STEEL CONSTRUCTION NEW ZEALAND

FEBRUARY 2018

SCNZ FACT SHEET

FS3/2018

AS/NZS 5131:2016 Fabrication and Erection of Steel Structures Standard

In today's global procurement environment, fabricated structural steel is sourced both locally and internationally for New Zealand building and infrastructure projects. In this setting, the means to demonstrate conformity and the necessary measures to regulate and control quality must be clearly specified. The new AS/NZS 5131 standard provides the framework to ensure better quality outcomes.

Published in 2016, AS/NZS 5131 defines the minimum requirements for the fabrication and erection of fabricated structural steel. When cited, it will replace the fabrication and erection provisions of NZS 3404.

Importantly, it also provides the basis for the industry-led quality assurance scheme, Steel Fabrication Certification (SFC), which is administered by HERA Certification Ltd.

Key elements of AS/NZ 5131

1. Technical requirements:
   AS/NZS 5131 specifies the minimum standard of workmanship (e.g. tolerances, defects) and any process limitations to avoid significantly degrading the mechanical properties of the structural steel.
2. Conformity assessment:
   The standard defines the manufacturing controls (i.e. operates a factory production control system) necessary to regulate quality and to demonstrate conformity. This involves regular inspections, testing and written procedures supported by competent personnel, and suitable production and testing equipment.
3. Risk-based approach:
   Four construction categories – CC1-CC4 – are recognised in AS/NZS 5131. It enables specifiers to select a level of manufacturing control appropriate to how safety critical the component will be in the construction. Examples of the construction categories for various types of structures are presented in Table 1.

NZS 5131 in practice

- Engineer specifies the construction category, or categories, and serves as the construction reviewer during both the fabrication and erection stages.
- Builder engages structural steel contractor capable of doing the work to the specified construction category. Ideally, the builder will appoint an SFC-qualified structural steel contractor, who has already been independently verified to be capable of completing the work to the required standard.
- Structural steel contractor operates a factory production control (FPC) system to AS/NZS 5131, ensuring the structural steel components meet the requirements of the standard.

For engineers, builders and structural steel contractors seeking more information about the new standard, its implementation and SFC, contact SCNZ.

AS/NZS 5131 CONSTRUCTION CATEGORIES

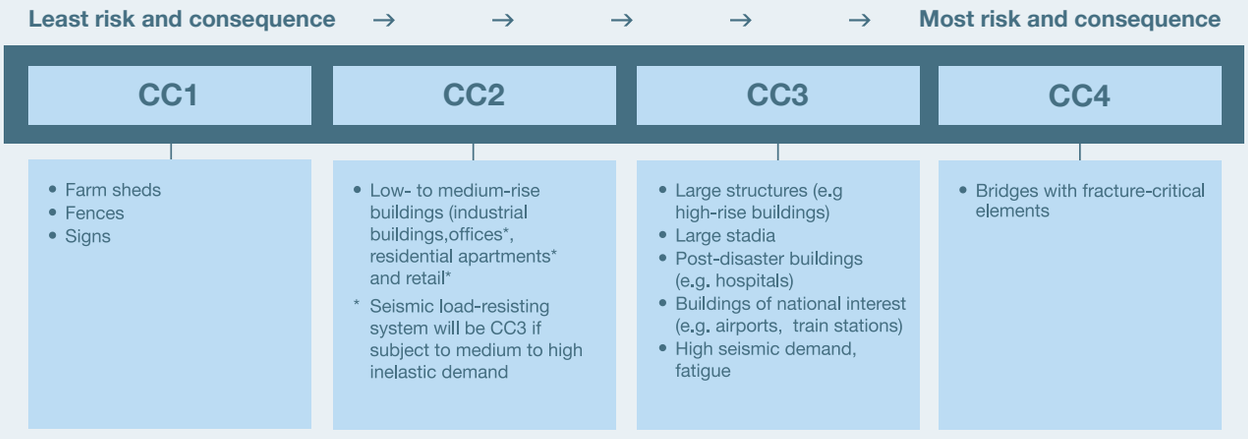

Table 1: Examples of construction categories for various types of structures.

Implementation

The citing date for NZS 5131 is Q1, 2018. In preparation for this:

1. The audit requirements for SFC are aligned with NZS 5131. All new SFC applications after 1 January 2018, and surveillance audits for existing certified companies, will be done to the new standard.
2. Education – it's a journey. SCNZ and HERA have been actively upskilling the industry and will continue to support the standard's implementation.
    a. HERA ran training workshops for structural steel contractors in 2017 – a video of this workshop can be referenced on the SCNZ website. HERA will roll out more education sessions in 2018.
    b. In 2017 SCNZ and HERA undertook a series of engineers' office presentations and a seminar series, which will also continue this year.
3. The New Zealand Structural Steelwork Specification in Compliance with AS/NZS 5131 has been developed to assist engineers to implement the standard:
    a. It aims to improve and unify specification of steelwork to the new standard.
    b. It provides a standardised template for creating project-specific and/or company-specific specifications for fabricated structural steel.

About SFC

Steel Fabrication Certification (SFC) introduces a mark of quality to New Zealand's structural steel sector. It reduces the compliance risk for engineers, architects, quantity surveyors, builders, and building and infrastructure owners. It provides procurers of locally fabricated structural steel confidence that certified fabricators have the appropriate personnel and procedures in place to consistently produce work to satisfy the requirements of AS/NZS 5131.

- Launched in 2014
- Industry-led quality assurance scheme, based on NZS 5131
- Offers independent, expert certification of New Zealand fabrication companies
- +80% of the total volume of structural steel sections produced is by SFC-qualified fabricators
- SFC mandatory for SCNZ members from 2020

For more information about SFC, including a list of certified fabricators, visit www.steelfabcert.co.nz

SCNZ STEEL CONSTRUCTION NEW ZEALAND

Steel Construction New Zealand Inc.
L2, 17-19 Gladding Place, P.O. Box 76403, Manukau City 2241, New Zealand
Phone: +64 9 263 5635, Fax: +64 9 263 5638, Email: info@scnz.org