

Bridge & Geotechnical Conference 2026

24 - 25 August
NZICC, Auckland



Conference Programme



Sunday, 23 August 2026

Informal Meet & Greet

Time / Location	Description
17:30 – 19:30 The Glass Goose, 78 Federal Street	Informal Meet & Greet - Sponsored by HEB Construction Enjoy drinks, canapés, and great company as we gather pre-conference for a relaxed networking opportunity.

Monday, 24 August 2026

Conference Day 1

Time / Location	Description			
07:15 Level 5, NZICC	Registration Desk & Exhibition Open			
08:15 – 09:00 Te Paepae Theatre 1 Level 5	Opening Ceremony Mihi Whakatau - Ngāti Whātua Ōrākei Welcome from BETS, NZGS and Platinum Sponsor KiwiRail <i>Chaired by Rudolph Kotze</i>			
09:00 – 09:30 Te Paepae Theatre 1 Level 5	National Infrastructure Plan Invited Speaker: Peter Nunns (Te Waihanga, New Zealand Infrastructure Commission)			
9:30 – 10:30 Te Paepae Theatre 1 Level 5	The Evolution of the Role of Engineers in Bridge Engineering Keynote: Prof. Michel Virlogeux (Ecole Nationale des Ponts et Chaussées of Bridge Design and Construction)			
10:30 – 11:00 Foyer, Level 5	Morning Tea			
Session 1	1A: Pile Design, Verification, and Foundation Performance	1B: Pedestrian and Active-Mode Bridge Design	1C: Advances in Bridge and Geotechnical Engineering	1D: Managing Ageing and End-of-Life Bridges
11:00 – 12:30	Te Paepae Theatre 1	Room 505	Room 504	Room 503
Chaired By	Kiran Saligame	Anton Kivell	Geoffrey Farquhar	Jennifer Critchley
11.00	Remedial Grouting Applications at Bridge Piers – Recent Case Studies from New Zealand Nathan Townsend	Design and construction of the Brougham St Overbridge Andrew McMenamin	Updates to the Seismic Design of State Highway Transport Structures Moustafa Al-Ani	AHB truss bridge assessment and strengthening design for a major refurbishment project Jareth Dickson
11.15	Bored pile design, construction and base grouting on the Takitimu North Link Stage 1 project Martin Barrientos Tim Pervan	Optimised bridge construction through the use of digital engineering and virtual construction Jonty Pretorius Bilel Ragued	Seismic Design of State Highway Soil Structures Luke Storie	Strengthening existing bridge assets with titanium alloy bars John Gin Brent England

Monday, 24 August 2026

Conference Day 1 (Continued)

11.30	Omanawa Replacement Bridge - Pile Design and Slope Stability Considerations Rhiannon Reardon	Balancing Seismic Performance and Construction Cost in Complex Bridge Design - Te Ara Tupua Bridge Tim Brook	Face the Hazard Lars Schmidt	Risk Mitigation Strategies for Protecting Bridges from Damage during Asphalt Deck Wearing Surface Resurfacing While Ensuring Long Term Durability Budi Soetanto
11.45	Comparative Evaluation and Calibration of Friction Pile Design Methods in the Takaanini Formation Using Dynamic Pile Testing (PDA) David Guinibert	Auckland Transport (AT) Modular Pedestrian Rail Crossings Willem Stolk	Engineering Resilient, Sustainable and Cost-Effective Transport Infrastructure Under Escalating Seismic, Climatic and Financial Pressures – Utopia or Reality? Pathmanathan Brabhaharan	Beyond the Temporary Crossing: Returning Te Puna to Service Steven Adams
12.00	Geotechnical and Design Adaptations for Bridges and Embankments in South Auckland's Complex Terrain Lara Pieters	SH76 Brougham St Bridge – a case study in unlocking Contractor lead design change benefits Chris Hewitt Alistair Briffett	Cost efficient civil structures design that ticks the other boxes Phil Gaby	End of the Road: Long bridges facing end-of-life in remote NZ locations Victoria Worner
12.15	River Scour Resilience Improvement using Micropile and mass concrete construction in extreme locations: Resilience Improvement Works on SH6 at the Gates of Haast, Westland, South Island, NZ Rob Bond	Hooker Bridge 2 - Longest spanning footbridge in NZ (189m) Dan Crocker	Exposure of transport networks to natural hazards in New Zealand Liam Wotherspoon	Evaluating the efficacy of laser ablation on steel bridges Raed El Sarraf
12:30 – 13:30 Foyer, Level 5	Lunch			
Session 2	2A: Standards, Design Codes, and Guidance Updates	2B: Collaborative Delivery and Early Contractor Involvement	2C: City Rail Link	2D: Asset Risk, Access and Network Performance
13:30 – 15:00	Te Paepae Theatre 1	Room 505	Room 504	Room 503
Chaired By	Rob Presland	Simoné Myburgh	Nigel McCreight	Jess McFarlane
13.30	Standardisation of NZTA Structures and Geotechnical Assets – an overview Moustafa Al-Ani Luke Storie	Muriwai Golf Course Bridge - Collaborative, Constructability Driven Design Development in Practice Nick Denham Willem Stolk	The buried bridge: geotechnical lessons from the CRL Eastern Grade Separation Joshua Teal Zhilong Liu	From Reactive to Proactive: A Smarter Way to Anticipate and Manage Road Network Risks from Natural Hazard events Natalia Uran
13.45	Progress on New Traffic Load Models for the Bridge Manual Nigel Lloyd Andrew Dickson	Standardised Superstructure Replacement: DfMA for Rapid, Resilient, Cost Effective Superstructure Renewal Richard Parkin Amor Acapulco	Porters Avenue Footbridge: Integrating Geotechnical Complexity, Seismic Performance and Constructability within the CRL Programme Ben Ryder	Marine Borer Risk Assessment in KiwiRail Bridge Assets Rudolph Kotze

Monday, 24 August 2026

Conference Day 1 (Continued)

14.00	Global Review of Standard Bridge Beams Jeremy Waldin	Collaboration: A specialist Subcontractors perspective Jayden Mellsop	City Rail Link: Geotechnical Challenges and Lessons Learnt Francis Dudouit Wataru Okada	KiwiRail Business as Usual Kyle Blyth
14.15	Proposed updates to NZTA Waka Kotahi standard precast concrete beam drawings Izzy Cattermole Rhys Rogers	From Data to Decisions: How Real-Time Concrete Monitoring Accelerated Construction of the Rā Hihi Viaduct Jeremy Pownall Ryan Clifton	Design and Construction of Diaphragm Walls for City Rail Link Kevin Anderson	Bridge and structure asset management challenges and opportunities. Taupō District transport asset management case study Ivan Nikitin
14.30	Non-Linear Time History Analysis of O2NL Single-span Bridges Charanjit Singh	Adverse Ground and Groundwater Conditions at the Eco-viaduct, Te Ahu A Turanga, Southern Ruahine Range, Manawatū Philip Kirk	Earth pressures in ECBF for economical geotechnical design Aidan Thorp	Austroads Bridge Assessment Guideline: Heavy Vehicles Peter Shaw Andrew Dickson
14.45	Train Loading – how much is too much? Marin Begovic Lars Schmidt	Te Reinga Bridge – The Big Lift Natasha Jokhan Yu-Shen Liu	Fenton Street Bridge- Design and Construction Challenges Jenny Zhang	Finite Element Analysis for Validating Structural Reinforcements in Steel Girders of a Railway Composite Bridge Carlos Alberto Medeiros
15:00 – 15:30 Foyer, Level 5	Afternoon Tea			
Session 3	3A: Seismic Geotechnical Design and Soil–Structure Interaction	3B: Materials Performance, Durability and Fatigue	3C: Sustainable and Circular Design for Bridge Infrastructure	3D: Applied Geotechnical Practice
15:30 – 17:00	Te Paepae Theatre 1	Room 505	Room 504	Room 503
Chaired By	Ananth Balachandra	Liam Hall	Oliver De Lautour	Philip Robins
15.30	Seismic Design of Southern Wharf Extension at Sulphur Point, Port of Tauranga Wataru Okada	The latest in NZ steelwork durability guidance for painting bridges Raed El Sarraf	Circular Design Framework – Circulating Infrastructure at Its Highest Value Allington Road Culvert – A Circular Design Case Study Jamil Khan Faiz Towfeek	Approach to liquefaction assessment in variable alluvial soils Russell Allison
15.45	Seismic resilience and practicality – ground improvement design on te wai takamori o te awa kairangi alliance Kevin Anderson	Composite Sleepers for Unballasted Rail Bridges: Early New Zealand Experience Adriano Mohr Bonatto	What we learnt from the design of a 162m long timber road bridge in Kakanui New Zealand Anton Kivell	Use of a Trial Embankment for Design Optimisation at the Mount Messenger Bypass Razel Ramildo Dani Thompson
16.00	New Melling River Bridge - Advanced analysis for onerous soil structure interactions and fault rupture within spans Ella Matuschka Kelsy Seyb	Design & Construction of a modular InQuik bridge in New Zealand Mike Wright	KiwiRail - Standardised Reinforced Concrete Ballast Tray Spans Nick Broad Matt Ireland	Rock characterisation for pile socket design of multiple bridges in South Auckland Gregory Pinches

Monday, 24 August 2026

Conference Day 1 (Continued)

16.15	Role of sensitivity analyses in soil-structure interaction analyses of pile foundations: a case study Mikias Yohannes	Development of a new coarse-thread positional coupler and of its validation test program Emanuele Naccini	Waka Bridge – Balancing Cultural Integration with Design Integrity Dan Crocker	Innovations in Geotechnical design at Duck Creek Road on O Mahurangi Penlink Aaron Fox
16.30	Belfast to Pegasus Motorway and Woodend Bypass - Cost-Effective Seismic Resilience through Performance Based Geotechnical Design Hayden Bowen	Material-Driven Design of Network Arch Bridges: Carbon Fibre Hangers for High Fatigue Demands – The Oder Bridge Case Study Valentin Bemetz	Co-Designing the Mimiha Stream Bridge: Cultural Partnership Shaping Engineering Outcomes Jared Flynn	Preliminary Geotechnical Appraisal: Making the Difference at SH1N Te Hana, Northland Sigfrid Dupre
16.45	Bridge Abutment Performance on Soft and Liquefiable Alluvial Soils: A Comparative Study of Mitigation Options Farbod Yarmohammadi	Ten Years of Heat of Hydration in Practice: Lessons Every Civil Structures Engineer Should Know Tom Watson	Bridging Track and Geotechnical Design in Transition Zones Brendon Gill	NZTA Geotechnical Asset Management and Monitoring Systems Sivaram Thirumoorthy
17:00 - 17:30 Room 505, Level 5	BETS AGM			
17:30 - 18:00	Free Time / Freshen Up			
18:00 Foyer, Level 5	Pre-Dinner Drinks			
19:00 – 22:30 Te Paepae Theatre 1 Level 5	Conference Dinner – <i>Sponsored by Oxcon</i>			

Tuesday, 25 August 2026

Conference Day 2

Time / Location	Description			
07:30 Level 5, NZICC	Registration Desk & Exhibition Open			
08:30 – 08:45 Te Paepae Theatre 1 Level 5	Day 2 Opening BRiDGE Programme Update: Paul Campbell <i>Chaired by Philip Robins</i>			
08:45 – 09:45 Te Paepae Theatre 1 Level 5	Load-carrying Geosynthetic-reinforced Bridge Abutments Keynote: Prof. Jorge G. Zornberg (The University of Texas at Austin)			
9:45 – 10:15 Te Paepae Theatre 1 Level 5	Building Resilience in Railways – a KiwiRail Perspective Invited Speaker: Dr. Romy Ridl (KiwiRail)			
10:15 – 10:45 Foyer, Level 5	Morning Tea			
Session 4	4A: Ground Improvement for Bridge Foundations and Earth Structures	4B: Performance-Based Design, Seismic Philosophy, and Resilience	4C: Cyclone Recovery and Flood Resilience	4D: Strategic Asset Management, Resilience and Investment
10:45 – 12:30	Te Paepae Theatre 1	Room 505	Room 504	Room 503
Chaired By	Hayden Bowen	Kevin Anderson	Jono Watkins	Matt Ireland
10.45	Design & Construction of Complex Slip Remedial Works Gunasekaran Mookaiya	Fitting Design Philosophy to Affordability and Performance Expectations Kelsy Seyb	Design and Construction challenges of 15.5 m span multiplate arch culvert across Whanaukini Stream at Kereru Gorge 3 Sivalingam Ilamaran	Development of the Highway Structures Operations and Maintenance Manual Jeremy Waldin
11.00	Constructability-Led design of Bridge Abutment Ground Improvement in Highly Liquefiable Soils – SH1 Loop Road Upgrade, Otaika Creek Bridge Lance Vazey	Sh2 interchange bridge design: designing for extreme fault rupture in a constrained corridor Melanie Regino Anton Stanisich	From Chasm to Culvert; Applicable Lessons from Kererū Gorge Robert Ferguson	Developments in Bridge Capacity Assessment and Access Management Dewi Todd-Jones Andrew Dickson
11.15	Performance of compacted aggregate piers for liquefaction mitigation beneath bridge abutments: Papamoa East Interchange Case Study Marianne Rogers	Highgate Bridge: Collaborative Structural, Geotechnical and Durability Design in Northland Allochthon Willem Stolk	Designing Bridges for Inundation: Interpretation of Flood Loading in New Zealand James Mortimer	Standardised superstructure replacement - delivery and construction Nick Mohamed Richie Parkin
11.30	Ground Improvement and Soil-Structure Interaction for Bridge and Buildings on Soft and Liquefiable Ground: The Drury Rail Stations Case Study Kushant Kishore Ross Kaufusi	Te Reinga – New Zealand's First Weathering Steel Network Arch Bridge Daryn Hobbs	Geotechnical Challenges and Resilient Design in Rebuilding Hawke’s Bay Bridges Damaged by Cyclone Gabrielle Paulo Alves	Natural Hazard Life Cycle Costs for Bridges at End of Life Ben Baty

Tuesday, 25 August 2026

Conference Day 2 (Continued)

11.45	Destructuration and Capacity of Sensitive Glaciogenic Silts: Field Lessons from the New Zealand West Coast Andy O'Sullivan	Bridging the Gap Between Design and Construction Kyron Day	Rebuilding Resilience: Designing the new Moteo-Puketapu Bridge after Cyclone Gabrielle Charanjit Singh	Bridge Maintenance: The Unloved Cousins of Asset Management Eric Singh
12.00	Landslide Stabilisation using Bored Drains at Fill 18, O Mahurangi Penlink Project Simon Farquhar	Tutaekuri River Bridge – Founding in a confined aquifer Steve Adams	Early Contractor Involvement in Post Disaster Bridge Delivery: A Contractors perspective Joel Hodgson	Acrow temporary modular bridges - introducing NZTA's modern Bailey bridge service Victoria Worner
12.15	WBOPDC No 4 Bridge - Slope stability risk assessment for bridge approach design Pedro Martins	Silverstream Pipe Bridge – resilient, robust design with excellent sustainability outcomes Liam Hall	Right-Sized Resilience: Client Lessons from Cyclone Gabrielle’s Bridge-Rebuild Programme David Scrimgeour	Bridge approaches - Managing the high-risk transition zone between flexible and rigid structures Robin Power
12:30 – 13:30 Foyer, Level 5	Lunch			
Session 5	5A: Advanced Analysis and Design of Long-Span Bridge Structures	5B: Constructability-Led Design and Accelerated Bridge Delivery	5C: Construction Techniques, Materials, and On-Site Innovation	5D: Asset Intelligence and Resilience
13:30 – 15:00	Te Paepae Theatre 1	Room 505	Room 504	Room 503
Chaired By	Peter Lipscome	Moustafa Al-Ani	Tim Pervan	Natalia Uran
13.30	Parahaki Bridge – Seismic resistance during construction of a balanced cantilever bridge Bill Van Nick Bamford	Standardised Precast Deck Panels for Steel Composite Bridges Cameron Weir	Design and Construction of Geosynthetic Reinforced Soil (GRS) Bridge Abutments in New Zealand Joshua Teal Luke Storie	Ormondville Rail Viaduct timber rail beam structural monitoring Rudolph Kotze
13.45	A practical application of AI in designing the Weiti River Bridge Sam Lichtwark	Value for Money Bridge Design on Otaki to North of Levin Ted Polley	Ō2NL Earthworks Trial James Muirson	Watercare Bridge Photogrammetric Condition Assessments Oliver Lumb
14.00	Design and Testing of Large Scale Laminated Elastomeric Bearings for the Wēiti River Bridge Mehdi Sarrafzadeh	Belfast to Pegasus and Otaki to North Levin – Bridge Standardisation Matthew Montgomery	Flatbush Stream Crossing Aruna Senanayake	10 Years of HSIMS: A Retrospective Tim Cross Lushi Cai
14.15	Computational Design in the Analysis of the Wēiti River bridge Agnes Curras Freixes Kimberley Twigden	Widening of two aging bridges on SH16 Terry Cheng	Changes to NZTA geosynthetic approvals Dante Legaspi	Digital Foundations for Resilient Bridge Asset Management in Auckland Gang Yu Paul Jenkinson
14.30	The Design and Construction of the 3rd Bosphorus Bridge (part 1) Michel Virlogeux	Fast-tracking End of Life Bridge Replacements Vincent Wong	Rethinking Installation Damage of Soil Reinforcement Geosynthetic. Maximum Particle Size is Not the Right Predictor Scott Judd	Accurate Measurement of Structural Cracks at Long Range Using Consumer Cameras (Physics only, no AI) Egor Volkov

Tuesday, 25 August 2026

Conference Day 2 (Continued)

14.45	The Design and Construction of the 3rd Bosphorus Bridge (part 2) Michel Virlogeux	When Is a Bridge Really Necessary? Lessons from the Northland Corridor Project Jono Watkins	Temporary Works New Zealand History Mark Hedley	Emergency Slope Stabilisation with Evolving Ground Conditions: Collaboration on the Brynderwyn Hills Resilience Project Francis Main
15:00 – 15:30 Foyer, Level 5	Afternoon Tea – final chance to connect with exhibitors!			
15:30 – 16:45 Te Paepae Theatre 1 Level 5	NZTA Plenary Followed by Panel Discussion: Standardisation: From Concept to Construction – Doing More with Less - Luke Storie (Chair) – Lead Advisor Geotechnical Engineering, NZTA - Mark Kinvig – Group Manager Infrastructure & Asset Management, Central Hawkes Bay District Council - Tim Watterson – Major Projects Director, Aurecon - Justin McDowell – Chief Operating Officer, Fulton Hogan - Evan Anderson – Principal Structures Engineer – Infrastructure, KiwiRail			
16:45 – 17:00 Te Paepae Theatre 1 Level 5	Conference Closing			

Wednesday, 26 August 2026

Site Visit

Time / Location	Description
08:30 NZICC	Site Visit Attendees Refer to your nametag to confirm if you have registered for the site visit – you will see an icon for this. The following PPE must be provided by and worn by all participants: - Hard hat - High-visibility jacket - Lace-up steel cap safety boots (no slip-ons) - Safety glasses - Long pants - Long-sleeve shirt (full wrist-to-ankle cover)
09:00 – 12:00 Depart from NZICC	Post-Conference Site Visit: Ō Mahurangi (Penlink) Project & Wēiti River Bridge A guided post-conference site visit to the Ō Mahurangi (Penlink) Project in North Auckland, featuring the Wēiti River Bridge works and associated geotechnical and construction innovations. This visit provides a practical, on-site perspective to complement several conference presentations related to bridge engineering, geotechnical design, and construction.

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