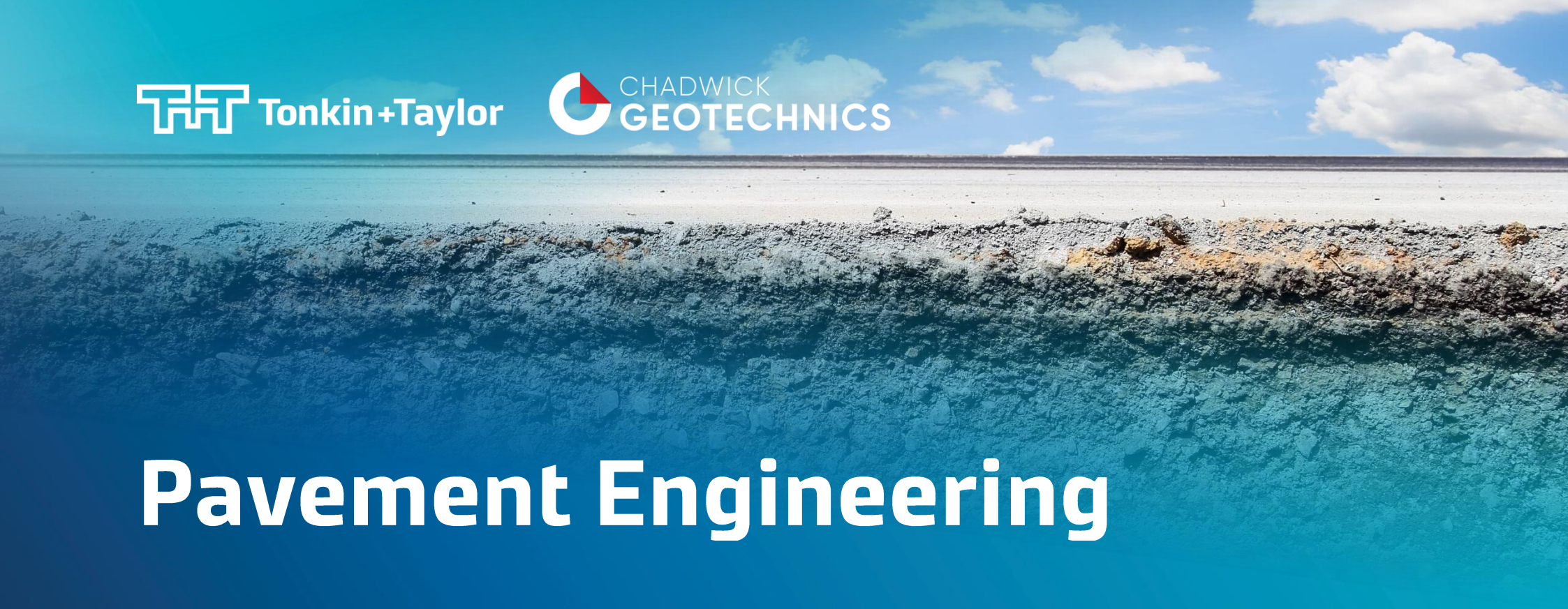




Pavement Engineering

Whether it's designing new assets, extending pavement life, or investigating failures, we work alongside clients to help ensure roads, airports, industrial hardstands and freight networks perform over the long haul.

Tonkin + Taylor's Pavement Engineering team partners with clients to deliver reliable, sustainable, and cost-effective pavement solutions — helping extend asset life, minimise maintenance, and meet the demands of growing infrastructure.



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 Pavement Engineering team brings together deep technical expertise and practical experience to deliver long-lasting, cost-effective pavement solutions.

We support a diverse range of sectors, including transport, land development, energy, water, and heavy industry. Our clients — from developers and councils to contractors and transport authorities — trust us to deliver designs that are compliant, constructable, and built to endure.

Our reputation is grounded in technical excellence, clear communication, and trusted relationships. We're proud to partner with clients to help reduce whole-of-life costs, enhance infrastructure resilience, and support sustainability goals — from initial concept through to rehabilitation and reuse.

Our team is collaborative, outcomes-driven, and passionate about building infrastructure that connects communities and supports economic growth.

Design + rehabilitate

Tailored solutions for performance, constructability, and long-term value — we deliver practical, standards-compliant designs that reduce lifecycle costs, meet regulatory requirements, and perform under real-world conditions.

- Flexible and rigid pavement design
- Overlay, inlay, and reconstruction design
- Pavement stabilisation treatment design
- Residual life assessment
- Surfacing options and performance advice

Investigate + diagnose

Clear insights to guide confident decision-making. We provide evidence-based assessments of suitability, structural capacity and risk to prioritise interventions and avoid over-design and costly rework.

- Site inspections and condition assessment,
- Site investigations, test pitting, pavement dippings and coring
- Falling Weight Deflectometer (FWD) testing
- Ground Penetrating Radar (GPR) and non-intrusive surveys
- Deflection testing and back-analysis
- Laboratory testing of pavement materials
- Dilapidation and condition surveys

Engineer for heavy loads

Specialist designs for complex freight, defence, and industrial pavements — we engineer for safety, durability, and compliance, ensuring performance even under extreme load conditions where failure isn't an option.

- Pavements for ports, terminals, intermodal facilities and airports
- Runways, taxiways, and hardstands
- Customised heavy-load solutions for non standard vehicles

Sustainable pavement solutions

Lowering environmental impact without sacrificing performance - our designs align with ESG goals and reduce both environmental and financial costs, helping you meet procurement requirements and community expectations.

- Integration of recycled materials (RAP, crushed glass, recycled crushed concrete, crumb rubber)
- In situ material reuse and stabilisation
- Design for durability and minimal maintenance

Forensic investigations and expert advice

Trusted expertise when it matters most - we help diagnose issues, resolve disputes, and deliver defensible technical advice that protects your project, budget, and reputation.

- Forensic investigation of pavement failures
- Performance analysis and remediation advice
- Independent design review and expert witness support

Track record

Corio Quay Upgrade, Geelong

T+T worked alongside a multidisciplinary design team and contractor to support the upgrade of Corio Quay for the new Spirit of Tasmania terminal. The site featured mixed-condition pavements and variable ground conditions due to historical use and reclamation works. Our role included geotechnical, environmental, and pavement investigations to assess existing pavement and hardstand areas for retention and reuse - supported by analysis of deflection testing data. We developed fit-for-purpose treatment options for both new and existing pavement areas, considering future usage, risk, and constructability under tight delivery timeframes. During construction, we provided responsive technical support and supervision to address unforeseen site conditions and deliver cost-effective solutions.

Stockyard Hill Wind Farm – Western Victoria

T+T designed over 110 km of temporary and permanent pavements for the 149-turbine Stockyard Hill Wind Farm — one of Victoria's largest wind energy projects. A key challenge was developing economical pavement solutions suited to high construction-phase traffic volumes, followed by minimal long-term use, in a remote location with limited access to conventional materials. Our scope included the design of pavements and hardstands optimised for heavy construction loads - including delivery of a 170-tonne transformer — using locally sourced materials. We also provided geotechnical and pavement advice throughout construction, including quality assurance support for earthworks, pavements, and hardstand construction, as well as specifications and assessments for fill platforms and existing pavement areas.

St Germain – Clyde North, Victoria

Located in Melbourne's south-eastern growth corridor, St Germain is a large residential development spanning variable and complex ground conditions. T+T undertook detailed geotechnical investigations to characterise subgrade conditions and inform targeted pavement design across the site. We delivered geotechnical advice and pavement designs for a wide range of applications - including the internal road network (flexible and rigid pavements), collector roads, commercial and shopping precincts, and upgrades to external Department of Transport roads. Our designs were tailored to the site's varying geologies and included opportunities to incorporate recycled materials within pavement layers.

Mordialloc Freeway – Melbourne, Victoria

T+T, in partnership with Chadwick Geotechnics, was the lead geotechnical and pavement designer for the 9 km Mordialloc Freeway — a major arterial link connecting Dingley Bypass to Thames Promenade. The alignment crossed soft ground, wetlands, and historical landfill areas, requiring innovative design to manage settlement, landfill gas risks, and constructability. T+T provided end-to-end support from tender through detailed design and construction, including geotechnical investigations, contamination management, and pavement engineering. The pavement designs were tailored to suit challenging ground conditions and informed by an extensive field and laboratory testing program. Our scope included pavement design over soft soils, advice on embankment and foundation treatments, and construction support across earthworks and pavement packages.



Contact us



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