



TAURANGA CITY COUNCIL, 90 DEVONPORT RD

Snapshot Case Study

DESIGN

Warren & Mahoney

CONSTRUCTION

LT McGuinness

STRUCTURAL ENGINEER

Dunning Thornton

BACKGROUND

The 90 Devonport Road project is New Zealand's largest mass timber office building, designed to meet sustainability, efficiency, and carbon reduction targets.

The eight-story structure, primarily featuring Cross-Laminated Timber (CLT), was developed to provide a modern, low-carbon alternative to traditional construction materials. Ensuring precision, timely delivery, and seamless integration of design, manufacturing, and installation were key challenges.



EASY GAINS

- Prefabricated CLT components allowed just-in-time delivery, reducing on-site storage needs.
- Lightweight timber structure required fewer foundation works compared to traditional materials.
- High-precision manufacturing streamlined the installation process, leading to programme efficiencies.
- CLT staircases and floors were installed ahead of schedule, enabling earlier commencement of the façade and fit-out.

RESULTS SUMMARY

- 2,213.4 tonnes of CO₂-eq sequestered by CLT, significantly reducing the project's carbon footprint.
- CLT demonstrated exceptional structural integrity, meeting and exceeding project resilience requirements.
- Efficient installation reduced labour costs and accelerated project timelines while maintaining quality.
- Early contractor engagement and digital fabrication methods ensured precision and minimal material waste.

HISTORY/PROJECT BRIEF

90 Devonport Road is a Tauranga City Council office development that aligns with the city's sustainability commitments.

The project was initiated to showcase mass timber as a viable solution for large-scale commercial buildings, offering lower embodied carbon emissions, efficient construction methods, and enhanced environmental benefits.

PROJECT LEARNINGS

- Digital modelling and CNC fabrication improved coordination and minimized errors.
- Prefabrication allowed rapid construction assembly, reducing on-site labour and programme delays.
- Acoustic and fire performance of mass timber met regulatory requirements without compromising aesthetics.
- CLT proved to be a resilient material, offering structural and sustainability advantages over steel and concrete.

BARRIERS TO OVERCOME

- Early coordination between design and manufacturing teams was essential to optimize material usage.
- Just-in-time delivery required precise scheduling to avoid site disruptions."
- Managing moisture protection for CLT during installation was critical to ensure durability.
- Industry adaptation to large-scale mass timber buildings required ongoing education and process improvements.

The detailed shop drawing process and delivery schedule coordination enabled our team to confidently proceed with a just-in-time delivery model. The product quality allowed us to exceed the programmed installation timeframes for the entire build, creating advantages to commence the façade and fit-out ahead of schedule.

Craig, LT McGuinness

Engaging with local industries to build the Tauranga City Council offices at 90 Devonport Road has been one of the great pleasures of this development. The efficiencies of CLT manufacture enabled the build to stay on time, and we have no hesitation in using mass timber again.

Will Ellison, Developer, Willis Bond