

# STRUCTURAL STEEL

## Market update - 28% spare capacity

### The '6Cs' - the local steel advantage

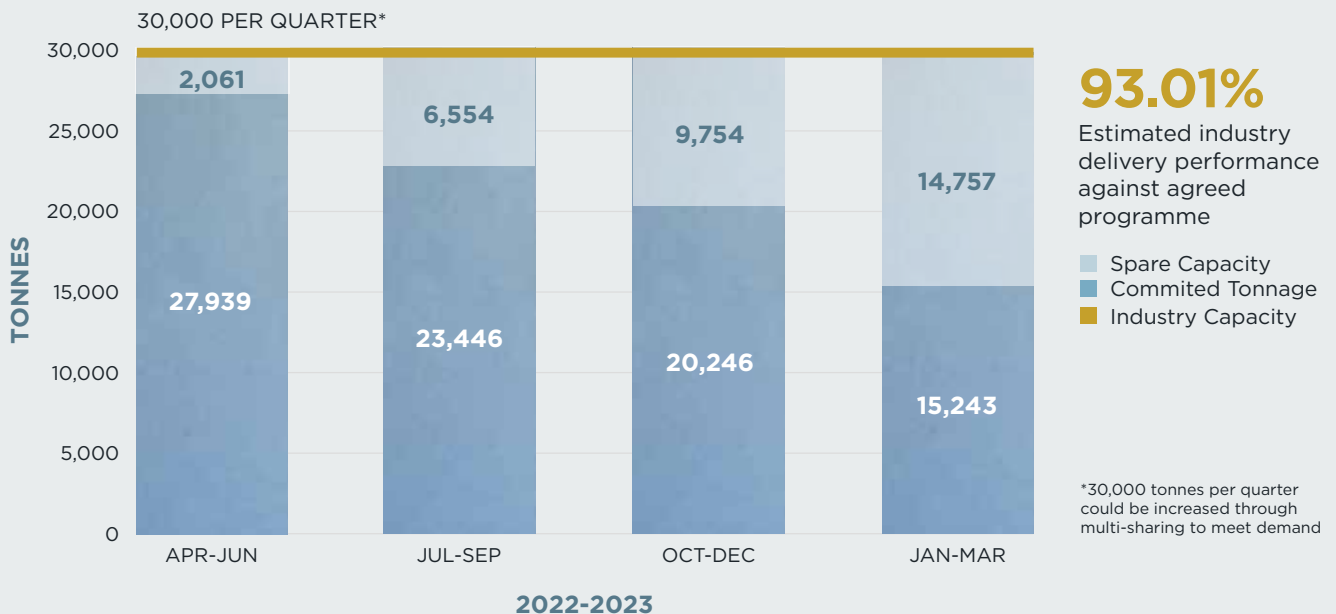
Our local structural steel industry is committed to building skills, capacity and processes to maximise steel's contribution to a low-emissions, climate-resilient and economically strong society. Our network of 149 fabrication companies has a strong track record of investing in our people, embracing technology and collaborating to deliver the best possible outcomes.

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:** Our local structural steel industry is well equipped to cope with a spike in demand brought on by the Government's continued focus on firing up the construction sector to support New Zealand's economic recovery. 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 March 2023 - estimated at 28 percent, based on a current estimated total capacity of 120,000 tonnes per annum.

### SCNZ Estimated Fabrication Tonnages (per quarter)



**CAPABILITY:** Our structural steel industry has proven capability to handle a range of construction projects. Thanks to our industry's investment in R&D and innovation, local structural steel fabrication capacity has increased from 20,000 to 120,000 tonnes over the past 20 years and led to world-first advances in seismic load-resisting systems and performance-based fire design. Our industry is also committed to developing the skills of 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.

**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. From the get-go, ECI allows our fabricators to add value to the design team by helping to explore buildability, timeframes and risk. The approach delivers projects that carry much less risk, enjoy fewer variations and are typically better planned.

**COMPLIANCE:** Quality and compliance are at the core of SCNZ activities and vital at a time when we cannot rely on the performance of imported prefabricated product from low-cost economies. SCNZ's 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. All seven SCNZ Distributor members have been independently audited to satisfy the requirements of the Charter.

**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 multi-level commercial projects using structural steel are generally 10-15 percent shorter compared to other materials, thanks to the efficiency of off-site manufacturing and fabrication, and 'just in time' deliveries.

**CARBON:** It's a pivotal time for our local structural steel industry as it seeks 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). Our aim is for steel to be a critical enabler in New Zealand's journey to a low-emissions economy. Highlights include a zero carbon steel offset programme in development; 72 percent of steel scrap in New Zealand is recycled, while the figure is closer to 85 percent for steel waste from construction; and research is underway into carbon-alternative reductants for the steelmaking process, specifically using hydrogen instead of coal.

## 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 multi-level 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](http://scnz.org) and [steelfabcert.co.nz](http://steelfabcert.co.nz)**



**For information about becoming a member, contact:**

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