed to be increasing with development growth.
Response	Poor	No resources identified to undertake comprehensive monitoring or analysis of air pollution or odour issues.
Point Source Air Pollution		
State	Limited	Rural Fire Service reported 32 bushfires covering areas greater than 1 ha and conducted 56 hazard reduction burns covering 260 ha.
Pressure	Unknown	Impacts of domestic heating and burning associated with agriculture or forestry unknown.
Response	Poor	
Indoor Air Quality		
State	Unknown	54 regulated air-conditioning systems in the Local Government Area.
Pressure	Unknown	Increased reliance on air conditioning systems expected as temperatures continue to rise from climate change.
Response	Limited	Council maintains a register of regulated air cooling systems and conducts routine inspections of commercial facilities, tourist and wine production premises.

RESPONSES TO GREENHOUSE GAS EMISSIONS ISSUES

ENERGY CONSUMPTION

During 2010-11, Ausgrid reported 276,328 MWh of electricity was consumed in the Cessnock LGA. There was a 2.3% drop in residential consumption (compared to 2009-10) and a 0.7% decrease in business electricity consumption. Solar generation fed into the grid grew to 1,473 MWh (from 112 MWh in 2009-10) demonstrating the strong uptake in solar panel installation in the LGA. Figure 8A compares 2010-11 electricity consumption with the past 3 years consumption.

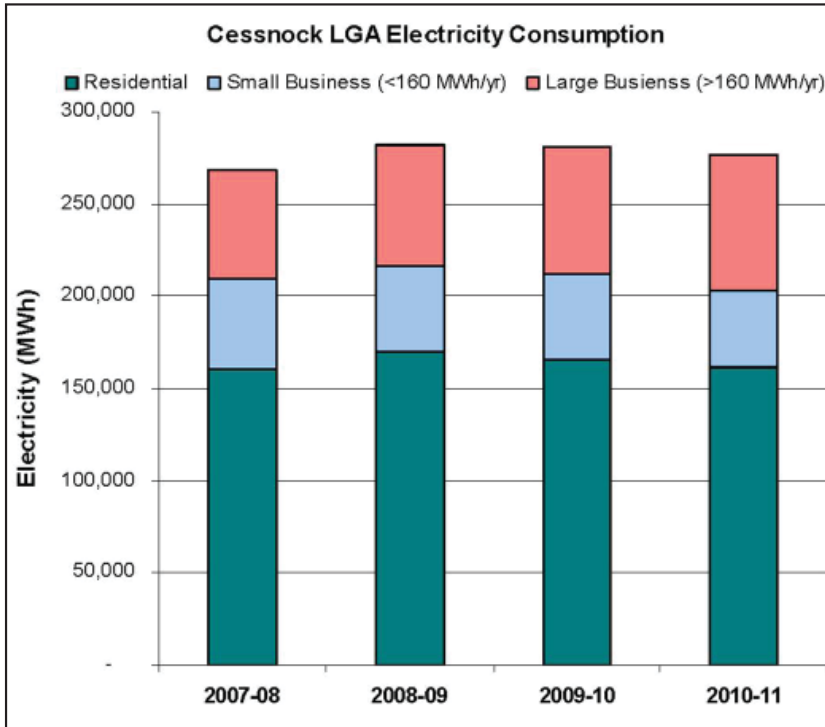


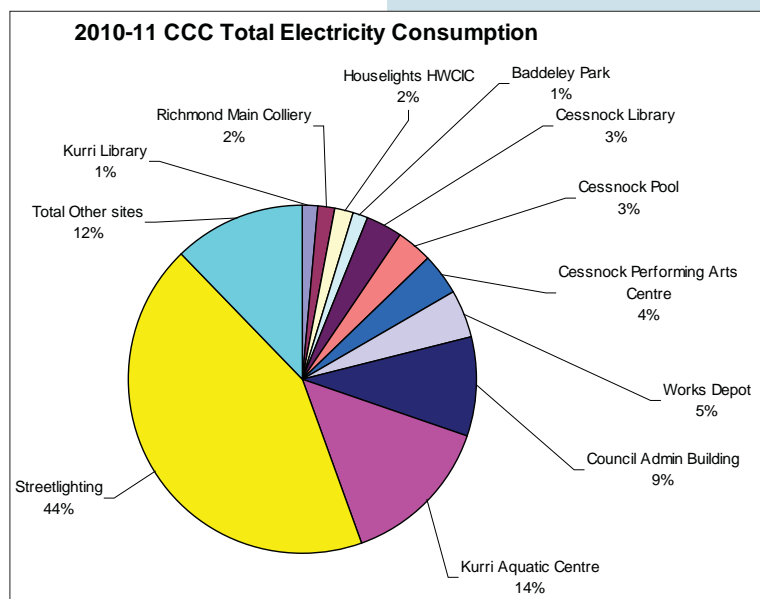
Figure 8A: Cessnock LGA Electricity Consumption

CESSNOCK COUNCIL ELECTRICITY CONSUMPTION

Under the NSW Government's Waste and Sustainability Improvement Program 2010-11, Council was required to undertake an audit (using 12 months of energy usage data) to identify Council's existing baseline energy use for its facilities within the Local Government Area and to identify the top ten energy usage sites. This audit is to be updated every four years. From this audit, Council then needs to develop and commence implementation of initiatives to reduce energy consumption at these ten sites.

Council's total electricity consumption for 2010-11 was 4,829,035 kWh. A summary of the breakdown of this consumption, listing the top 10 consuming sites, is provided in Figure 9.

Figure 9: Council Electricity Consumption



During 2010-11, an energy audit of Council's highest electricity using facility (Kurri Kurri Aquatic Centre) was undertaken identifying the following actions:

- Install variable speed drives to filtration pumps.
- Replace T8 fluorescent lighting with high output T5 fittings.
- Replace halogen down lights.
- Replace exit signs.
- Install timer and contractor to HWS in Plant Room.
- Install power factor correction.
- Investigate mercury vapour alternatives.

The total estimated cost of these actions is \$41,780 and would result in annual savings of \$23,897 on electricity costs i.e. saving of 14% total consumption and 103t CO₂-e per year.

CESSNOCK COUNCIL FUEL CONSUMPTION

Council is responsible for a large fleet of vehicles that are required to assist Council in carrying out all its functions. The fleet varies from 4-6 cylinder cars, four wheel drives, light plant and heavy vehicles.

In 2010-11 the car fleet travelled a total of 2,807,498km averaging 11.2L/100km.

Type of Fuel	2010-11 Consumption
Unleaded	162,243
Diesel	89,718
LPG	-
E10	27,987

Table I: Council Fuel Usage across fleet

Council is working towards reducing fuel consumption by encouraging staff to swap their larger six cylinder lease back vehicles with smaller more fuel efficient four cylinder vehicles.

CESSNOCK LGA CARBON FOOTPRINT

In August 2010, a consultant's report on Council's 2008-09 greenhouse gas emissions was finalised. A summary of Council's carbon emissions is shown in Table 2.

Scope	Emissions Source	Emissions tCO ₂ -e	% of total emissions
Scope 1	Landfill emissions	28,287	84
	Transport based emissions	1,729	5
	Stationary combustion based emissions	312	1
	Emissions from main natural gas	90	<1
	Fugitive emissions from refrigerants	28	<1
Scope 2	Electricity use	3,385	10
Total Emissions		33,831	

Table2: Summary of Councils Carbon Emissions 2008-09

It can be seen that 84% (28,287 tCO₂-e) of Council's carbon footprint is attributable to methane emissions from its landfill. One of the most effective mitigation measures for landfill emissions is typically the installation of a landfill gas capture system, with destruction of methane through flaring or generation of power. Discussions are in progress with a company to capture and use or flare this methane to substantially reduce Council's carbon emissions.

RESIDENTIAL REBATE PROGRAM

From 30 June 2009 to 30 June 2011, 1,499 rebates for hot water systems and 243 rebates for ceiling insulation were paid by the Department of Environment, Climate Change and Water NSW for the Cessnock Local Government Area.

HCCREMS - CLIMATE ACTION PROJECT Regional Risk Assessment and Adaptation Project

The final reports developed under the Regional Climate Change Risk Assessment and Adaptation Planning project were distributed to all councils in December 2010. These reports include:

- Individual risk assessment and adaptation planning reports for Cessnock, Maitland, Singleton, Dungog, Gloucester, Muswellbrook, Upper Hunter and Taree Councils.
- Rural Councils Regional Adaptation Plan.
- Coastal Councils Regional Adaptation Plan.
- Potential Impacts of Climate Change on the Hunter, Central and Lower North Coast of NSW.

The regional coastal and rural council adaptation plans respectively identify 55 and 39 actions – best undertaken on a regional basis - to address the priority risks. (There is also considerable overlap between the two plans in regard to many of the actions that have been identified).

Given the significant number of collaborative opportunities for climate change adaptation that have been identified for councils in the region, two regional workshops have been completed to identify those actions of highest priority to pursue over the next three year period. Priorities identified from the workshop process include:

- Modelling of extreme rainfall intensities.
- Development of high resolution integrated elevation/bathymetry datasets for the coastal zone.
- Estuarine Smartline Mapping.
- Development of guidelines to assist councils to consider and plan for the impacts of climate change in relation to:
 - o Asset condition assessment and reporting.
 - o Drainage assets.
 - o Roads and bridges.
- Downscaled hydrological projections to identify changes to local rainfall runoff, rainfall variability and drought frequency and severity.
- Development of decision making frameworks to enhance the capacity of councils to consistently and transparently integrate and apply climate change science within the decision making processes of councils. Priority areas include:
 - o Prioritising vulnerable coastal areas and assets and appropriate management options for these.
 - o Land use planning in areas vulnerable to the impacts of climate change.

Focus on Energy Reduction

Six meters are available at Cessnock and Kurri Kurri Libraries for borrowing by residents. During 2010-11, these meters were borrowed 80 times with most months having a waiting list of borrowers. In support of this program, two energy and water reduction workshops were held on 18 May 2011 attracting a small but interested group of community members.

Focus on Facilities

This project is directly funding the provision of professional Technical Advice and Mentoring Services to member councils – to allow them to accelerate the implementation of sustainable facilities management strategies. Projects range from energy audits through to specialist consultancy advice on upgrades to specific lighting and air conditioning systems.

RESPONSES TO AIR QUALITY ISSUES

OUTDOOR AIR QUALITY

Diffuse Source Air Pollutants

During 2010-11 Council received 32 reports of air pollution incidents. Of these complaints, 20 related to backyard burning and nine related to dust issues including dust from private and public property and roads.

During 2010-11 Council received 41 complaints in relation to odour, 12 of these complaints were in relation to odours from chicken sheds.

POINT SOURCE AIR POLLUTANTS

During 2010-11, there were 32 bushfires affecting more than one hectare of land in the Cessnock Local Government Area.

NATIONAL POLLUTION INVENTORY

Within the Cessnock Local Government Area, 71 substances were identified from 12 sources. More information on the National Pollutant Inventory can be found at www.npi.gov.au.

INDOOR AIR QUALITY

On 1 July 2010, Council approved the adoption of a Legionella Management Plan to assist Council in the coordination, preparation, planning and operation of its resources to control Legionnaires' disease, and to revoke Council's previous policy for the Installation and Maintenance of Regulated Systems for Control of Legionnaires Disease. The Legionella Management Plan supersedes Council's Policy L14.1 'Installation and Maintenance of Regulated Systems for Control of Legionnaires Disease'. There are currently 54 cooling towers registered in the Cessnock Local Government Area.



AT A GLANCE

Non-drinking Water Quality

State	Fair	Local Government Area water quality varies within each catchment. 21 Waterwatch groups monitored 30 sites and reported 155 datasets. 31 complaints to Council on water quality were received.
Pressure	Increasing	Increasing development for a variety of land uses in the Local Government Area and continued land degradation affects water quality.
Response	Improving	Hunter Water and Community water quality monitoring programs.

Wastewater

State	Improving	Wastewater Treatment Plants monitor water quality above and below discharge points. Continued reliance on on-site effluent treatment.
Pressure	Increasing	As the demand for rural and rural-residential development continues to increase additional pressure will be placed on on-site effluent treatment systems.
Response	Fair	16 NSW Environment Protection Authority licensed premises for water discharge.

Ground and Surface Water

State	Unknown	Little data exists on the current groundwater quality. Currently 256 surface water licences and 234 groundwater licences.
Pressure	Increasing	Groundwater quality is under continual pressure from agricultural activities and on-site effluent disposal.
Response	Limited	Water tank and washing machine rebates and Regional Water Project are addressing some surface water issues.

Stormwater

State	Fair	All new developments must meet requirements in relation to stormwater management.
Pressure	Increasing	In line with increasing development.
Response	Improving	Council Stormwater Management Plan and Regional Water Program.

RESPONSES TO WATER QUALITY ISSUES

WATER QUALITY

The Hunter Water Corporation conducts a water quality monitoring program to assess the impact of point sources of wastewater pollution from their wastewater treatment works on the aquatic environment. This data has been used to assess the compliance of Cessnock's waterways to ANZECC and NHMRC water quality guidelines (see Appendix 1) for potable water supply, the maintenance of aquatic ecosystems and agricultural uses (see Table 3). The mean of the data set for each parameter has been used as the value to assess the water quality guidelines against.

Water Quality Sampling Site	Water Quality Parameter						
	pH	Turbidity	Conductivity	Nitrate Nitrogen	OP	Faecal Coliforms	Chlorophyll-a
Anvil Creek – Upstream							
Potable Water Supply	✓	-	-	✓	-	-	X
Agriculture	✓	-	-	✓	-	-	*
Maintenance of aquatic ecosystems	✓	-	-	✓	-	*	X
Anvil Creek – Downstream							
Potable Water Supply	✓	-	-	✓	-	-	X
Agriculture	✓	-	-	✓	-	-	*
Maintenance of aquatic ecosystems	✓	-	-	✓	-	*	✓
Congewai Creek – Upstream							
Potable Water Supply	✓	-	X	-	-	X	-
Agriculture	✓	-	✓	-	-	✓	*
Maintenance of aquatic ecosystems	✓	-	✓	-	-	*	-
Congewai Creek – Downstream							
Potable Water Supply	✓	-	X	-	-	X	-
Agriculture	✓	-	✓	-	-	✓	*
Maintenance of aquatic ecosystems	✓	-	✓	-	-	*	-
Swamp Creek – Upstream							
Potable Water Supply	✓	X	X	-	-	X	X
Agriculture	✓	X	X	-	-	X	*
Maintenance of aquatic ecosystems	✓	X	✓	-	-	*	✓

Water Quality Sampling Site	Water Quality Parameter						
	pH	Turbidity	Conductivity	Nitrate Nitrogen	OP	Faecal Coliforms	Chlorophyll-a
Swamp Creek – Downstream							
Potable Water Supply	✓	X	X	-	-	X	X
Agriculture	✓	X	X	-	-	X	*
Maintenance of aquatic ecosystems	✓	X	✓	-	-	*	✓
Swamp Creek – Alcan							
Potable Water Supply	✓	-	X	✓	X	X	✓
Agriculture	✓	-	X	✓	X	X	*
Maintenance of aquatic ecosystems	✓	-	✓	✓	X	*	✓
Black Creek – Upstream							
Potable Water Supply	✓	X	X	✓	X	X	X
Agriculture	✓	X	X	✓	X	X	*
Maintenance of aquatic ecosystems	✓	X	✓	✓	X	*	✓
Black Creek – Downstream							
Potable Water Supply	✓	X	X	✓	X	X	✓
Agriculture	✓	X	X	✓	X	✓	*
Maintenance of aquatic ecosystems	✓	X	✓	✓	X	*	✓

Table 3: Water Quality Monitoring Data 2010-11 for creeks near Hunter Water wastewater treatment plants.

- ✓ denotes compliance with ANZECC and NHMRC guidelines
- * denotes no guideline available
- x denotes non-compliance with ANZECC and NHMRC guidelines
- denotes information unavailable

WATER POLLUTION COMPLAINTS/INCIDENTS

Council received 31 water pollution incident reports in 2010-11 representing a 60% increase in the water pollution complaints received by Council in 2009-10. Twenty-seven of the 31 water pollution incidents were related to wastewater, effluent or sullage discharge.

WATERWATCH ACTIVITIES

During 2010-11, 21 groups (15 in 2009-10) undertook Waterwatch sampling at 30 sites (26 in 2009-10) reporting a total of 155 datasets (137 in 2009-10). A full report of Cessnock Local Government Area Waterwatch Group's results for 2010-11 are summarised in Appendix 2.

Water Bug Surveys

The results of Water Bug surveys carried out in the Cessnock Local Government Area in 2010-11 are included in Table 4.

Group	Stream	Stream Pollution Index
		Spring 2010
Ellalong Public School	Ellalong Lagoon	Low
Abermain Junior Girl Guides	Peace Park, Weston	Low
Friends of Werataka	Deadmans Water Holes	High
Friends of Werataka	Saltwater Creek, Lovedale	High
Friends of Tumblebee	Old Colliery Dam, Stanford Merthyr	Low

Table 4: Water Bug Survey Results for the Cessnock LGA

Phosphorus Day

Waterwatch groups in the Cessnock Local Government Area participated in Phosphorous Day in November 2010 taking readings at 16 sites. Readings recorded were in the low range for 7 sites, in the medium range for 6 sites and high range for 1 site. 2 sites in the Cessnock Local Government Area were recorded in the extreme range.

Catchment Crawl

No Catchment crawls were held in the Cessnock Local Government Area during 2010-11. For further information on NSW Waterwatch visit www.environment.nsw.gov.au/waterwatch.

RESPONSES TO WATER USAGE ISSUES

CESSNOCK COUNCIL WATER CONSUMPTION

Under the 2010-11 New South Wales Government's Waste and Sustainability Improvement Program, Council was required to undertake an audit (using 12 months of water usage data) to identify Council's existing baseline water use for its facilities within the Local Government Area and identify the top 10 water usage sites. This audit is to be updated every four years. From this audit, Council then needs to develop and commence implementation of initiatives to reduce water consumption at these 10 sites.

Council's total water consumption for 2009-10 was 130,020 kL. A summary of the breakdown of this consumption listing the top 10 consuming sites is provided in Figure 10.

During 2010-11, water audits of Kurri Kurri Aquatic Centre, Baddeley Park and Turner Park were undertaken. Actions to install aerators in basins, replace showerheads and toilets costing \$3,900 were identified that could save Council \$6,710 per year on water accounts. In addition, an irrigation study of Miller Park Branxton was undertaken. This study identified actions including soil aeration, topdressing, minimising mulch depth, re-turfing and irrigation upgrades costing \$212,000 with the potential to save \$202,000 per year.

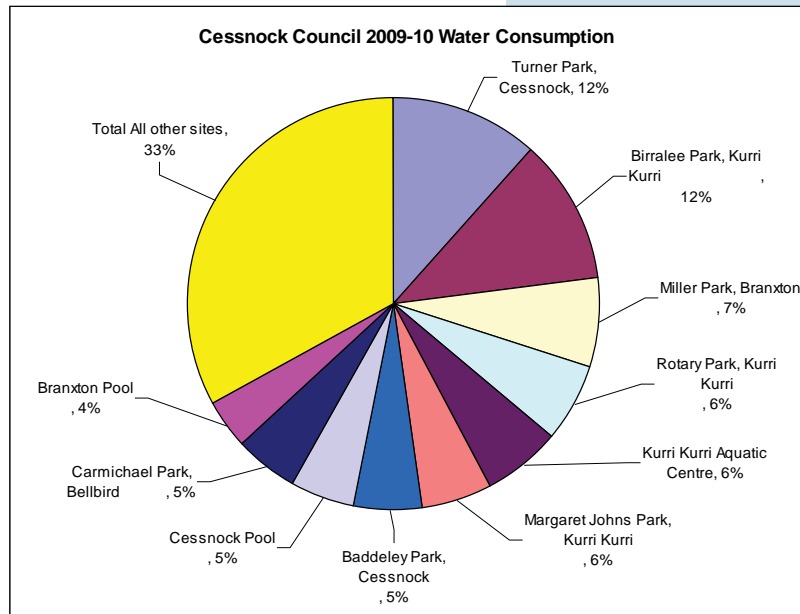


Figure 10: Council Water Consumption

SURFACE AND GROUNDWATER EXTRACTION

Department of Natural Resources records indicate that there are currently 256 surface water extraction licenses and 234 groundwater extraction licenses in the Cessnock Local Government Area. The most common use for this water is for irrigation, stock and grape vines.

HOME SAVER REBATES

The New South Wales Government's Home Saver Rebate program ended on 30 June 2011. In total, the program issued 285 water tank rebates, 1,499 hot water system rebates, 520 washing machine rebates and 177 dual flush toilet rebates to homes in the Cessnock Local Government Area.

FOCUS ON WATER SENSITIVE URBAN DESIGN PROGRAM

Hunter Central Coast Regional Environmental Management Strategy has engaged South East Queensland's "Water by Design Team" to deliver a technical Constructed Wetlands Workshop on the latest innovations and advances in the design, implementation and maintenance of constructed wetlands.

RESPONSES TO WASTEWATER ISSUES

WASTEWATER TREATMENT PLANTS

The effluent discharge for 2010-11 (with comparison to 2009-10 and 2008-09) of each of the wastewater treatment plants in the Cessnock Local Government Area is summarised in Figure 11.

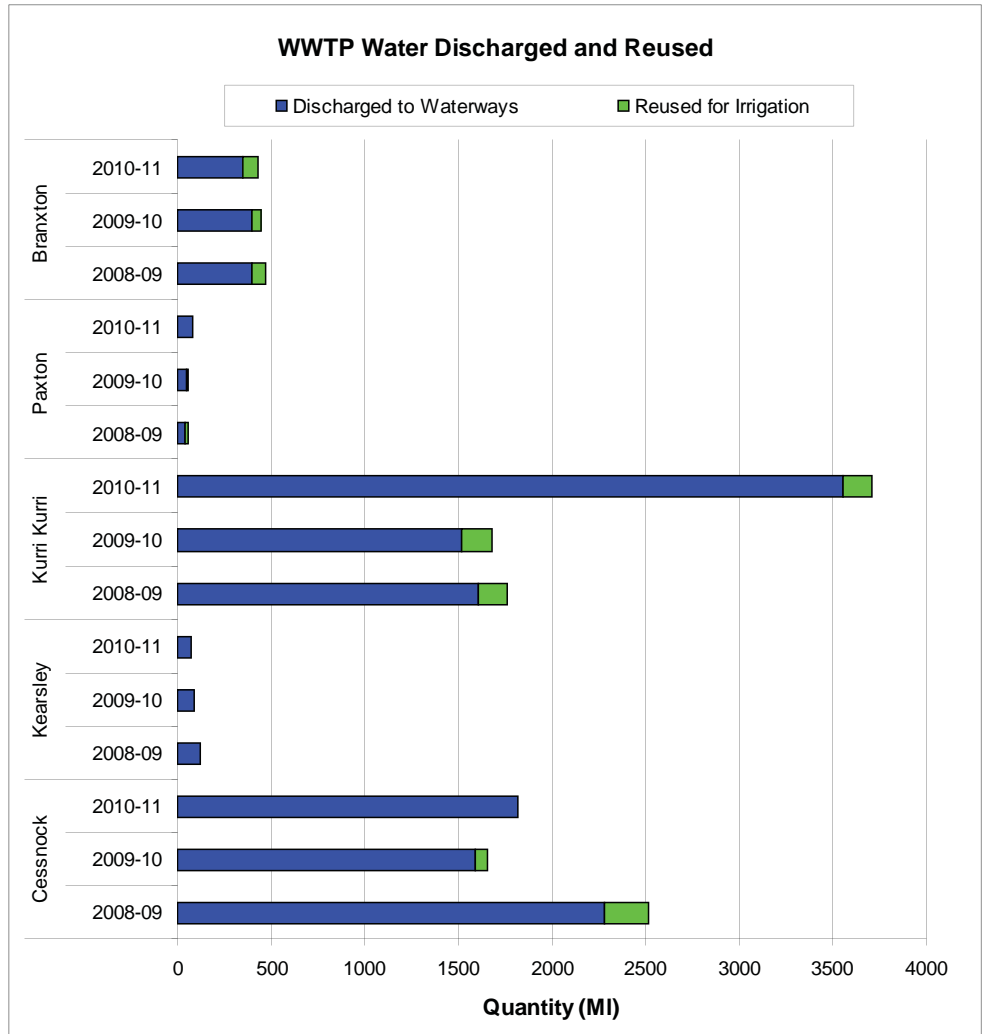


Figure 11: Effluent treated and disposed of at Hunter Water wastewater treatment plants during 2010-11, 2009-10 and 2008-09 in the Cessnock Local Government Area.



PROTECTION OF THE ENVIRONMENT OPERATIONS ACT, 1997 SCHEDULED PREMISES

In relation to the Protection of the Environment Operations Act 1997 there are currently 16 scheduled premises (for water) within the Cessnock LGA (these are listed in table 5).

During 2010-11, 18 trade waste permits and 12 renewals were issued by Hunter Water in the Cessnock Local Government Area. In addition there were 229 sewerage overflows with 193 being due to tree roots.

Business Name	Activity
Austar Coal Mine P/L	Coal Mining
Bloomfiled Collieries P/L	Coal Mining
Hunter Enviro-mining (Operation) P/L	Coal Mining
Cessnock City Council	Landfilling
Cessnock City Council	Herbicide Application
Donaldson Coal P/L	Coal Mining
Enviroking Investments P/L	Waste Storage
HWC – Branxton WWTW	Sewerage Treatment
HWC – Kurri WWTW	Sewerage Treatment
HWC – Cessnock WWTW	Sewerage Treatment
HWC – Kearsley WWTW	Sewerage Treatment
HWC – Paxton WWTW	Sewerage Treatment
Hydro Aluminium Kurri P/L	Aluminium Production
J R Burnett P/L	Animal Slaughter
Orica Australia P/L	Explosives
Valley Feeds	General Agricultural Processing

Table 5: Environment Protection Authority licensed premises (in relation to water pollution) under the Protection of the Environment Operations Act in Cessnock Local Government Area during 2010-11.



Biodiversity

AT A GLANCE

Terrestrial Biodiversity		
State	Declining	Various developments pose threats to terrestrial biodiversity in the Local Government Area. Currently listed under the Threatened Species Conservation Act 1995 for the Local Government Area are 72 fauna species, 18 flora species, 1 endangered population and 9 endangered ecological communities. Catchment Management Authority did not approve any clearing.
Pressure	Increasing	Demand for rural, rural residential, industrial and urban expansion as a result of population growth increasingly affects biodiversity.
Response	Limited	Landcare programs, Roadside Environmental Management and Vegetation Management programs.
Aquatic Biodiversity		
State	Unknown	Little is known of the aquatic biodiversity in the Local Government Area.
Pressure	Increasing	Increasing development is placing pressure on aquatic ecosystems through disturbance, pollution and changes in water quality and quantity.
Response	Limited	Salvinia removal programs are continuing but are limited by resources.
Introduced Flora and Fauna		
State	Unknown	Complete numbers of introduced species are unknown. List of 25 Regional Weeds of Significance established.
Pressure	Increasing	Development in the Local Government Area is increasing the incidence of weed infestation and introduction of feral animals into natural bushland.
Response	Fair	Council employs 2 Weeds Officers and participates in many regional weed programs as well as receiving grant funding to initiate programs.

RESPONSES TO BIODIVERSITY ISSUES

AUSTRALIA'S BIODIVERSITY CONSERVATION STRATEGY 2010-2030

Australia's Biodiversity Conservation Strategy 2010-2030 is a guiding framework for biodiversity conservation over the coming decades for all sectors - government, business and the community. The vision of this Strategy is that Australia's biodiversity is healthy and resilient to threats, and valued both in its own right and for its essential contribution to our existence.

The Strategy sets out priorities which will direct our efforts to achieve healthy and resilient biodiversity and provide us with a basis for living sustainably.

The Strategy contains three national priorities for action to help stop the decline in Australia's biodiversity.

These priorities for action are:

- Engaging all Australians in biodiversity conservation through:
 - o mainstreaming biodiversity
 - o increasing Indigenous engagement
 - o enhancing strategic investments and partnerships.
- Building ecosystem resilience in a changing climate by:
 - o protecting diversity
 - o maintaining and re-establishing ecosystem functions
 - o reducing threats to biodiversity.
- Getting measurable results through:
 - o improving and sharing knowledge
 - o delivering conservation initiatives efficiently
 - o implementing robust national monitoring, reporting and evaluation.

Each of the priorities for action is supported by subpriorities, outcomes, measurable targets and actions which collectively provide a strategic focus for our efforts.

The 10 national targets to achieve by 2015 are as follows:

1. A 25% increase in the number of Australians and public and private organisations who participate in biodiversity conservation activities.
2. A 25% increase in employment and participation of Indigenous people in biodiversity conservation.
3. A doubling of the value of complementary markets for ecosystem services.
4. A national increase of 600,000 km² of native habitat managed primarily for biodiversity conservation across terrestrial, aquatic and marine environments.
5. 1,000 km² of fragmented landscapes and aquatic systems are being restored to improve ecological connectivity.
6. Four collaborative continental-scale linkages are established and managed to improve ecological connectivity.
7. Reduce by at least 10% the impacts of invasive species on threatened species and ecological communities in terrestrial, aquatic and marine environments.
8. Nationally agreed science and knowledge priorities for biodiversity conservation are guiding research activities.
9. All jurisdictions will review relevant legislation, policies and programs to maximise alignment with Australia's Biodiversity Conservation Strategy.
10. Establish a national long-term biodiversity monitoring and reporting system.

Australia's Biodiversity Conservation Strategy 2010-2030 vision is that Australia's biodiversity is healthy and resilient to threats, and valued both in its own right and for its essential contribution to our existence.

Currently listed under the Threatened Species Conservation Act 1995 for the Local Government Area are 72 fauna species, 18 flora species, one endangered population and nine endangered ecological communities.

The Strategy then provides details on implementation and a series of actions that will help to achieve the outcomes and targets. These actions will be variously carried out at national, state, regional and local levels. The actions are an indicative set, acknowledging that as we progress our biodiversity conservation efforts, we will need to adapt our approaches and develop new actions to help achieve our outcomes and targets. Arrangements for monitoring and reporting on implementation of the Strategy are also outlined, as are evaluating the effectiveness of our efforts.

The Strategy functions as a policy 'umbrella' over other more specific national frameworks. These include:

- National Framework for the Management and Monitoring of Australia's Native Vegetation (NRMMC 1999)
- The Australian Weeds Strategy (NRMMC 2007a)
- Australian Pest Animal Strategy (NRMMC 2007b)
- Australia's Strategy for the National Reserve System 2009-2030 (National Reserve System Task Group 2009)

It is also a guiding policy framework for the diverse mix of Australian, state, territory and local government and private sector approaches to biodiversity conservation.

THREATENED FAUNA SPECIES

A complete list of threatened fauna species within the Cessnock Local Government Area is contained in Appendix 3 and is available on the NSW Threatened Species website (www.threatenedspecies.environment.nsw.gov.au). Since 1980 there have been 2,111 records comprising 62 threatened fauna species placed on the National Parks and Wildlife Service Atlas of NSW Wildlife. Fifty-one per cent of these sightings (covering 45 species) have been recorded in the last three years.

THREATENED FLORA SPECIES

A complete list of threatened flora species within the Cessnock Local Government Area is contained in Appendix 3 and is available on the NSW Threatened Species website (www.threatenedspecies.environment.nsw.gov.au). Since 1980 there have been 3,710 records comprising 23 threatened fauna species placed on National Parks and Wildlife Service Atlas of NSW Wildlife. Eighty-eight per cent of these sightings (covering 21 species) have been recorded in the last three years.

OEHS CESSNOCK BIODIVERSITY CONSERVATION PROGRAM

The Office of Environment and Heritage is currently preparing a Biodiversity Management Plan for the valley floor region of the Cessnock Local Government Area. The plan aims to address the conservation needs of all 65 threatened species and ecological communities in the area. By identifying clear objectives it is hoped to encourage landholders, individuals, community groups, schools and other government departments to initiate and become involved in threatened species recovery projects. The project will be delivered through a poster and an associated project website.

In addition, on Threatened Species Day (7 September 2010) a community survey was conducted with 25 keen volunteers. The group located, mapped and measured 118 *Personia pauciflora* plants, which is a great effort considering this critically endangered plant is now restricted to as few as 400 individuals. Some of the plants mapped had not been recorded previously.

The information collected during the survey is being used in the development of habitat rehabilitation

and management plans for two private properties which will soon be protected in perpetuity.

REGENT HONEYEATER AND SWIFT PARROT SURVEYS

The Hunter region is recognised as providing important habitat for the endangered Regent Honeyeater. A preliminary determination was recently released, proposing to upgrade this species from endangered to critically endangered. The determination by the Scientific Committee states that the total adult population within New South Wales could be as few as 250 individuals.

Targeted searches were undertaken on 7 and 8 August 2010, which is the second of the bi-annual surveys for Regent Honeyeaters and Swift Parrots, another nationally-listed endangered species. These surveys are coordinated by Birds Australia as part of its Woodland Birds for Biodiversity Project.

Targeted surveys for Regent Honeyeaters undertaken earlier in the year by Office of Environment and Heritage staff managed to find two groups. One was at Kitchener, where up to seven birds were found during February and the other was at Milbrodale (Putty Road) where the peak count was of 19 birds in late May. This represents by far the biggest count of the species anywhere since Winter 2009 when up to 40 birds were found in Werakata National Park near Cessnock.

PRIVATE LAND CONSERVATION WORKSHOP

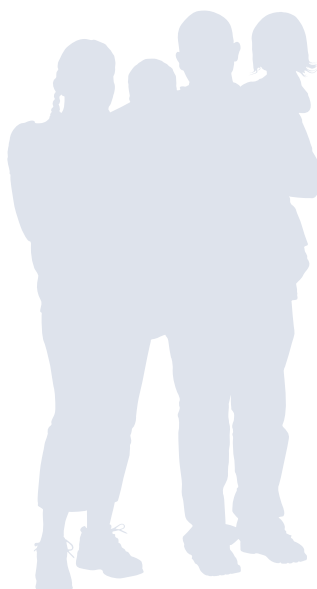
The Environmental Defenders Office held a workshop on Private Land Conservation in New South Wales at Branxton on 22 October 2010. The workshop was well attended and concluded with a site visit to a local property.

LANDOWNER WORKSHOPS

With funding from the Hunter Central Rivers Catchment Management Authority, Council conducted two Rural Landowners Workshops in Ellalong (on 16 April 2011) and Abermain (on 7 May 2011). The Workshops focussed on incorporating natural vegetation to promote local biodiversity and the use of regional vegetation mapping to develop individual property revegetation plans. Presenters were from Hunter Central Rivers Catchment Management Authority, the Office of Environment and Heritage, the Rural Fire Service, Council's Weeds Officers and a local native plant supplier. Both workshops were well attended and future workshops are being planned.

HABITAT FRAGMENTATION AND CLEARING

During 2010, the Catchment Management Authorities did not approve any clearing applications in the Cessnock Local Government Area.



INTRODUCED SPECIES - WEEDS

During 2010-11, Council's Weeds Officers received 179 customer requests regarding weed issues, ranging from requests for plant identification to control works.

Council's Weeds Officers inspected 276 properties and nine section 18/18A Weed Control Notices were issued.

The 2010-11 Council weed control program treated the following weeds throughout the year:

- Blackberry (25)
- African Boxthorn (3)
- Pampas Grass (4)
- Green Cestrum (25)
- Mother of Millions (21)
- Salvinia (7)
- Smooth Tree Pear (2)
- Patersons Curse (5)
- Water Hyacinth (2)
- Bathurst Burr (2)
- Crofton (1)
- Lantana (30)
- Alligator Weed (5)

As well as these activities, Council's Weeds Officers:-

- Continued a program of community education on weeds through making available a poster on major weeds of the area and printed fact sheets at Council's Administration Centre and Libraries. These are also available on Council's website.
- Developed new promotional material as handouts for the general public as a means of education on the importance of weed identification and control.
- Undertook a survey along the south arm of Wollombi Brook with Catchment Management Authority officers for salvinia in July 2010.

Regional Weed Strategy

The transition to new regional arrangements for weeds management in the Hunter and Central Coast is almost complete:

- The Upper Hunter Weeds Authority is to assume the role of host organisation for the new Regional Strategy, its funding and its implementation plan on behalf of Lower Hunter and Central Coast councils. A Memorandum of Understanding has been signed.
- Hunter Councils has made a formal submission to Industry and Investment NSW to transfer all contractual agreements to the Upper Hunter Weeds Authority.

The Hunter Councils team is currently managing two regional on-ground works projects:

- A three year, federally funded Alligator Weed Management Project.
- A two year state funded Riparian Weeds Management Project.

Detailed site analysis, plans of management and consultation have commenced for both initiatives with on-ground works commencing in June 2011.

A briefing session for regional stakeholders about the Hunter Central Coast Weed Strategy and Implementation Plan 2010 – 2015 was held in August 2010. The briefing session was followed by a technical workshop to assist with the design and development of regional prioritisation inspectorial programs that align with Industry and Investment NSW funding requirements and the Noxious Weeds Act, as well deliver a strategic response to the new landscape based plan.

The Regional Weed Management Planning Team and councils have yet to determine the final governance structure for hosting the position and Industry and Investment NSW grant funding arrangements.

The Regional Weed Strategist worked with weeds managers to ensure that the following initiatives were completed by end 2011:

- Management tools to assist the professional team and technical officers with the regional strategies' implementation next year.
- Design and development of a comprehensive Monitoring and Evaluation Plan – a requirement of Industry and Investment NSW Weeds Action Program, and an instrument to guide implementation of the regional strategy.
- Production of a communications strategy.
- Completion of GIS-based analysis to assist technical officers to target high-priority areas for possible new weed species and populations.
- Completion of mapping products for all eight Lower Hunter and Central Coast councils to guide strategy implementation.

FIRE AND FUEL REDUCTION

In 2010-11 there were 179 incidents of bushfires in the Cessnock Local Government Area (of which 32 affected areas greater than one hectare) making a total of 205 hectares lost to fire. There were 56 hazard reductions carried out (10 by fire and 46 by mechanical means) treating 260 hectares. There were five total fire bans.

BIODIVERSITY WEBPAGE

Council maintains and annually updates a page on its website containing information on local biodiversity. This is able to be used by the community as reference material on local ecology.

LANDCARE ACTIVITIES

The following reports have been provided from Landcare groups operating in the Cessnock Local Government Area. Some Landcare groups have not provided updates on their activities for 2010-11.

Abermain Landcare

- Actively involved in working with Cessnock Council on mitigation plans for the future, with representation on the Flood Plain Management Committee.
- Black Creek, Swamp Creek, Wallis Creek and Wollombi Brook clearing and dredging of creeks, bank reinforcement, assessment of surviving vegetation and revegetation needs are all being addressed by the Flood Plain Management Committee.
- Maintaining control of giant reed and salvinia.
- Maintaining remaining site not washed away in June 2007 flood.
- Monitoring progress of proposed works on Swamp Creek for flood mitigation such as in-stream vegetation management and channelization.

Kurri Kurri Landcare

Kurri Kurri Landcare have had a most interesting and fruitful year:

- Work is continuing on the Salt Scald eradication in Deakin Street, Kurri Kurri.
- The flood alarms at Weston and Abermain were bought into operation in the flash flood in June. Their main function in the dark conditions was to notify affected residents and to bring citizens from further afield offering to help.
- The park in Mitchell Avenue is proceeding. Noxious plants and trees have been treated with poison as directed by Council's Weeds Officers.
- Seeking permission to clear the small parkland in Brooks Street, Abermain.

REGIONAL ROADSIDE ENVIRONMENT PROGRAM

Roadside environments in the Hunter region provide habitat for at least 28 threatened flora species, adjoin 480km of Ramsar listed wetlands and contain seven ecologically endangered vegetation communities.

The Regional Roadside Environment Program focusses on the design and implementation of a regional roadside marker system to identify and protect ecologically significant roadside environments across the region. The marker system aims to assist councils in meeting their state and Commonwealth legislative responsibilities and reduce the risks associated with unintentional damage to such environments arising from routine maintenance or upgrade activities.

During 2010-11 the Roadside Marker Project:

- Conducted briefings for councils on the status and progress of the Program providing councils with a copy of the Regional Roadside Environment Resource Kit and an explanation of the resources that it contains.
- Finalised the training module to be delivered to the three pilot councils.
- Undertook negotiations with the New South Wales Roadside Environment Committee to sponsor the training delivery roll out to all New South Wales councils.
- Commenced implementation of on-ground works (happening over the next three years) for the protection and management of Endangered Ecological Communities on roadsides.

AT A GLANCE

Aboriginal Heritage		
State	Unknown	941 sites are recorded on the National Parks and Wildlife Service Aboriginal Sites register. The location of sites within the Local Government Area is generally kept confidential for security reasons.
Pressure	Increasing	Many identified areas are on land not in Aboriginal control and may be subject to disturbance through various activities including agriculture, forestry, mining and urban development.
Response	Limited	National Parks and Wildlife Service are the lead agency for protection of aboriginal artefacts.
Non-Aboriginal Heritage		
State	Stable	There are four items of State Environmental Heritage, 33 items of Regional Environmental Heritage and 24 items of Local Environmental Heritage listed in the Hunter Heritage Regional Environmental Plan 1989.
Pressure	Increasing	Increased development activity places increased pressure on both identified and unidentified sites.
Response	Increasing	A Heritage Schedule to the draft Cessnock Local Environmental Plan 2010 has been prepared and includes 217 heritage items and 2 conservation areas. Convict Trail Project and local heritage groups actively working on restoration, education and protection of some sites.



RESPONSES TO ABORIGINAL HERITAGE ISSUES

There are 941 sites recorded on the National Parks and Wildlife Service's Aboriginal Sites Register for the Cessnock Local Government Area. More than half these sites are shelter sites that contain art and/or archaeological deposits.

RESPONSES TO NON-ABORIGINAL HERITAGE ISSUES

HERITAGE LOCAL ENVIRONMENTAL PLAN AND REVISION OF HERITAGE STUDY

As part of the Comprehensive Local Environmental Plan, Council engaged a consultant to review the 1994 Cessnock Heritage Study and existing Regional and Local Environmental Plan schedules of Heritage Items. This involved a review of 657 potential heritage sites and landscapes. As recommended by the consultant, the heritage schedule of the draft Local Environmental Plan 2010 originally contained 252 heritage items and two conservation areas. However, following two exhibition periods of the draft Local Environmental Plan 2010, amendments have been made to the heritage schedule, so that it now contains 217 items and two conservation areas.

CULTURAL COMMUNITY DEVELOPMENT DOLLAR FOR DOLLAR GRANT PROGRAM

Each year Council provides funding for community arts/cultural projects through the Community Cultural Development Dollar for Dollar Grant Program. In 2010-11 \$25,679.03 was spent on this program.

HERITAGE DOLLAR FOR DOLLAR GRANT PROGRAM

A Heritage Dollar for Dollar Grant Program was not run in 2010-11.

THE CONVICT TRAIL PROJECT

In 2010-11, the Convict Trail Project worked with Cessnock City Council to help with the heritage oversight of the repairs to the Ramsays Leap wall and the onsite heritage recording of the council works done at Ramsays Leap. A Jobs Australia Heritage Grant of \$780,000 was used to carry out work there and at Thompsons Bridge.

A grant for the Convict Trail Project received in 2009 for work on the culvert at Ramsays Leap is now completed. In 2010-11 Cessnock City Council. Applied for a grant to develop multi media tourist presentation for tourist route 33 (the Convict Trail) but the results of the highly competitive application have not yet been announced.



ABBREVIATIONS

ANZECC	Australian and New Zealand Environment and Conservation Council
CCC	Cessnock City Council
CYCOS	Cessnock Youth Centre & Outreach Service
DA	Development Application
DCP/DCPs	Development Control Plan/s
DECCW	Department of Environment, Climate Change and Water NSW (formerly DECC)
DII	Department of Industry and Investment NSW
DIPNR	Department of Infrastructure, Planning and Natural Resources
DNR	Department of Natural Resources NSW (formerly DIPNR)
EEC	Endangered Ecological Community
EPBC Act	Environment Protection and Biodiversity Conservation Act
ESD	Ecologically Sustainable Development
GPT	Gross Pollutant Trap
HCRCA	Hunter – Central Rivers Catchment Management Authority
HRR	Hunter Resource Recovery
HWC	Hunter Water Corporation
KAB	Keep Australia Beautiful
LCA	Local Control Authority
LEP/LEPs	Local Environmental Plan/s
LGA	Local Government Area
HCCREMS	Hunter and Central Coast Regional Environmental Management Strategy
ML	Mega litres
NPWS	National Parks and Wildlife Service NSW
OEH	NSW Office of Environment and Heritage
OSSM	On-site Sewerage Management
PVP	Property Vegetation Plans
RFS	Rural Fire Service
RTA	Roads and Traffic Authority
SEPP	State Environmental Planning Policy
SoE	State of the Environment Report
WWTP/WWTW	Wastewater Treatment Plant/Wastewater Treatment Works

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APPENDIX 1 - WATER QUALITY GUIDELINES

	Potable Water Supply	Agricultural Purposes – Irrigation and Stock Watering	Maintenance of Aquatic Ecosystems
pH	6.5 – 8.5	4.5 – 9	6.5 – 9
Turbidity (NTU)	<5	>100	>50
Electrical Conductivity (uS/cm at 250C) ^c	<280	280 – 800 (up to 5500 for salt tolerant crops)	<1500
Total Dissolved Solids (mg/L)	*	175 – 500	0 – 175
Orthophosphate (mg/L)	<0.05	<0.05	<0.05
Nitrate Nitrogen (mg/L)	<10	<10	<10
Chlorophyll-a (g/L)	<5	*	<20
Faecal Coliforms (count/100mL)	<10	1000	*

* No Guideline Available

Adapted From ANZECC (1992), NHMRC (1987)

APPENDIX 2 – WATERWATCH WATER QUALITY MONITORING RESULTS FOR CESSNOCK LGA 2010-11

Water Quality Sampling Site	Water Quality Parameter				Readings
	pH	Conductivity	Turbidity	Total Dissolved Solids	
Congewai Landcare – Congewai Creek (at ford on Congewai Rd) (WBN005)					Readings: 2
Potable Water Supply	x	✓	x		-
Agriculture	✓	x	x		-
Maintenance of aquatic ecosystems	x	✓	x		-
Congewai Landcare – Dam at 'Glenbori' (WBN008)					Readings: 2
Potable Water Supply	x	✓	x		-
Agriculture	✓	✓	x		-
Maintenance of aquatic ecosystems	x	✓	x		-
Congewai Landcare – Congewai Creek (along entrance to Reedy Creek) (WBN010)					Readings: 2
Potable Water Supply	x	x	x		-
Agriculture	✓	✓	x		-
Maintenance of aquatic ecosystems	✓	✓	x		-
Bellbird Public School – Bellbird Creek (Kendall & Pittman Sts)					Readings: 2
Potable Water Supply	✓	x	x		*
Agriculture	✓	x	x		✓
Maintenance of aquatic ecosystems	✓	✓	x		x
Congewai Landcare – Congewai Creek (Thursby Rd bridge) (WBN040)					Readings: 2
Potable Water Supply	✓	x	x		-
Agriculture	✓	✓	x		-
Maintenance of aquatic ecosystems	✓	✓	x		-
Paxton Public School – Ellalong Lagoon (WBN055)					Readings: 2
Potable Water Supply	x	-	x		*
Agriculture	✓	-	✓		x
Maintenance of aquatic ecosystems	x	-	✓		x
Millfield Public School – Wollombi Brook North Arm at Millfield (WBN070)					Readings: 2
Potable Water Supply	x	-	x		*
Agriculture	✓	-	x		✓
Maintenance of aquatic ecosystems	x	-	x		x
Millfield Public School – Wollombi Brook North Arm 50m downstream bridge, Millfield (WBN080)					Readings: 2
Potable Water Supply	x	-	x		*
Agriculture	✓	-	x		✓
Maintenance of aquatic ecosystems	x	-	x		x
Cessnock Waterwatch – Black Creek downstream of bridge on Deep Spring Lane, Nulkaba					Readings: 7
Potable Water Supply	✓	x	x		-
Agriculture	✓	x	x		-
Maintenance of aquatic ecosystems	✓	✓	x		-
Wollombi Public School – Wollombi Brook (waterhole) at Wollombi (WBN090)					Readings: 4
Potable Water Supply	✓	-	x		*
Agriculture	✓	-	x		✓
Maintenance of aquatic ecosystems	✓	-	x		x
Hunter Community Salinity Monitoring – Wollombi Brook Big Arm, Broke Rd, Wollombi (WBT060)					Readings: 3
Potable Water Supply	✓	x	x		-
Agriculture	✓	✓	x		-
Maintenance of aquatic ecosystems	✓	✓	x		-
Congewai Landcare & Public School - Congewai Creek (bridge 1km south school) (WBN030)					Readings: 6
Potable Water Supply	✓	x	x		-
Agriculture	✓	✓	x		-
Maintenance of aquatic ecosystems	✓	✓	x		-
Mount View High School – Bellbird Creek end of Desmond St, Cessnock West					Readings: 1
Potable Water Supply	✓	✓	x		-
Agriculture	✓	x	x		-
Maintenance of aquatic ecosystems	✓	✓	✓		-
Ellalong Public School – Quorrolong Creek (End Truro St) (WBN050)					Readings: 4
Potable Water Supply	✓	x	x		*
Agriculture	✓	✓	x		✓
Maintenance of aquatic ecosystems	✓	✓	x		✓
Hunter Central Rivers Waterwatch - Wallis Creek, Mt Vincent (WAL005)					Readings: 1
Potable Water Supply	✓	x	x		-
Agriculture	✓	x	x		-
Maintenance of aquatic ecosystems	✓	✓	x		-

Water Quality Sampling Site	Water Quality Parameter			
	pH	Conductivity	Turbidity	Total Dissolved Solids
Bow Wow Gorge Waterwatch - Wallis Creek, Bow Wow Gorge (WBS090) Readings: 11				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Bow Wow Gorge Waterwatch - Wallis Creek, upstream of confluence with Bow Wow Gorge Readings: 11				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Endeavour Industries Limited Cessnock, Nulkaba – Black Creek (West & South Sts), Nulkaba Readings: 22				
Potable Water Supply	✓	✓	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends Tumblebee and Abermain Junior Guides – Swamp Creek, Peace Park, Weston (SWA020) Readings: 9				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Tumblebee – Wallis Creek at Black Hollows Readings: 5				
Potable Water Supply	✓	✓	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Tumblebee – Wallis Creek at Twin Bridges, Buchanan Readings: 6				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Tumblebee – Fishery Creek, old Stanford Merthyr Colliery Dam, Kurri Kurri Readings: 10				
Potable Water Supply	✓	✓	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Tumblebee and Hunter Central Rivers Waterwatch – Wallis Creek, John Renshaw Drive (WAL050) Readings: 4				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Werakata – Swamp Ck, Kearsley (Abermain 2 Colliery) Readings: 4				
Potable Water Supply	✓	✓	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Werakata – Kitchener Poppethead Dam Readings: 8				
Potable Water Supply	✓	✓	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Werakata – Swamp Ck (along Willai firetrail) Readings: 2				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Greta Public School – Anvil Creek Readings: 1				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	x	x	-
Friends of Werakata – Swamp Creek – Deep Creek (Abermain 2 Colliery) Readings: 5				
Potable Water Supply	✓	✓	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Friends of Werakata – Black Creek, Deadmans Waterhole Readings: 7				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	x	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Friends of Werakata – Black Creek at Saltwater Creek Readings: 8				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	x	-
Maintenance of aquatic ecosystems	✓	✓	x	-

- ✓ denotes compliance with ANZECC and NHMRC guidelines
- * denotes no guideline available
- x denotes non-compliance with ANZECC and NHMRC guidelines
- denotes information unavailable

APPENDIX 3 – THREATENED SPECIES LISTINGS FOR CESSNOCK LGA

Flora listed under Schedule 1 (part 1) and Schedule 2 (part 1) Threatened Species Conservation Act 1995 as at 1 July 2011 occurring or predicted to occur in Cessnock LGA.

Scientific Name	Common Name	Classification TSC	Classification EPBC
<i>Acacia bynoeana</i>	Bynoe's Wattle	E	V
<i>Callistemon linearifolius</i>	Nettled Bottlebrush	V	-
<i>Cynanchum elegans</i>	White-flowered wax plant	E	-
<i>Diuris praecox</i>	Rough Double Tail	V	-
<i>Eucalyptus fracta</i>	Broken Back Ironbark	V	-
<i>Eucalyptus glaucina</i>	Slatey Red Gum	V	V
<i>Eucalyptus parramattensis</i> subsp. <i>decadens</i>		V	V
<i>Eucalyptus pumila</i>	Pokolbin mallee	V	V
<i>Grevillea parviflora</i> subsp. <i>parviflora</i>	Small-flowered Grevillia	V	V
<i>Melaleuca groveana</i>	Grove's Paperbark	V	-
<i>Olearia cordata</i>		V	V
<i>Persicaria elatior</i>	Tall Knotweed	V	V
<i>Persoonia hirsuta</i> subsp. <i>nov.</i> <i>Yengo National Park</i>	Hairy Geebung	E	E
<i>Persoonia pauciflora</i>	North Rothbury Persoonia	E	CE
<i>Prostanthera cineolifera</i>	Singleton Mint Bush	V	V
<i>Rutidosis heterogama</i>	Heath winklewort	V	V
<i>Tetradlea juncea</i>	Black-eyed Susan	V	V
<i>Zannichellia palustris</i>	Aquatic plant – Black Ck	E	-

Ecological Communities listed under Schedule 1 (part 3) and Schedule 2 (part 2) Threatened Species Conservation Act 1995 as at 1 July 2011 occurring or predicted to occur in Cessnock LGA.

Scientific Name	Common Name	Classification TSC
<i>Central Hunter Grey Box – Ironbark Woodland in the NSW North Coast and Sydney Basin Bioregions</i>	Central Hunter Grey Box – Ironbark Woodland	E
<i>Central Hunter Ironbark – Spotted Gum – Grey Box Forest in the NSW North Coast and Sydney Basin Bioregions</i>	Central Hunter Ironbark – Spotted Gum – Grey Box Forest	E
<i>Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions</i>		E
<i>Kurri Sand Swamp Woodland in the Sydney Bioregion</i>	Kurri Sand Swamp Woodland	E
<i>Hunter Lowland Redgum Forest in the Sydney Basin and NSW North Coast Bioregions</i>	Hunter Lowland Redgum Forest	E
<i>Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Bioregion</i>	Lower Hunter Spotted Gum – Ironbark Forest	E
<i>Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions</i>	Lower Hunter Valley Dry Rainforest	V
<i>River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions</i>	River-Flat Eucalypt Forest on Coastal Floodplains	E
<i>Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South east Corner bioregions</i>	Swamp Oak Floodplain Forest	E
<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	Box-Gum Woodland	E

Populations listed under Schedule 1 (part 2) Threatened Species Conservation Act 1995 as at 1 July 2011 occurring or predicted to occur in Cessnock LGA.

Scientific Name	Common Name	Classification TSC
<i>Leionema lampropyllum</i> supsp.	Leionema lampropyllum supsp.	E
<i>Obovatum</i> population in the Hunter Catchment	Obovatum population in the Hunter Catchment	

Fauna listed under Schedule 1 (part 1/1A) and Schedule 2 (part 3) Threatened Species Conservation Act 1995 as at 1 July 2006 occurring or predicted to occur in Cessnock LGA.

Scientific Name	Common Name	Classification TSC	Classification EPBC
Amphibians			
<i>Crinia tinnula</i>	Wallum Froglet	V	-
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	V	V
<i>Litoria aurea</i>	Green and Golden Bell Frog	E	V
<i>Litoria brevipalmota</i>	Green-thighed Frog	V	-
<i>Litoria littlejohni</i>	Littlejohns Tree Frog	V	V
<i>Mixophyes balbus</i>	Stuttering Barred Frog	E	-
<i>Mixophyes iterates</i>	Giant Barred Frog	E	E
<i>Pseudophryne australis</i>	Red-crowned Toadlet	V	-
Mammals			
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V	V
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V	-
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	-
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	-
<i>Kerivoula papuensis</i>	Golden-tipped Bat	V	-
<i>Macropus parma</i>	Parma Wallaby	V	-
<i>Miniopterus australis</i>	Little Bentwing Bat	V	-
<i>Miniopterus schreibesii oceanensis</i>	Eastern Bentwing Bat	V	-
<i>Mormopterus norfolkensis</i>	Eastern Freetail Bat	V	-
<i>Myotis adversus</i>	Large-footed Myotis	V	-
<i>Nyctophilus corbeni</i>	Greater Long-eared Bat (south eastern form)	V	V
<i>Petaurus australis</i>	Yellow-bellied Glider	V	V
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	-
<i>Petrolgale penicillata</i>	Brush-tailed Rock-wallaby	E	V
<i>Phascolarctos cinereus</i>	Koala	V	-
<i>Phascogale tapoatofa</i>	Brush-tailed Phascogle	V	-
<i>Planigale maculata</i>	Common Planigale	V	-
<i>Potorous tridactylus</i>	Long-nosed Potoroo	V	V
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V
<i>Saccolainus flaviventris</i>	Yellow-bellied Sheath-tail Bat	V	-
<i>Scoteanax ruepellii</i>	Greater Broad-nosed Bat	V	-
<i>Thylogale stigmatica</i>	Red-legged Pademelon	V	-

Appendices

Scientific Name	Common Name	Classification TSC	Classification EPBC
Reptiles			
<i>Varanus rosenbergi</i>	Rosenberg's Goanna	V	-
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake	V	-
<i>Hoplocephalus bungaroides</i>	Broad-headed Snake	V	-
<i>Hoplocephalus stephensii</i>	Stephen's Banded Snake	V	-
Other			
<i>Petalura gigantea</i>	Giant Dragonfly	E	-
Birds			
<i>Anseranas semipalmata</i>	Maggie Goose	V	-
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE	-
<i>Botaurus poiciloptilus</i>	Australasian Bittern	V	-
<i>Burhunis grallarius</i>	Bush Stone-curllew	E	-
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	V	-
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	V	E
<i>Climacteris picumnus</i>	Brown Treecreeper	V	-
<i>Circus assimilis</i>	Spotted Harrier	V	-
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E	-
<i>Erythrotriorchis radiatus</i>	Red Goshawk	E	V
<i>Glossopsitta pusilla</i>	Little Lorikeet	V	-
<i>Grantiella picta</i>	Painted Honeyeater	V	-
<i>Haematopus longirostris</i>	Pied Oystercatcher	V	-
<i>Hamirostra melanosternon</i>	Black-breasted Buzzard	V	-
<i>Hieraaetus morphnoides</i>	Little Eagle	V	-
<i>Irediparra gallinacea</i>	Comb-crested Jacana	V	-
<i>Ixobrychus flavicollis</i>	Black Bittern	V	-
<i>Lathamus discolor</i>	Swift Parrot	E	E
<i>Lophoictinia isura</i>	Square-tailed Kite	V	-
<i>Melanodryas cucullata</i>	Hooded Robin	V	-
<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subsp.)	V	-
<i>Neophema pulchella</i>	Turquoise Parrot	V	-
<i>Ninox connivens</i>	Barking Owl	V	-
<i>Ninox strenua</i>	Powerful Owl	V	-
<i>Pachycephala olivacea</i>	Olive Whistler	V	-
<i>Petroica boodand</i>	Scarlet Robin	V	-
<i>Petroica phoenicea</i>	Flame Robin	V	-
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subsp.)	V	-
<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V	-
<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V	-
<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V	-
<i>Pyrrholaemus sagittatus</i>	Speckled Warbler	V	-
<i>Stagonopleura guttata</i>	Diamond Firetail	V	-
<i>Stictonetta naevosa</i>	Freckled Duck	V	-
<i>Tyto novaehollandiae</i>	Masked Owl	V	-
<i>Tyto tenebricosa</i>	Sooty Owl	V	-
<i>Vespadelus trougtoni</i>	Eastern Cave Bat	V	-
<i>Xanthomyza phrygia</i>	Regent Honeyeater	-	E

Key Threatening Processes listed under Schedule 3 Threatened Species Conservation Act 1995 as at 1 July 2006 occurring or predicted to occur in Cessnock LGA

- Alteration of habitat following subsidence due to longwall mining
- Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands (as described in the final determination of the Scientific Committee to list the threatening process)
- Anthropogenic Climate Change
- Bushrock removal (as described in the final determination of the Scientific Committee to list the threatening process)
- Clearing of native vegetation (as defined and described in the final determination of the Scientific Committee to list the key threatening process)
- Competition and grazing by the feral European Rabbit, *Oryctolagus cuniculus* (L.)
- Competition and habitat degradation by Feral Goats, *Capra hircus* Linnaeus 1758
- Competition from feral honey bees, *Apis mellifera* L.
- Forest eucalypt dieback associated with over-abundant psyllids and Bell Miners
- Herbivory and environmental degradation caused by feral deer
- High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition
- Importation of Red Imported Fire Ants *Solenopsis invicta* Buren 1972
- Infection by Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species and populations
- Infection of frogs by amphibian chytrid causing the disease chytridiomycosis
- Infection of native plants by *Phytophthora cinnamomi*
- Introduction and establishment of Exotic Rust Fungi of the order Uredinales on plants of the family Myrtaceae
- Introduction of the Large Earth Bumblebee *Bombus terrestris* (L.)
- Invasion and establishment of exotic vines and scramblers
- Invasion and establishment of Scotch Broom (*Cytisus scoparius*)
- Invasion and establishment of the Cane Toad (*Bufo marinus*)
- Invasion, establishment and spread of Lantana (*Lantana camara* L. sens. lat)
- Invasion of native plant communities by African Olive (*Olea europaea* L. subsp. *cuspidata*)
- Invasion of native plant communities by *Chrysanthemoides monilifera*
- Invasion of native plant communities by exotic perennial grasses
- Invasion of the Yellow Crazy Ant, *Anoplolepis gracilipes* (Fr. Smith) into NSW
- Loss of hollow-bearing trees
- Loss or degradation (or both) of sites used for hill-topping by butterflies
- Predation and hybridisation by Feral Dogs, *Canis lupus familiaris*
- Predation by *Gambusia holbrooki* Girard, 1859 (Plague Minnow or Mosquito Fish) (as described in the final determination of the Scientific Committee to list the threatening process)
- Predation by the European Red Fox *Vulpes vulpes* (Linnaeus, 1758)
- Predation by the Feral Cat *Felis catus* (Linnaeus, 1758)
- Predation by the Ship Rat *Rattus rattus* on Lord Howe Island
- Predation, habitat degradation, competition and disease transmission by Feral Pigs, *Sus scrofa* Linnaeus 1758
- Removal of dead wood and dead trees

APPENDIX 4 – NOXIOUS WEED DECLARATIONS FOR CESSNOCK LGA

Appendices

Class	Legal Requirements	All NSW Declaration	Cessnock LGA Declaration
1	State prohibited weeds The plant must be eradicated from the land and the land must be kept free of the plant.	Anchored water hyacinth Black knapweed Broomrapes Chinese violet East Indian hygrophila Eurasian water milfoil Hawkweed Horsetail Hymenachne Karoo thorn Kochia Lagarosiphon Mexican feather grass Miconia Mimosa Parthenium weed Pond apple Prickly acacia Rubbervine Senegal tea plant Siam weed Spotted knapweed Water caltrop Water lettuce Water soldier Witchweed Yellow burrhead	
2	Regionally prohibited weeds The plant must be eradicated from the land and the land must be kept free of the plant.	Alligator weed Tropical Soda Apple	Hygrophila
3	Regionally controlled weeds The plant must be fully and continuously suppressed and destroyed.		Giant Parramatta grass Green cestrum Groundsel Bush Mother-of-millions Salvinia]
4	Locally controlled weeds The growth and spread of the plant must be controlled according to the measures in a management plan published by the local control authority.	Arrowhead Blackberry Bridal creeper Golden Dodder Harrisia cactus Lantana Leafy elodea Lippia Prickly pear Rhus	African boxthorn Bathurst/Noogoora/ Californian/ cockle burrs Bitou bush/ Boneseed Cape tulip Chilean needle grass Columbus Grass Crofton weed Johnson grass Long-leaf willow primrose Mistflower Pampas grass Paterson's curse, Vipers bugloss, Italian bugloss Serrated tussock Spiny burrgrass Spiny emex St. John's wort Water hyacinth
5	Restricted plants for sale or distribution The requirements of the Noxious Weeds Act 1993 for a notifiable weed must be complied with.	African feathergrass African turnipweed Annual ragweed Artichoke thistle Athel pine Bear-skin Fescue Bridal creeper Burr ragweed Cabomba Cayenne snakeweed Clockweed Corn sowthistle Dodder Espartillo Fine-bristled Burrgrass Fountain grass Gallon's curse Glaucous starthistle Golden thistle Mexican poppy Mossman River grass Red rice Sagittaria Smooth-stemmed turnip Soldier thistle Texas blueweed Willows Yellow nutgrass	

APPENDIX 5 - ENVIRONMENTAL WEBSITES

Australian Association for Environment Education	www.aeee.org.au
Australian Network for Plant Conservation	www.anbg.gov.au/anpc/
Aust. Nat. Botanic Gardens/Centre for Plant Biodiversity	www.anbg.gov.au
Australian Water Association Homepage	www.awa.asn.au
Biodiversity/ Endangered Species Programs	www.environment.gov.au/biodiversity/index.html
Convict Trail Project-Great North Road	www.convicttrail.org
CSIRO Australia	www.csiro.au/
NSW Department of Planning & Infrastructure	www.planning.nsw.gov.au
Dept. of Agriculture, Fisheries and Forestry Australia	www.daff.gov.au
Dept. of Climate Change and Energy Efficiency	www.climatechange.gov.au
NSW Office of Environment & Heritage	www.environment.nsw.gov.au
Dept. of Transport NSW	www.transport.nsw.gov.au
Dept. of Sustainability, Environment, Water, Population & Communities	www.environment.gov.au
Energy Ratings Website	www.energyrating.gov.au
Find Legal Answers	www.legalanswers.sl.nsw.gov.au
Forests NSW	www.dpi.nsw.gov.au/forests
Greening Australia	www.greeningaustralia.org.au/
Hunter Central Rivers Catchment Mgt Auth.	www.hcr.cma.nsw.gov.au
Hunter Resource Recovery	www.hrr.com.au
Hunter Water	www.hunterwater.com.au
Keep Australia Beautiful NSW	www.kabnsw.org.au
HCCREMS	www.hccrems.com.au
Environment Protection and Heritage Council	www.ephc.gov.au
Landcare	www.landcareaustralia.com.au
National Native Title Tribunal	www.nntt.gov.au
NSW National Parks and Wildlife Service	www.environment.nsw.gov.au/nationalparks
Nature Conservation Council NSW	www.nccnsw.org.au/
NSW Agriculture	www.dpi.nsw.gov.au/agriculture
NSW Division of Local Government	www.dlg.nsw.gov.au
NSW Wildlife Atlas	www.wildlifeatlas.npws.nsw.gov.au
Sustainable Building Guide	www.yourhome.gov.au
Waterwatch	www.environment.nsw.gov.au/waterwatch
Total Environment Centre Index	http://tec.org.au
World Wide Fund for Nature	www.panda.org

NOW IT'S YOUR TURN

State of the Environment Reports are produced for the local community and your views are important to Council. We hope you will take the time to complete this response sheet so we can incorporate your ideas and opinions into subsequent reports. Your response will be greatly appreciated, and will assist Council in planning future environmental management activities.

Are you aware of any important environmental issues affecting the Cessnock area which have been omitted from this report?

Are the main issues given adequate coverage in the report? In which areas is information lacking? Please give details.

Towards Sustainability

Human Settlements

Land

Atmosphere (Air)

Water

Biodiversity

Heritage

Did you find the structure and presentation of the report user-friendly, that is, easy to read and understand?
YES / NO

If not, have you any suggestions for improving this aspect of future State of the Environmental reports?

Are you aware of any environmental information in the form of documents, reports, plans, or programs which should be included in Cessnock's Environmental Database? Please give full details.

Do you have any other suggestions for improving the report?

In the interests of Community consultation, what are your top 3 environmental concerns in Cessnock LGA?

Please return to:
Cessnock City Council
Community Services Department
PO Box 152
CESSNOCK NSW 2325

