

Air Quality - Monitoring Summary 2011

Key Points

- * The NES for PM₁₀ was exceeded on six occasions in Blenheim. Blenheim must show compliance with the NES by 2016.
- * The highest PM₁₀ concentration for the Redwoodtown site was recorded in 2011.
- * Trends analysis show PM₁₀ concentrations are decreasing in Springlands but increasing at the Redwoodtown site.
- * Home insulation and 'clean heat' help reduce PM₁₀ emissions by improving the efficiency of home heating. Government and council grants are available to help with the cost of heating homes.

Why we monitor air quality

- * It's a National Requirement— There is a national requirement for Councils to monitor PM₁₀ in designated airsheds. Blenheim is the only designated airshed in Marlborough.
- * It's a public health risk— Monitoring shows that PM₁₀ levels in Blenheim exceed health standards. Exposure to excessive amounts of PM₁₀ can lead to serious health problems, such as respiratory problems and heart disease particularly in the young and elderly and in those with pre-existing medical conditions. Currently other air contaminants such as SO_x and NO_x are not at levels which are a public health risk.
- * It's a possible health risk — Where there is a concern that air contaminants may be creating a health problem investigations are carried out to determine the risk e.g. previous monitoring of PM₁₀ and methyl bromide in Picton.

Where and how we monitor air quality

- * PM₁₀ is measured at two sites in Blenheim. Measurements are taken every hour in Redwoodtown and a daily average is recorded. Monitoring occurs 1 in every 3 days in Springlands throughout the year.
- * Monitoring of methyl bromide in Picton took place in January and March 2011. Monitoring takes place when methyl bromide is in use at the Port for the fumigation of logs due for export. There are typically between 5 and 7 fumigation events every year.

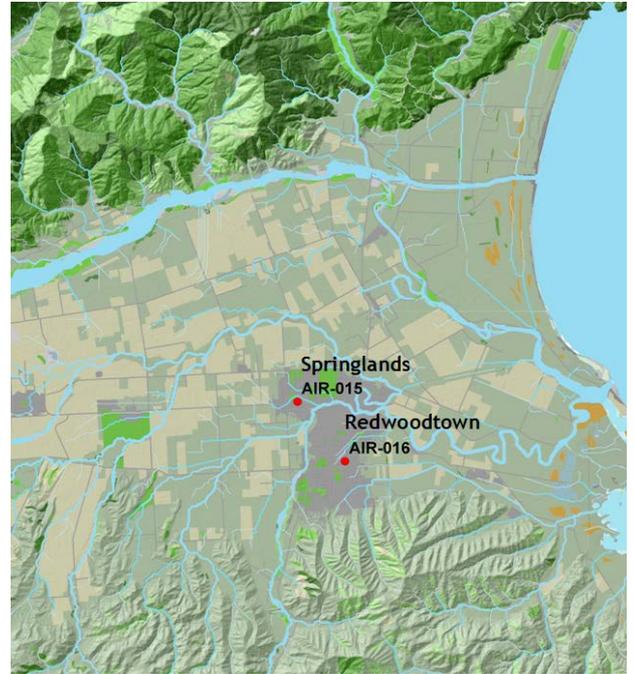


Figure 1. Locations of the PM₁₀ monitoring sites in Marlborough



Figure 2. PM₁₀ monitor at Middle Renwick Road (Springlands).



Figure 3. PM₁₀ monitor at Redwoodtown bowling club.

What happened in 2011?

Compliance with the NES

- * In 2011 Blenheim exceeded the NES for PM₁₀ on six occasions, this is the worst air quality recorded for Blenheim. In addition 2011 recorded the highest PM₁₀ concentrations for the Redwoodtown site.
- * The apparent reduction in PM₁₀ seen in previous years at Redwoodtown has been negated in 2011. The reason for this is unclear, especially as the trend for the Springlands site has been a reduction in PM₁₀ of approximately 30% since monitoring began in 2000.

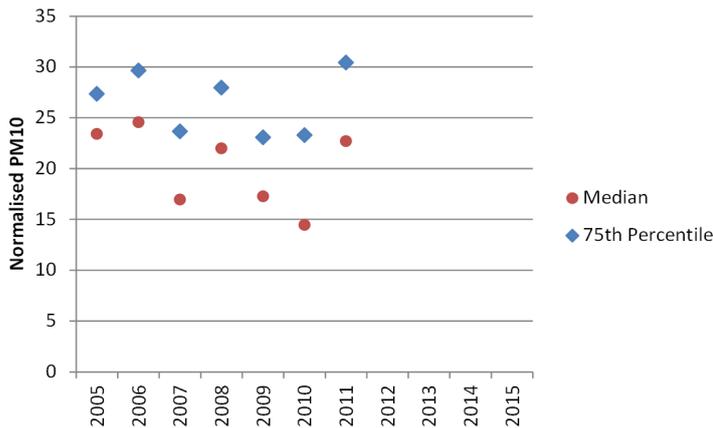


Figure 4. Trend analysis shows no reduction in PM10 concentrations at the Redwoodtown site in the Blenheim airshed.

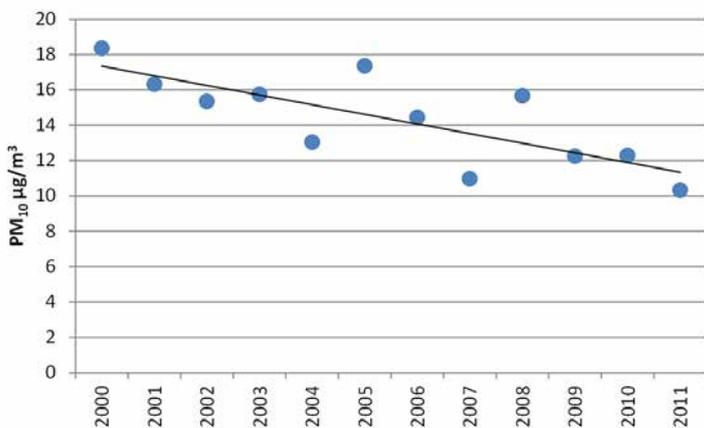


Figure 5. Annual average concentrations for the Springlands air monitoring site show a reduction in PM10 concentrations.

- * There have been no new sources of PM₁₀ in the Blenheim airshed and thus the apparent increase may be due to meteorological effects and/or an increase in the use of old woodburners/open fires as secondary forms of home heating due to increasing electricity prices.

Council's 'Heat Smart' programme.

- * The Council is supporting the government's 'Heat Smart' insulation and home heating scheme by offering a funding option for ratepayers whereby ratepayers have the opportunity to pay off the cost of upgrading their heating and/or insulation costs over an extended period through their rates. The scheme is cost neutral to Council but makes it easier for ratepayers to avail of government funding. The scheme has benefits for air quality as increased insulation and cleaner methods of heating mean reduced emissions and lower PM₁₀ concentrations.
- * To date 144 applications have been received for Councils 'Heat Smart' program, 97 of which are in the Blenheim airshed. The diagram below shows the rate of uptake since the scheme was introduced in August 2010.

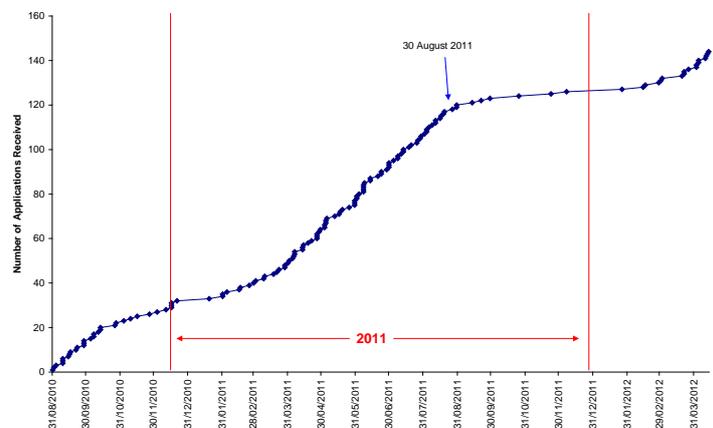


Figure 6. Number of applications received by Council for their 'Heat Smart' programme

What can you do to help clean up our air?

- * Only burn dry seasoned wood, get your supplier to check the moisture content, it should have less than 25% moisture content, they will be happy to do so.
- * Don't burn rubbish, plastics, treated or painted wood, glossy paper as these release harmful toxic emissions to the atmosphere.
- * Ensure your chimney stack is cleaned regularly, at least once a year.
- * Insulate your home, government and council subsidies are available to help with this.