



# Climate Change + Sustainability

Scientific rigour and technical expertise are often sparse amongst in-house teams, yet essential for addressing sustainability and climate change issues in a pragmatic, robust and cost-effective manner.

**Tonkin + Taylor's** specialist Climate Change + Sustainability team is driven to make a difference. Combined with years of consulting experience, our deep pool of technical expertise enables us to lead the way, providing effective advice for clients on a full range of climate change and sustainability impacts.



*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 focus

Tonkin + Taylor is at the forefront of sustainability and climate change work. Our pragmatic consulting solutions are underpinned by a dedicated team of specialists, scientific rigour and proven technical expertise.

We support clients across the full spectrum of climate change and sustainability services — from strategic assessments and planning to on-the-ground implementation. Our team works with private companies, councils, infrastructure utilities, and central government agencies to develop solutions tailored to their unique needs. We also provide board and management-level training on core climate change and sustainability concepts.

Our specialist **climate change services** include:

- **Climate risk assessments (physical and transition)**
- **Scenario development, analysis and iteration**
- **Metrics, targets, and financial quantification**
- **Credible transition planning**
- **Climate-related disclosures**
- **Carbon inventories and emissions reduction planning**

We offer tailored tools to streamline emissions measurement and reporting across various scales, from product and organisational levels to community and construction projects, covering both direct emissions and value chain impacts (Scope 3).

Our expertise in climate disclosures and risk assessments is widely recognised. Our team was selected to develop national climate risk guidance for the NZ Ministry for the Environment and has contributed to landmark projects such as New Zealand's first National Climate Change Risk Assessment (NCCRA). We also developed climate change sector scenarios for the Health and Telecommunications sectors.

The breadth of our environmental and engineering services means that we can support clients turn climate adaptation planning into tangible projects. From groundworks and sea walls to wetlands - our diverse teams have a full range of experience to help clients address climate adaptation challenges.

Throughout our services, we work together with our clients to create and sustain a better world. Our approach is collaborative and pragmatic—from project inception to transition planning and disclosures.



# Our services

## Climate risk and adaptation

- Climate related disclosure support
- Climate risk and opportunity assessments
- Scenario development and scenario testing
- Adaptation and resilience planning (including dynamic adaptive pathways)
- Innovative tools and approaches for communicating climate change impacts
- Monitoring, evaluation, and reporting frameworks for adaptation
- Natural hazard modelling including coastal, flood, landslide, streamflow, etc.
- Loss and damage assessments
- Training, workshop facilitation and engagement.

## Climate change mitigation

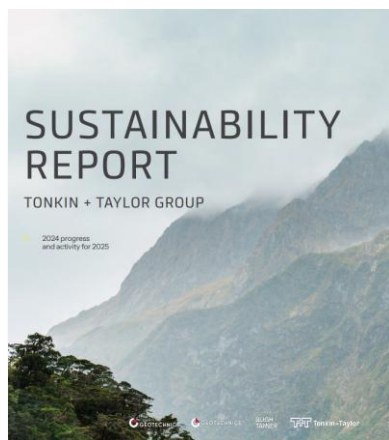
- Community, Project, and Product carbon footprints to meet GHG Protocol and related standards, and PAS 2050 including Life Cycle Assessments
- Corporate GHG emissions inventories of operations and assets to meet ISO 14064-1:2018 and GHG Protocol Corporate Standard requirements including Scope 3
- Emission Reduction Plans including feasibility assessments, marginal abatement cost and net present value analysis.

## Transition planning

- Transition plan development covering mitigation and adaptation. Support ranges from XRB compliance approach to business integrated plans aligned with international best practice guidance for *credibility*.

## Wider sustainability services

- Sustainability strategy and planning (including impact mapping, theory of change development, metrics and stakeholder engagement)
- Waste strategies, circular economy, and product stewardship
- Environment Health + Safety management systems and audits
- Biodiversity and nature-based design solutions
- Materiality assessments and benchmarking
- Sustainability and ESG reporting
- Sustainable infrastructure and construction
- Sustainable supply chains (i.e. EcoChoice Aotearoa & GECA)
- Environmental planning services
- Digital sustainability solutions
- GIS mapping and analysis.



*Further details about our sustainability services and impact are set out in our 2024/25 Sustainability Report.*

[Read and download the report here.](#)



Tonkin + Taylor has achieved *Ekos*-certified zero carbon status. Our goal is to be climate positive.

# Track record

## Climate risk, adaptation and disclosures

### City of Kingston Climate Change Hazards and Risk Assessment

T+T is working on a climate change hazard and risk assessment for the City of Kingston. This has involved a gap analysis, stakeholder engagement to understand community vision and values, coastal hazard exposure, risk and vulnerability assessment and risk prioritisation.

### Victoria 'Future Coasts' Coastal Vulnerability Assessment

T+T has had significant involvement in the Victorian Government 'Future Coasts' coastal vulnerability assessment project, with specialist staff providing technical advice (peer review) for the four pilot Local Coastal Hazard Assessment projects for Bellarine Peninsula, Port Fairy, Western Port and Ninety Mile Beach – Gippsland Lakes.

### Port Phillip Coastal Hazard Assessment Review

Specialist T+T staff provide expert peer review and input into the Port Phillip Bay Coastal Hazard Assessment led by CSIRO.

### Christchurch City Holdings Climate Disclosures

T+T worked with CCHL to support climate-related disclosures for the group. This involved consolidating drivers and scenarios from the subsidiaries into group level scenarios; and developing a group level methodology to consolidate and rate risks. We also consolidated the subsidiaries' individual GHG inventories into a group inventory for reporting on the Group's GHG emissions. Subsidiaries included Christchurch International Airport Limited, Lyttleton Port, Orion Energy, Citycare Water, and EcoCentral.

### Climate Scenarios for Telecommunications and Health Sectors

T+T developed climate scenarios for the telecommunications and health sectors. The scenarios align with NZ disclosure guidance (XRB) and include an orderly, disorderly and hothouse scenario. The project involved close collaboration with sector specialists and technical working groups. The final set of scenarios will assist entities in those sectors to assess climate risks and test their strategies in relation to climate change. [Link here for Telecoms report.](#) [Link here for Health Sector report.](#)

### Auckland Council Climate Change Disclosures

T+T assisted Auckland Council and associated Council-controlled organisations (Port of Auckland, Watercare, Auckland Transport) with their climate disclosure work programme. This was NZ's first Council-level assessment under the XRB Standards, developing a consistent approach to develop climate-related disclosures – for both physical and transition risks, in alignment with TCFD requirements. The project also involved capacity building and training for Auckland Council staff.

### Trust Management Climate Change Disclosures

T+T supported Trust Management (a large property investor) complete a physical and transitional risk assessment for a portfolio of properties related to their climate-related disclosure. This involved support with tailoring industry scenarios in addition to undertaking a climate risk and opportunity assessment.

### Skellerup Transition Plan

Skellerup is a manufacturing company and the second largest manufacturer of food-grade dairy rubber-ware globally. T+T was retained to support Skellerup's initial climate change transition plan, including emissions reduction and adaptation planning. The project included a full review of the company's climate-related risks and opportunities, developing adaptation action plans and a site level emissions reduction plan. The project approach involved strategy workshops and supporting Skellerup to draft the final consolidated transition plan.

### Canterbury Regional Council Monitoring, Evaluation and Reporting Plan

The Canterbury Climate Partnership Plan is a collaborative climate action plan involving all councils in the region. T+T worked closely with the CCPP working group and Canterbury Regional Council to develop a tailored Monitoring, Evaluation and Reporting plan with indicators, metrics and reporting framework for both the CCPP plan and the regional council's own climate action plan.

### Oceania Healthcare Climate Change Disclosures

During 2023, T+T worked with Oceania Healthcare to undertake a physical climate change assessment for 38 sites (as part of the first step in its CRD). The approach involved granular, spatial exposure assessments for each site; and a number of risk workshops with internal stakeholders - to identify and prioritise risks at a site level as well as the broader value chain risks.

## Climate mitigation and emissions reduction

### **Department of Corrections Climate Change Mitigation and Adaptation**

Developed GHG emissions inventory (including database development), decarbonisation roadmap (incl. marginal abatement cost analysis) and options analysis tool (digital dashboards designed for a variety of different roles), materiality assessment, sustainability management plan, climate change risk exposure assessment and adaptation strategies. This covered multiple assets across all regions of Aotearoa NZ.

### **Christchurch City Council and CCOs Decarbonisation and Adaption Planning**

Developed decarbonisation pathways that estimated the likely impacts (emissions reductions) and costs of the top potential future emissions reduction initiatives. Our key contributions included reviewing existing emissions inventories, facilitating workshops to identify potential new emissions reduction initiatives, exploring potential decarbonisation pathways, and developing a plan to reduce emissions.

### **Port Nelson & Lyttelton Port Value Chain Emissions Assessment**

High level screening of the ports' annual financial accounts to estimate carbon footprint associated with the annual consumption of products and services. The objective of the project was to ensure the completeness of carbon disclosures and to highlight hot spots for the decarbonisation action plan.

### **Moana NZ Roadmap for Zero Carbon**

Ongoing development of a decarbonisation roadmap to assist Moana NZ's business goal to become net zero carbon, including collaborative workshops with staff to identify a long list of potential decarbonisation initiatives, screening and preliminary prioritisation, marginal abatement cost curve analysis of initiatives and scenario analysis.

### **NZ Transport Agency Embodied Carbon Tool**

Te Ara Tupua is the project creating a walking and cycling link between Wellington and Lower Hutt. Our team developed a digital tool to help calculate the embodied carbon from different construction materials. The Pohutukawa Carbon Tool calculates the total carbon emissions from extraction / manufacturing of a product to arrival on site. By entering weights or volumes of different materials listed in the T+T carbon database, and optional freight distances, the tool calculates the total embodied carbon or compares design options from different projects or zones.

## Wider sustainability services

### **Ministry of Education Circular Economy and Waste Action Plan**

Provided waste strategy support for a BRANZ research project to assist the Ministry in developing an Environmental Action Plan (EAP). The project comprised desktop audits, physical waste audits and waste minimisation trials of nine schools (refurbishment and new build projects) across Auckland, Wellington, and Nelson. Our key contributions included data collection (waste and resource recovery), capability development/ training, feasibility studies, strategy development, and the development of data collection tools.

### **Department of Corrections Nature-based Solutions and Green Infrastructure Strategy**

Developed a site-wide stormwater management strategy based on water-sensitive design principles to address a suite of water quality and water quantity issues across the Whanganui Prison facility. Our key contributions included modelling the stormwater system, liaising with mana whenua representatives, preparing concept and detailed designs of green infrastructure assets, and assessing rainwater harvesting and re-use potential.

### **Auckland Council Shoreline Adaptation Plans**

Developed Shoreline adaptation plans that will support the sustainable management of Auckland Council owned land and assets on the coast for the next 100 years. Our contributions included conducting a risk assessment to identify the potential impacts of coastal erosion, coastal inundation, and rainfall flooding on Auckland Council owned land and assets across the short, medium, and long-term, while considering the impacts of climate change.

### **Transpower review of material sustainability impacts**

Transpower engaged T+T to carry out a full review of the company's material sustainability impacts in accordance with the GRI Standards. The project deliverables were carefully designed to inform both Transpower's strategy as well as its annual reporting. Stakeholder interviews were used to inform the assessment of impacts whilst also generating decision-useful insights that help improve future management of material impacts.

# Contact us



**Sze-Fei Peng**

**Principal Environmental Engineer**  
Melbourne

☎ +61 3 8770 0925

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



**Donna Shiel**

**Practice Lead – Waste + Advisory**  
Melbourne

☎ +61 3 8352 3151

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



**James Hughes**

**Principal – Climate + Resilience**  
Tauranga

☎ +64 7 577 7309

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



**Simon Harvey**

**Principal Consultant – Strategic Sustainability**  
Auckland

☎ +64 9 352 3016

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



**Ben Perry**

**Senior Coastal Engineer**  
Adelaide

☎ +61 383 523 126

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



**Emma Singh**

**Senior – Climate + Resilience**  
Auckland

☎ +64 9 359 2763

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



**Richard Wilson**

**Associate Water Resources Engineer**  
South Melbourne

☎ +61 383 523 164

✉ [rwilson@tonkintaylor.com.au](mailto:rwilson@tonkintaylor.com.au)



**Tom Shand**

**Practice Lead - Coasts + Water**  
Sydney

☎ +61 477 275 520

✉ [tshand@tonkintaylor.co.nz](mailto:tshand@tonkintaylor.co.nz)