

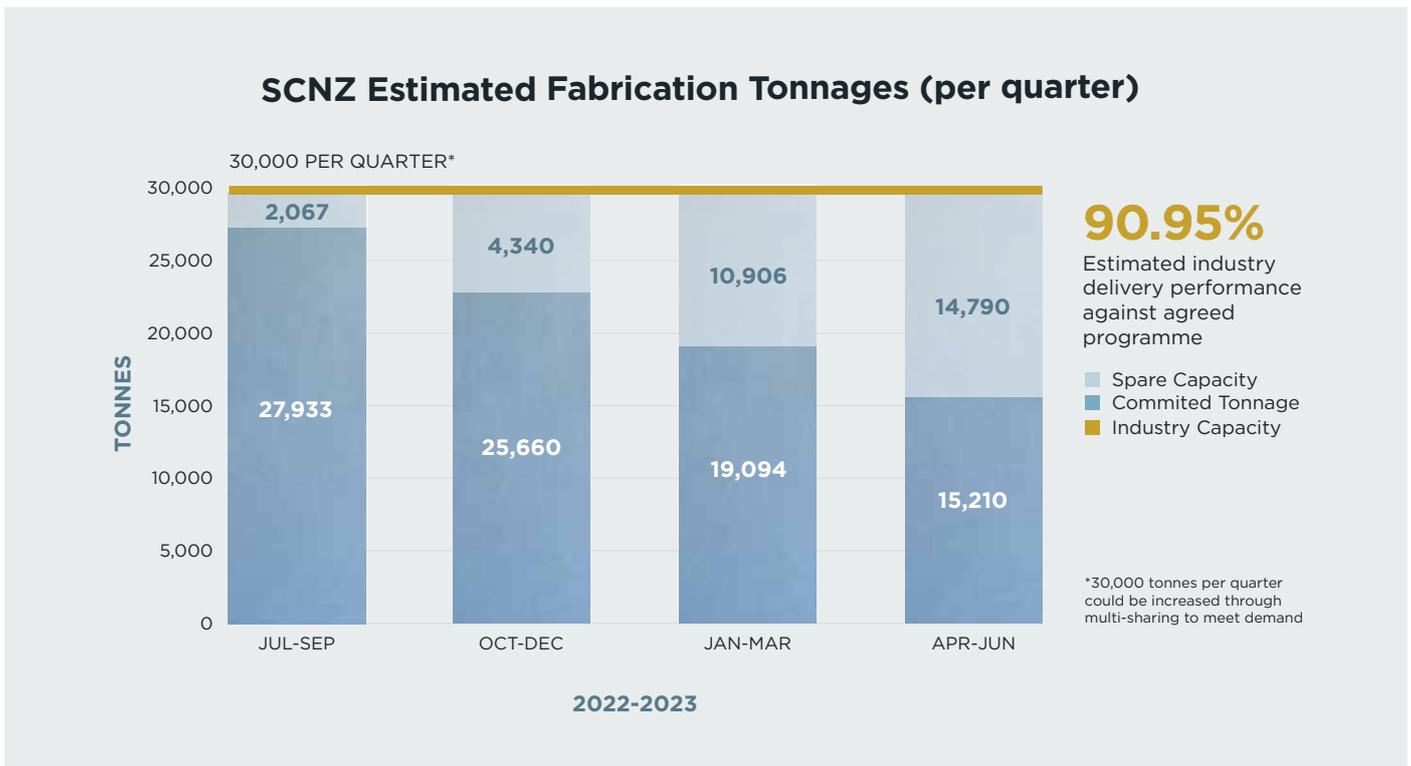
STRUCTURAL STEEL

Market update - 27% spare capacity

The '6Cs' - the local steel advantage

The strengths and unique qualities of our industry are based on the '6Cs' - carbon, capacity, competitiveness, capability, compliance and collaboration. As a result, demand for structural steel solutions has grown substantially in the past two decades.

CAPACITY: The industry has proven capacity to deliver on all projects - there is no need for procurers to go offshore to satisfy demand. In the past 12 months the New Zealand structural steel sector turned approximately 100,000 tonnes of structural steel into buildings and bridges through its network of steel distributors, fabricators and erectors. SCNZ's latest quarterly fabricator forward-workload survey indicates there is significant spare industry capacity for the year ending June 2023 - estimated at 27 percent, based on a current estimated total capacity of 120,000 tonnes per annum.



CAPABILITY: Our structural steel industry has proven capability to handle a range of construction projects. Our industry's investment in R&D and innovation has led to world-firsts in seismic load-resisting systems and performance-based fire design. We are also committed to developing our people: 9.1 percent of the total workforce employed by local structural steel contractors are in a training programme, and 69 percent of structural steel contractors employ an average of four apprentices.

COMPLIANCE: Quality and compliance are at the heart of SCNZ activities. Our industry-led quality scheme Steel Fabrication Certification (SFC) ensures that participating structural steel contractors have international best-practice personnel and quality management systems in place. 90 percent of the sector's annual output is now delivered by SFC-qualified fabricators. SCNZ's Structural Steel Distributor Charter complements SFC by ensuring that structural steel is sourced using best-practice procurement.

CARBON: Our local structural steel industry is working to reduce its emissions and progress towards a circular economy with the support of the Sustainable Steel Council (SSC) and the Heavy Engineering Research Association (HERA). Notably, a zero carbon steel offset programme has been developed; 95 percent of steel waste in construction is recycled; and research is underway into carbon-alternative reductants for the steelmaking process.

COMPETITIVE: Structural steel is a cost-effective building solution. Investment in fabrication technology and workshops, and the modern approach of simple bolted connections,

has improved productivity in New Zealand's structural steel industry. Overall construction programmes for multilevel commercial projects using structural steel are generally 10-15 percent shorter compared to other materials.

COLLABORATION: Our highly collaborative network of 149 fabricator companies has proven ability to meet demand, regularly partnering with each other nationwide - and with the head contractor and lead consultants as part of the Early Contractor Involvement (ECI) procurement model - to ensure a project is delivered to a high standard, on time and on budget.

SCNZ Excellence in Steel Awards

The annual Awards celebrate the best and brightest in the industry, and acknowledge the sector's commitment to innovation, quality and collaboration. Our 2021 winners were:

- **\$1.5M-\$3M & Supreme Winner: Eastbridge & Beca for SH2 Wairoa River Bridge Cycleway Widening**
The existing, 177m-long bridge was too narrow for cyclists or pedestrians to safely cross. Lightweight modular steel construction was the solution to adding a cycleway to the existing bridge in a safe manner.
- **Under \$500K: D&H Steel Construction for Waiouru Point Development**
The project includes two adjoining warehouses that overlook the Tamaki River. The project's striking design demonstrates steel's versatility as an architectural feature.

- **\$500K-\$1.5M: VIP Structural Steel for Christ Church Cathedral Reinstatement**
Before reinstatement could begin it had to be stabilised, so a prominent structural steel frame was designed and fabricated to restore key structural load paths. It was lowered into position and secured to the building in a single day.
- **Over \$3M: D&H Steel Construction for Sylvia Park Galleria**
Sylvia Park's \$277m, 20,000sqm south mall expansion involved retrofitting a new upper-level floor to the shopping mall. Steel provided practical solutions to complex details related to geometry, connections and accessibility.
- **Standalone Residential: All Steel Services for Gawor Beach House, Coromandel**
The home boasts a completely exposed steel structure, cruciform columns and a massive eight-metre cantilevered second lounge with breath-taking views.

Industry who's who

Manufacturers (steel mills) produce structural steel products, including hot-rolled elements (I beams and columns, channels, plate and angles) and hollow sections (circular, rectangular and square).

Merchants / distributors import steel for use in the construction industry. Such companies have extensive warehousing facilities to carry a large inventory required to service market needs and provide limited pre-processing of structural material prior to fabrication.

Structural steel fabrication companies physically prepare the structural steel for a building or bridge through a process of developing detailed drawings (the work of a detailer) based on the construction drawings provided by a structural engineer. They are responsible for material management, cutting, drilling, shop fitting (bolting or welding), painting and galvanising (when required), and shipping.

Erectors assemble the structural steel members into a structural frame on the project site by bolting and field welding structural steel components together according to the construction documents. In New Zealand the fabricator will typically manage the erection process of its steelwork either through the use of its own rigging crews or subcontracted resource.

Key industry facts

In the past two decades demand for structural steel solutions has grown substantially. Today, structural steel's share of the multilevel construction market is more than 50 percent nationwide. In Christchurch, due to structural steel's strong seismic performance, its market share is over 80 percent - up from virtually nil before the Canterbury earthquakes.

Market share: 50 percent nationally and >80 percent in Christchurch

Annual output: circa 100,000 tonnes in the past 12 months

Structural steel fabrication companies: 149 nationwide

Current annual capacity: estimated at 120,000 tonnes, which could be increased by multi-shifting to meet demand

Employment: approximately 5,000 workers

Industry investment: significant investment in several new state-of-the art workshops since 2007

Fabrication certification: 50 structural steel fabrication companies representing 90 percent of the sector's annual output participate in independent quality assurance scheme SFC.

For more information about who's who in structural steel, visit scnz.org and steelfabcert.co.nz



For information about becoming a member, contact:

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