

CAPABILITY STATEMENT

Contaminated Land Remediation

WHO WE ARE

GWE Consulting Engineers is a company of highly experienced geotechnical, environmental, civil and process engineers that has an established and expanding capability in Contaminated Land and ground/ groundwater remediation. We work closely with architects, urban designers, planners and landscape architects to provide our clients with all the creative and technical resources they need to design and deliver their project.

Our staff have the skill and experience to deliver projects across a range of specialist areas, from **site investigation, land remediation, foundation engineering, earthworks, infrastructure engineering, stormwater management and pavement design.**

Our brand essence, ***Creative Thinking | Better Environments*** drives the approach to all our work. We always put a premium on the quality of our output, and its relevance to your needs.



Coastal Heavy Metal Remediation

We treat you as valuable team members, and we always keep you fully informed on how the project is progressing. We respect your

time and your style of interaction, and we are always sensitive to your inputs. We are flexible and work to your deadlines and treat your time requirements with the highest regard.

WHAT WE DO

GWE Consulting Engineers has built a reputable track record in Contaminated Land and Remediation in recent years with the addition of accredited and certified engineers who have joined our team. This complements the skills and disciplines of many of our longer serving staff.



Commercial Detailed Site Investigation

We undertake the following Contaminated Land related work:

- **Preliminary and Detailed Site Investigations**
- **Remediation Action Plans**
- **Site Management Plans**
- **Site Validation and Certification**
- **Professional Evidence for Consent Hearings and Environmental Court**

Our company offers a diverse range of environmental specialist

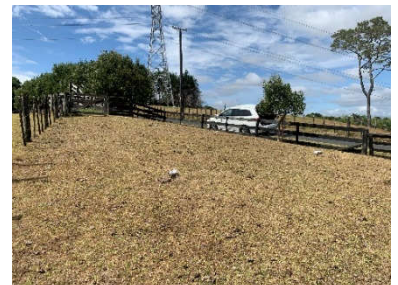
services, drawing on solid professional experience across Residential, Commercial and Infrastructure projects. Team members have completed key remediation projects in New Zealand and the United Kingdom.

We collaborate closely with a select range of specialist companies and individuals, whose work meets our standards, to offer clients a unique consulting team with the highest level of skill required for each project.

OUR SERVICES

Preliminary and Detailed Site Investigations

The first stage of contaminated land investigation is to develop a thorough understanding of the site history and the level of soil contaminants. These reports draw upon a wealth of scientific knowledge relating to the effects of contaminants arising from historic land uses on human and ecological health. The Ministry for the Environment have a specific set of guideline documents outlining the process of contaminated land investigation and reporting.



Rural Sheep Dip Sampling, Coatesville

GWE Consulting Engineers

Ground Floor Oceanbridge House
25 Anzac Street Takapuna Auckland 0622
P 09 445 8338

GWE
CONSULTING ENGINEERS

CAPABILITY STATEMENT

Contaminated Land Remediation

GWE Consulting Engineers has significant knowledge and understanding of the National Environmental Standards and Council requirements to address the effects of ground contaminants to a proposed development, human health or environmental receptors.

Remediation Action Plans

Significant contaminant linkages between contaminant sources and receptors including humans and the environment must be addressed early in the consenting process. Once the requirement for remediation has been identified, GWE can provide detailed remediation design and methodology to match the nature of the development and to provide an environmentally sustainable outcome. In most cases we can avoid costly landfill disposal costs with in-situ remediation and management. Working closely with our Clients we can provide effective remediation based on budget and timeframe. The wide-ranging multidisciplinary nature of GWE gives us the advantage that our remediation design considers the concurrent development engineering requirements such as geotechnics, infrastructure and civil design.



Olympic Park, London In-situ Soil Washing

Site Management Plans

Remediation is not always required. Effective and well-considered site management is routinely adopted to manage the risk to human health when developing a contaminated site. GWE has a proven track record of achieving consent through effective site management protocols. Our diverse range of experience means we can provide a range of effective site management plans for land development. This works particularly well where marginal contaminant exceedances exist on land being developed for residential subdivision where Public Open Space or other acceptable receiving environments are available.



Site Management Planning, Auckland

Site Validation and Certification

Effective remedial design should be closely monitored and certified by a qualified professional. GWE is regularly involved with contaminated land and groundwater remediation projects with strict clean up goals and validation criteria. Site verification is commonly undertaken by visual walkover surveys and laboratory sample analysis. Our competent engineers can provide the advice to achieve validation with minimal variation and re-working. We can summarise our findings into a validation certifying report which is required to satisfy Council consent conditions.



Boat Yard Remediation Validation, Opua

Professional Evidence

Frequently, Resource Consent hearings or Environmental Court witness evidence is required to achieve Consent. The experience and qualifications that GWE senior staff hold enables us to represent our Clients and stakeholders in a legal setting. Our experience includes detailed responses to Council queries, Resource Consent hearing and Environmental Court attendance.

GWE Consulting Engineers

Ground Floor Oceanbridge House
25 Anzac Street Takapuna Auckland 0622
P 09 445 8338

CAPABILITY STATEMENT

Contaminated Land Remediation

RELEVANT PROJECT EXPERIENCE OF GWE PERSONNEL

Opuia Boat Yard Remediation

A historic boat yard designated for redevelopment was found to be contaminated with widespread Copper and Lead and localised hydrocarbons. GWE provided detailed remediation advice and validation and achieved the remediation goals in a single earthworks phase. The project is under strict remediation protocols following an Environmental Court hearing.

Commercial Units, Ponsonby

Investigation of deep hydrocarbon contamination from a historic on-site tank. Address corrosive effects on concrete, off-site disposal and contaminated land requirements for the development.

Krispie Kreme, Auckland

Preliminary and Detailed Site Investigation reporting of site with a highly variable industrial background revealed the potential for significant contaminant linkages.

Rural Subdivision, Coatesville

GWE provided a detailed site investigation and report for a proposed subdivision with a history of horticulture and livestock spraying. A detailed regulatory assessment enabled GWE to

mitigate the Contaminated Land requirements for the Client as we were able to determine that contaminants were below natural background threshold limits for the geological setting.

Site Management Plans for Multi-Unit Developments

Remedial design and long-term management of contaminated soils to minimise the requirements on the developer.

Retirement Villages, New Zealand

Contaminated land investigation and remediation design to enable Resource Consent.

Asbestos Remediation, Kerikeri

Detailed contaminated land investigation and remediation design for residential and commercial development. Included validation of remediation to strict clean-up goals.

Olympic Stadium, London

Detailed geotechnical investigation and design of ground remediation for hydrocarbon impacted soils and water.

Karaka Sports Park, Pukekohe

Development of a multisport clubhouse and changing room for the proposed redevelopment and expansion of the sports park.

KEY PEOPLE

Gareth Williams, Director

Gareth is a process engineer and specialises in water and wastewater infrastructure for commercial and residential developments. Gareth has commercial oversight of all our projects and actively engages in client relationship management.

Edward Collings, Senior Geotechnical Engineer – Certified Environmental Practitioner

Edward is responsible for managing our Contaminated Land team and producing detailed remediation designs. While in the UK, Edward worked on a significant ground remediation project for the London Olympic Games.

Christina McPherson, Senior Geotechnical Engineer

Christina is a chartered geotechnical and contaminated land engineer. She has over 15 years of local and international experience assessing sites, implementing remedial works, preparing validation reports as well as action plans to prevent re-contamination.

Sandra Hamler, Environmental Compliance Manager

Sandra has solid industry experience in the environmental discipline from her master's degree in environmental Geology and experience with Stevensons Quarry, Drury as a testing Engineer. Her master's thesis was focussed upon heavy metal remediation.

GWE Consulting Engineers

Ground Floor Oceanbridge House
25 Anzac Street Takapuna Auckland 0622
P 09 445 8338

