

# Land Development + Buildings

Land development and population growth go hand-in-hand. However, the development process can involve many hurdles.

Whether greenfield, brownfield, marginal, or contaminated, **Tonkin + Taylor's** Land Development + Buildings team delivers customised site and infrastructure solutions that navigate regulatory and land use constraints and help get projects 'out of the ground'.

# Our services

We specialise in residential, commercial, mixed use, educational and institutional, and recreational development projects.

We combine technical expertise with innovation and commercial awareness to offer a comprehensive range of integrated services throughout Aotearoa New Zealand. Our approach is designed to not only save clients' money and increase their return on investment but also to protect the longevity of assets, and the environment, with built-in resilience and sustainability.

By working collaboratively with our clients, we fully understand project requirements and our support covers every phase of land development. From site viability studies and detailed risk assessments; through to contaminated land remediation, infrastructure design, and construction supervision; and on to stormwater management and environmental monitoring.

## Advisory

- Business case development
- Sustainability
- Carbon offsetting and mitigation
- Climate change adaptation planning
- Stakeholder engagement
- Value engineering

## Investigations and Planning

- Feasibility studies
- Preliminary and detailed site investigations
- Subsurface assessments
- Material studies
- Risk assessments
- Forensic engineering
- Site classification assessments
- Pre-purchase assessments
- Desktop assessments
- Soil classification for onsite reuse or offsite disposal
- Complex soil structural interaction analysis
- Seismic hazard and flood evaluations
- Geological 3D modelling
- Site assessment for environmental auditing
- Contaminated soil and groundwater management
- Hydrogeological assessments
- Master planning
- Resource/land use consent acquisition
- Resource Management Act (RMA) planning
- Ecological studies, including offsetting and mitigation options
- Environmental impact analysis

## Contaminated Land

- Pre-purchase potential contamination assessments
- Site contamination assessments, investigations, evaluations
- Risk characterisation and assessment
- Soil gas measurements
- Ground water sampling
- Air quality calculations and modelling
- Quantitative human health/environmental risk assessments
- Qualitative and quantitative modelling
- Site monitoring and management plans
- Remediation planning, design, and implementation
- Post remedial monitoring and management
- Environmental effects assessments

## Design and Construction

- Geotechnical, civil, and hydrogeological engineering
- Hydraulic and water resources engineering
- Liquefaction susceptibility and mitigation design
- Low damage design technologies
- Excavations
- Soil and groundwater remediation
- Infrastructure design
- Drainage and sewer construction
- Wetland design
- Foundation modelling and design
- Ground improvement works
- Slope remediation design
- Earthworks specifications and supervision
- Perimeter retention design
- Retaining structures
- Pavement design
- Landslide stabilisation
- Construction supervision, testing, and monitoring
- Integrated resource management
- Stormwater management
- Noise and vibration monitoring
- Environmental impact monitoring

# Track record

## **LEAD Alliance Housing Development Programme, Auckland**

Surveying, geotechnical investigation, civil design, infrastructure planning, stakeholder engagement, and consent acquisition for earthworks and infrastructure for this 'first of its kind', large-scale, brownfield land development programme; followed by the removal of old state housing, land remediation, and civil construction, including roads, parks and utilities.

## **Drury South Crossing, Auckland**

\$100m project value. Design of all civil works including three waters, all dry services, flood management assessment and design, wetland and stream diversion design, roads, bulk earthworks and terrain design of a 360ha development. Will include NZ's largest business park once completed and comprises 180ha of business park development, 90ha of stormwater management, open space and 40ha of residential development all of which is currently under design or construction.

## **Kākātangiata Master Planning, Palmerston North**

Environmental and geotechnical hazard assessments for incorporation into future development considerations to support the proposed 300ha growth expansion project, with the aim of creating 5500 new houses over the next 10 years.

## **Downtown Infrastructure Development, Auckland**

\$300m project value. Overall programme leadership of a multi-disciplinary, multi-agency project team to enhance and integrate systems within the downtown waterfront precinct. Other contributions included: strategic planning, engineering, environmental science, design management, mana whenua engagement, and Single Stage Business Case (SSBC) assessment.

## **Te Pae Convention Centre, Christchurch**

\$380m project value. Geotechnical, civil and hydrogeological planning and design, including contaminated land management and seismic hazard risk assessment for the construction of a new convention centre building with capacity for 1400 people.

## **Town Hall Preservation, Wellington**

\$135m project value. Provided geotechnical and contaminated land expertise to support the development of high-level protection against future seismic activity, along with troubleshooting to ensure the building's heritage was preserved throughout the construction phase, including screw piles in the basement, foundation work, and underpinning work for structure.

## **Waipapa Hospital Building, Christchurch**

\$450m project value. Worked with the structural engineer to design the foundation to resist loads from the base isolated columns as well as groundwater pressures, and advised on geotechnical, civil, and environmental engineering throughout the construction of a 62,000m<sup>2</sup>, six-storey building with over 400 beds.

## **The Living Pā, Te Herenga Waka Marae Precinct, Victoria University**

\$40m project value. Geotechnical investigations and laboratory testing; through to geotechnical engineering and design services, including liquefaction assessment, option development, ground contamination, foundation modelling, slope stability and retention design, and risk and opportunity assessment. Low Damage Design technologies were integrated into the redevelopment.

## **PPP3 School Build Programme, Multiple Locations**

\$220m project value. Geotechnical and civil planning and design inputs; through to preparing the suite of application documentation for four new schools, including the relevant 'regional' resource consents, outline plan, and land use consents.

## **Justice and Emergency Services Precinct, Christchurch**

\$300m project value. Geotechnical, civil, RMA planning, contaminated land, hydrogeology, and air quality services; through to construction monitoring of the 42,000m<sup>2</sup> development – the largest multi-agency government project in New Zealand's history.

## **Commercial Bay, Auckland**

Geotechnical design of all aspects in the construction of a 39-floor graduated glass skyscraper, including permanent and temporary retention, anchorages, underpinning works, design of foundations, assessment of groundwater effects and flood hazard risk and civil design of all external services.

## **36th Americas Cup Marine Assessment, Auckland**

\$260m project value. Ecological assessments to inform resource consents for the construction of complex waterfront infrastructure in a sensitive marine environment, including considered effects on water quality, marine habitats, coastal birds and marine mammals.

## **Taumanu Reserve, Onehunga Foreshore**

\$32m project value. Environmental, stormwater, ecology, civil and design aspects of the restoration of the Onehunga foreshore to create the Taumanu Reserve – a 6.8-hectare recreational park formed on reclaimed land in the Manukau Harbour.

# Contact us



**Shiraz Soysa**

**Sector Director – Land + Buildings**

Residential + Villages

☎ +64 9 359 2756

✉ [ssoysa@tonkintaylor.com](mailto:ssoysa@tonkintaylor.com)



**Peter Norfolk**

**Discipline Director – Civil**

Infrastructure

☎ +64 9 355 0702

✉ [pnorfolk@tonkintaylor.com](mailto:pnorfolk@tonkintaylor.com)



**Karin Speight**

**Sector Lead – Land Development**

Pre-purchase + Residential

☎ +64 9 355 6064

✉ [kspeight@tonkintaylor.com](mailto:kspeight@tonkintaylor.com)



**Lisa Dowson**

**Sector Lead – Water**

Infrastructure

☎ +64 9 529 8054

✉ [ldowson@tonkintaylor.com](mailto:ldowson@tonkintaylor.com)



**Dave Chiswell**

**Sector Lead – Buildings**

Commercial + Multi-storey build

☎ +64 9 355 0746

✉ [dchiswell@tonkintaylor.com](mailto:dchiswell@tonkintaylor.com)



**Colin Shields**

**Sector Lead – Transport**

Transport Planning

☎ +64 9 529 8104

✉ [cshields@tonkintaylor.com](mailto:cshields@tonkintaylor.com)