



**lewis bradford**  
CONSULTING ENGINEERS



## Joe Byrne

**Associate and Shareholder  
Christchurch Office**

### Education

BE Civil (First Class Honours) - UC  
ME Civil (Distinction) - UC  
CMEngNZ  
CPEng (Structural)

### Publications

Master's thesis:

*Bond and shear mechanics within reinforced concrete beam-column joints incorporating the slotted beam detail*

NZSEE Conference 2012:

*Design and testing of reinforced concrete frames incorporating the slotted beam detail*

## Professional Experience and Affiliations

Associate and Shareholder

*Lewis Bradford, Christchurch Office (2021 – present)*

Structural Engineering Advisor

*Urban Search and Rescue NZ (2021 – present)*

Senior Structural Design Engineer

*Lewis Bradford, Christchurch Office (2017 – 2021)*

Structural Design Engineer

*Engenium Ltd (2012 – 2017)*

## Areas of Specialist Expertise

- Public sector buildings
- Carpark buildings
- Hotel and apartment buildings
- Multi-storey building analysis and design

## Major Project Experience

Invercargill Central Development, Invercargill

*New development spanning a full city block (50000m<sup>2</sup>) including carpark, mall, retail, and office buildings.*

University of Otago, Te Rangi Hiroa College

*New 7-storey / 14000m<sup>2</sup> student apartment structure over 2 seismically separate wings.*

*Design-build project. Steel gravity structure with EBF lateral system to IL3.*

Waimakariri Multi-Use Sports Facility, Rangiora

*New 6000m<sup>2</sup> indoor sporting complex. Architecturally driven project with steel framed structure to IL3.*

Shirley Boys' & Avonside Girls' High School, Christchurch

*New theatre and attached 2-storey ancillary building (2800m<sup>2</sup>). Precast concrete and steel framed structure to IL3.*

Palmerston North Central Library

*Seismic assessment of existing 5-storey / 6000m<sup>2</sup> library building. Complex reinforced concrete / steel structure including original build (1920s) to strengthening (1990s).*

Innovation Centre Carpark, Christchurch

*New 7-storey / 10000m<sup>2</sup> carpark building. BRB lateral system with steel framed gravity system.*

Invercargill Licensing Trust Hotel, Invercargill (Peer Review)

*New 8-storey / 6500m<sup>2</sup> hotel. Steel gravity structure with EBF lateral system.*

St. Margaret's College Administration Block, Christchurch

*New 2-storey / 1100m<sup>2</sup> school building. Precast concrete structure with steel roof to IL3.*

