



Contaminated Land

Tonkin & Taylor has provided specialist services related to contaminated land management for over 42 years.

Over the past 22 years T&T has been involved in significant research, practical trials and development of protocols for investigation, sampling and remediation. We have also carried out many of the more significant and innovative contaminated site and groundwater remediation projects throughout New Zealand during that time and continue to stay at the forefront of technology and implementation in this important area.

Expertise

T&T has extensive experience, both in New Zealand and overseas, in all areas of soil and groundwater contamination chemistry and processes. Our particular strength lies in the areas of site investigation, risk assessment and remediation. Our offshore experience includes a wide range of industry types and soil and groundwater contaminants.

- Pre-Purchase Assessments
 - T&T offers a wide range of pre-purchase or sale assessment and audit services. Our internationally respected team of auditors and site contamination specialists offers pre-purchase/sale inspections to identify potential site contamination and to assess the significance of any contamination in terms of financial cost and constraints on site use.

Examples of recent pre-purchase or pre-sale site contamination assessments include:

- A&G Price (Thames)
- Masport Industries (Auckland)
- New Zealand Insulations (Christchurch and Temuka)
- Methven Tapmakers (Dunedin)
- Former NECAL/ESR Laboratories
- Siemens/United Networks Ltd (North Island)
- Numerous residential subdivisions (New Zealand wide)

- Numerous petrol station and truck stop sites (New Zealand wide)
- Ajax Industries, Mt Wellington
- Temptation Chocolates Ltd, Henderson
- New Zealand Post Auckland Regional Mail facility
- Hanimex New Zealand, Albany
- Coates New Zealand, Christchurch
- Site Investigations
 - We have undertaken several hundred site assessments including preliminary inspections and detailed investigations, often followed by remedial works design, consent applications and monitoring. We have experience with a wide range of contaminant types, including petroleum hydrocarbons, chlorinated and oxygenated solvents, heavy metals, PCBs, PCP and other timber treatment chemicals, pesticides and herbicides.
- Assessments
 - T&T has leading edge capability in environmental risk assessments, and our specialist staff has experience with a wide range of risk assessment work, from simple qualitative evaluations, through cost-effective semi-quantitative and quantitative techniques, to extensive quantitative modelling. Our staff are trained in the use of the latest USEPA models, and are experienced in applying these techniques to real problems to achieve useful and applicable results.
- Representative Risk Assessment Projects:
 - Quantitative human health and environmental risk assessments for a variety of sites, including pesticide manufacturing and storage sites, bitumen plants, gasworks sites and landfills
 - Qualitative risk assessment of a large number of timber treatment, gasworks, service station, landfill and pesticide disposal sites within New Zealand



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- Semi-quantitative risk assessment of the Mobil Oil (New Zealand) Ltd Seaview Terminal, New Zealand and the Caltex Oil (New Zealand) Ltd Timaru Terminal, New Zealand
- Government (FRST) funded research project to develop New Zealand specific environmental risk assessment modelling tools
- Semi-quantitative risk assessment of a wide range of contaminated sites in Marlborough District.
- Policy and management
 - We have extensive experience in preparing site monitoring, management and/or contingency plans for site owners and occupiers for site development projects and to satisfy resource consent requirements. On the 'other side of the fence' our extensive experience with practical contaminated site management means we can assist regulatory authorities to develop policies and practical implementation strategies to manage contaminated site issues.

Experience

Recent policy and management projects includes:

- Marlborough District Council, Contaminated Site Register Database and Code of Practice
- Wellington Regional Council, Technical Manual and Management Plan
- Northland Regional Council, Regional Management Plan (qualitative risk assessment and action plan)
- Otago Regional Council, Contaminated Site Assessment and Management Plan
- Taranaki Regional Council, Contaminated Site Database and Management Strategy

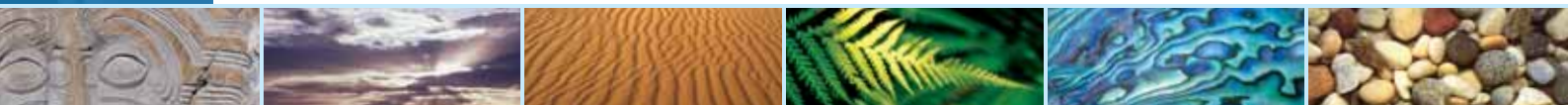
- Waikato District Council, Contaminated Site Screening Guide.

Remediation

T&T has completed a large number of successful remediation projects, including physical cleanup works, cleanup validation, post-cleanup monitoring and management and regulatory "sign off". We are New Zealand's market leaders in brownfields redevelopment works.

Recent remediation projects include:

- Remediation of over 30 sites contaminated by timber treatment chemicals (CCA, Boron and PCP) for industrial and residential uses
- Redevelopment of eight former gasworks sites in New Zealand, including the prestigious Beaumont Quarter development on the former Auckland gasworks site
- Remediation of a range of small industry sites for commercial and residential use, including metal working, chemical storage and manufacturing, coatings and resins, and automotive industries
- One-off remediation programme for a number of Carter Holt Harvey contaminated sites, including the construction of two hazardous waste containment cells
- The assessment and remediation of nine childcare centres in Auckland for the Auckland City Council.



ENVIRONMENTAL AND ENGINEERING CONSULTANTS