



# Byron State of the Environment Report 2008



Supplementary  
Report for Byron Shire  
NOVEMBER 2008



The purpose of this report is to supplement and update the information presented in Byron Shire Council's State of the Environment Comprehensive Report 2004. Therefore this document should be read in conjunction with Council's Comprehensive SoE Report 2004 and Supplementary SoE Reports 2005, 2006 and 2007.

## Acknowledgements

This report was prepared with input from numerous staff at Byron Shire Council and coordinated by Council's Community Planning & Natural Resources Branch.

The report structure, style and content were developed through consultation with members of Council's **Sustainability Committee**, consisting of:

### Councillors

Mayor Jan Barham  
Cr Peter Westheimer  
Cr Jan Mangleson

### Community Representatives

Judy Conlan  
Maggi Luke  
Joanne Walsh  
John Dolman  
Basil Cameron  
Gayle Russell

Byron Council thanks the Committee for their involvement and participation.

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- Centrelink
- Country Energy
- Greenswitch
- Energy Australia
- Origin Energy
- Climate Friendly
- Brunswick Valley Landcare Inc.
- Richmond Landcare
- Griffith University, Centre for Innovative Conservation Strategies
- Biological Farmers of Australia.
- Southern Cross University Whale Research Centre
- Far North Coast Weeds
- NSW North Coast Weeds Advisory Committee
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- NSW Sugar Milling Co-operative
- Wetland Care Australia
- Council's Heritage Adviser
- Byron Environment Centre (BEC)
- Byron Environment and Conservation (BEACON)
- Council staff

### Front Cover Photos

Background Image: Bush regeneration site at Wilsons Creek, Byron Shire Council's Sustainability Committee, Local Food, Pied Oyster Catcher

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# INTRODUCTION

The State of the Environment (SoE) Report provides a summary of the attributes of the local government environment and the human impacts on that environment. It also provides a public record of the activities of government, industry and the community in protecting and restoring the environment.

*Environmental Guidelines State of the Environment Reporting by Local Government: Promoting Ecologically Sustainable Development published in January 2000 by the Department of Local Government*

**State of the Environment (SoE) reporting** is an annual legislative requirement for New South Wales local governments, coinciding with the preparation of Annual Reports each financial year. The SoE report provides a critical feedback link to the activities in Council's Management Plan and responds to its key objectives for a sustainable future.

The local government legislative requirements for the preparation and content of SoE reports are listed below:

- The report should relate to the environmental sectors of land, air, water, biodiversity, waste, noise, aboriginal heritage and non-aboriginal heritage
- For each sector the report should refer to management plans and special council projects relating to the environment and the environmental impact of Council activities
- When preparing the report, Council considers any guidelines and directions regarding SoE reporting
- When preparing the report Council consults with the community
- Council should involve the community in monitoring changes to the environment over time
- The report is produced in a form readily understandable by the community.

Additionally, Council is required to report on specific aspects of the environment in SoE reports, eg, any Council responsibilities outlined in recovery plans and threat abatement plans under *Threatened Species Conservation Act 1995* and the *Fisheries Management Act 1994*, and any decisions relating to interim heritage orders.

The **2007/2008 State of the Environment Report** is Byron Shire Council's fourteenth consecutive report. This year Council has chosen to prepare a supplementary report covering the period from 1 July 2007 to 30 June 2008. The purpose of this report is to complement Byron Shire Council's State of the Environment Comprehensive Report 2004 and further update environmental indicator information and trends from State of the Environment Supplementary Report 2006. Therefore it is essential that this Supplementary Report be read in conjunction with the 2004 Comprehensive Report and the 2005, 2006 and 2007 Supplementary Reports.

A supplementary SoE report meets the requirements of the *Local Government (General) Regulation 2000* if it does each of the following:

- a) identifies any new environmental impacts since the Council's last State of the Environment report,
- b) updates the trends in environmental indicators that are important to each environmental sector listed above.

The chapters and environmental indicators in this report are consistent with the 2005, 2006 and 2007 reports (refer to list of indicators on next page). Please note however, that data from the 2005 reporting year has been removed

This report retains the same user-friendly presentation of environmental indicators and trends in 'Trends at a Glance' and includes summary information in the favourable, unfavourable and uncertain news sections of each chapter. The 'Further Actions' section identifies environmental priority actions and their status and provides a critical link to Council's activities in 2009.

## Consistent Indicators – NSW North Coast

1. Point source discharges
  - a) Number, location and type of point source discharges – type and volume of discharge and any prosecutions
  - b) Area of urban collection catchment, percentage of this area with discharge point sources (predominantly stormwater outlets) and percentage of this area treated to primary, secondary and tertiary stormwater treatment levels
2. Total number of new septic approvals per year and percentage of population serviced by septic or sewer
3. Percentage exceedances of ANZECC water quality guidelines for recreation; aquatic ecosystem protection; irrigation and stock watering detected during routine monitoring programs (not one off/ incident/pollution event or issue identification)
4. Percentage of primary/secondary/tertiary waste water treatment
5. Annual total volume, percentage and per capita water use for percentage of population connected to the reticulated water supply
6. Land uses in the LGA – surrogate measures of:
  - a) (1) number of people employed in key industry sectors  
(2) number of scheduled activities under the PoEO Act
  - b) Land use zonings.
7. Extent and degree of change of native vegetation
8. Acid sulfate soils indicators:
  - a) extent and location of land identified with Acid sulfate soils
  - b) extent and number of ASS hot spot;
  - c) length of drainage system
  - d) new developments/works on ground (including for remediation) on identified ASS areas
9. Number and or area of contaminated sites, nature of contamination and remediation
10. Number of introduced species and number of declared noxious weeds (describe key problems, area affected and extent of the problem)
11. Number of endangered and threatened species, populations and ecological communities (as specified in the *Threatened Species Conservation Act 1995*)
12. Effectiveness of the formal reserve system in accordance with its comprehensiveness, adequacy and representativeness within the region
13. Air quality
  - a) Number of EPA Licensed discharges
  - b) Percentage of sugar cane harvested green or burnt
  - c) Number and type of air quality complaints to council and the EPA and issues raised
  - d) Greenhouse gas emissions produced within the LGA each year and change over time
14. Number of noise complaints to Council and the EPA and issues raised
15. Population growth rates and population numbers
16. Number and area of rural residential lots approved and rate of uptake
17. Volume and percentage of municipal waste disposed to landfill (surrogate greenhouse measure) and volume or percentage of municipal waste recycled
- 18A. Aboriginal and Non-Aboriginal Heritage:
  - (a) Number and nature of heritage sites, structures and landscapes
- 18B.
  - (b) Number of heritage items altered/destroyed/demolished
  - (c) Area of LGA that is a heritage conservation area
19. Presence or absence of riparian zone vegetation (if possible length/% of stream with vegetation)
20. Extent and degree of change of marine habitat types (mangroves, saltmarshes and seagrasses)
21. Area and % of LGA occupied for different land uses (e.g. agriculture, recreation, forestry, conservation, residential, commercial, industrial)

## Additional Indicators – Byron Council

22. Amount of Certified Organic Production
23. Housing affordability in Byron Shire
  - (a) *The median cost of housing over time*
  - (b) *The number of people claiming Commonwealth rental assistance*
  - (c) *The number of rental bond assistance applications granted*
24. Road usage in Byron Shire
25. Environment-related human diseases
26. Property ownership in Byron Shire
27. Number of bore water extraction licences issued
28. Area of land zoned for environmental protection
29. Number and types of development applications received
30. Voluntary Conservation Agreements in Byron Shire
31. Internal paper consumption
32. Number of fish kills recorded
33. Amount of Greenpower purchased by the community
34. Number and types of vehicles in the Shire
35. Length of cycleways
36. Number of whales sighted

# CHAPTER 1 - BIODIVERSITY

<b>TRENDS AT A GLANCE – BIODIVERSITY</b>					
✓ = improved management      x = further improvement required      ◇ = no significant change in trend      ? = trend unclear					
■ = data not suitable to indicate trends					
Indicator	2004	2006	2007	2008	Management trend
<b>10. Number of introduced species &amp; number of declared noxious weeds</b>					
Environmental Weed Species (known or potential weeds identified in Byron Flora and Fauna Study & Biodiversity Conservation Strategy)	259	No new data	263	263	◇
Declared Noxious weeds in Far North Coast	41	101 <sup>o</sup>	101	101	◇
Introduced terrestrial species	14	No new data	No new data	No new data	■
<b>7. Extent &amp; degree of change of native vegetation</b>					
Area of vegetation in the Shire excluding National Park Estate	17,498 ha*	No new data	22,325.5 ha**	No new data	■
Area of land (ha) approved for clearing native vegetation	4.83	32.145	0 <sup>1</sup>	No new data	x
Number of tree removal applications approved	95	140	123	138	x
<b>11. Number of endangered &amp; threatened species, populations &amp; ecological communities</b>					
Threatened terrestrial fauna species & populations	85	85	96***	96	◇
Threatened terrestrial flora species	55	57	59	81***	■
Threatened fish species	5	5	6	7	◇
Endangered ecological communities	4	9	11	11	◇
Recovery Plans (flora, fauna & fish)	-	6	6	18***	■
Threat Abatement Plans (flora, fauna & fish)	-	3	3	3	◇
<b>36. Number of humpback whales sighted during northern &amp; southern migration</b>					
Northern migration	855 whales over 16 days	792 whales in 12 days	No new data <sup>2</sup>	Data incomparable <sup>3</sup>	■
Southern migration	380 whales in 24 days	1,258 whales in 47 days	No new data <sup>2</sup>	Data incomparable <sup>3</sup>	■
<b>12. Effectiveness of the formal reserve system in accordance with its comprehensiveness, adequacy and representativeness within the region</b>					
Total area (ha) of land in Byron Shire in the National Park Estate	6,181.8	6,181.8	6,188.7	6,188.7	◇
<b>30. Voluntary Conservation Agreements in Byron Shire</b>					
Voluntary Conservation Agreements (No. and area)	2 36.8 ha	2 36.8 ha	3 102 ha	3 102 ha	◇
Wildlife refuges (No. and area)	6 147.9 ha	6 147.9	6 147.9	6 147.9	◇
Property Agreements (No. and area)	13 96.5 ha	No new data	No new data	No new data	■

Note: Only those environmental indicators, and surrogate measures, that readily lend themselves to numerical comparisons have been included in this analysis.

- © *The Noxious Weeds Act 1993 was amended in 2006 resulting in an expanded list of weeds declared noxious. The previous list has been expanded to include the twenty Weeds of National Significance, the weeds previously listed in the Seeds Act 1982 and several new weeds of particular concern.*
- \* *This is the area of native and non-native vegetation in the Shire from the Byron Shire Flora and Fauna Study 1999.*
- \*\* *Updated shire-wide vegetation mapping was completed in 2007 and is not directly comparable to the 1999 study. This figure encompasses native vegetation as well as non-native vegetation, including plantations.*
- \*\*\* *Denotes that these figures were corrected in 2008.*
- <sup>1</sup> *Although the area of native vegetation cleared appears to have been negligible over the reporting period, clearing associated with routine agricultural activities, a dwelling house or 'regrowth' vegetation is exempt under the Native Vegetation Act, 2003.*
- <sup>2</sup> *The annual count of humpback whales was not undertaken in 2007- see notes on changes to the survey design in "Favourable News".*
- <sup>3</sup> *The annual count of humpback whales is now being conducted over a 16-day survey rather than using Northerly and Southerly migration.*

## FAVOURABLE NEWS

Under the Byron Shire Biodiversity Conservation Strategy 2004 (BCS), a range of projects and initiatives was commenced over the reporting year funded through the Biodiversity levy. This includes the ongoing operation of Council's Bush Regeneration Team who undertake priority projects identified in the Biodiversity Conservation Strategy. The team began work with two members in November 2006 and a third indigenous identified team member was appointed in early May 2007.

The Bush Regeneration Team has been highly successful in achieving project objectives. Works are currently underway at 35 high priority sites in the Shire, including:

- Highly strategic targeting of project sites - 65% of sites with recorded threatened species and/or Endangered Ecological Communities (EECs) and 79% of sites located in identified wildlife corridors
- High level of representation of local vegetation communities - 50% of mapped vegetation communities at project sites including 7 of 11 EECs known to occur in the Shire
- Primary treatment of priority weeds underway at all sites with some sites progressing to secondary/maintenance phase
- Outcomes at all sites resulting in improved regeneration potential and thus increased biodiversity value.

A significant additional benefit of the team has been the ability to attract grant funds to complement biodiversity management activities in the Shire. Council's ongoing financial commitment to bush regeneration, reputation for successful implementation and ability to deliver high quality outcomes all assist in successful application for financial assistance. Grants received for biodiversity management projects since establishment of the team represent 145% of cost of the team over the first 18 months of operation.

The team also presents an excellent opportunity to engage with the community regarding biodiversity management issues. This includes direct support of community revegetation projects, establishment of networks with relevant community, industry and agency representatives, and the capacity to contribute to cross tenure projects with other significant land managers in the region.

Another high priority action of the BCS is the Biodiversity Extension Service. This program offers specialist advice and support to landowners with properties mapped as containing High Conservation Value Vegetation and/or located within wildlife corridors mapped under the Byron Biodiversity Conservation Strategy. The service provides:

- Biodiversity assessment of the land including significant flora and fauna, vegetation types, environmental weeds and other threats
- Mapping of ecological values
- Advice on preparing a Biodiversity Management Plan for the property
- Advice on managing threatened species, weed and pest animal control and planning for ecological restoration works
- Advice on how to access funding and other incentives.

Landholders engaged with the Extension Service represent a cross-section of the community and have different levels of experience and skills and different requirements for assistance. The properties assessed

are distributed throughout the Shire and are subject to a range of land uses from agricultural production through to 'lifestyle' blocks. A significant number of new threatened species records have resulted from site inspections with landowners. The Extension Service also provides more general support for landowners including the provision of technical workshops and field days.

Ecological assessment guidelines for development assessment have been published in accordance with priority actions of the BCS. These guidelines provide thorough and specific guidance as to the information Council requires to fulfil its legislative decision-making obligations in relation to the ecological issues associated with development applications. It is important that ecological consultants provide consent authorities with the relevant information to ensure that decisions are based on the best available data, adequate survey effort and address all the relevant legal obligations.

World Environment Day 2008 festivities converged in the Brunswick Valley Nature Festival, held at the Shearwater Steiner School in Mullumbimby. This year's event attracted more than 600 visitors with a theme of "Birds, bugs and butterflies - conserving the biodiversity of the Brunswick Valley".

Festival workshops focussed on the survival of species and the impacts of climate change, as well as providing information on a variety of topics for nature lovers and native gardeners. The Festival was funded in part by a NSW Environmental Trust grant to Brunswick Valley Landcare for a three-year community education program.

A guide to rural life for new landholders called '*Farmers farm and cows do moo!*' was launched by the Mayor, Cr Jan Barham, at Byron Farmers Market on Thursday 3 April 2008. Council produced the guide to assist newcomers in understanding the issues of life on a rural block as the beautiful hinterland of Byron Shire can hold a few surprises for some new residents. Tensions sometimes arise between neighbours when new landowners are unaware of their responsibilities as land managers, or misunderstand the type of activities that their neighbours need to undertake in order to earn a livelihood. This booklet will contribute to an increased understanding of land management issues, sustainable agriculture and the value of rural industries.

Weed and feral animal control, biodiversity conservation, dust, noise, waste management and fencing are among the many responsibilities that face recent arrivals. The booklet summarises key aspects of these issues and provides useful links to additional information sources in each section. The booklet is an initiative of Council's Sustainable Agriculture Strategy and was developed with a grant from the NSW Natural Resources Advisory Council. The booklet will be distributed to Byron Shire real estate agents.

Council organised cane toad musters at Fern Beach over two nights in February 2008. The events were inspired by overwhelming community support for the 2006 Byron Bay cane toad muster, and involve reducing cane toad populations by volunteers manually collecting toads from priority sites, such as high conservation areas. A free Frog and Toad seminar was also held on 9 February at South Golden Beach Hall to show how to accurately identify cane toads and native frogs, and to assist in monitoring changes in local frog and toad populations.

Byron Shire Council was successful in obtaining state government funds from the Environmental Trust to undertake a range of cane toad control measures including employment of a project officer to coordinate the musters and support the development of a network of volunteer cane toadbusters here in Byron Shire.

The 2008 National Tree Day saw around 300 native trees and shrubs planted on the dunes at Brunswick Heads. Over 70 people donned their gardening gloves on Sunday morning to replace recently removed bitou bush weed with native trees. The newly-planted native vegetation will create habitat for native wildlife by providing cover and food, and maybe in a hundred years or so, some of the trees will have hollow branches giving homes for gliding possums and lorikeets. Organisers of the event were Brunswick Heads Dunecare, Byron Shire Council and Brunswick Valley Landcare.

The Environmental Trust-funded project – Restoring High Conservation Value Vegetation and Wildlife Corridors – has made substantial progress towards restoring high conservation value vegetation and wildlife

corridors on council land. Council staff, consultants, and community partners have undertaken assessments and established monitoring and evaluation plots and photo points at 11 sites. Seven bush regeneration action plans for restoring native plant communities and native animal habitat have been completed. Professional bush regenerators employed or contracted by the Council initiated primary weed control works at nine project sites targeting over 70 species of environmental weeds on 14.6 hectares of land.

The grant has also funded actions aimed at revegetating 2 kilometres of the Brunswick River. 6,900 endemic lowland rainforest plants are being established along the Brunswick River bank at Vallances Rd, including community participation at a tree planting day held in April 2008.

Over the 2007/08 reporting period, the Byron Bay Integrated Water Management Reserve's Secondary School Education Program was delivered to 60 schools across the region and the interpretive centre hosted over 1,000 visitors for wetland visits etc.

Council supported 80 person days of weed management works in sensitive and threatened habitats at three sewage treatment plants.

A further 2.5 kms of riparian fencing was installed at the Vallances Rd Sewerage Treatment Plant (STP), with a total of 4.5ms of riparian zones fenced and 35ha of riparian land set aside for protection and restoration. Riparian and Fisheries habitat enhancement projects were also conducted at Vallances Rd and Bangalow STPs. Both projects include riparian protection, tree planting and weed management works. Works will benefit endangered ecological communities such as coastal saltmarsh and freshwater wetlands on coastal floodplains.

A macroinvertebrate study examining the ecological benefits of the new Byron Bay STP and resulting closure of the South Byron STP revealed a dramatic improvement in ecological health, sediment and water quality in Tallow Creek and no decline in these qualities in the Belongil estuary.

Rehabilitation management plans were developed for Bangalow, Brunswick, Ocean Shores and the proposed Vallances Rd sewage treatment plants.

Council continued to support the 33 Landcare, Dunecare and Rivercare Groups working on ecological restoration projects in Byron Shire. Support includes the provision of office space, training programs, administration support and resources for the Northern Rivers Catchment Management Authority Landcare Community Support Officer and the provision of technical advice from Council ecologists to community groups.

Council was successful in securing support from the State Government to collect a special rate variation of 2% to fund environmental initiatives in the Shire. The environmental levy will replace the temporary biodiversity levy and will continue to fund implementation of the BCS as well as Coastal and Estuary management actions and Sustainability initiatives.

A total of 1,183 humpback whales were counted during Southern Cross University's annual Cape Byron Whale Research Project. The 16-day survey was conducted by researchers from the Southern Cross University Whale Research Centre and a crew of 25 volunteers. The survey, which has been conducted off Cape Byron since 1995, is run in collaboration with the University of Newcastle, Cape Byron Trust, the NSW National Parks and Wildlife Service, NSW Marine Parks Authority and the South Pacific Whale Research Consortium. The number of whales counted as they passed Cape Byron on their journey north to the winter breeding grounds demonstrates a steady increase. The 2008 survey reported a southern right whale, a minke whale and seven humpback whales with calves.

## **UNCERTAIN NEWS**

In March 2008, the NSW Scientific Committee made a Preliminary Determination to list Coastal Cypress Pine Forest in the NSW North Coast Bioregion as an Endangered Ecological Community under the *Threatened Species Conservation Act, 1995*. Coastal Cypress Pine Forest is typically found on coastal sand plains and has a closed to open canopy mixed with eucalypts, wattles, banksias and/or rainforest trees, and an open to sparse understorey of shrubs, sedges and herbs. A large reduction in the size and distribution of this community has been caused by clearing for sand mining, agriculture and coastal development.

In October 2007, the NSW Scientific Committee made a Final Determination to list the loss of Hollow-bearing Trees as a new Key Threatening Process under the *Threatened Species Act, 1995*. Although hollow-bearing trees are rare, they remain vital as nest and roost sites for vertebrate species. However, the distribution and abundance of hollow-bearing trees in NSW has been reduced and fragmented by extensive clearing of native vegetation during the past two centuries, primarily for agriculture.

Over the 2008 reporting period, Far North Coast Weeds monitored 10,000ha throughout Byron Shire, equating to 1,030 inspections compared to 1,040 inspections in 2007. In terms of inspections, the majority of weed species detected were Alligator Weed, Bitou Bush, Groundsel Bush and Broad Leaf Pepper.

In January 2008, the NSW Scientific Committee made a Preliminary Determination to support a proposal to remove the Black Flying-fox as a vulnerable species under the *Threatened Species Conservation Act, 1995*, due to evidence that the distribution and abundance of Black Flying-foxes has increased in NSW since their original listing. The Flying-foxes have extended their southern range approximately 600km from 1990 to 2006, accompanied by greater local abundance of breeding individuals. However, Flying-foxes still face a number of threats, such as illegal culling by fruit-orchard growers, loss of foraging habitat and increase in temperature extremes caused by anthropogenic climate change, so continual monitoring is proposed.

Over the reporting period, 12 'Formal Warning Notice to Prevent Environmental Harm' documents were issued. One case, involving a landowner at Federal, saw the voluntary replanting of 40 native rainforest species as a result of this warning and no further action was taken.

#### **Endangered Ecological Communities Occurring in Byron Shire**

- Coastal saltmarsh
- Freshwater Wetlands on coastal floodplains
- Swamp oak floodplain forest
- Swamp sclerophyll forests on coastal floodplains
- River-flat eucalypt forest on coastal floodplains
- Subtropical coastal floodplain forest
- Themeda grassland on seacliffs and coastal headlands
- Byron Bay dwarf graminoid clay heath
- Littoral rainforest
- Lowland Rainforest on Floodplain
- Lowland Rainforest in NSW North Coast and Sydney Basin Bioregion

### **UNFAVOURABLE NEWS**

Over the reporting period, a total of five environmental offence matters were referred to the NSW Department of Environment and Conservation and the Commonwealth Department of the Environment, Water, Heritage and the Arts for substantial vegetation removal matters.

Council was also successful in prosecuting an individual in Ocean Shores for the removal of a number of native palms protected by Council's TPO (Tree Preservation Order). The illegal clearing was carried out on public land for the purposes of view enhancement from an adjoining private property. Furthermore, five \$600

penalty infringement notices were issued for clearing trees without consent over the 2007/2008 reporting period.

## FUTHER ACTION REQUIRED

Environmental Priority Action		Status
1.	Employ a skilled bush regeneration team/s for undertaking restoration works at targeted sites *	Positions filled. Works on more than 30 high priority sites
2.	Develop best practice weed control and management guidelines for serious weed. *	Final version ready for publication
3.	Identify and map areas where sediment enters waterways from gravel roads and drains and quantify amount of sealing required to ameliorate the problem *	Not commenced; however mapping of sealed and unsealed roads is complete to assess the extent to which erosion is occurring on roads and associated embankments
4.	Prepare biodiversity assessment and reporting guidelines for development applications (including minimum standards for Threatened Species Survey and Assessment) *	Guidelines for ecological assessment in Byron Shire complete. Guidelines for Threatened Species assessment underway
5.	Employ ecologists to carry out duties in Local Approvals, Waste and Water, Asset Management and Environmental Planning *	One ecologist employed
6.	Prepare threatened species profiles and management guidelines for all threatened species that are known or considered likely to occur in the Shire *	Nine high priority species ready for publication
7.	Establish a biodiversity extension service to offer (but not limited to): <ul style="list-style-type: none"> <li>▪ Property based biodiversity assessments</li> <li>▪ Advice on threatened species management and provision of background information</li> <li>▪ Advice on weed management, bush regeneration, revegetation and animal pest control</li> <li>▪ Property planning advice</li> <li>▪ Advice on all forms of assistance available to landowners to manage biodiversity values</li> <li>▪ Vegetation and other constraint mapping</li> <li>▪ Provision of available data and assistance in the preparation of Property Management Plans. *</li> </ul>	Ongoing – pilot complete. Shire-wide roll-out underway
8.	Draft new Shire-wide planning control provisions for HCV vegetation and habitats, and 'secondary wildlife corridors' in accordance with decision-making criteria outlined in Part 2 of the Biodiversity Conservation Strategy *	Awaiting for new Shire-wide LEP
9.	Review Council's DCP (or similar planning controls) for exempt and complying development to ensure the appropriateness of any forms of development in 'secondary wildlife corridors' and HCV vegetation and habitats *	Commenced for new Shire-wide LEP and DCP
11.	Introduce new Shire-wide planning controls for buffers to HCV *	Commenced for new Shire-wide LEP and DCP
12.	Amalgamate Zone No. 7(a) - (Wetlands Zone), Zone No. 7(b) - (Coastal Habitat Zone), and Zone No. 7(k) - (Habitat Zone) into single 'Habitat' zone *	Being examined as part of Shire-wide LEP
13.	Develop a no-net vegetation loss policy *	Not commenced – drafted in Biodiversity Conservation Strategy
14.	Encourage and facilitate better information exchange between Council and the community to determine the extent, location and nature of regeneration/revegetation work carried out in Byron Shire	Bush regeneration work sites and maps published on Council website

*\* These are high priority actions in the Biodiversity Conservation Strategy – Action Plan adopted September 2004*

## CHAPTER 2 – CULTURAL HERITAGE

<b>TRENDS AT A GLANCE – CULTURAL HERITAGE</b>					
✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear ■ = data not suitable to indicate trends					
Indicator	2004	2006	2007	2008	Management trend
<b>18(a) Number of listed Aboriginal heritage sites, structures &amp; landscapes</b>					
AHIMS Register – number of sites	97	97	99	99	◆
AHIMS Register – number of features	164	164	168	168	◆
NPW Act 1974 – number of aboriginal places	2	2	2	2	◆
<b>18(a) Number of listed Non-Aboriginal heritage sites, structures &amp; landscapes</b>					
Byron LEP 1988 – number of listed sites*	154	149 <sup>⊙</sup>	149	149	◆
North Coast REP (state & regional significance) – number of listed sites	3	3	3	3	◆
State Heritage Register – number of listed sites	2	2	3	3	◆
Register of National Estate – number of listed sites**	8	8	11	11	◆
<b>18(b) Number of listed Non-Aboriginal heritage items altered/destroyed/demolished</b>					
Destroyed or demolished – number of sites	0	0	0	0	◆
Alterations to listed sites – number of DAs approved	4	9	5	8	x
<b>18(c) Area of LGA that is heritage conservation area</b>					
Listed non-Aboriginal heritage – area in hectares	104.4	104.4	104.4	10.4	◆
<b>Additional information requirement: Decisions relating to interim heritage orders (IHOs)</b>					
IHOs issued under delegation - number	0	0	1	0	?

Note: Only those environmental indicators, and surrogate measures, that readily lend themselves to numerical comparisons have been included in this analysis.

\* There are 22 individual sites listed and the remaining sites are within the Bangalow Heritage Precinct

\*\* This indicator and data was modified in 2007 to reflect listings on the Register of National Estate following implementation of a new national heritage system.

⊙ The difference in the number of listed sites can be explained by improvements to Council's property notation system (not a decrease in the number of actual listed properties) and the addition of one new item of environmental heritage.

### FAVOURABLE NEWS

Council resolved in June 2007 to prepare a draft LEP amendment to list a historic homestead on Ewingsdale Road, Ewingsdale (that was previously subject to an Interim Heritage Order) as an item of environmental heritage in the Byron LEP 1988.

The Draft shire-wide LEP was publicly exhibited during February – March 2008 and contained new heritage provisions for the area. A draft is now pending for Council consideration.

The Draft Community-Based Heritage Study was presented to Byron Shire Council in June 2007 and Council agreed to exhibit the Draft Study which was placed on exhibition between 5 May and 13 June 2008. Workshops associated with the exhibition were held in Ewingsdale, Bangalow, Mullumbimby and Brunswick Heads during the exhibition period and many property owners took advantage of the opportunity to learn more about the application of heritage guidelines and how their properties would be affected. Initial feedback from the community suggests that there has been more support for the study than anticipated and that the majority of inquirers are looking forward to the benefits that heritage listing will bring.

The draft Study represents an important step forward in identifying and protecting heritage items, providing details of approximately 200 items of heritage significance as well as 5 conservation areas across the Shire. It is anticipated that the final study will be incorporated into the new Shire-wide LEP for gazettal.

As of July 2008, a total of eleven (11) places within the Byron Local Government Area were listed on the Register of National Estate. This includes the Cape Byron Lighthouse and Residences, Cape Byron Lighthouse, Broken Head Nature Reserve, Brunswick Heads Nature Reserve, Blackbutt Plateau, Wilsons River Scrub, Allansby Area Big Scrub Remnant, Julian Rocks Aquatic Reserve, an unspecified Indigenous Place and Nightcap National Park. At the time of writing, a further twenty two (22) sites had been nominated but were yet to be assessed for listing on the Register.

In September 2007, Council resolved to rezone a part of the 'Sandhills Estate' in Byron Bay to 'operational' to permit the construction of a new library. The land for the new Byron Library was transferred to Council as part of an Indigenous Land Use Agreement. The transfer was enacted as a compulsory acquisition under the Just Terms Compensation Act. Council further raised an additional \$1,000,000 for the new library project through a special rate variation in the 2008/09 Management Plan and Budget adopted on 19 June 2008.

The Cultural Plan will provide Council with a strategic framework for managing and promoting culture in the Shire. The Plan will feature a profile of the cultural assets and activities in the area, identify cultural issues to be addressed, and provide a set of priorities, actions and timelines for implementation. The draft plan was adopted by Council for exhibition on 26 June 2008. Submissions were received and the draft plan was amended where appropriate with the final document adopted on 28 August 2008.

A total of three (3) sites, Byron Bay Railway Station and yard group, High Conservation Value Old Growth Forest and Higgins House, Ewingsdale are recognised on the NSW Heritage Act.

## UNFAVOURABLE NEWS

Council's Aboriginal heritage study has still not been commenced.

## ADDITIONAL INFORMATION – UPDATE ON THE INTERIM HERITAGE ORDERS

Schedule 1, point 7 of Ministerial Order – Authorisation for local councils to make interim heritage orders requires councils to do the following:

7. *The council must publish annually in its State of the Environment Report or Annual Report, a summary of all decisions regarding Interim Heritage Orders for that year and provide a copy to the New South Wales Heritage Office.*

**Table 1: Update of decisions relating to interim heritage orders imposed in 2005 and associated LEP amendments**

Address of item	Property Description	Type of item	Council officer / Heritage Advisor Recommendation	Result (updated in 2007)
Ewingsdale Road, Ewingsdale	Lot 17 DP 816451	Traditional timber homestead and associated outbuildings reflecting the history of the development of the Ewingsdale area	Recommended placing of IHO over property, refer to reasoning in SoE Report 2007.	IHO placed over property in February 2007 and Council resolved to prepare a draft LEP for the site in June 2007.

## FURTHER ACTION REQUIRED

Environmental Priority Action		Status
1.	Prepare Social Impact Assessment Policy and guidelines	Prepared. Awaiting re-exhibition
2.	Complete Shire-wide Aboriginal Cultural Heritage Study and amend LEP accordingly to provide protection via development controls	Not commenced
3.	Identify all significant Aboriginal places/items/sites/objects on Council owned community land	Not commenced
4.	Complete community based Cultural Heritage Study and amend LEP accordingly to provide protection via development controls	Complete. Draft Study was placed on public exhibition between May and June 2008. It is anticipated that the final study will be incorporated into the new Shire-wide LEP for gazettal.

## CHAPTER 3 – HUMAN SETTLEMENT

<b>TRENDS AT A GLANCE – HUMAN SETTLEMENT</b>					
✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear					
■ = data not suitable to indicate trends					
Indicator	2004	2006	2007	2008	Management trend
<b>15. Population growth rates and population numbers</b>					
Population number excluding visitors - Census data*	28,530*	28,767*	28,885	29,000	■
Population growth – Census data**	.4%	.4%	.4%	.4%	◆
<b>29. Number of development applications received (includes complying development certificates)</b>					
Development applications & complying development certificates received	1,236	1,238	1,297	1,407	■
New dwelling approvals	181	154	202	135	■
Approvals for alterations/additions to existing dwellings	160	221	219	230	◆
<b>16. Number &amp; area of rural residential lots approved &amp; rate of uptake</b>					
Rural residential lots approved – number	3	14	13	6	◆
Rural residential lots approved – total area	-	39.7 ha	88.2 ha	147.9ha	?
<b>24. Road usage (based on calendar year)</b>					
Annual average daily traffic – Brunswick Heads Bypass	22,998	21,167	No new data	No new data	■
Annual average daily traffic – Pacific Highway, south of Ewingsdale Road	19,426	No new data	No new data	17,546	✓
Annual average daily traffic – Pacific Highway, north of Ewingsdale Road	24,288	No new data	No new data	25,658	◆
Annual average daily traffic – Ewingsdale Road	14,510	15,113	No new data	14,275	◆
Traffic count – Lawson Street railway crossing (April)	31,099	No new data	No new data	No new data	?
Annual average daily traffic - Bangalow Road, between Bangalow and Pacific Highway	7,457	7,440	No new data	No new data	◆
Annual average daily traffic - Old Pacific Highway, Brunswick Heads	5,344	5,510	No new data	No new data	◆
<b>23. Housing affordability in Byron Shire</b>					
Property cost – median sale price rounded to the nearest \$10,000	\$400,000	\$460,000	\$480,000	\$570,000	x
Commonwealth Rental Assistance*** – number of people claiming <i>[Approx. a million individuals in Australia are paid each fortnight but over 1.4 million different individuals are paid over a full year]</i>	7,790	7,571	3,170** ***	3,097	■
Department of Housing rental bonds – number issued for residents	196	143	133	116	■
<b>26. Property ownership</b>					
Non-resident property owners – percentage of total	70%	No new data	No new data	No new data	?
<b>17. Volume &amp; % of municipal waste disposed to landfill and recycled</b>					

<b>TRENDS AT A GLANCE – HUMAN SETTLEMENT</b>					
✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear					
■ = data not suitable to indicate trends					
<b>Indicator</b>	<b>2004</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Management trend</b>
Municipal waste disposed to landfill – total volume & percentage of total waste	16,475 tonnes or 66%	16,765 tonnes or 59.9%	18,000 tonnes or 63.1%	18,101 tonnes or 56.8%	✓
Green waste recycled	2,142 tonnes	2,433 tonnes	2,805 tonnes	4,103 tonnes	✓
Municipal waste recycled – total volume & percentage of total waste	8,491 tonnes or 34%	11,261 tonnes or 40.2%	10,536 tonnes or 36.9%	13,747 tonnes or 43.2%	✓
Contamination of recycled waste - % of total	48%	13.43%	14.35%	13.60%	✓
<b>25. Environment-related human diseases</b>					
Environment-related human diseases – number of notifications to Public Health Unit****	104	162****	66	147****	x

Note: Only those environmental indicators, and surrogate measures, that readily lend themselves to numerical comparisons have been included in this analysis

\* Please note data for years preceding 2008 have been updated based on 2006 census data. Therefore figures will vary from those shown in previous reports that were based on 2001 census projections.

\*\* Population growth declined rapidly from 9.2% over 1996 to 2001 to approximately 2.2% in the five years to 2006. If averaged this equates to an annual growth rate of 0.4%.

\*\*\* This data is only a 'snapshot in time' and only represents the total number of Shire residents claiming assistance at the time of data collection (usually carried out following the end of the reporting year).

\*\*\*\* This increase can be primarily attributed to an increase in the number of arboviral infections (Ross River Virus & Barmah Forrest Virus) reported. The increase is linked to high rainfall in the reporting year (when compared to previous years).

\*\*\*\*\* 2007 data re-assessed to exclude postcode 2480, which is predominately located in Lismore LGA.

## **FAVOURABLE NEWS**

Despite receiving an additional 3,300 tonnes through the gate (a 12% increase), successes in recycling resulted in an increase in waste disposed of to landfill of less than 1%. Correspondingly, Council's recycling and resource recovery programs delivered the best diversion of waste from landfill on record with 43% of all waste received at Myocum diverted to recycling. 13,731 tonnes were recycled, a 30% increase on the previous year.

While deliveries of materials already segregated for recycling such as green waste and concrete increased by 30-40%, efforts to increase the recovery and recycling of bulk cardboard, tyres, automotive batteries, pallets and gas bottles at the Myocum Waste and Recycling Centre diverted an additional 300 tonnes of waste from landfill.

The Myocum Landfill Southern Expansion, Council's the first fully engineered Class 1 Solid Waste Landfill, was put to the test in early 2008, when more than 750mm rain fell in 40 days. The landfills operating systems successfully managed two significant rainfall events which each resulted in around 300mm of rain over 5 days.

The kerbside recycling yield increased by 15%. This was a result of continued strong growth in the uptake of commercial recycling services (up 12%) and rural waste and recycling services (up 7%), and a modest (6%) reduction in contamination.

A trial of environmentally-friendly lighting was commenced in Mullumbimby. The low wattage lights are the T5 greenstreet pierlite (2x24w) and compact fluorescent (42w) models and are being trialled with a view to replace the existing 80 watt Mercury Vapour streetlights across the Shire.

Over the reporting year, a number of Amendments Byron LEP 1988 and Development Control Plans were publicly exhibited, including;

- Development Control Plan No 20 (Bayshore Village, Byron Bay) that facilitates mixed-use development came into effect on 20 March 2008.
- Amendment No 132 Amplification of Kallaroo Circuit Bund was gazetted on 19 October 2007. The Amendment facilitated the installation of a culvert structure in the bund across Capricornia Canal to strike a balance between the flooding issues and needs of upstream landowners, down stream landowners and the wetlands in the Billinudgel Nature Reserve. The purpose of the amendment is to permit a development application to be submitted and assessed for the amplification of Kallaroo Circuit Bund.
- Amendment No 128, Draft Development Control Plan - Main Arm was gazetted 20 July 2007. The DCP provides for planning controls to guide the expansion of the Main Arm village and rural community title development near the village.

## UNCERTAIN NEWS

Ballina Shire Council is experiencing significant cost increases in their waste management operations and have increased some costs to the point where it is now more economical to transport waste from Ballina to Myocum for disposal. Council has increased disposal fees as a defensive move, however there is the potential for Council's landfill capacity to be rapidly consumed if waste from outside the Shire continued to be disposed of at Myocum. This situation will be monitored as it has the potential to bring forward the need for development of future disposal options.

The number of new dwelling approvals decreased over the reporting period as which has negative consequences for housing affordability but is positive in limiting the effects that population growth has on the local environment.

The number of rental assistance bonds provided by the NSW Department of Housing to residents of Byron Shire continues to fall, which may be due to a decline in the number of rental properties available and increases to the cost of renting. The median rental price for a two-bedroom dwelling in March 2008 rose to \$300 per week (compared to \$280 per week in June 2007). The median rental price for a three-bedroom dwelling also rose to \$373 per week (compared to \$350 per week 2007) (NSW Department of Housing 2008).

## UNFAVOURABLE NEWS

From a sustainability perspective, reducing the demand for and consumption of resources by preventing or reducing the amount of waste generated is preferable to resource recovery and much more preferable than disposal. Per capita waste generation is considered to be a good measure of resource consumption. While diversion of waste from landfill and increasing resource recovery and recycling are good outcomes, Council has been unable to arrest the increase in overall waste generation or per capita waste generation. This is an area where Council's performance can improve. The 2007 Integrated Waste Management Strategy adopted by Council is seeking to address this issue by increasing the focus on waste avoidance and reduction while maintaining and expanding recycling programs.

Housing affordability has decreased over the 2008 reporting period with the median sale price for properties around Byron Shire rising by approximately \$90,000 since 2007 to \$570,000. The median sale price for properties in Byron Bay increased from \$550,000 in 2007 to \$610,000 in 2008, while the median price for rural properties also increased from \$720,000 in 2007 to \$800,000 in 2008.

The number environment related human diseases reported to the Northern Rivers Public Health Unit has significantly risen compared to the low incidence over the previous year due to the high rainfall experienced over warmer months.

## FURTHER ACTION REQUIRED

Environmental Priority Action		Status
1.	Apply for funding from relevant sources to employ a specialist entomologist to investigate mosquito-breeding sites with Byron Shire.	No action. Mosquito trapping and identification ongoing.
2.	Examine relevant plans/strategies dealing with mosquito control and management to establish the applicability of implementation of such strategies in Byron Shire.	Council has conducted mosquito trapping in different parts of the Shire over summer months. Data, such as mosquito species and presence of Ross River and Barmah Forest virus can be used to inform further plans or strategies.
3.	Prepare a study into outdoor lighting in the Shire – with an emphasis on examining light types, their efficiencies and any impacts (social, economic, environmental) they may have.	Environmentally efficient lighting trial commenced in Mullumbimby.
5.	Maximise salvaging and resource recovery at Myocum Landfill	Project to establish salvaging facility is ongoing and is expected to be completed in 2008/09, subject to Council approval.
6.	Develop and adopt a new waste disposal strategy	Draft Strategy complete and awaiting consideration by Council
9.	Consult with the community regarding monitoring performance, identifying problems, information exchange and waste management initiatives	Ongoing.
10.	Develop a policy and program to provide resources and support for community initiatives that avoid and reduce waste	Considered by Solid Waste Committee and not progressed. Not included in Management Plan and superseded by actions in New 2007 waste strategy.
11.	Work with Department of Environment and Conservation and North East Waste Forum (NEWF) to develop and implement education and promotion plan which reflects, in its emphasis the Waste Hierarchy	Council utilises NEFW as the vehicle for a number of projects and benefits from the pooled resources, external project management and access to State Government funding. NEWF continues to deliver good outcomes across a variety of projects.
12.	Develop initiatives to deter dumping of waste in public litter bins, on public and private land and in waterways	Management Plan project for 2008/09
13.	“Leading By Example”, Council waste guide	Council has participated in a North East Waste Forum Project on “Council Waste Reduction and Sustainable Purchasing”. Council has joined the Sustainable Choices program, designed to increase the use of sustainable products by Councils. Ongoing implementation of waste reduction plan and integration of sustainable purchasing into Council’s operations is continuing. Waste Guide project has been replaced by these initiatives.
14.	Develop an active relationship with schools etc	Council has continued involvement with schools via programs with the waste contractor and the North East Waste Forum. This program is being expanded in 2008/09
15.	Waste management for commerce, industry, construction etc	Council continues to participate in the NEFW Business Waste Reduction

Environmental Priority Action		Status
		project. Council resolved to undertake a major recycling trial for construction and demolition waste and this commences in 2008/09.
16.	Develop industry specific waste audit and minimisation guides	This project has been incorporated into the NEWF Business waste reduction project which produces case studies and tool kits for various types of businesses.
17.	Conduct audits & surveys of the Shire's waste	2007/08 audit was postponed due to difficulties in finding a suitable contractor within the budget. NEWF project for 2008/09
18.	Develop waste provisions for new developments	A Draft Waste Minimisation DCP has been completed by NEWF and will be incorporated into the new Shire wide DCP in 2008/09.
19.	Involve businesses in implementing the Waste Hierarchy	Refer to items 15 and 18 above.
20.	WasteSmart guide	Refer to item 15
21.	Promote the use of Waste Exchange database networks	Council continues to support the operation of a regional reuse directory <a href="http://www.reusedirectory.com">www.reusedirectory.com</a> The Directory comprises reuse and repair businesses and organisations in the region. It's aim is to promote 'reuse' as an alternative shopping option, rather than buying new goods created with virgin resources.
22.	Prepare, adopt and implement a DCP for Affordable Housing in the Shire	Preparation commenced as component in Shire-wide DCP.
23.	Investigate and trial the use of biodiesel in plant and vehicles at the Myocum landfill	Council has been unable to source biodiesel locally and is continuing to monitor the market for opportunities
24.	Develop a strategy for recycling of organic waste	Strategy complete. Project included in 2008/09 management plan to undertake detailed planning for organic waste recycling program.
25.	Develop a system for recovering recyclable materials from construction and demolition waste at the Myocum landfill	Council has approved a 6 month trial commencing in 2008
26.	Develop and implement a greenhouse gas reduction program at the Myocum landfill	Preliminary investigations completed. Project to quantify GHG emissions included in 2008/09 management plan. Continuing to look at cost effective options for gas recovery.
27.	Prepare infrastructure plans and long term financial models for adopted waste disposal strategy	Awaiting adoption of waste disposal strategy before completion

# CHAPTER 4 – WATER – INLAND WATER

TRENDS AT A GLANCE – INLAND WATERS					
✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear ■ = data not suitable to indicate trends					
Indicator	2004	2006	2007	2008	Management trend
<b>1(a) Number, location &amp; type of point source discharges &amp; no. of prosecutions</b>					
Point source discharges – number of scheduled activities under PoEO Act [Bangalow STP & Booyong abattoir]	2	2	2	2	◆
Bangalow STP – licence exceedences <sup>1</sup>	10	5	3	6	x
Bangalow STP – number of prosecutions for contravening licence conditions	0	0	0	0	◆
Bangalow STP – volume of effluent received (kL)**	128,597	135,782	111,142	135,744	■
Bangalow STP – volume (kL) & % of effluent recycled	8,611 (7%)	1,570 (1%)*	14,582 (13%)	14,823 (11%)	■
<b>1(b) Area of urban collection catchment &amp; % with discharge point sources &amp; area treated to primary, secondary and tertiary treatment levels</b>					
Area of Bangalow urban stormwater sub-catchment (hectares)	-	145.51	145.51	145.51	■
Number of gross pollutant traps	-	3	3	3	◆
<b>2. Total number of new septic approvals per year &amp; % of population serviced by septics or sewer</b>					
On-site systems – number approved <sup>2</sup>	135	151	94	92	◆
Rated properties not connected to sewer - percentage	27.9%	28.75%	26.13%	25.87%	◆
<b>5. Annual total volume, % &amp; per capita water use for % of population connected to the water supply</b>					
Reticulated system – annual total water use (kL)	2,981,396	2,909,037	2,559,670	2,380,747	✓
Water use per household – average (kL)	211.57	203.17	213.48	196.09	✓
Water use per commercial property – average (kL)	694.20	701.64	604.56	709.84	x
Surface Water licences ( <i>Water Act 1912</i> ) – number & total allocation (ML/year)	-	179 (5,127 ML)	162*** (8,446 ML)	159 (4,932 ML)	■
Surface Water licences ( <i>Water Mngt Act 2000</i> ) – number & total allocation (ML/year)	-	57 (2,508 ML)	84*** (3,225 ML)	52 (2,958 ML)	■
<b>3. Percentage exceedances of ANZECC water quality guidelines during routine monitoring programs</b>					
Byron Creek - % of non-compliance with ANZECC water quality guidelines (overall non-compliance)	50%	63%	61%	42%	✓
<b>27. Number of bore water licences issued</b>					
Licences under <i>Water Act 1912</i> – number	746	659	907	94	?
Licences under <i>Water Management Act</i> - number	49	9	2	29	?

Note: Only those environmental indicators, and surrogate measures, that readily lend themselves to numerical comparisons have been included in this analysis.

<sup>1</sup>excludes licence exceedences relating to daily monitoring of samples and sample volume

<sup>2</sup> includes total number of approvals for both primary and secondary systems

\* Effluent reuse decreased in the reporting year due harvesting of the mop crop trial, 5 hectares of bamboo is due to be planted in October 2006

\*\* Variability is often associated with yearly rainfall

\*\*\* The Dept. of Natural Resources indicate that approx. 10% of water extraction licences expire, are amalgamated or cancelled annually depending on weather conditions and that state of the rural economy.

## FAVOURABLE NEWS

Annual total water use decreased by 178,923 kL in the 2007 reporting period. Some of this decrease can be attributed to a drop of approximately 17 kL in average household annual water use when compared to the preceding year.

In relation to Byron Creek catchment, trends over this reporting year indicate a substantial improvement in the set of water quality parameters when compared to the 2006 and 2007 data at all sites and for all parameters. The upgraded Bangalow sewerage treatment plant has proven that the standard of effluent treatment can significantly reduce impacts upon Byron Creek. This may be the last data reported on these sites.

Bagalow sewage treatment plant underwent an upgrade leading to improved levels of reuse and improved discharge water quality. The project has also improved sewerage services for the Bangalow community by lifting of the development moratorium in that community.

Stage 1 of effluent reuse project at Bangalow was commissioned to beneficially reuse effluent, sequester carbon from the atmosphere and reduce effluent discharges to inland waters.

Councils' adopted "Onsite sewage management: Approval to Operate Decision Tree" was formulated to allow for consistent and repeatable decisions to be made by staff when dealing with old and existing onsite sewage management systems (OSMS). The review of this procedure revealed considerable efficiencies in processing of applications for 'approvals to operate' where previously there had been no accepted standard by which to assess such privately operated systems. While the objectives of the NSW Department of Local Government have not strictly been applied in having all OSMS inspected, the decision tree and reporting functions by system owners has improved the general standard of private sewage management in Byron Shire.

Average annual water use per residential property decreased by 17.3 kL to 196 kL over the 2008 reporting year. However, it should be noted that Council's Management Plan 2006–2009 (Principal Activity-Water) identifies an average annual residential water consumption of less than 240 kL/residential property as an indicator of sustainability.

## UNCERTAIN NEWS

The increase in licences under *Water Management Act* may present issues in terms of increased volume of water extraction.

## FURTHER ACTION REQUIRED

Environmental Priority Action		Status
1.	Implementation of Shire-wide effluent re-use scheme	Bagalow: Stage 1 completed Sept 07, investigations for stage two commenced. Mullumbimby: current rural reuse continues, however planned rural and urban reuse expansion as part of the Brunswick Area Sewerage Augmentation Scheme (BASAS) deferred due to financial constraints. Investigation for other funding sources commenced.
2.	Shire-wide water demand management scheme.	Ongoing. Proceeding in conjunction with Rous Water program and Sustainable schools program.
3.	Approval and monitoring of all on-site sewerage systems.	Procedure for considering and upgrading existing on-site sewage management systems adopted early 2007.
4.	Ensure the establishment of relationships with Rivercare, universities and other groups to collect data on river health and water quality to feed into the assessment of State indicators generally.	Ongoing

# CHAPTER 5 - WATER - ESTUARIES AND THE SEA

<b>TRENDS AT A GLANCE – ESTUARIES AND THE SEA</b>					
✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear					
■ = data not suitable to indicate trends					
<b>Indicator</b>	<b>2004</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Management trend</b>
<b>1(a) Number, location &amp; type of point source discharges &amp; no. of prosecutions</b>					
Point source discharges – coastal sewage treatment plants (STPs)	5	5	5	5	◆
STPs – number of licence exceedences <sup>1</sup>	15	32	117	26	✓
STPs – number of prosecutions for contravening licence conditions	0	0	0	0	■
Brunswick Heads STP – volume of effluent received (kL)**	288,968	307,074	275,212	269,550	■
Brunswick Heads STP – volume (kL) & % of effluent recycled	0	0	0	0	■
Mullumbimby STP – volume of effluent received (kL)**	583,001	595,160	443,134	600,231	x
Mullumbimby STP – volume (kL) & % of effluent recycled	137,410 (24%)	121,368 (20%)▲	164,805 (37%)	99,966 (17%)	x
Ocean Shores STP – volume of effluent received (kL)**	404,383	607,026	512,938	600,369	x
Ocean Shores STP – volume (kL) & % of effluent recycled	0	0	0	0	?
(formerly West) Byron STP – volume of effluent received (kL)**	790,385	1,236,894*	1,605,427	1,641,206	■
(formerly West) Byron STP – volume (kL) & % of effluent recycled	294,929 (37%)	562,195 (45%)	624,738 (39%)	583,845 (36%)	■
<b>1(b) Area of urban collection catchment &amp; % with discharge point sources &amp; area treated to primary, secondary and tertiary treatment levels</b>					
Area of Byron Bay urban stormwater collection sub-catchment (ha)	-	322.12	322.12	322.12	■
Area of Mullumbimby urban stormwater collection sub-catchment (ha)	-	208.08	208.08	208.08	■
Area of Brunswick Heads, Ocean Shores, Billinudgel, South Golden Beach & New Brighton collection sub-catchment (ha)	-	495.60	495.60	495.60	■
Number of gross pollutant traps	-	18	18	18	■
<b>32. Number of fish kills</b>					
Fish kills – number recorded	0	0	1	1	x
<b>3. Percentage exceedences of ANZECC water quality guidelines during routine monitoring programs</b>					
Tallow Creek catchment - % of non-compliance with ANZECC water	40%	65%	49%	60%	x

## TRENDS AT A GLANCE – ESTUARIES AND THE SEA

✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear  
 ■ = data not suitable to indicate trends

Indicator	2004	2006	2007	2008	Management trend
quality guidelines (overall compliance)					
Belongil Creek catchment - % of non-compliance with ANZECC water quality guidelines (overall non-compliance)	63%	86%	75%	85%	x

Note: Only those environmental indicators, and surrogate measures, that readily lend themselves to numerical comparisons have been included in this analysis.

<sup>1</sup> excludes licence exceedences relating to daily monitoring of samples and sample volume

\* South Byron STP was decommissioned on 24 November 2005, West Byron STP now receives the effluent from both STPs

\*\* Variability is often associated with yearly rainfall

▲ Effluent reuse capacity was reduced due to rainfall

## FAVOURABLE NEWS

Five new customers connected Byron Bay Urban Reclaimed Water Scheme: Red Devils Footy Club, Byron Bay High School, Tennyson St Ovals and two nurseries. Reclaimed water reused at these sites will beneficially reuse effluent and reduce effluent discharges to Belongil Estuary and Cape Byron Marine Reserve.

An Options Study was commissioned over the reporting period to propose alternatives for the reuse of treated effluent from Ocean Shores sewage treatment plant with the intention of eliminating dry weather discharges to the Brunswick Estuary and Cape Byron Marine Reserve. O/S STP effluent reuse options have been deferred due to financial constraints.

Planning and design commenced to transfer effluent load from local abattoirs to new Byron Bay STP, thereby eliminating a significant point source discharge to the Belongil estuary. Sunnybrand Sewerage pumping station and pipeline to the STP are designed and now awaiting payment of fees to allow construction to commence.

Following community consultation to determine values associated with the coastline and its resources, Council has proceeded with the development of a draft Coastal Zone Management Plan. The Draft has been subject to a first stage review by state government agencies and Council's Coastline Management Committee. The draft is expected to be placed on public exhibition in late 2008.

The draft Brunswick Estuary Management Plan has been extracted from the larger, combined Study and Plan and will soon be distributed to the Brunswick Estuary Management Committee and state government agencies for a final review before being reported to Council for adoption. Council has lodged two funding applications. One for \$10,000 and one for \$100,000 to undertake riparian restoration in Simpson's Creek in accordance with recommendations of the Brunswick Estuary Management Plan.

Council has engaged consultants 'Australian Wetlands' to complete bi-annual reports on the artificial opening of the Belongil Estuary. These reports seek to further progress a more sustainable long-term entrance Management Strategy for the Belongil Estuary.

Council has received a draft beach scraping proposal and environmental assessment for New Brighton and South Golden Beach which is undergoing a Coastline Management Committee Review before being reported to Council for consideration.

Over 2008, Council used 315 ML of recycled water in place of potable water and reused a total 698 ML of recycled water across the Shire. This equates to approximately 21% of Council's total processed waste water.

Worked continued on the Mullumbimby drought management pipeline over the reporting period. Linked with the Mullumbimby Road upgrade, the project involves road widening, bank stabilization, hazard and tree removal, realigning fencing, compensatory tree planting, stormwater pipe replacement and improvement to the shape of the road. The Mullumbimby Drought Management Pipeline has been designed to provide an emergency connection to the Rous Water (Rocky Creek Dam) water supply for periods of prolonged drought as occurred in 2002. The project includes laying 3km of 250mm diameter pipe along Mullumbimby Road from Uncle Toms to James Street with a portion of the funding for the pipeline has been received under the State Government Drought Relief for Country Towns program. The project is 75% complete with negotiations regarding easements stalling works. Mullumbimby town water supply is currently in plentiful supply, ensured by solid rainfall in 2007/2008.

The Brunswick Area Sewage Augmentation scheme has commenced with ongoing environmental restoration works including tree planting and riparian restoration and treatment plant construction tender assessment underway. This project will prove very significant in terms of Shire's long-term sewage management to the year 2025.

Progress was made on the Mullumbimby Inflow and Infiltration Integrated Strategy, designed to reduce stormwater infiltration into the sewage system. An 18% reduction in chokes and overflows from the sewerage system was achieved over the reporting period in order to reduce the frequency and intensity of overflow occurrences during wet weather periods.

## **UNCERTAIN NEWS**

Increased loads at many of the Shire's sewage treatment plants may place increasing pressure on the capacity of these systems to operate efficiently.

## **UNFAVOURABLE NEWS**

The general water quality of Tallow Creek during 2007/2008 displayed highly variable results with an overall deterioration of the water quality parameters. The reduction of the environmental monitoring program has amplified some variability in the statistical analysis process. The waterway continues to be heavily impacted by nutrients (nitrogen and phosphorus compounds) despite the cessation of all licensed discharge from South Byron sewerage treatment works. An interim strategy is in place to support the mouth opening of the creek into the sea.

Belongil Creek continues to be heavily impacted upon by high levels of nutrients (nitrogen and phosphorus compounds) low dissolved oxygen levels and high turbidity and faecal contamination. The improving trend of 2007 of all comparative parameter and site indicators appears to have been reversed with further evidence of impacts upon this natural waterway. The West Byron STP has maintained the strict environmental standards imposed to protect Belongil Creek, so the likely source is not clear. All sites continue to exhibit unacceptable environmental standards for water quality.

This may be the last reporting on these waterways due to a significant reduction in data gathering on all natural waterways.

Due to regular rainfall Clarkes Beach did not present any faecal coliform<sup>1</sup> contamination concerns that required ocean diffusion. However, stormwater pollution was recorded above preferred levels.

A heavy rainfall event in June 2008 resulted in a report of dead fish in Capricornia canal at North Ocean Shores. The immediate investigation of the complaint by Environmental Health officers found only one dead

eel. No further complaints had been received for the 2007/2008 period in relation to fish kills. All significant fish kill events are reported to the NSW Department of Primary Industries (Fisheries).

Escalating project costs has resulted in the deferral of effluent reuse schemes that would reduce effluent discharges from four sewage treatment plants.

<sup>1</sup>*Faecal coliform are bacteria found in the faeces of humans and warm-blooded animals. These bacteria can enter waterways through direct discharge from mammals and birds, from agricultural and stormwater runoff carrying waste from animals and from human sewage from overflows or system leaks (EPA NSW).*

## FURTHER ACTION REQUIRED

Environmental Priority Action		Status
1.	Implementation of Shire-wide effluent re-use scheme	Byron Bay: Urban reuse continues, 5 new reuse customers added, investigations for further expansion commenced. Ocean Shores: planned rural reuse connection as part of the BASAS is deferred due to financial constraints. Investigation for other funding sources commenced.
2.	Preparation of the Coastline Management Plan.	Preliminary draft complete
3.	Implementation of the Belongil Estuary Management Plan	Underway
4.	Preparation of the Brunswick Estuary Management Plan	Draft Plan to be reported to Council for adoption in late 2008
5.	Review Council's water quality monitoring program in terms of what is monitored, where monitoring occurs and the rationale for monitoring and identify monitoring requirements applicable to each area of Council.	Review undertaken for Water and Recycling Management Division. Consolidation underway
6.	Establish a protocol for regular reporting of Council's water quality monitoring data in relation to ANZECC water quality guidelines and consistent State of the Environment Report indicators.	Consolidation underway
7.	Implementation of Shire-wide Urban Stormwater Management Plan with an associated stormwater monitoring program.	Review of document planned in 2008/09
8.	Development audit of Belongil and New Brighton for implementation in the Coastline Management Plan	Proposed for 2009
9.	Foreshores Management Plan Brunswick Estuary	Abandoned
10.	Butler Street Wetland stormwater treatment system *	Not funded, but options being examined as part Byron Bay stormwater drainage assessment
11.	Environmental assessment for the Belongil Entrance Opening Strategy *	REF complete. Scoping study on EIS proposed for early 2009
12.	Protect significant estuarine and aquatic habitat in the Belongil and Brunswick Estuaries*	Underway – protected through marine park & ongoing estuary management
13.	Implement Dune Management Plans in Byron Shire	Underway
14.	Preparation of a Tallow Creek Estuary Management Plan	Not commenced

\* *These are high priority actions from the Belongil and Brunswick Estuary Management Plan or actions required to implement the Belongil Estuary Management Plan*

## CHAPTER 6 – THE LAND

TRENDS AT A GLANCE – THE LAND					
✓ = improved management      x = further improvement required      ◇ = no significant change in trend      ? = trend unclear					
■ = data not suitable to indicate trends					
Indicator	2004	2006	2007	2008	Management trend
<b>6(a)(ii) Land uses in the LGA – intensity of key industry sectors</b>					
Scheduled activities under PoEO Act 1997– number of active licences	15	16	16	17	◇
<b>28. Area of land zoned for environmental protection</b>					
Land zoned 7A, 7B, 7C, 7D, 7F1, 7J, 7K & 8A – total area in hectares	10,577	10,591	No change	No change	◇
<b>22. Number of certified organic farms &amp; area of land under production</b>					
Certified organic farms <sup>1</sup> – number (including postcode 2480)	83	42*	79*	82*	✓
Certified organic farms – area of OHGA certified farms (includes postcode 2480)	777	356	1,751	2,985	✓
<b>9. Number and/or area of contaminated sites, nature of contamination &amp; remediation</b>					
Records under section 58 of the <i>Contaminated Land Management Act 1997</i>	-	7 notices for 6 sites	4 notices for 4 sites	7 notices for 6 sites	x
Cattle Tick Dips – number	85	85	85	94	x
Properties within 200m buffer of dip sites – number	1,466	1,458	1,456	1,101	◇
Unhealthy building land – number of sites	134	132	133	133	◇
<b>8(b) Acid Sulfate soil indicators: extent &amp; number of identified ASS hotspots</b>					
ASS hotspots – number & total area	2 (1,270ha)	-	-	-	?
<b>8(c) Acid Sulfate soil indicators: length of drainage system</b>					
Drainage system in union drain, Belongil – length (km)	5.23	5.23	5.23	5.23	◇
<b>8(d) Acid Sulfate soil indicators: new developments/works on ground on identified ASS areas</b>					
Consents issued for development on identified ASS area	312	499	487	434	■

Note: Only those environmental indicators and surrogate measures that readily lend themselves to numerical comparisons have been included in this analysis.

<sup>1</sup> The number of organic farms is based on information provided by the Biological Farmers of Australia (BFA)

\* These figures include organic farms in postcode area 2480 of which Byron Shire only makes up a small part.

### FAVOURABLE NEWS

Council's Sustainable Agriculture Strategy lists a series of actions and projects. Over the reporting period a range of education resources, including sustainable agriculture brochures for dissemination at local farmers markets and a rural landholders brochure for prospective and current rural landholders were completed. The rural landholders brochure features information on the responsibilities of rural landowners, pest animal control, waste and bushfire management, vegetation and biodiversity management and realistic expectations of moving to a rural area. The project was funded by \$30,000 forging partnerships grant from the State Government to implement the Sustainable Agricultural Partnership projects.

The Ewingsdale Sporting Fields Plan of Management was adopted in December 2005 and Council has since allocated funding for the project. The Federal Government has is also expected to contribute funding for the sports field development and Council is currently working through the development application process. A community steering committee has been established to assist in the project development.

## UNCERTAIN NEWS

The Bangalow Sports Fields Plan of Management was adopted in March 2005 and since then Council has progressively allocated funds towards the project. A grant application for \$200,000 was lodged with the Department of Sport and Recreation (DSR) on was successful and consent for the development of Bangalow Sports Fields was granted in 2006. Council has further allocated funds for the project and quotations for the project are currently being sought.

Project objectives for the 2007-2008 year were to prepare funding applications to gain State and/or Federal funds to add to Council's budget to deliver Stage 1. A further application was lodged when the 2007 Regional Sports Facilities funding round opened. The application was successful and Council was granted \$200,000 from the program to assist in delivering the Western Extension of the Bangalow Sports Fields. This will result in the construction of Soccer, Netball, Rugby Union, AFL, Softball, Athletics and general training areas as well as the construction of a walking track around new and existing sports fields. This project demonstrates how strong partnerships between Council and motivated community groups can deliver great outcomes for the whole community.

## FURTHER ACTION REQUIRED

Environmental Priority Action		Status
1.	Prepare a new Byron Local Environmental Plan and review and amend Byron Development Control Plans.	New Shire-wide LEP in preparation
2.	Development of a Tourism Management Plan for the Shire	Byron Shire Tourism Management Plan largely complete and awaiting public exhibition.
4.	Prepare and update Plans of Management (PoM) for Community Land.	PoM for Railway Park on hold pending further information, PoM for Bangalow Sporting Fields, Ewingsdale Road, Waterlilly Park, Ocean Shores and Brunswick Heads Recreation Area complete, PoM for Main Beach, Byron Bay in preparation, PoM for Mullumbimby Sports Fields complete.
5.	Improve management of data regarding contaminated land in the Byron Shire	Ongoing
6.	Develop guidelines for contaminated land management and remediation	Byron Shire Council draft Management of Contaminated Land Policy prepared and awaiting adoption.
7.	Develop a policy for managing contaminated land in order to provide a local context for decision making	Same as above
8.	Manage acid sulfate soil in the Belongil 'hot spot' in accordance with the Belongil Estuary Management Plan *	Ongoing
9.	Develop and adopt a range of mechanisms to reduce potential conflict in agricultural areas and where appropriate, include in the shire-wide LEP.*	Being investigated as part of the review of the Byron Rural Settlement Strategy and Shire-wide LEP and DCP preparation
10.	Provide education resources to ensure awareness of new land and house purchasers of the activities to be expected when moving to a rural area and their responsibilities as landholders. *	Complete. 'Farmers Farm and Cows Do Moo' brochure published.
11	Ensure Agriculture issues are addressed in the review of settlement strategies for towns, villages and rural areas and the shire-wide LEP *	Commenced

Environmental Priority Action		Status
12.	Investigate the use of S149 Certificates or other similar mechanisms to disseminate information to intending rural land and house purchases.*	On hold
13.	Encourage and promote agricultural enterprises to utilise where they exist, and develop or update where appropriate, industry codes of practice that address duty of care to the environment *	Not given high priority at first SART meeting (April 2006)
14.	Work with rural landholders and others to develop a common understanding of what a landholder's duty of care is to the environment *	Not given high priority at first SART meeting (April 2006)
15.	Develop information packages for all landholders – rural, rural residential, urban – providing information on local natural resources, required duty of care and best management practices for their maintenance and management. *	Brochure detailing the responsibilities of new rural landholders developed.
16.	Promote <i>Growing Successfully and Sustaining the Land – Case Studies of Local Producers</i> (developed as part of this strategy) and continue to add further case studies of interesting and model enterprises to the publication. *	Ongoing - case studies released and available on website.
17.	Assess and develop options for alternative mechanisms for access to land (due to high cost of land) for agriculture such as incubator type projects, share farming etc. *	Not given high priority at first SART meeting (April 2006)
18.	Investigate use of financial and other incentives for sustainable agricultural practices and develop and implement an incentive scheme. *	Not given high priority at first SART meeting (April 2006)
19.	Develop information and leaflet about the importance of agriculture and buying local produce. *	Complete. Sustainable Agriculture Fact Sheet series published and disseminated at local farmers markets and online.
20.	Support and facilitate the establishment of local farmers markets *	Council approved a temporary license for a new farmers market at New Brighton on 11 December 2007.
21.	Develop a communication strategy to raise the community's awareness of the importance of agriculture to the Shire's economy and wellbeing including promoting sustainable agriculture as a competitive advantage/strength of the Shire *	To be incorporated in Environmental Levy Communication Strategy.

\* These actions are high priority actions from the Sustainable Agriculture Strategy adopted 2004

✳ These are high priority actions from the Belongil Estuary Management Plan or actions required to implement the Belongil Estuary Management Plan

## CHAPTER 7 – THE ATMOSPHERE

<b>TRENDS AT A GLANCE – THE ATMOSPHERE</b>					
✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear					
■ = data not suitable to indicate trends					
Indicator	2004	2006	2007	2008	Management trend
<b>34. Number and types of vehicles in the Shire</b>					
Total registered vehicles	24,512	24,779	25,287	25,890	x
Passenger vehicles – total	13,280	12,306	13,473	12,797	✓
Off-road passenger vehicles – total	2,146	3,329	2,574	3,359	x
<b>13(b) Air Quality: % of sugarcane harvested green or burnt</b>					
Sugarcane harvested green - % of total harvest	12.7	9.93	8.8%	8.9%	◆
<b>13(c) Air Quality: number &amp; type of air quality complaints to local government &amp; DECC (formerly EPA)</b>					
Air quality complaints to Council – total number	75	95	120	49	✓
Air quality complaints to DECC – total number	15	273	72	6	✓
<b>14. Number of noise complaints to local government and the DECC &amp; the issues raised</b>					
Noise complaints to DECC – total number	1	8	14	5	✓
Noise complaints to Council – total number	199	270	267	256	✓
<b>35. Length of cycleways</b>					
Addition to cycleways – length in km	N/A	1.3km	3.74km	8km	✓
<b>33. Amount of green power purchased by the community</b>					
Greenpower purchased – percentage of total customers*	1%	4.3%	5.1%	6.5%	✓

Note: Only those environmental indicators, and surrogate measures, that readily lend themselves to numerical comparisons have been included in this analysis.

\* These figures have been provided by Country Energy and exclude postcode 2480. Other retailers supply green power to residents of Byron Shire (refer to Favourable News below) however the bulk of greenpower is purchased through Country Energy.

### FAVOURABLE NEWS

On 10 April 2008, Byron Shire Council adopted a revision of its Greenhouse Action Strategy for public exhibition. The 2008 Greenhouse Action Strategy is designed to guide Council and the wider Byron Shire community in implementing practical actions to reduce local greenhouse gas emissions. Council's recently formed Sustainability Committee, which consists of councillors and community representatives was instrumental in undertaking the review, and a school art competition was run to provide a new, more engaging front cover for the Strategy. Regular updates of the Strategy are planned.

The Byron Shire community have increased their take-up of green power options since last year. More than two thousand households and businesses have taken up green power in Byron Shire (excludes customers in postcode 2480). The percentage of customers in Byron Shire using green power products rose to 6.5% from 5.1% last year. Green power providers with customers in Byron Shire are predominately with Country Energy (2,011 customers).

The percentage of total vehicles registered in Byron Shire that use LPG or LPG/petrol fuels has increased from 1.5% in 2007 to 1.7% in 2007. This rise may relate to the Federal government's LPG conversion rebate.

From April – June 2008 Council ran the *Byron Shire Community Solar Hot Water Campaign* which culminated in a free community solar hot water presentation in Mullumbimby attended by over 100 local residents and business representatives. The Campaign resulted in ninety five (95) households installing solar hot water systems who were able to take advantage of discounts averaging between \$200 - \$800. The solar hot water campaign was an action from Council's Greenhouse Action Strategy that resulted in an annual reduction of approximately **380 tonnes of greenhouse gas emissions** – the equivalent of taking 100 cars off the road each year.

Byron Shire Council was awarded for its commitment to reducing greenhouse emissions under the Cities for Climate Protection (CCP) Program in November 2007. Council was recognised for achieving 'milestone 4' certification under the CCP Program. The accomplishment of 'milestone 4' requires local government organisations to achieve 5% of Council's greenhouse gas emission reduction targets. The reduction in greenhouse gas emissions was mostly due to a 13% increase in the volume of green waste recycled by Council. It is estimated that Council has abated approximately 4,948 tonnes of greenhouse gases through the diversion of organic waste from landfill and the recycling of paper waste at the Myocum Waste and Recycling Centre.

The NSW Sugar Milling Co-operative has 650 members growing 36,000 hectares of sugar cane across North Coast local government areas, including Byron Shire Council. The Co-operative is currently building 30MW cogeneration power plants at its Condong and Broadwater mills in conjunction with state-owned Delta Electricity. The "green energy" project is one of Australia's largest and will use sugar cane waste normally burnt in the paddock as a fuel to create electricity for 20,000 to 30,000 homes. Reducing cane fires is one of the many ways the industry is working toward protecting the environment while maintaining the viability of the industry. Over the reporting year, sugarcane yields have decreased in the region.

An additional 8km was added to Council's cycleway network during the reporting year (3km by Council and 5km by the RTA). The Shire bicycle network consists of 27km of on-road cycleways and 30kms of off-road cycle paths.

On the 26 June, 2008 Byron Shire Council resolved to adopt and publicly exhibit the Draft Byron Shire Bike Strategy and Action Plan (Bike Plan). The Plan establishes three broad aims that will be achieved via a series of infrastructure and non infrastructure 'actions'. The bike plan identifies various cyclist types and their different needs including youth and disadvantaged, many of whom rely on cycling as a form of transport, and recreational cyclists. The Plan further recognises cycling as both a legitimate and increasing form of transport for commuters and visitors. The bike plan contains maps and many projects, listed as 'actions', which focus on routes and facilities in and/or between Ocean Shores, New Brighton, South Golden Beach, Billinudgel, Brunswick Heads, Mullumbimby, Byron Bay, Suffolk Park, Bangalow and Ewingsdale.

The number of air quality complaints made to Council regarding poultry farm/abattoirs significantly decreased during the reporting year from eighty nine (89) to one (1) which relates to the relocation of a processing works/abattoir from the Byron Bay area.

The number of air pollution complaints received by the DECC has significantly dropped, which relates to the relocation of an abattoir from residential zones in Byron Bay.

Energy saving initiatives have been implemented at two sewage treatment plants including Power Factor Correction devices designed to save energy and reduce the emission climate change gasses. The initiative has a payback on investment period of two years.

Approximately thirty-five thousand (35,000) trees have been planted around water and sewerage sites to enhance habitat and sequester carbon.

## UNFAVOURABLE NEWS

The total number of vehicles registered in Byron Shire increased by 603 over 2008.

## FURTHER ACTION REQUIRED

Environmental Priority Action		Status
1.	Continue to explore effective control of gas generation from Myocum landfill.	Investigations reveal the cost inefficiency of a methane gas system. Council is investigating alternative technology options based on biofilters using microbiological activity to convert methane to CO2.
2.	Establish the Greenhouse Gas Abatement Working Group *	Not commenced
3.	Achieve 5% of Reduction Goal for Council and Community emissions *	Resources required to investigate reductions achieved to date.
4.	Achieve Milestone 4 of the CCP *	Complete
5.	Produce a draft Development Control Plan addressing external impacts from light and energy and the role of efficient urban design.	Superseded in Shire-wide DCP

\* *These actions, and achievement of these actions, is within the Greenhouse Action Strategy adopted June 2004*

# CHAPTER 8 – COUNCIL RESPONSIBILITIES, IMPACTS AND ACTIVITIES

## TRENDS AT A GLANCE – COUNCIL RESPONSIBILITIES, IMPACTS & ACTIVITIES

✓ = improved management      x = further improvement required      ◆ = no significant change in trend      ? = trend unclear  
 ■ = data not suitable to indicate trends

Indicator	2004	2006	2007	2008	Management trend
<b>31. Internal paper consumption</b>					
Amount of A4 paper used – in reams per year	3,520	3,840	2,995	2,880	✓
Amount of A3 paper used – in reams per year	97	172	71	52	✓

*Note: Only those environmental indicators, and surrogate measures, that readily lend themselves to numerical comparisons have been included in this analysis.*

**Note** The majority of indicators addressing the responsibilities, impacts and activities of Council can be found in other sections of this report.

## FAVOURABLE NEWS

During the reporting year Council received approximately \$11,385,000 in grant funding. Projects funded were for: estuary management plans, environmental restoration, flood management studies, road realignment and Aboriginal employment assistance etc.

Over the reporting period, Council reduced the amount of A4-sized paper by over 100 reams, which relates to the increasing use of digital storage media (e.g. CDs) and the reduction in public access print points over the period. Similarly, Council has reduced to the amount of A3-sized paper back in-line with pre-2006 levels. The 'spike' in the amount of A3-sized paper in 2006 was considered a 'once-off' that reflected projects that occurred during the reporting year.

## FURTHER ACTION REQUIRED

Environmental Priority Action	Status
Explore possibilities for developing and implementing an organisation-wide environmental management plan and a series of related performance indicators to ensure continuous improvement across all aspects of Council activities. Such an EMP would cover the sourcing, use and re-use levels and disposal of all materials related to the conduct of Council business.	Not funded or commenced
Better integrate Council's own record-keeping, monitoring and reporting systems into future State of the Environment Reports	Ongoing

\* Please note that this figure does not directly compare to previous years figures as a different method of calculation was used.

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## INFORMATION SOURCES AND CONSULTATION

The following individuals, organisations and authorities provided information and/or were consulted during preparation of this report:

- *NSW Department of Housing*
- *NSW Department of Primary Industries (DPI)*
- *NSW Department of Natural Resources (DNR)*
- *North Coast Area Health Service*
- *Department of Environment and Climate Change (DECC)*
- *Byron Coast Area, Parks & Wildlife Division, DECC*
- *NSW Roads and Traffic Authority (RTA)*
- *Centrelink*
- *Country Energy*
- *Greenswitch*
- *Energy Australia*
- *Origin Energy*
- *Climate Friendly*
- *Brunswick Valley Landcare Inc.*
- *Richmond Landcare*
- *Griffith University, Centre for Innovative Conservation Strategies*
- *Biological Farmers of Australia.*
- *Southern Cross University Whale Research Centre*
- *Far North Coast Weeds*
- *NSW North Coast Weeds Advisory Committee*
- *Mark Cochrane Real Estate*
- *NSW Sugar Milling Co-operative*
- *Wetland Care Australia*
- *Council's Heritage Adviser*
- *Byron Environment Centre (BEC)*
- *Byron Environment and Conservation (BEACON)*
- *Council staff*

The following Council resources were used to prepare this report:

- *Council's Geographic Information System*
- *Council's Authority Database*
- *Council's document management system*