



Air Quality

Tonkin & Taylor's team of chemical engineers and environmental scientists can assist you with all aspects of air quality management, from obtaining resource consents to developing practical solutions to manage process discharges.

The National Environmental Standards have had a significant impact on how air quality is being managed in different parts of New Zealand. We have current working knowledge of how the regulatory framework is being implemented and good working relationships with key contacts at most regulatory agencies.

We have experience with a wide variety of chemical and manufacturing industries and other activities such as landfills, quarries, intensive farming and roading projects. A growing area of work, both in New Zealand and overseas, is assessment and management of greenhouse gas emissions.

Expertise

- Air pollution assessment and management
 - We have experience in assessing emissions of dust, odour, combustion products and process-specific emissions such as formaldehyde, volatile organic compounds and other chemical contaminants.

We offer a complete range of services to assess and manage the effects of discharges to air, including:

- Resource consent processes
- Evaluating effects of process or formulation changes
- Sourcing and selecting air pollution control equipment
- Developing ambient monitoring and stack testing programmes

- Dust management plans
- Emissions inventories
- Assessments of Environmental Effects
- Health risk assessments
- Liaison with regulatory agencies and community consultation
- Presenting expert evidence at Council hearings and the Environment Court.
- Atmospheric dispersion modelling
 - Dispersion modelling is an important part of evaluating the impact of changes to plant and processes on discharges and compliance with emission limits. We combine use of the latest modelling software with our real-world experience of a range of processes and activities to produce model predictions that are robust and defensible. For remote sites with no site specific meteorological data, we have access to information and tools to develop the necessary inputs for modelling. The modelling software that we routinely use, as appropriate, are AUSPLUME, TAPM, CALMET/ CALPUFF and CALINE4 (for roadway emissions). We also use specialist packages to produce 3D terrain imagery and sophisticated presentations of model outputs to clearly communicate model findings.
- Odour assessment and control
 - Due to their subjective nature, odour assessments can be complex and rely on a range of tools. Our team has the right background, including experience as Regional Council Enforcement Officer, to understand and evaluate potentially offensive and/or objectionable odours.



Techniques for odour measurement and characterisation include:

- Dynamic dilution olfactometry
- Odour dispersion modelling
- Analysis of community consultation and complaints records.

We have hands-on experience to help you develop effective, site-specific odour control measures.

Environmental engineering

We specialise in landfill engineering and works on closed landfills and contaminated sites. Examples of specialist environmental engineering include:

- Design of landfill gas extraction systems
- Specification of flares and landfill gas-to-electricity generators
- Vapour barrier design for protection of indoor air
- Tender documentation and construction inspections.