

Breathe Easy...

Change is in the air

What are the options for Gore and Invercargill?

There are no easy options when it comes to making changes to home heating to help improve air quality.

Some of the options being grappled with as part of Southland's air plan review include:

- Open fireplaces – should their use be banned?
- Old and inefficient wood and coal burners – should they be phased out?
- Any new wood burner being installed in a built-up area (ie, on a property under 2 ha) must meet national emissions standards – should this requirement be extended to include all types of home burners? (See the Ministry for the Environment's national list of authorised burners, www.mfe.govt.nz)
- Personal responsibility – should people be expected to use their burners more efficiently to reduce the smoke coming out of their chimneys?

The review of *Regional Air Quality Plan for Southland* is underway. If you live in the built-up areas of Gore or Invercargill, any changes will almost certainly affect you because what comes out of the chimneys in those areas is an important focus of the review.

Please read on to find out more about the issues that face us and the opportunities you will have to contribute to any decisions.

Why make changes?

We all have the right to breathe clean air. That's the motivation behind the Government's National Environmental Standards for Air Quality (NES), which aims to provide a guaranteed level of protection for the health of all New Zealanders.

Environment Southland is legally obliged to make sure that air quality in Southland meets those standards through management options determined in consultation with the community. That process is underway with the review of the *Regional Air Quality Plan for Southland (1999)*, which needs to be updated to reflect new legislation and community health values.

Initial feedback from the public was received last year through the *Breathe Easy* questionnaire and more will be sought in the future, possibly later this year.

One of our most serious air quality problems affects people living in the built up areas of Gore and Invercargill. They are exposed to the pollutant PM₁₀ in concentrations that regularly exceed the NES standard during the winter months.

At issue is what comes out of our chimneys because the primary cause of the PM₁₀ is the burning of coal and wood in home fires.

As a community we have to make changes if we are to protect our health.

Balancing Act

Staying warm, having affordable heating and improving air quality is a balancing act of priorities that will take time to achieve.

When you consider your choices, it's important that you continue to heat your home and keep warm, otherwise you'll be replacing one health risk (air pollution) with another (cold conditions).



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How serious is Southland's air quality issue?

*Very serious – in 2011 a national stocktake of the annual average PM_{10} concentrations for the Invercargill and Gore airsheds placed them amongst the **top 10 most polluted airsheds** in New Zealand that year.*

Air quality standards

The National Environmental Standards have minimum requirements for outdoor air quality, including levels of PM_{10} . The standard is exceeded when more than 50 micrograms of PM_{10} is measured as a 24-hour average.

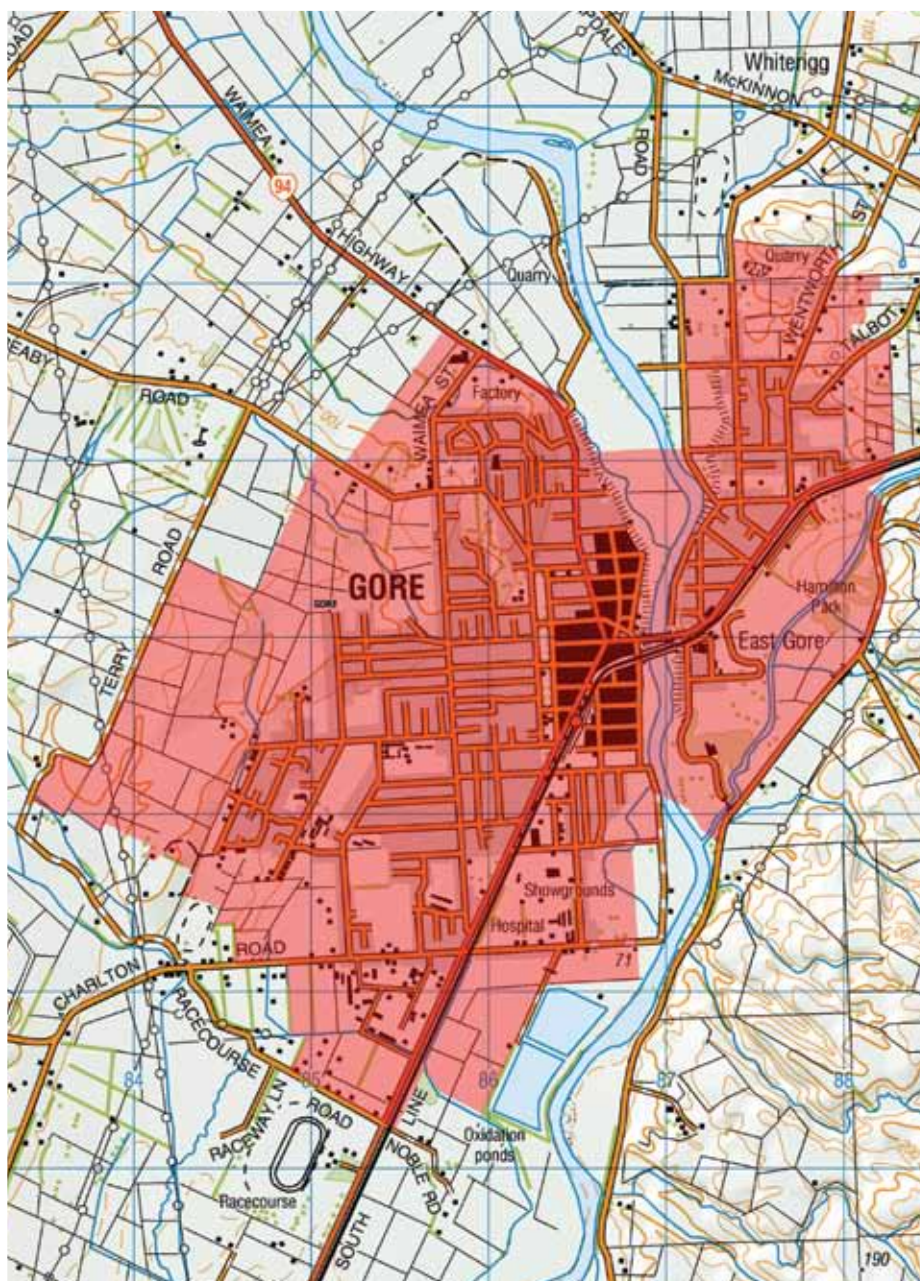
What is an airshed?

An airshed is an area where the air quality has been identified as exceeding or having the potential to exceed the national standards for air quality.

In Southland there are two gazetted airsheds: the built up areas of Invercargill and Gore.

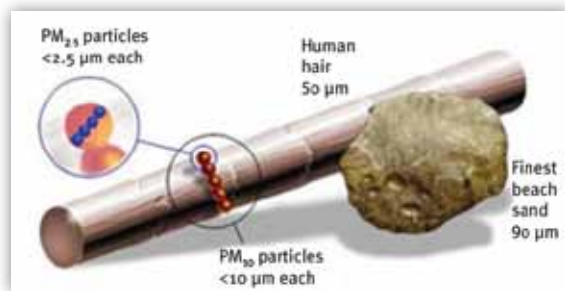
In both these airsheds the national standard for PM_{10} is regularly exceeded during winter. Invercargill typically has more than 20 exceedances and Gore, less than 10.

GORE AIRSHED



What is PM₁₀

PM₁₀ is fine particulate matter smaller than 10 micrometres (10µm) in diameter. PM₁₀ is formed through the combustion of fuels (burning), atmospheric reactions and mechanical processes including crushing, grinding and abrasion.



PM₁₀ is so tiny it is not visible to the human eye and is easily breathed in.

How does PM₁₀ affect our health

Breathing in PM₁₀ is harmful to human health. Healthy people experience mainly nuisance health effects but children, asthmatics and people with other respiratory problems can experience serious health effects. Increases in mortality and other health effects are associated with increases in the 24-hour average PM₁₀ concentrations.¹

Home fires leading cause of PM₁₀

Far and away the biggest contributor of PM₁₀ in the built up areas of Invercargill and Gore is the burning of coal and wood in home fires.

An emission inventory undertaken for Invercargill and Gore found that:

Domestic heating is the main source of PM₁₀ emissions in both areas and accounts for 92% and 96% in Invercargill and Gore respectively. Other sources include motor vehicles (2% and 1%), outdoor burning (<1% and 1%) and industrial and commercial activities (6% and 1%).

What you told us

In March 2013, Environment Southland arranged for a Breathe Easy questionnaire and information flyer to be delivered to most homes in the Invercargill and Gore airsheds. It asked you how we, as a community, should deal with our air quality problems.

A big concern for many respondents was improving air quality without increasing day-to-day costs and making sure people stayed warm in their homes over winter.

The feedback suggested that a point of sale rule, incentives and education programmes would need to be used in combination to improve air quality.

People preferred a number of different options to help pay for any changes, but interest-free loans and partial subsidies were favoured overall.

To see a full summary of the results from the 2013 Breathe Easy questionnaire, please visit www.es.govt.nz/environment/air/breathe-easy-and-the-air-plan-review.



Next steps in the air plan review

Southland's air plan review is currently considering domestic heating, urban and rural outdoor burning, agrichemical use and fertiliser use.

Once all the options have been formulated on these issues, they will go out for public consultation, which could be as early as this year. At that time people will have an opportunity to tell us what they think and contribute to the final decisions.

We know that making changes to help improve air quality won't be easy. So, we're working with the Government and other Southland councils and agencies to look for ways to offer useful information and practical help to those who need it.

In the meantime...

There are some things you can do to make a difference and together, little by little, we will improve the quality of the air we breathe.

✓ Consider insulating your home

An insulated home is warmer, drier and saves you money because it doesn't require as much heating.

✓ Investigate replacing your open fire or old wood/coal burner with a cleaner heating option

A wood or pellet burner that is on the national list of authorised wood burners, or a heat pump, are preferable home heating options for areas that experience air pollution.

✓ Burn as cleanly as possible:

- ➔ Keep your wood stack under cover and burn only dry, untreated wood.

Burning damp wood creates an inefficient, smoky fire.

- ➔ Stock up on kindling so you can easily relight your fire.

Dampening down or banking your fire results in a slow, heavy-smoking chimney.

- ➔ Get your chimney swept every year.

A dirty chimney is a smoky chimney.

- ➔ Get a copy of *Warm Up Wisely: Getting the best out of your wood burner.*

Download this brochure from www.es.govt.nz/environment/air/what-you-can-do or contact Environment Southland for a copy.



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