



Land Development

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

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

A green dragon with a yellow sun and a yellow arrow are visible in the background. The dragon is a stylized, cartoonish creature with a long, winding body and a large, open mouth. The sun is a simple yellow circle with rays. The arrow is a yellow arrow pointing upwards and to the right.

Tonkin + Taylor acknowledges the First Nations peoples of Australia as Traditional Custodians of the land and waterways on which we work and live, and recognise their continuing connection to land, water, and culture.

We pay our respects to their Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.

About us

Tonkin + Taylor is a leading employee-owned environmental and engineering consultancy. With offices across Australia and New Zealand, we service these areas, the Pacific and SE Asia.

In Australia, our diverse team provide specialist services across a range of practice areas, including Coasts + Water, Geotechnical, Geosciences, Pavements and Waste. We are renowned among our diverse range of clients for delivering innovative, sustainable and resilient solutions.

Our reputation for professional excellence, strong collaboration and trusted partnerships is one we continue to be very proud of as we work with our clients and communities to embrace the challenges and opportunities around us as we strive to meet our purpose:

Together, we create and sustain a better world.

Our team are experienced, knowledgeable, and passionate about what they do. We look forward to being your partner of choice in finding sustainable solutions.



Our services

Our Land Development team specialises in the full mix of build - residential, commercial, industrial, educational and institutional, and recreational development projects. Irrespective of land use or scale, our experience adds substantial value from the moment a potential site is being evaluated.

We combine technical expertise in geotechnical, hydrogeological, and environmental engineering with innovation and commercial awareness to offer a comprehensive range of integrated services. 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.

We have EPA Auditors practising across Contaminated Land and Industrial Facilities.

We are a corporate member of ANCOLD and a number of our consultants are registered professional engineers.

By working collaboratively with our partners at Chadwick Geotechnics, our support covers every phase of land development project requirements. From site viability studies and detailed subgrade assessments; to infrastructure design, groundwater and soil remediation, and onsite construction supervision; through to stormwater management and environmental monitoring.

Environmental and auditing

- Pre-purchase assessment
- Preliminary and detailed site investigations
- Soil classification for off-site disposal
- Risk assessments
- Soil and groundwater remediation
- Environmental impact assessment
- Environmental monitoring
- Noise and vibration monitoring
- Air quality
- Site assessment for environmental auditing
- Contamination assessment
- Sodic and acid sulfate soil analysis and management
- Hydrogeological assessments.

Pavement engineering

- Pavement rehabilitation design
- Road and hardstand design
- Near surface soil conditions
- Purpose specs for pavements.

Geotechnical

- Geotechnical Investigation
- Geotechnical ground conditions assessment and interpretation including design parameters
- Pile unit stresses
- Lateral forces
- Deep and shallow foundation design
- Ground deformation and settlement analyses
- Complex soil structural interaction analysis
- Geotechnical retention design for a range of basement and temporary support types
- Basement excavation and design
- Groundwater modelling and drawdown assessments
- Slope stability assessments
- Landslide risk assessment
- Earthworks design and specifications
- Construction observations
- Instrumentation and monitoring.

Track record

Arden Gardens, Arden Macaulay, Melbourne CBD

The modern mixed-use development at the heart of Melbourne's Arden Macaulay urban renewal initiative, the Arden Gardens, the precinct's first notable mixed-use development undertaken by CBD Development Group. With a sloping site, variable ground and shallow groundwater conditions, Arden Gardens needed strong geotechnical and environmental advice to meet its quality objectives. Provided geotechnical, environmental and hydrogeological investigation and advice, and specialist drilling services.

Merrifield Industrial Estate, Donnybrook, Vic

A 150 Ha site in Donnybrook is being developed as an industrial/commercial hub in the northern suburbs of Melbourne with future development to incorporate mixed-use development. T+T has undertaken detailed investigation of the site, hydrogeological assessment and provided pavement and geotechnical engineering services for the design and construction of the subdivisional road network and the widening adjoining arterial roads and the installation of stormwater and sewage systems. This has included a management plan for sodic soils and a plan for the re-use of an existing soil stockpile containing up to 20,000 m³ of material.

Eynesbury Estate, Melton South, Vic

A 4500- lot residential suburban development of a former sheep grazing property. T+T has provided geotechnical and pavement engineering services for the internal road network, the upgrade of an existing arterial road, two new arterial roads which together will link Melton to Werribee and the lining of a waterway in highly expansive and dispersive soils which involved a hydrogeological assessment.

Kinley Estate, Lilydale, VIC

The Kinley Estate project is a major undertaking to redevelop the former Lilydale Limestone Quarry for residential, retail, commercial and community uses. As part of the redevelopment, the quarry is being backfilled with approximately 9 million m³ of fill from an RL of 10m to an RL of 130m. We provided settlement assessments, earthworks specifications, site investigation (including 50 boreholes), dewatering sump design, bridge foundations and soil-supporting structures advice, groundwater dewatering monitoring and recovery modelling, pavement, sewer, retarding basin advice and design, plate load test and interpretation, and on-site supervision. Services in accordance with AS 3798-2007.

Ryman Healthcare Retirement Villages

T+T engaged to help deliver their flagship project. At due diligence stage, T+T provided an understanding of the ground-based risks involved and was contracted to carry out geotechnical, environmental, and hydrogeological assessments of the site. Additional groundwater investigations allowed the installation of a well for irrigation purposes, in line with Ryman's sustainability objective. We also provided pavement design for the site.

Officer South, Vic

This 800-lot residential development in the south-east of Melbourne was developed on former grazing land. T+T was engaged to assess the potential for soil contamination from earlier land use and for dryland salinity due to high groundwater. We also provided geotechnical and pavement engineering services for the residential development and earthworks control for fill used to raise site levels by up to 2 m.



Victoria Road Estate, Bendigo, Vic

A small 23 Ha site being redeveloped as an industrial estate. T+T has conducted a preliminary site assessment including land contamination assessment and a geotechnical investigation of the site to identify risks to the proposed development. We have also undertaken the design of pavements for the subdivisional road network and provided geotechnical advice on building foundations, slope stability and pavement construction. Furthermore we have provided a consequence assessment for a retarding basin that is to be constructed on an existing watercourse that flows through the site with recommendations for the future maintenance and monitoring of the earthfill embankments which will impound the basin.

Melbourne Art Precinct Transformation (MAPT)

Geotechnical services to support a contractor during tender, including comments on geotechnical risks in the design provided by a third party, opportunities to potentially save time and money with alternative geotechnical design approaches and comments on other options and ideas put forward by the client.

Richmond (Confidential Project)

Geotechnical and contamination assessment for a development covering at least 32,000m² comprising a hotel and office buildings. The ground level is expected to include pedestrian laneways, significant landscaping and integration with the site's heritage.

58-Storey Building, 560 Lonsdale Street, Melbourne CBD

Geotechnical services included a site investigation, developing a ground model in a geologically complex site and advice for pile unit stresses and geotechnical design of a single infill pile. We also advised on earthworks for site trafficability and piling platforms for a 58-storey building with no basement.

17-Storey Structure, 88 Laurens Street, North Melbourne

Geotechnical services including a site investigation, developing a ground model including geotechnical parameters and groundwater data, analysis of the proposed basement retention system using the geotechnical model and the fine element software program PLAXIS-2D, review the PLAXIS analysis output to assess the ground movements in the vicinity of the neighbouring structures and along all site boundaries, inform the detailed structural assessment of the proposed retention system from the PLAXIS analysis and perform a hydrogeological assessment for a proposed 17--storey structure with a basement.

12-Storey Building, 31-35 Victoria Pde, Fitzroy

Geotechnical services including a site investigation, advice for shallow and deep foundations, excavation conditions and pavement design for a 12-storey building with one basement level.

9-Storey Building, 9-11 Williamsons Road, Doncaster

Geotechnical and contamination assessment services including site investigation, advice for shallow and deep foundations, excavation conditions, retaining wall design parameters, construction support and ground subsidence monitoring associated with the excavation work for a 9-storey building with a 4-level car parking basements.

5-Storey Building, 344-360 St Kilda Road, St Kilda

Geotechnical and contamination assessment services including site investigations, advice for shallow and deep foundations, excavation conditions, retaining wall design parameters, construction support and ground subsidence monitoring associated with the excavation work for a 5-storey building with three basement levels.

Contact us



Rhian Owen

Sector Lead – Land + Buildings

☎ +61 3 8770 0919

✉ rowen@tonkintaylor.com



Prasanna Punchihewa

Principal Geotechnical + Pavement Engineer

☎ +61 3 8796 7911

✉ ppunchihewa@tonkintaylor.com



David Glover

Principal Geotechnical Engineer

☎ +61 3 8796 7951

✉ dgtlover@chadwickgeotechnics.com.au



Colin Dailey

Practice Lead - Pavements

☎ +61 3 9863 8671

✉ cdailey@tonkintaylor.com



David Harr

Associate Geotechnical Engineer + Basements Specialist

☎ +61 3 8796 7960

✉ dharr@tonkintaylor.com



Tim Vass

Senior Principal Environmental Consultant

☎ +61 3 8352 3118

✉ tvass@tonkintaylor.com



Wendy Greatbatch

Practice Lead – Geotechnical + Geosciences

☎ +61 3 8770 0953

✉ wgreatbatch@tonkintaylor.com



Tim Chadwick

Strategic Growth Director

☎ +61 3 8796 7901

✉ tchadwick@tonkintaylor.com