

6 Remnant Vegetation and Wildlife Management

Council recognizes that appropriate management and conservation of local remnant vegetation and wildlife is critical to the conservation of biodiversity, is a fundamental concept in ecologically sustainable development, and that its presence adds significantly to the quality of life for residents.

The Issues:

Diversity of character is a valued concept in any system - natural, urban, social or economic. A municipality largely or totally devoid of remnant vegetation and wildlife lacks such diversity and appeal, with subsequent ramifications for the social and economic well being of its people.

It is the nature of an area's remnant vegetation and wildlife, because it is determined by the local environment that constitutes a large part of the area's natural character. Destroying that character can result in loss of identity for the area, such that it becomes little different from any other. The islands, coast, flood plains and surrounding hills, all clothed with their distinctive vegetation types, gives Townsville its character. In many ways, the City is as diverse and resilient as the natural vegetation and wildlife we share the area with. Perhaps it is this similarity, which enables us all to co-exist (to date) in spite of the threatening processes presented by a developing urban environment. We, the human residents of Townsville, share habitat with Curlews, Dugongs, Peregrine Falcons and Rock Wallabies (to name but a few of Townsville's distinctive wildlife species), a claim that can be made by no other city in the world.

We are also a living, growing city. We modify and destroy habitat with residential and industrial development; we pollute the environment; we light unperceived fires; we facilitate the spread of weeds, vermin, and predators; we neglect our obligations as stewards of the environment and other species. Careful planning, responsible management, and effective public awareness programs can mitigate these problems to a significant extent. If we wish to continue to share our environment with the plants and animals that distinguish Townsville and contribute to our economic and social well-being, we need to ensure that they, too, have suitable habitat and resources for current and future generations, just as much as we need it for ourselves.

Mangroves provide a physical interface between the terrestrial and marine environments. They are an enormously productive ecosystem, from which the

fishing industry derives significant economic benefit, providing both nutrition and breeding grounds for a number of economically important fish and crustaceans. The significance of mangrove productivity is in part illustrated in part by the fact that they are under the control of the Dept. of Primary Industries and clearance is prohibited without its approval and permit.

Whilst some (non-marine) species of plants and animals can exist in the urban environment, they usually disperse to such areas from natural habitat in which they can breed and/or feed, or vice-versa. Most depend heavily on suitable natural habitat provided by remnant vegetation for some or all stages of their life cycle. Because different species require different habitat, it is essential that a representative range of vegetation types is available for use by these species, and that such areas are not so isolated from each other so as to prevent genetic exchange between local populations. The RIKES Report provides an excellent run down on the general range and values of habitat in the Townsville area, although there has as yet been no systematic inventory of the area's biota to guide planning and management decision-making and Council has only limited resources available to carry out management tasks required. Conservation of remnant vegetation and wildlife has been formalized for areas on Magnetic Is., the Town Common, Many Peaks Ra., Mt Elliott, and Cape Cleveland. Less formal arrangements, which will be reviewed where and as appropriate, exist for the Rowes Bay area, the South Bank of Ross River, Castle Hill and Mt Stuart.

The range of threats faced by remnant vegetation and wildlife require mitigation through planning, management and public awareness programs. Areas for conservation need to be prioritized on the basis of their bioregional significance, determined through regional and site-specific surveys. Management strategies need to be based on an understanding of the identity and ecology of species present, including weeds and vermin. Introduced species directly impact native species by modifying habitat, competition for resources, and predation. Widespread pests, such as Cane-toads, pigs, and feral cats and environmental weeds can only be controlled on a local basis through intensive on-going efforts. It is essential that effective biological programs for such pests be developed. Fire, for example, should be excluded from fire-sensitive vegetation such as the remnant vine thickets on Castle Hills, Many Peaks Ra., Magnetic Is., and Mt Stuart.



Council has recently commissioned a Management Plan to guide appropriate management on remnant bush land of Castle Hill.

In instances where fire is prescribed, the prescription should include information on the impact to, or response of, the species so that for example, follow-up weed control programs can be implemented. An example of where public awareness programs appear justified concern the practice of annual burning-off of certain areas, which can exacerbate land and vegetation degradation through erosion, species elimination and promotion of grass dominance, as well as contributing to the Greenhouse Effect. Fire protection requires planning, not ad hoc firing of the bush. Another concerns the decline of Curlews on Magnetic Is. due to harassment and predation (mainly by dogs), and being killed by cars.

Council's involvement in the conservation of remnant vegetation and wildlife can be dated back to 1888 when it requested from the Government of the Colony of Queensland trusteeship of Castle Hill (Cudtheringa) in an effort to control erosion and other forms of degradation due to goats, tree-felling and shack construction. Management of the Hill has been a source of debate ever since, with the Council most recently commissioning consultants to prepare Master Management Plans for areas under its control.

Council is also trustee for the internationally renowned Town Common Environmental Park and Horseshoe Bay Environmental Park, which are managed jointly with the Dept of Environment and Heritage. A management plan for Magnetic Is. has been prepared, and a vegetation restoration program along the Rowes Bay Foreshore has recently commenced. Council's Environmental Planning Officer has arranged regular "walks, talks & gawks" through natural areas and municipal parks. Council's Environmental Consultative Committee provides a formal avenue for community input and feedback on issues, which concern the conservation and management of remnant vegetation and native wildlife.

The objectives for Remnant Vegetation and Wildlife Conservation in Townsville are to:

- Develop an understanding of the nature, distribution and status of the region's habitat and biota in order to facilitate sound decision-making on planning and management matters;
- Promote awareness of the value of remnant vegetation and wildlife and their management requirements; and, implement appropriate conservation and management programs.

Areas for Council Action:

To promote the conservation of remnant vegetation and wildlife populations, Council should consider the following:

Review the tenure, conservation status and condition of all habitat areas noted as important in Chapters 3 and 5 of the RIKES report. (ENV: PD)

Develop a prioritized list of natural and semi natural areas requiring resource inventories (species present, habitat condition etc.). (ENV)

Develop a prioritized list of those animal species and habitat areas that require formal management plans. (ENV)

Develop a schedule of pest plant and animals (including fish), and appropriate regulations to control the sale, use, and possession of such. (ENV)

Establish a Natural Areas Management Unit within the Dept of Environmental Services to implement bush regeneration and management programs. (ENV)

Liaise with CSIRO and other agencies to develop sound land clearance guidelines. (PD:OA)

Liaise with the Dept. of Environment and Heritage, Dept of Defense, ICU and fire brigades to develop fire management plans for all bush land and wildlife habitat areas in Townsville City, especially hillsides and fire sensitive plant communities. (ENV:OA)

Encourage local research institutions (e.g., JCU, DEH) to conduct research into wildlife species and their habitats and management requirements to aid preparation of formal management plans. (ENV:OA)

Regularly review fire and water management strategies on the Town Common and monitor their long-term effects in liaison with DEH and interested community groups. (ENV:OA)

Monitor appropriateness of current town planning schemes on land adjacent to significant habitat areas to ensure compatibility with conservation objectives. (ENV: PD)

Promote the concept of habitat restoration in re-vegetation programs and the use of local plants for local wildlife in landscape design. (ENV)

Encourage and assist community involvement the restoration and management of wildlife habitat. (ENV)

Provide incentives to land owners to retain and/or restore wildlife habitat. (ENV: PD)

Investigate the following areas with a view to formal recognition of their role as wildlife corridors: Ross Creek, Ross River, Louisa Ck and Bohle River riparian strips. (ENV: PD)

Areas for Community Action:

Lobby for the conservation and management of wildlife habitat.

Keep cats and dogs under control; never dump them or let them wander in the bush.

Drive with care where wildlife is likely to be encountered, such as on the Pallarenda Rd and on Magnetic Is.

Avoid the use of pesticides in the garden.

Dispose of litter and garden refuse by composting or taking to the municipal dump, never in the bush.

Record the types of birds, butterflies and other wildlife using your garden and plant suitable local plant species to attract them.

Join the Wildlife Care Group and learn how to care for orphaned or injured wildlife.

Join the Wildlife Preservation Society and learn about your local wildlife.

Take part in bush regeneration projects in the area, e.g.: on the Town Common, contact QNPWS for information.

Make a fortnightly roundup of toads from your garden; freeze them to kill them painlessly.

Areas for Research:

Determine the conservation values and constraints of remnant vegetation and methods to mitigate threats and degradation.

Investigate the ecological relationships of the local biota, such as the impact of fire on wildlife and vegetation patterns.

7 The Marine Environment

Council recognizes that, as a large City adjoining the Great Barrier Reef World Heritage Area, it has a particular responsibility to ensure that municipal Management is compatible with the conservation and management requirements of the Reef.

The Issues:

The Great Barrier Reef Marine Park - a World Heritage Area and one of the "Seven Great Wonders of the World" - is located directly offshore from Townsville. Together with other coastal municipalities in Queensland, we are to a large extent its custodians on behalf of the rest of the world. Whilst it is a challenging responsibility, the potential exists to develop great community pride if we do this job well.

Coral reefs require clear, clean, nutrient-poor seas. Excessive levels of nutrients cause algal growth to out-compete and smother the coral. Sediments suspended in water impede light penetration to the coral and sea-grass beds, and can, in sufficient quantities, physically smother them. As a living ecosystem, the various components are all susceptible to toxins and pollutants contained in agricultural and urban runoff and other effluent.

The Great Barrier Reef Marine Park Authority (GBRMP A) is currently preparing a Strategic Plan to guide sustainable management of the Reef, based on a 25-year time frame. It is not a new set of laws, but rather provides guidance and direction for decision making by the Authority itself, as well as for stakeholders such as the community and Council of Townsville, to develop plans and actions that are compatible with the conservation of the Reef.

The shallow coastal shelf and lack of a natural deep-water harbour in Townsville has resulted in the port being sited in Ross Creek. Platypus Channel was cut in 1883 to allow access to the port and is dredged regularly. The Townsville Port Authority (TP A) dredges some 3 - 500,000 tones of sediment a year, most of which is dumped at sea in two sites, an inshore site and an offshore site (Pringle, 1989). Sea dumping is under federal control and requires an annual permit. Plans to extend the port and deepen and extend the channel will increase the amount of dredge spoil needing disposal. Investigations into spoil movement after dredging are not conclusive and there are concerns that sediment could affect the Marine Park and Townsville beaches.

The TP A has recently commenced a major research program with consultants to investigate the behaviour of dredge spoil and possible impacts of sediment disposal to fringing reefs around Magnetic Is. and elsewhere in Cleveland Bay.



Sound management of the terrestrial environment is required to protect the marine environment

Sewage disposal in ocean outfalls is a common practice for coastal towns. Townsville disposes of secondary treated effluent into Cleveland Bay and via the Bohle River and Sand fly Ck (for more information on treatment refer to Chapter 13 - Liquid Wastes). Problems exist with this in that, whilst it is not raw sewage, the effluent is nutrient-rich and may contain potential pollutants and toxins illegally discharged to the sewage system. A Trade Waste Policy is shortly to be released and implemented by Council to deal with this latter problem. Council has planned for the upgrading to tertiary treatment level at Sand fly Creek Treatment Plant, and is researching contaminant-stripping methods using artificial wetlands at the Mt St John site.

Council maintains on-going liaison authorities with a direct interest in the marine environment, including GBRMP A, TP A, DEH, BP A, AIMS and JCU, by attending technical briefing sessions and representation on committees. As well as being involved with the committee, which oversaw the Impact Assessment Study of the Townsville Port eastern expansion, Council also made a detailed submission on a draft report of the Study.

The objectives for Marine Conservation in Townsville are to:

Maintain close liaison with relevant authorities and other stakeholders; and

Ensure that municipal management is compatible with the management and conservation of the marine environment.

Areas for Council Action:

To reduce the city's impact on the marine environment, Council should consider the following actions:

Develop and implement effluent treatment programs to achieve acceptable standards for discharge. (ENG: ENV)

Support the Townsville Port Authority's endeavors to research and develop ecologically sustainable management of Platypus Channel and the Port. (ENG: ENV: PD)

Liaise with GBRMP A and other authorities with regard to urban impacts on the marine environment as issues arise. (ENV: ENG: PD)

Areas for Community Action:

Dispose of oils and chemicals appropriately so they do not affect the marine environment. Ring Councilor DEH for information on safe disposal methods.

Report any water pollution problems, such as oil pollution or fish kills, to DEH.

Visit the Barrier Reef Wonderland to find out more about the Great Barrier Reef.

Check the zoning of marine and reef areas before you go boating, fishing, shell collecting etc. Obtain a zoning map from the Great Barrier Reef Marine Park Authority if you are unsure.

Areas for Research:

Research is needed to determine the most appropriate site and methods for disposal of dredge spoil. Such research needs to be on going in order to understand effects over time.

Research is also required to discover the best ways to treat and dispose of sewage effluent in the most environmentally responsible manner.