

# Urban design and amenity: noise levels



## Indicator 7.2 L10 and L95 noise levels

GETTING BETTER

### Purpose of indicator

Noise levels play a large part in determining the quality of our living environment. Monitoring occurs in each of the different zones of the district to assess whether noise levels are within an acceptable range for the activities taking place in that zone. This indicator focuses on the residential, industrial and rural zones. The technical terms that are used when measuring noise are explained in Table 7.1.

### Current information and trend

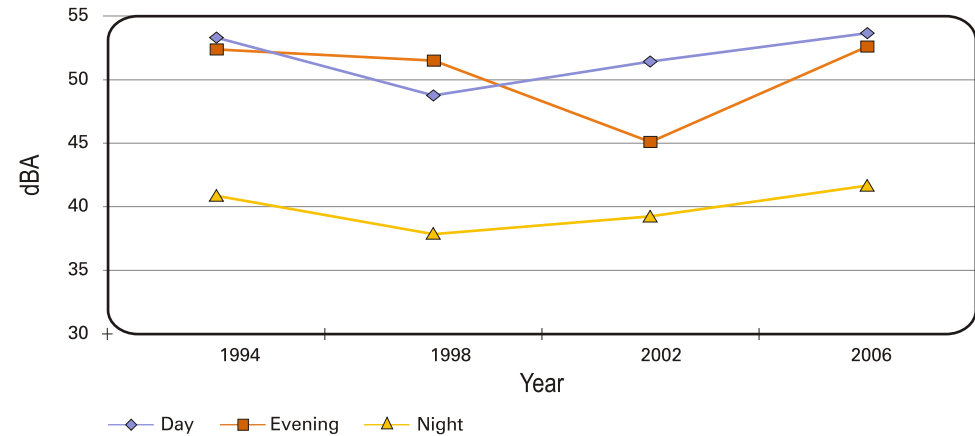
Noise sources can vary for different zones. Generally an increase in noise levels is due to greater activity in the area through increases in traffic, people, or in industrial areas, machine noise. The long term trends for all zones show there has been no significant change in L10 (intrusive) noise levels in the Rotorua district.



Table 7.1 Definitions

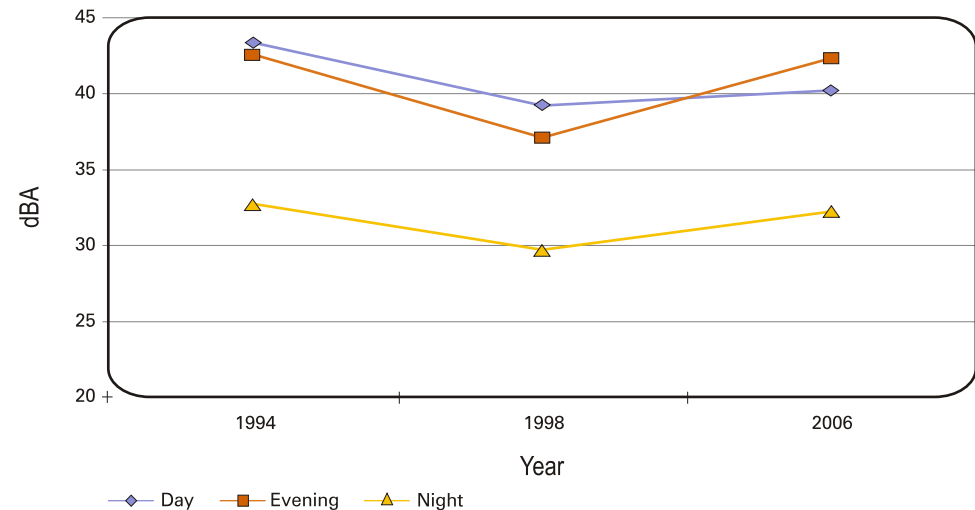
Term	Meaning
dBA	A measurement of sound pressure level which closely matches the frequency of the human ear.
L10	L10 is the loud noises that we hear a little of the time such as a truck going past or an aeroplane or someone slamming a door. If you measured noise over a period of time these noises would be heard 10% of the time.
L95	L95 is most commonly background noise that we hear all day every day. If you were to measure noise over a period of time it is the background noise you would hear 95% of the time such as trees blowing in the breeze or birds etc.

Figure 7.4 Residential zones average intrusive noise (L10) levels



Source: Design Acoustics and Rotorua District Council, 2006

Figure 7.5 Residential zones average background noise (L95) levels



Source: Design Acoustics and Rotorua District Council, 2006

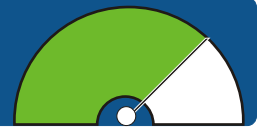
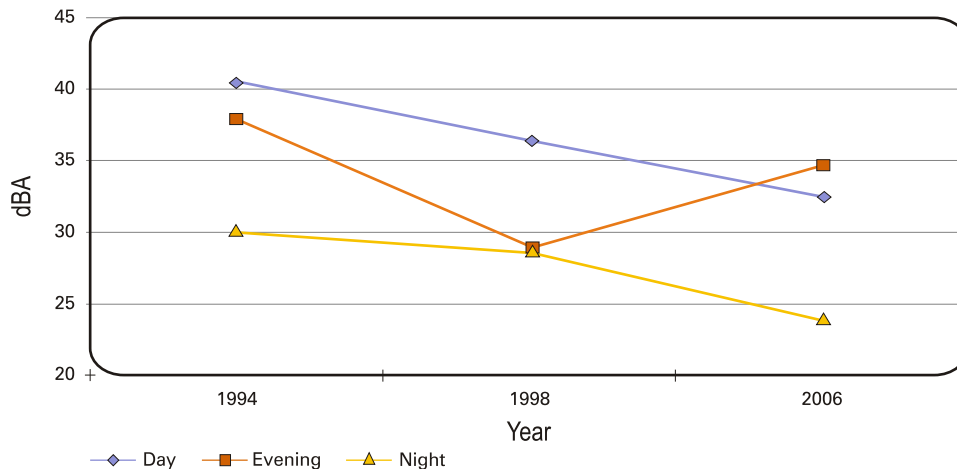


Figure 7.6 Rural zones average background noise (L95) levels



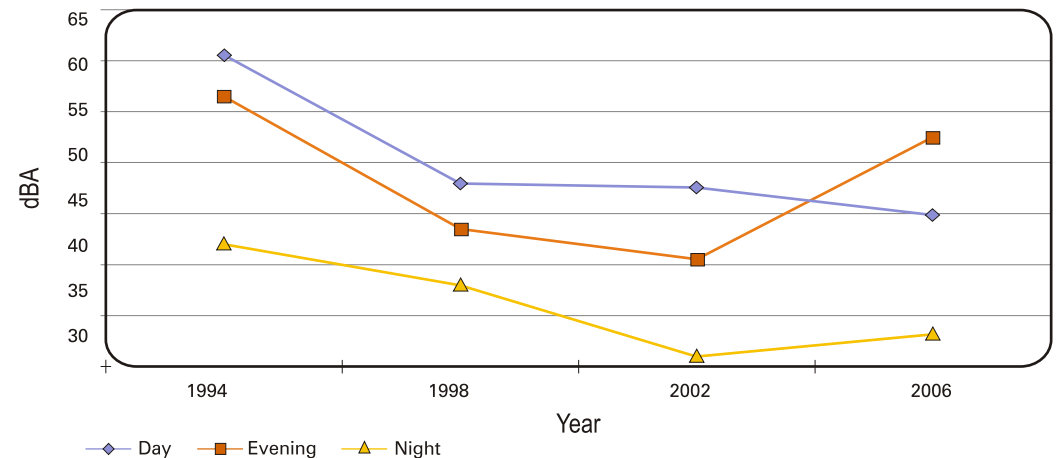
Source: Design Acoustics and Rotorua District Council 2006

Noise monitoring is undertaken every four years using sound level meters at designated sites in each of the different zones. Since the 2002 State of Environment Report there has been an increase in L10 during the day and evening (Figure 7.4) in residential zones

The background noise (L95) levels measured in 2006 in residential areas (Figure 7.5) have increased since last measured in 1998. However, they have remained very similar to 1994 levels, with the exception of daytime noise levels which have decreased by 4dBA.

In rural zones background levels (Figure 7.6) during daytime, evening and night times are quieter compared with the residential zones. Interestingly, an increase in noise levels is evident for intrusive noises during the evening and night times from 2002 to 2006 but they are still lower than 1994 levels (Figure 7.7).

Figure 7.7 Rural zones average intrusive noise (L10) levels



Source: Design Acoustics and Rotorua District Council

### What the community said

The community's response to noise are usually through noise complaints. A quarter (25%) of the community were concerned with subdivision in their area and of these people, 17% identified vehicle movements/ traffic and 8% identified people noise as their concern.



# Urban design and amenity: noise complaints



## Indicator 7.3 Number of noise complaints

GETTING BETTER

### Purpose of indicator

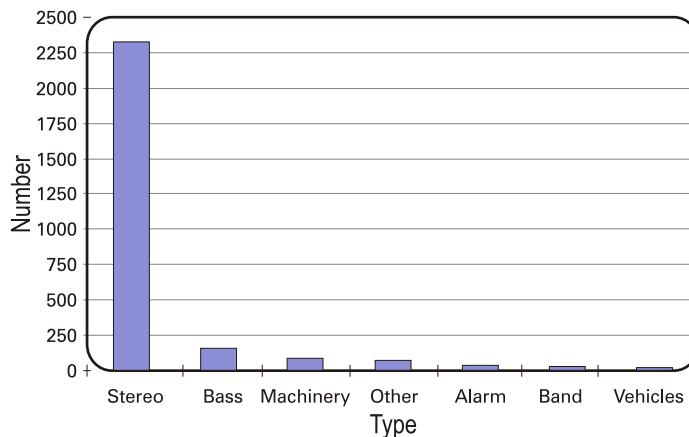
Excessive noise can impact on the amenity of surrounding properties and their occupants. Affected persons commonly register noise complaints with Council. The purpose of this indicator is to know the type, frequency and location of noise complaints. Knowing the cause and location of excessive noise means that appropriate management responses can be actioned.

### Current information and trend

The most common noise complaints are due to stereos, bass, and machinery (Figure 7.8). In general noise complaints have decreased with the exception of stereo noise complaints (Figures 7.9 and 7.10). The trend from 2002 to 2006 shows there has been a general decline in the number of noise complaints. The major reason for this was a change to Council's noise complaints policy. Previously, a verbal warning was given in the first instance for a noise complaint, whereas now a notice is served. To discourage repeat offenders a permanent noise abatement notice has also been introduced. This means if an abatement notice is served on a property, any noise complaint for that property may result in the seizure of equipment responsible for the excessive noise.

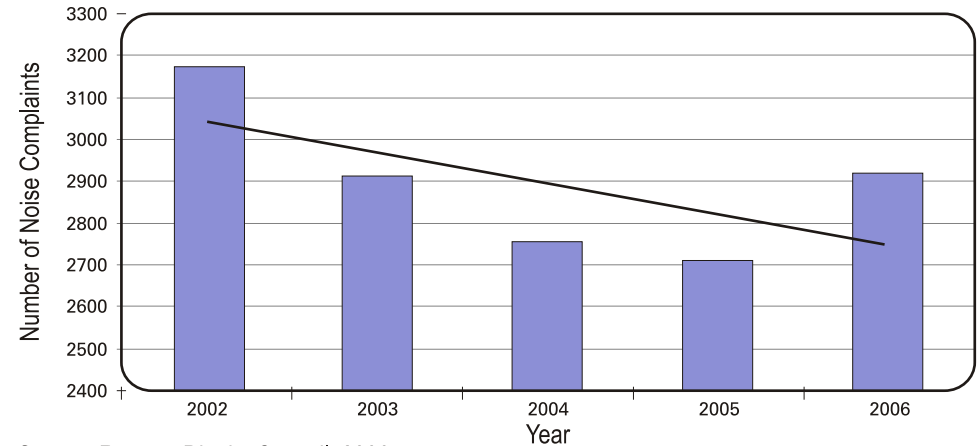


Figure 7.8 Most common noise complaints 2006



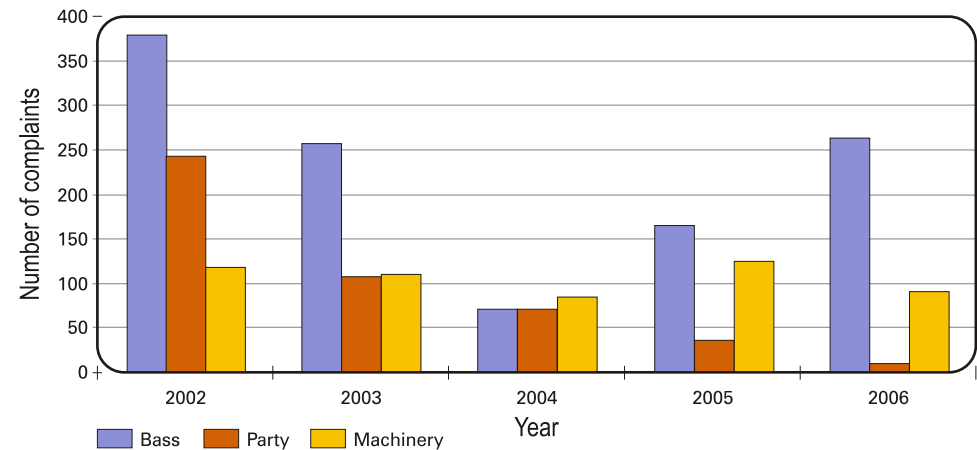
Source: Rotorua District Council, 2006

Figure 7.9 Total noise complaints



Source: Rotorua District Council, 2006

Figure 7.10 Common noise complaints



Source: Rotorua District Council, 2006

### What the community said

In 2006 11% of households contacted Council about noise control and 83% of those people were satisfied overall with Council's noise control response.