



AIR QUALITY



WHY IS GOOD AIR QUALITY IMPORTANT?

Good air quality is important for people's health and well-being. National and international data shows high concentrations of fine particles (PM₁₀) in the air we breathe can increase mortality rates, aggravate respiratory illnesses such as asthma, and result in reduced activity (people work less because of illness or having to care for ill people).

What can you do about it?

- Use dry wood from a Good Wood supplier
- Don't damp your fire down
- Burn only paper rubbish (no plastic or rubber)
- Spread the word to others
- Check your chimney – is it smokey?

As 84% of all fine particle (PM₁₀) pollution is calculated to be caused by domestic home heating emissions (e.g. log burners) there is a lot you can do if you operate such an appliance.

For a full report on Air Quality see the Council website: www.tasman.govt.nz click on "Environment" pages, then click "Air" or use the following link: <http://www.tasman.govt.nz/index.php?Air>



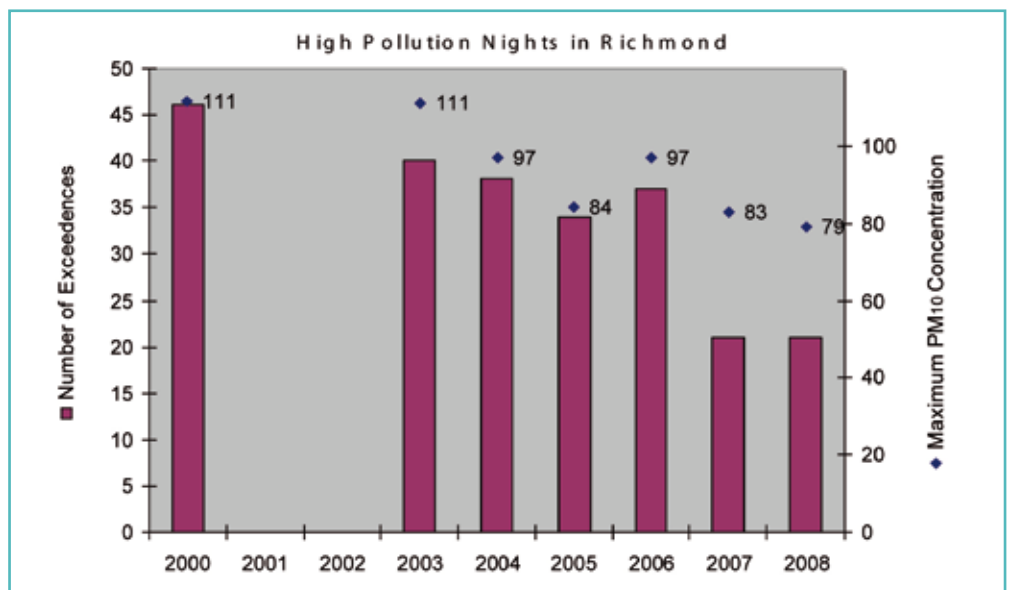
Richmond on a smoggy morning in June 2007

What is the state of air quality in Tasman?

Ambient air quality in Richmond has exceeded the National Air Quality Standard every winter since monitoring began in 2000. The 24 hour average standard for fine particles in the air (PM₁₀) is 50 µg/m³ and is typically exceeded 20-40 times each winter.

Air quality in other towns such as Motueka and Wakefield appears to be meeting the 24-hour PM₁₀ standard.

All exceedences in Richmond have occurred during May to August. The highest recorded maximum concentration (115 µg/m³) occurred in 2006. The annual average also exceeded guidelines but only by a small amount. There appears to be no significant trend in PM₁₀ concentrations, or in the number and magnitude of exceedences. Any trends in PM₁₀ will be confirmed in 2009 when enough data from the continuous monitoring equipment, installed in 2005, has been gathered.



Number of days each year when the national standard was breached and the maximum concentration. The standard only allows for one day have PM₁₀ concentrations greater than 50 µg/m³

USEFUL INFORMATION



Basic steps to remember

When lighting a fire, make sure you:

- Use enough kindling
- Don't put too much firewood in at first
- Stack wood loosely in the firebox so air can circulate
- Never use wet or green wood.

Once alight, make sure you:

- Keep the fire burning brightly
- Keep the air control open for at least 30 minutes
- Burn smaller logs rather than trying to burn a single, large log
- If you add logs, open up the air control to high for at least 20-30 minutes before turning down
- Be careful not to block air supply to the base of the fire with a badly positioned log
- Don't damp down the fire
- Don't burn rubbish in the fire.

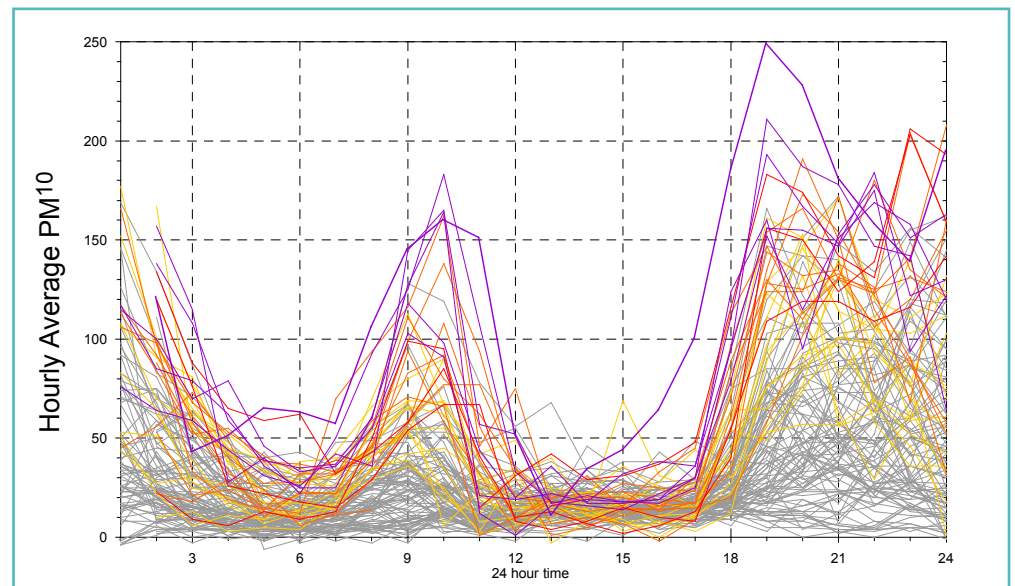


The highest air pollution occurs in the morning and evening which coincides with people lighting their fires. Air pollution generally increases dramatically from 5pm - 6pm (see graph below) to about 8pm, falls slightly then rises again from 10pm - 11.30pm, most probably as a result of people damping down their fires for the night.

Investigations show that the primary cause of poor air quality is the burning of solid fuels in domestic appliances. About 84 percent of PM₁₀ comes from this source. Daily variations of PM₁₀

concentrations are typical of those in an air-shed dominated by wood smoke with peak levels in the evening (typically 6pm - 10pm) and smaller peaks in the morning (around 9am). About 6 percent is calculated to come from traffic and 10 percent from industry sources.

In accordance with the National Standard, Richmond must show a decrease in the number of exceedences each year until there is no more than one exceedence per year (day with an average over 50 µg/m³) by August 2013.



Daily Variation in PM₁₀ over the 2006 winter. The grey lines are days without any exceedence, yellow 50-60, orange: 61-75, Red: 96-90 and Purple: >91. The highest peak was for 29/6/06, the highest recorded 24-hour reading on record (115 µg/m³).

What is Council doing about it?

- Introducing higher thresholds for industrial emissions of PM₁₀ in Richmond. Any applications for new sources of PM₁₀ may be declined.
- Burning of agricultural containers will be banned where a product stewardship programme is in place.
- Educational programmes will be stepped up with a focus on how to reduce smoke emissions from appliances.
- New rules were implemented in January 2007 in an effort to reduce air pollution in Richmond. The new rules cover the installation of small-scale (domestic) solid fuel appliances in Richmond:
 1. No new appliances will be allowed to be installed in Richmond unless to replace an existing burner.
 2. Existing burners and open fires will be permitted to be replaced, but only with an appliance that meets minimum standards for PM₁₀ emissions.
 3. New regulations prohibit the discharge of any smoke from a non-compliant appliance once a house has changed ownership.

In other towns in Tasman District, new solid fuel appliance will be required to meet minimum standards for emissions of PM₁₀. The Council does not have any new regulations for the rural areas of the District, except for a requirement that people operate wood burners without causing a nuisance for their neighbours.