

## CANTERBURY STRUCTURAL GROUP PRESENTATION

### *Te Matatiki Toi Ora The Arts Centre Strengthening*



*Figure 1 - Te Matatiki Toi Ora, The Great Hall. Image Credit: Warren and Mahoney*

Date: **Thursday, 16<sup>th</sup> October 2025**

Time: **5:30 pm – Refreshments, pizza, and networking**  
**6:00 pm – Presentations followed by Q & A**

Venue: **Arts Centre, Rutherford's Den Lecture Theatre**  
**Clock Tower Building, 2 Worcester Street, Christchurch CBD**

Please RSVP to [office@h3structural.co.nz](mailto:office@h3structural.co.nz) by Tuesday, October 14. For catering purposes, please let us know if you will attend the social hour at 5:30 p.m.

## Abstract:

Te Matatiki Toi Ora The Arts Centre is an iconic collection of 23 neo-Gothic heritage buildings, with local, national, and international significance. In the years following the earthquake, rebuilding and restoring the building cluster was one of the largest and most complex heritage structural strengthening challenges in the Southern Hemisphere. More than a decade on from the earthquake, after tens of thousands of engineering hours, The Arts Centre stands as a centrepiece in Christchurch and an important community hub, connecting locals to their city's heritage.

The days and months immediately following the earthquake were some of the most confronting and challenging phases of the project. Through this challenging period, our team of engineers worked at the coal face, delivering engineering designs “on the back of an envelope” in amongst the rubble. Emergency solutions were implemented the same day, with design calculations to verify and amend the designs delivered in the days after. Through the remaining years, our engineers faced the enormous challenge of retrofitting the very diverse group of buildings in a manner that preserved their heritage character, as well as providing resilience and flexibility for changing community needs.

But some of the most important engineering work was the work done prior to the earthquakes. Since the inception of the governing Arts Centre of Christchurch Trust in 1978, a clear vision was developed for the seismic upgrading of the buildings, and was being followed right up to the time of the earthquakes. The survival of most of the buildings

The Arts Centre is an outstanding testament to clever engineering and long-term dedication—its legacy extends well beyond its own walls, and many of the techniques and learnings having since been used across Aotearoa, and beyond. The Arts Centre earned international recognition as a winner at the Institution of Structural Engineers 2024 Structural Awards for its pioneering retrofit approach.

This presentation will traverse the entire history of the engineering work at The Arts Centre, from the formation of the Trust board to the current day.



*Figure 2: Reinstating the Clock Tower spire during restoration construction*

## Presenters:

John Hare, DFEEngNZ, CPEng, IntPE, BE(Hons)  
Holmes Group Limited



**John Hare** is a structural engineer and Managing Director of the Holmes Group of companies. He has worked in NZ, UK and the US, and is now based in Christchurch. He has extensive experience in both the design of new structures and in the assessment and strengthening of existing buildings.

John first worked on the Arts Centre in the late 80's on some of the early Stage I securing work and has been involved (off and on) ever since. He led sitewide studies in the late 90's investigating full strengthening alternatives, culminating in the first strengthening project, of the former Arts School (DA Block) in 2008/9.

Following the February 2011 Christchurch earthquake, John was seconded as Principal Engineering Adviser, firstly to Civil Defence and subsequently to the Canterbury Earthquakes Recovery Authority, whilst also acting as the President of SESOC. He has had extensive involvement with a number of other Christchurch landmarks, including the Town Hall, Old Government Buildings, and the ChristChurch Cathedral.

John Trowsdale, MEngNZ, BE(Hons)  
Holmes ANZ



**John Trowsdale** is a structural engineer and Commercial Manager for Holmes ANZ, combining his excellent technical knowledge with a deep understanding of the commercial realities of the industry.

With 14 years as a contractor before he became an engineer, he offers invaluable experience from 'both sides of the fence'. John is a highly skilled project director, and a proven stakeholder manager on complex major projects. Before becoming Commercial Manager, John was the Business Manager of our Queenstown office for eight years.

Since the 2011 earthquakes, John has led the major restoration of The Arts Centre of Christchurch—the largest heritage restoration project of its kind anywhere in the country. He handled the project management and took the lead on the strategic direction of the restoration, as well as managing a number of the construction contracts on site.

In addition to his eight years at The Arts Centre, John has been involved in a large number of commercial developments in and around Christchurch, Queenstown and the wider South Island, including the Christchurch Town Hall, the Queenstown Post Office Precinct and other commercial buildings for Ngai Tahu Property, and a number of buildings at Remarkables Park Town Centre.