



AUSTRALIAN STEEL INSTITUTE

ASI STEEL COMPLIANCE SOLUTIONS

BUILDING RESILIENCE

AUSTRALIAN STEEL: ADDED VALUE WITH QUALITY, PRODUCTIVITY & SAFETY

The supply of an unacceptable degree of non-compliant, unsuitable, and often faulty building products is increasingly being seen in building, infrastructure and resources projects in Australia, ranging from small local developments to major projects involving international teams.

Buying Australian manufactured and processed steel brings many advantages to customers beyond the broader economic benefits. These include reduced delivery lead times and freight costs, as well as greater reliability of supply and lower inventory requirements.

Australia's steel value chain offers significant benefits, including the customisation, fabrication and finishing of products to meet unique local aesthetic and environmental requirements. National manufacturing and distribution networks streamline supply and ensure availability, after-sales and technical support, while fabrication and roll-forming facilities deliver high levels of workmanship and compliant structures.

Customers can be sure of the consistency and quality of Australian steel and steelwork knowing that it complies with Australian Standards and regulations, and that it is supported by an effective and compliant value chain.

ASI STEEL COMPLIANCE SOLUTIONS

The ASI has produced a range of solutions and tools to help our stakeholders ensure cost-effective, compliant outcomes, and structures that are resilient and achieve the intended design life. These steel compliance solutions include:

- **National Structural Steelwork Compliance Scheme (NSSCS)** is an independent, third party quality compliance and certification system for the supply, fabrication and erection of structural steelwork in Australia. The NSSCS is underpinned by:
 - The Australian Standard AS/NZS 5131 *Structural Steelwork - Fabrication and Erection*: provides the technical foundation for compliant solutions
 - The National Structural Steelwork Specification (NSSS): provides engineers and specifiers with a straightforward way to implement AS/NZS 5131 requirements
 - [Steelwork Compliance Australia \(SCA\)](#): is the approved 3rd party auditing & certification body to assess fabrication and processing facilities to AS/NZS 5131 via the NSSCS.
- [Environmental Sustainability Charter \(ESC\)](#) has been established in collaboration with the Green Building Council of Australia (GBCA), to drive meaningful improvement in the environmental footprint of its certified steelwork fabrication companies. The ESC certifies and promotes environmentally aware steelwork fabrication and processing companies. The objective of the ESC is to develop steel as a sustainable form of construction and to assist the steel industry supply chain to operate in an environmentally responsible manner.
- [ShedSafe](#), a third-party accreditation program, developed at the request of industry, to promote and publicise compliance with the Building Code of Australia for cold-formed steel sheds.

Each of ASI's steel compliance solutions is outlined in detail on the following pages.



STRUCTURAL STEELWORK COMPLIANCE



OVERVIEW

ASI has been on a planned and managed journey to improve compliance outcomes for structural steelwork in Australia which benefits the entire Australian community.

Compliance must be addressed and managed across the complete steel supply chain. As such, ASI has put in place a multi-faceted initiative, the major components of which include:

- The Australian Standard AS/NZS 5131 Structural steelwork - Fabrication and erection provides a unified, transparent, and definitive view of what 'good practice' looks like and forms the technical foundation for the NSSCS.
- The National Structural Steelwork Specification (NSSS) provides engineers and specifiers with a straightforward way to implement AS/NZS 5131 requirements in the project process.
- The National Structural Steelwork Compliance Scheme (NSSCS) provides engineers, builders and the client with a packaged solution for cost-effective compliance outcomes.
- Steelwork Compliance Australia (SCA) is an independent company established by ASI to administer third-party certification of fabricators under the NSSCS.

The rates of adoption of third-party certification by SCA under the NSSCS have grown to over 100 companies certified across Australia and many additional in the process of gaining certification.

AUSTRALIAN STANDARD AS/NZS 5131 STRUCTURAL STEELWORK - FABRICATION AND ERECTION

AS/NZS 5131 defines good practice for the fabrication and erection of structural steelwork for projects in Australia, using a risk-based fit-for-purpose approach. It provides the technical basis for the NSSCS and establishes a quality benchmark that is responsive to the needs of both projects and clients. AS/NZS 5131 addresses:

- Requirements for documentation and specification
- Materials, including steel, welding consumables, fasteners and grout
- Preparation and assembly, including cutting, shaping and holing
- Welding, including welding processes and qualification of welding procedures and personnel
- Surface treatment and corrosion protection
- Mechanical fastening (bolting, tensioning of bolts, special fasteners, post-fixed anchors)
- Architecturally exposed structural steelwork
- Erection
- Geometrical tolerances
- Inspection, testing and correction
- Site modifications and repair of existing structures

This quality benchmark is established via the requirement for engineers to specify a Construction Category (CC) in project specifications. The CC establishes the correct level of quality and assurance controls to ensure the structure meets the engineer's design assumptions and level of risk mitigation under obligations implicit in the Workplace Health and Safety Act (2011). The fabricator must have the processes in place to satisfy the specified CC. Construction categories vary from CC1 for least risk to CC4 for most risk.

Key documents developed by ASI include the National Structural Steelwork Specification (NSSS), along with Standard Drawing Notes (SDN) for engineers and specifiers, which were released after peer reviews by several prominent engineering practices. The documents facilitate uniform and consistent reference to AS/NZS 5131 and reduce the misalignment of expectations and contractual issues. The NSSS and SDN are available for free download to help promote best practice project implementation.

NATIONAL STRUCTURAL STEELWORK COMPLIANCE SCHEME

Established in 2014, the National Structural Steelwork Compliance Scheme (NSSCS) is an independent, third party quality compliance and certification system for the supply, fabrication and erection of structural steelwork in Australia.

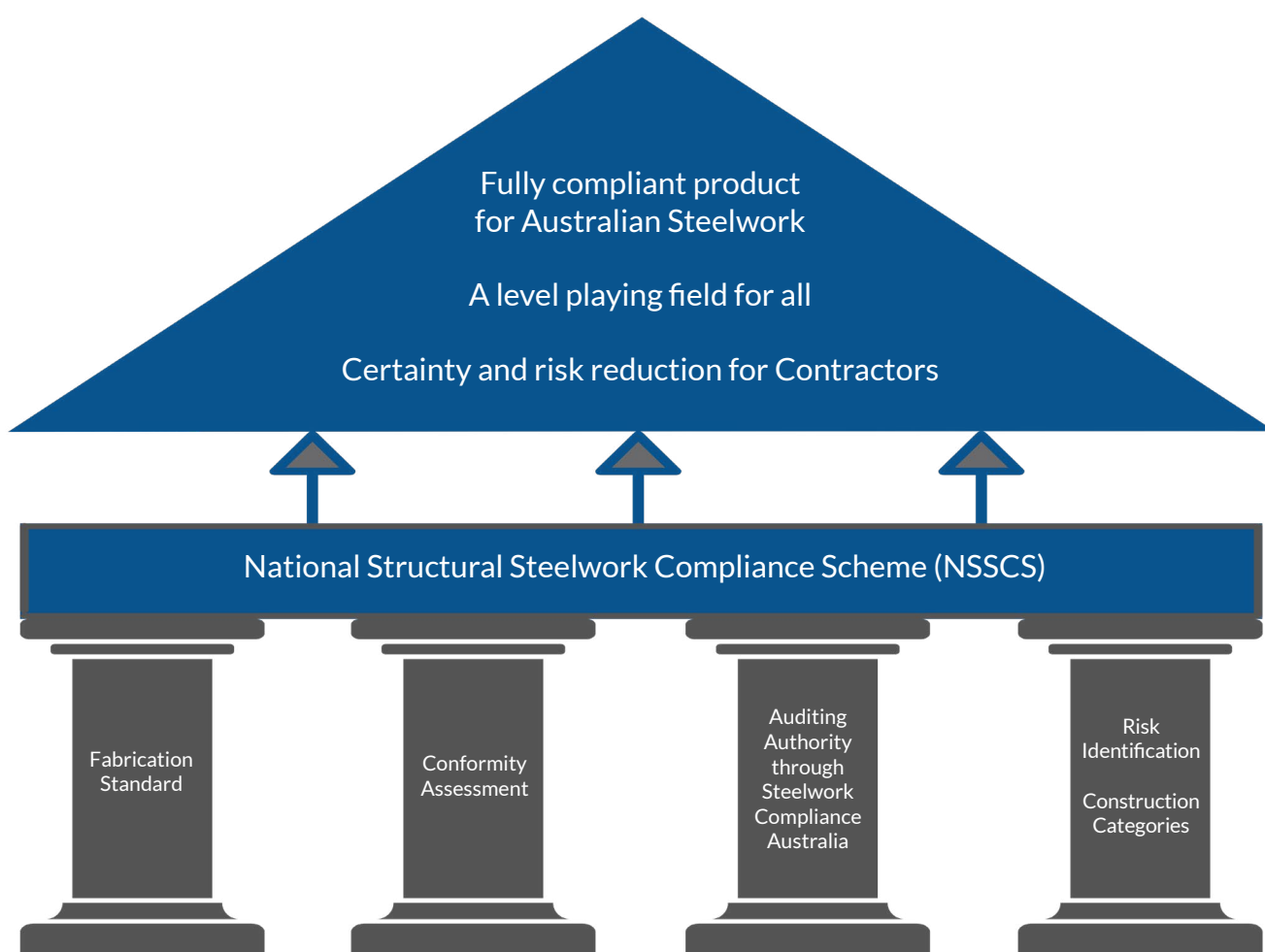
The NSSCS ensures that steel fabricators have the correct systems in place and employ skilled workers to achieve the required quality of work and meet the requirements of Australian standards.

With the technical basis for the NSSCS founded on AS/NZS 5131, the Scheme is applicable to structures designed to AS 4100 Structural steelwork, AS/NZS 5100.6 Bridge Design – Steel and composite construction and supporting Australian Standards, including those for welding, bolting and corrosion protection.

Under the NSSCS, fabricators (both local and overseas) are audited and certified by Steelwork Compliance Australia (SCA) to one of the Construction Categories (CC) defined in AS/NZS 5131. Once certified, fabricators are pre-qualified to carry out specific steel fabrication processes which depends on their certification level. Certification to a qualification level also ensures the Scheme is fit-for-purpose and does not result in over specification.

The required CC (as assessed by the engineer) is included in project specifications and establishes the correct level of quality and assurance controls to ensure the structure meets the engineer's design assumptions and level of risk mitigation under obligations implicit in the Workplace Health and Safety Act (2011).

The steel fabricator contracted for a specific project must have the processes in place to satisfy the CC specified. Fabricators certified under the NSSCS must employ trained staff, demonstrate material traceability, and have welding and document controls in place throughout the fabrication process.



BENEFITS OF CERTIFICATION

The SCA provides the construction industry with certainty that certified fabrication companies have the capability to produce to the compliance requirements of the appropriate Australian Standards for the relevant construction categories as defined in AS/NZS 5131 and specified by the design engineer for a project or component of a project. This benefits the Australian construction industry by:

- Providing greater certainty of construction outcome
- Reducing the incidence of bogus supply
- Boosting productivity by minimising the need for rework and repair over the lifecycle of a project
- Providing a national pool of pre-qualified fabricators to AS/NZS 5131
- Reducing risk consistent with the Workplace Health and Safety Act and Regulations

CLIENTS AND GOVERNMENT

The process to achieve the quality benchmark for clients and Government is:

1. Configure your procurement specifications to correctly reference AS/NZS 5131 (the NSSS and SDN will help in this regard) and the appropriate Construction Category
2. Nominate third party certification of steelwork under the NSSCS
3. Implement surveillance to ensure the intent of your procurement specifications has been actioned

The benefits for clients and Government include:

- Assurance that the steelwork contractor is competent as assessed by an expert process
- Assurance that the tender offer is based on a like-for-like quality comparison and not compromised on quality, therefore minimising likely costly rework and remediation
- Management of risk and your duty of care under the Workplace Health and Safety Act (Safe design of structures)
- Utilising a steelwork fabricator who has invested in training, apprenticeships, systems and capability over those who quote on price alone
- Support development of a world class steelwork fabrication industry in Australia

BUILDERS

The process to achieve the quality benchmark for builders is:

1. Ensure processes and documentation are consistent with the Construction Category for the project or component being undertaken. AS/NZS 5131 defines the requirements. The NSSS actions these requirements
2. Provide necessary project-specific documentation as and when needed
3. Provide the Declaration of Compliance (DoC) for the products covered

The benefits for builders include:

- Avoids the cost of setting up an in-house fabricator quality capability assessment team
- Provides an assessor with intimate knowledge of steelwork fabrication
- Provides the ability to nominate a fabricator for which the builder can request assessment
- Is fit-for-purpose based on risk assessment, and is therefore cost effective
- Provides a mechanism to feedback project outcomes and request special fabricator assessment
- Reduces costs of rectification and rework, utilising fabricators proven to meet the minimum requirements of Australian Standards
- Frees up valuable personnel to focus on the project issues and delivery they were trained for

FABRICATORS

The process of SCA certification for structural steelwork fabricators varies according to the Construction Category applied for and is briefly outlined below. In all instances the fabricator must:

1. Complete an application
2. Undergo a desktop audit
3. Following resolution of any shortfalls or issues, undergo a detailed site audit (if seeking certification to CC2, CC3 and CC4)

The benefits for fabricators include:

- A proven commitment to capability based on chosen certification level helps distinguish you in the eyes of clients
- A de-facto 'National Technical Prequalification Scheme' that in time will become common across the industry, increasing productivity, saving you significant time and cost in tender submissions and multiple certifications
- The site audit and ensuing gap analysis can prompt demonstrable improvements in internal process efficiencies
- A uniform transparent quality bar to support fair competition with your peers

GOOD PRACTICE STEELWORK PROCUREMENT

FOLLOWING INTERNATIONAL GOOD PRACTICE, THE AUSTRALIAN STEEL INSTITUTE NOW PROVIDES A FRAMEWORK FOR RISK CATEGORISATION AND STEELWORK FABRICATOR PREQUALIFICATION, ENABLING COST-EFFECTIVE PROCUREMENT OF COMPLIANT STEELWORK STRUCTURES.



FURTHER INFORMATION



Visit the SCA Website



Visit the ASI Website



Find an SCA Certified Company



Contact SCA

ENVIRONMENTAL SUSTAINABILITY CHARTER



OVERVIEW

Established in collaboration with the Green Building Council Australia (GBCA) in 2011, the Environmental Sustainability Charter (ESC) is ASI's solution for environmentally aware steelwork fabrication and processing companies. The objective of the ESC is to develop steel as a sustainable form of construction and to have the steel industry supply chain operate in an environmentally responsible way.

The ESC enables fabricators to drive meaningful improvement in, and demonstrate their commitment to, reducing their environmental footprint while reducing costs within their business.

The ESC also creates a mechanism through which construction companies can substantiate the credentials of a sustainable steelwork supplier. Charter-certified fabricators can be used in projects by regulators, environmental rating bodies like the GBCA (Green Star), state authorities such as rail and road, and any other stakeholder wanting to demonstrate environmental leadership in their project through their contracting process.

Charter membership is designed for downstream steel enterprises associated with steelwork fabrication or processing. This membership demonstrates a company's commitment to environmental improvement and is of particular importance where a company is required to achieve an accreditation as a contractual requirement. This commitment is audited and certified annually by an independent auditor.

The ESC has been delivering mentoring and certification to fabricators since 2011 and is making a positive difference to improving the environmental footprint of Australia's steel industry. With year-on-year growth, today the ESC has over 70 member companies.

GBCA AND GREEN STAR POINTS

ASI worked closely with GBCA to establish the ESC scheme. Under the Green Star building rating system, one credit point may be earned where at least 60 percent of the fabricated structural steelwork on a project is supplied by a steel fabricator or contractor Charter-certified to the ESC.

In addition, 95 percent of the steel (by mass) used in the project must be supplied from environmentally responsible steelmaker(s) who have a valid ISO 14001 Environmental Management System (EMS) in place and are signed to the World Steel Association's Climate Action Program (WSA CAP).

"We congratulate the Australian Steel Institute for its ongoing leadership. The ASI Charter has engaged the entire steel supply chain to embrace more environmentally-sustainable business practices. It has supported downstream manufacturing, fabricating and supply companies that are an integral part of the entire supply chain. The result is better buildings and a stronger supply chain."

~ Romilly Madew, Chief Executive Officer, Green Building Council of Australia

MEMBERSHIP CRITERIA

To become an ESC member, companies must sign the ESC declaration, committing the company to:

- Operating its business to reduce its environmental footprint
- Increasing the efficiency of its resource use
- Demonstrating environmental responsibility, sharing its knowledge of sustainability with others and seeking this in its choice of sub-contractors and suppliers.

ESC members are required to maintain an Environmental Management System (EMS). ASI provides an online EMS mentoring system (compliant with BS 8555 Environmental management), which is designed for small-to-medium enterprises. Fabricators with ISO 14001 certification can use this scheme to fulfil their obligations, but must still provide evidence through the web-based Environmental Management System (EMS) Mentor and be working on an environmental improvement project.

ANNUAL AUDIT REQUIREMENTS

During the annual audit, the environmental improvement of ESC member companies is measured and evaluated. Member companies must demonstrate their commitment to the following environmental procedures:

- Have an Environmental Policy in place (signed by the relevant manager) that commits to a reduction in their environmental footprint by managing waste, energy and fuel use
- Be fully compliant with the legislative requirements for environmental laws
- Be operating an Environmental Management Scheme (EMS) and using environmental impact assessment for process improvement
- Efforts to improve its environmental footprint through the EMS.
- Agree to and participate in an independent annual audit of the EMS.
- Have a policy that seeks interaction with suppliers and its community on environmental issues

ASI reserves the right to conduct the ESC audit on-site to ensure that the projects listed on the EMS are operational.

FURTHER INFORMATION



Visit the ASI Website



Contact the ASI



Find an ESC Charter Member

OVERVIEW

A third-party accreditation program managed by ASI, ShedSafe was developed at the request of industry to promote and publicise compliance with the Building Code of Australia for cold formed and hot rolled portal frame steel sheds. As the industry benchmark for Australian manufactured steel sheds, ShedSafe accreditation assures consumers that the:

1. Shed seller has recommended a design with an appropriate site classification using the ASI Site check program that checks wind and snow loads for the intended site.
2. The Shed manufacturer is supplying site specific certification by an approved engineer that the shed is engineered to meet the requirements of the National Construction Code.

ShedSafe accreditation is applicable to cold formed portal frame, hot rolled steel frame and stud frame buildings with spans of 6m to 40m. Any manufacturer whose sheds fall within this scope may apply for ShedSafe accreditation. ShedSafe is not applicable to garden sheds, carports, or houses.

The rate of adoption of third-party certification under ShedSafe has grown steadily over the last few years, with over 1000 accredited users selling ShedSafe accredited sheds.

THE HISTORY OF SHEDSAFE

In 2006, following the devastation caused by Cyclone Larry in North Queensland, government regulators and building certifiers called on ASI to facilitate design compliance with the Building Code of Australia for steel sheds.

In response, ASI published the Steel Shed Design Guide for Portal Frames Sheds and Garages, and established ShedSafe. The Steel Shed Design Guide provides detailed information for engineers and designers on the correct application of design codes for steel sheds.

The ShedSafe program was created to ensure shed designs meet the intent of the Building Code of Australia and Site Check for suitability for the intended location.

KEY ASPECTS OF SHEDSAFE

Applicants are required to submit several completed projects with supporting engineering calculations. Designs are reviewed by an independent panel of consultants to ensure design principles and documentation are consistent with the Building Code of Australia. Manufacturers are then subject to ongoing audits.

All sheds are required to have site specific engineering certification including site classification of wind, snow and earthquake loadings. ShedSafe members have access to Site Check—a web-based site classification tool specifically designed for the Australian steel shed industry.

Utilising Site Check, engineers can review both the location and design of a proposed shed and certify that the structure is compliant to Australian Standards for wind, snow and earthquake loadings for the specific location. As such, consumers have peace of mind that the correct specifications are adhered to for their specific shed and site.

MEMBERSHIP CRITERIA

To achieve and maintain ShedSafe accreditation, companies must:

- Be fully compliant with the requirements of the Building Code of Australia and the ASI's Steel Shed Design Guide for Portal Frames Sheds and Garages.
- Successfully complete an independent third-party design and documentation check, and comply with any ongoing 'spot audits' of designs
- Provide site specific engineering certification for all sheds, including site classification of wind, snow and earthquake loadings that are evaluated and signed off by an approved engineer.
- Successfully complete a design audit of selected completed projects on an annual basis.

FURTHER INFORMATION



Visit the ShedSafe Website



Contact ShedSafe



Find a ShedSafe
Accredited Manufacturer



ABOUT THE AUSTRALIAN STEEL INSTITUTE (ASI)



The Australian Steel Institute (ASI) is the nation's peak body representing the entire steel supply chain from the manufacturing mills right through to end users in building and construction, heavy engineering and manufacturing.

Our Vision: To influence profitable growth for the complete Australian steel value chain.

Our Mission: To deliver increased use of Australian steel and improved industry competitiveness in construction and other strategic markets.

The ASI provides marketing and technical leadership to promote Australian-made steel as the preferred material to building, construction and manufacturing industries and policy advocacy to government.

LEADERSHIP, ADVOCACY, EDUCATION, RESOURCES

Steel is the backbone of Australia's construction, infrastructure and manufacturing sectors. It is a vital and sustainable source of innovation, employment and capability in our cities and our regional communities.

The Australian Steel Institute (ASI) exists to represent the Australian steel industry, to support its growth in the future, maintaining and creating jobs and income for Australia, supporting Australian steel producers, distributors and manufacturers, fabricators and detailers, builders and constructors and city and regional communities by providing the highest-quality certified steel products for Australians.

The ASI achieves this by ensuring that political and policy decision makers, industry, consumers, allied industries and professions and other key stakeholders continue to recognise the strength, beauty and versatility of Australian steel, and the importance of maintaining and growing a strong steel industry sector.

We act as the focal point for the steel industry providing leadership on all major strategic issues impacting the industry, particularly focusing on economic, environmental and social sustainability.

It is in everyone's interest that Australian steel continues to go from strength to strength.

The ASI is active in key areas of interest to the Australian steel industry:

- Promoting Australian made steel
- Influencing the choice of Australian steel as the preferred building and construction material
- Advocating for full, fair and reasonable trade
- The prevention of dumping to ensure Australian steel can compete
- Promoting the importance of quality, compliance and best practice (including standards, safety and logistics)
- Securing reliable and affordable baseload energy for Australian steel
- Promoting the steel capability agenda: Diversity, STEM, trades, the next generation and succession
- Championing innovation and future steel

A member-based organisation, the ASI's activities cover and promote advocacy and support, steel excellence, standards and compliance, training, events and publications.

FURTHER INFORMATION



Visit the ASI Website



Contact the ASI



AUSTRALIAN STEEL INSTITUTE

FURTHER INFORMATION

Phil Casey
National Compliance Manager
Australian Steel Institute (ASI)
0424 225 701
philc@steel.org.au