



BIODIVERSITY

Biodiversity: overview

Rotorua is home to a number of important indigenous species and contains large areas of native bush. Biodiversity is an important environmental factor for both rural and urban environments. Mokoia Island, Mt Ngongotaha, Whakarewarewa, Kuirau Park and Sulphur Point are just a few examples of areas of biodiversity that are close to the urban area. As is the case throughout New Zealand, the pressures on Rotorua's biodiversity are increasing due to ongoing habitat destruction and the impact of introduced pest species.

The biodiversity theme includes two environmental indicators: land cover and protected natural areas.

How are we going?

An increase in protected natural areas helps to enhance and support biodiversity. Since 2002, 33 natural areas have been formally protected. Twelve of these were through Queen Elizabeth II (QEII) covenants.

The most recent land cover data available is from 2001. The 2002 State of Environment Report provided information from 1997. Between 1997 and 2001 there have been some positive changes. Indigenous forest cover has increased from 15% to 18.7%, and planted forests have increased from 20.4% to 24.8%. By comparison the urban environment has increased by 0.1%, or almost 320 hectares. The most dominant land cover is still pastoral land, which also increased from 42.6% in 1997 to 48.2% in 2001.



What are we doing?

Throughout the district there are numerous efforts to increase and maintain biodiversity. Environment Bay of Plenty manages environmental programmes, which consist of partnerships among private land owners, Environment Bay of Plenty and Rotorua District Council. Through the programmes private landowners benefit from professional advice and funding assistance, while the environment and the community benefits from enhanced biodiversity and ecosystem services. The main focus of environmental programmes in Rotorua is improved water quality but also

contributes greatly to biodiversity through pest management and re-vegetation of catchments and riparian areas.

The Waikato Biodiversity Forum provides technical information, skills, support and a means of communication between organisations and individuals. The forum also helps fund projects for the protection, maintenance and restoration of biodiversity.

Biodiversity indicators are:

Indicator	State
Percentage change in land cover	
Area (ha) of protected (formal or legal) natural areas	





Purpose of indicator

How we use land affects the type of vegetation cover present. A loss of vegetation can result in poorer soil quality, erosion and a decline in water quality in streams and lakes, all of which affects the biodiversity and sustainability of natural resources. The purpose of this indicator is to monitor the types of land cover and associated land use, and changes of this over time.

Current information and trend

Table 4.1 shows the change in land cover between 1997 and 2001. There is currently no data available for 2007. The most obvious change between 1997 and 2001 is a decrease of 5.6% in primary pastoral land and a 4.4% increase in planted forest. Indigenous forest has also increased by 2.9%.

Despite these changes, the most dominant land cover in Rotorua is still pastoral (42.6%) and planted forest (24.8%), with indigenous forest (18.7%) being a high proportion of the remaining land cover (Figure 4.1). The urban area has also expanded slightly, by almost 320 ha. Figure 4.1 shows the types and locations of land cover in the district.



Table 4.1 Land cover in the Rotorua district

Category	1997		2001		% Difference
	Area (ha)	Percent	Area (ha)	Percent	
Urban	3286.9	1.3%	3605.3	1.4%	0.12
Urban open space	708.8	0.3%	705.3	0.3%	0.00
Bare ground	1180.8	0.5%	409.3	0.2%	-0.30
Scrub	12150.5	4.7%	7043	2.7%	-2
Tussock grassland	444.5	0.2%	554.3	0.2%	0.04
Primarily horticulture	4.0	0.0%	1220.1	0.5%	0.5
Primarily pastoral	125795.8	48.2%	111414.3	42.6%	-5.6
Planted forest	53372.5	20.4%	64793.8	24.8%	4.4
Indigenous forest	41417	15.9%	48980.1	18.7%	2.9
Inland water	22204.9	8.5%	22110.7	8.5%	-0.04
Inland wetland	574	0.2%	578.7	0.2%	0.00
Total*	261139.7	100%	261414.8	100%	

Source: Rotorua District Council using Terralink's Land Cover Database 1 (1997) and Land Cover Database 2 (2001, most recent)

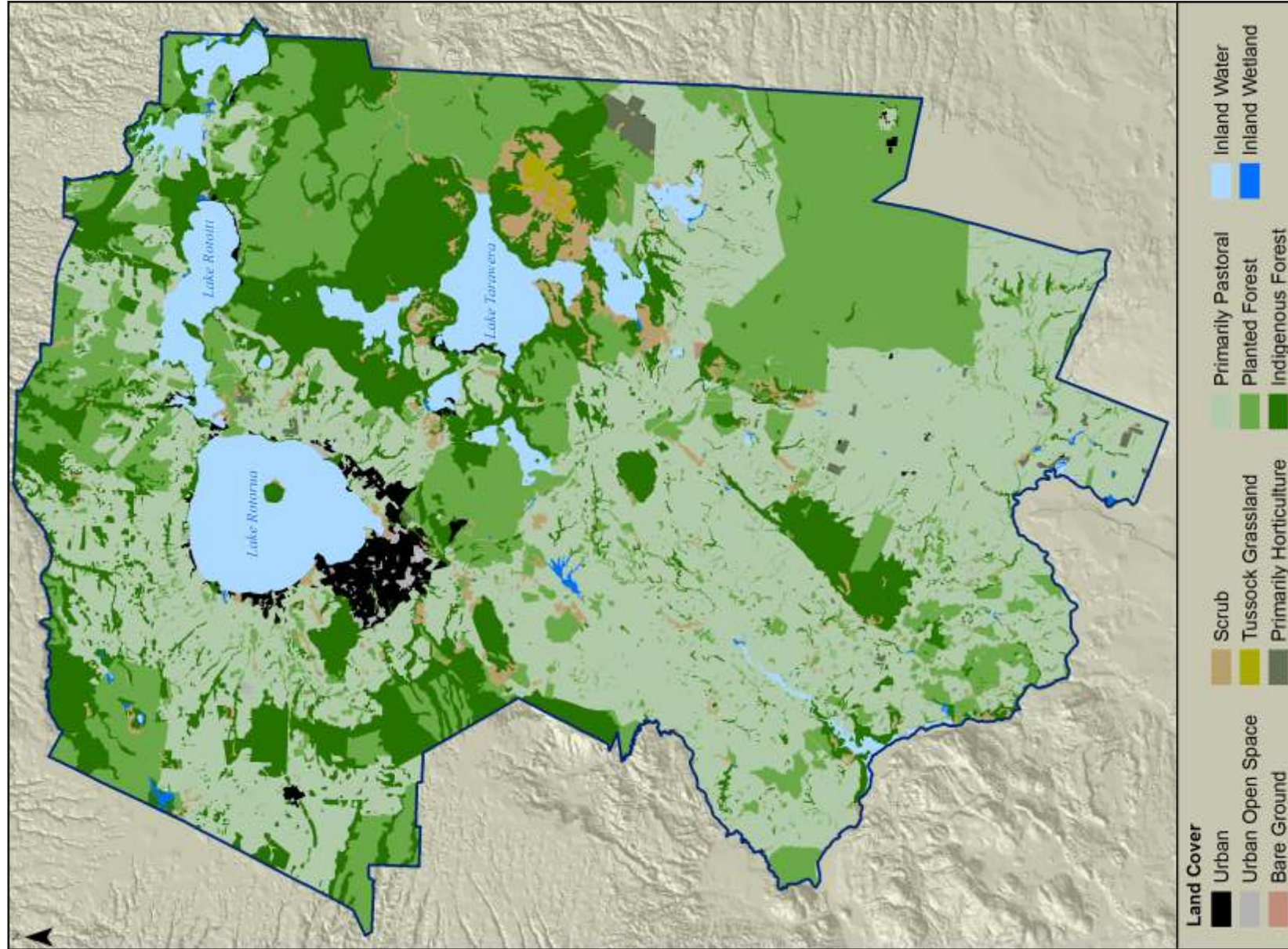
* more accurate data and technology has resulted in a greater total area in Land Cover Database 2



Biodiversity: landcover

Indicator 4.1 Percentage change in land cover

Figure 4.1 Land cover of the Rotorua district



Source: Land Cover Database 2, 2001