

10th September 2021

Senate Economics References Committee Inquiry into the Australian Manufacturing Industry

- Australian Steel Institute submission

About the Australian Steel Institute (ASI)

The ASI is the nations peak body representing the entire steel supply chain, from the primary producers through to end users in building and construction, resources, heavy engineering and manufacturing. The ASI membership base includes approximately 6,000 individuals that are associated with more than 500 corporate memberships and over 350 individual memberships.

A not-for-profit organisation, the ASI's activities extend to, and promote, advocacy and support, steel excellence, standards and compliance, training, events and publications. The ASI provides marketing and technical leadership to promote Australian-made steel as the preferred material to the resources, construction, and manufacturing industries, as well as policy advocacy to government.

Submission Summary

Steel is the backbone of the Australian construction, resources, infrastructure and manufacturing sectors. It is a vital and sustainable source of innovation, skilled employment and technical capability in our cities and our regional communities.

In recognition of the strategic importance of the steel industry, the ASI recommends that every effort needs to be made to ensure that all of the remaining domestic manufacturing capabilities are retained. Looking to the future, Australia needs a large and diverse traditional manufacturing base in order to nurture and support new and emerging industries. Given the significance of energy cost in the economics of steel manufacturing, the ASI further recommends that Commonwealth government energy policy needs to act to continue to drive a reduction in the cost of energy.

In order to improve overall competitiveness, the ASI strongly recommends that the existing Modern Manufacturing Initiative or related funding schemes be expanded to include merit criteria that are focussed on assisting existing, traditional industries to invest in automation to improve labour productivity. Finally, it is recommended that the ARC Steel Research Hub model of collaborative co-funded academic research and development continue to be supported by the Commonwealth, and ideally expanded to a broader range of steel industry subsectors.

Overview of the Australian Steel Supply Chain capability and capacity

Overall Capability

Australia's primary steel producers and steel product manufacturers together form a strategically important value chain that has the capability to supply in excess of ninety percent of the steel grades and qualities required in this country. If special categories such as very large diameter oil and gas pipe, stainless steel, electrical steel, and tinplate are excluded, then the capability is significantly closer to one hundred percent.

Overall Capacity

In terms of national requirements, depending on the demand in any given year, Australian steel production has the potential to be completely self-reliant. According to the World Steel Association, in 2019 Australian crude steel production was 5,493,000 tonnes. This does not take into account the additional production capacity of facilities that are being operated at below maximum capacity or currently idled. From the December 2017 Senate Inquiry into the steel industry, it was estimated (Figure 2.2) that the net theoretical crude steel capacity for the local industry if all facilities were operated at 100% would be 8,100,000 tonnes. So, whilst the 2019 domestic steel production was approximately 90% of apparent consumption, the local industry has idle capacity that is well in excess of requirements.

Further to this point, it should be noted that exports from Australia of semi-finished and finished steel comprised 1,149,000 tonnes in 2019 (World Steel Association). In the main, export steel markets are less profitable than domestic markets, and it is reasonable to assume that a large proportion of current exports could be readily used to replace imported steel if this was economically favourable.

Economic and Social Benefit

The domestic steel industry creates significant economic benefit and a large number of skilled manufacturing employment opportunities. According to the Australian Bureau of Statistics, the Australian steel supply chain, from basic iron and steel production through to downstream steel users such as fabricators, employed nearly 110,000 Australians in 2017-2018¹ and generated annual revenue in the order of \$29 billion.

Manufactured Products Capability

Australia has world leading manufacturing capability in many areas of steel product application. Some examples include wear resistant and ballistic plate steels for mining and defence applications, grinding media for mineral processing, strata control products for underground mining, wire rope for open cut mining, wheels, rail, and sleepers for both mainline and heavy haul railway applications, strapping for

¹ ABS 81550DO003_201718 Australian Industry, 2017-18 (Manufacturing Industry Data Cube)

load restraint, engineered bar and resultant products such as automotive springs and specialty fasteners, high pressure gas storage tanks, racking and shelving for automated warehouse solutions, highly durable coated steel water pipe for infrastructure, and a myriad of specialised components for building, construction and defence industry applications. Essential components for transport infrastructure such as highway guard rails, safety barriers, overhead signs, stanchions, light poles, and fences are all made by a number of local producers. The rural economy is well supported by domestic manufacture of fencing products such as wire and posts.

In the area of steel intensive consumer products, Australia has diverse capability in applications such as hot water heaters, and rain water tanks. There is also domestic production of household appliances such as ovens and stoves. Unfortunately, with the closure of domestic vehicle production from 2016 onwards, the ability to manufacture new cars was lost, along with associated manufacturing processes such as engine assembly, panel stamping and pressing, and drivetrain component production. Vehicle accessories and suspension components such as leaf and coil springs are still produced, albeit mainly for aftermarket support and export markets.

In the residential building sector Australia is relatively unique in having a very high proportion of domestic detached dwellings with a steel roof. As a consequence of this strong consumer preference and market share, the local industry has been able to continually invest in world leading innovation in the manufacturing, product design and installation of steel building materials for residential construction. Examples of this innovation include development of highly corrosion resistant coatings for long exterior life, highly weather durable paint systems that are specifically engineered for high UV environments, and prefabricated steel frame and trusses that reduce construction time and improve accuracy. In the commercial construction sector, Australia is a leader in the use of high-strength light weight reinforcing products, and light weight roof support structures with superior spanning capability.

Similarly, the steel fabrication sector is well served by a wide range of domestic businesses, located in all regions of the country, each with an area of unique capability or specialisation. Steel fabrication is essential for manufacturing of bespoke construction products such as foundations, piling, columns, beams, girders, gantries, platforms, and towers. Areas of specialisation include wind turbine towers, transmission towers, storage tanks, chemical processing plant, boilers and pressure vessels, mining infrastructure refurbishment, mobile equipment for underground and surface mining, mobile cranes, bridges, armoured vehicles for Defence, naval and domestic ship building, rolling stock, truck bodies and trailer chassis. In those applications where demand is relatively consistent from year to year, local fabricators have invested heavily in state-of-the-art technology such as automated beam lines, robotic welding cells, and fully integrated design software that incorporates visualisation and 3D simulation capability.

Recommendations in response to the Inquiry Terms of Reference

- a) **What manufacturing capacities Australia requires for economic growth, national resilience, rising living standards for all Australians and security in our region?**

The ASI recommends that every effort needs to be made to ensure that all of the remaining manufacturing capabilities that were outlined in the introductory section on the Australian Steel Supply Chain capability and capacity are retained. The rationale for this recommendation is that:

- The steel industry needs to maintain a certain **critical mass** to help support ongoing reinvestment in the latest technology such that it can remain cost competitive and technically capable. When a significant section of the manufacturing base is lost, for example as occurred with the closure of local car production, this impacts negatively on both the capability mix and domestic demand aspects.
- The domestic manufacturing industries in business today have a very **competitive cost structure** as a consequence of having restructured and survived through an extended period with US dollar exchange rates above parity.
- Australian manufacturers produce **world class products** that can win sales based on a compelling value proposition, and are not reliant on subsidies.
- Australian made products are designed and manufactured in **compliance with** all relevant **Australian Standards** and the National Construction Code, meaning that consumers can have peace of mind in the safety and quality compliance of these products and resultant structures.
- Australian manufacturing leads directly to the **employment of highly skilled staff**, often located primarily in regional towns and cities, which in turn support the ongoing viability of technically oriented tertiary education institutions in the same regions.
- Many Australian manufacturers are also very successful **long-term exporters** with a global reputation.
- The recent disruption to global supply chains associated with the COVID-19 pandemic and ensuing impacts on the cost and availability of international shipping have highlighted the importance of **sovereign capability** in the form of fully capable and self-reliant domestic manufacturing value chains

The new or expanded manufacturing capabilities that Australia requires in order to meet future demand are in the field of **renewable energy infrastructure**. These capabilities include, but are not limited to large scale capacity to produce:

- Wind towers and their foundations;
- Solar farm support structures and their foundations;
- High voltage power transmission towers and their foundations;
- Pumped hydro infrastructure;
- Off shore wind power generation.

- **b) The role that the Australian manufacturing industry has played, is playing and will play in the future?**

In addition to the points made in the immediately preceding section, the ASI recommends that Australia needs a large and diverse traditional manufacturing base in order to nurture and support new and emerging industries. High tech future industries such as aerospace rely heavily on the existing industrial ecosystem for the supply of experienced staff, access to specialised skills and capabilities, and all the infrastructure needed for prototyping and initial trial manufacturing. Our future industries will not be developed in complete isolation from existing, mature industries, rather they coexist and have a mutually beneficial relationship. Therefore, a strong and 'healthy' manufacturing base helps to provide the essential ingredients for development of future industries that we look to for growth in new markets.

- **c) The drivers of growth in manufacturing in Australia and around the world?**

The recent history of industrialisation in countries such as Japan, South Korea, and China indicates that manufacturing of any kind can prosper and be successful whenever the conditions are such that it is cost competitive. In the case of the steel industry the key drivers of cost competitiveness are raw material cost and quality, energy cost, and labour productivity.

Australia is naturally blessed with access to large volumes of high quality, low-cost raw materials that span virtually all the requirements for a completely vertically integrated steelmaking value chain. For example, Australia has huge scale iron ore and metallurgical coal mines that export to world markets, it collects and recycles into new products more than ninety percent of all scrap steel generated each year, it produces the ferroalloys required for steelmaking, and also mines much of the fluxing materials required in iron and steelmaking. From a raw material standpoint, Australia is well placed to support a long term viable domestic steel industry.

With regard to energy cost, for both electricity and natural gas, the situation is much less competitive. Major steel producers such as BlueScope with manufacturing operations in both Australia and a range of countries in the region, report that 'Prices paid by our Australian operations for electricity and gas are approximately double those paid by our US steelmaking operation'². Similarly, natural gas, which is critical for reheating in all steel rolling operations, and for most steel heat treatment processes, is not available at a price that is competitive with our major competitors. Therefore, the ASI recommends that Commonwealth government energy policy needs to act to continue to drive a reduction in the cost of energy.

² BlueScope FY2021 Results Presentation slide 48

The key to competitive labour productivity is ongoing investment in automation and industrial robotics. Many businesses have already made significant investments in these technologies and continue to do so. In many cases, these have resulted in redeployment of labour from dangerous and repetitive manual tasks to higher skilled roles, so automation need not lead to a net reduction in employment opportunities. For the Australian steel industry overall, there are several significant barriers to wholesale adoption of automation.

- Firstly, many manufacturing sites have been in operation for a considerable time, with associated legacy constraints. This means that often the only way to automate is via a bespoke solution that isn't commercially available, but instead requires significantly higher cost to design and implement.
- The second significant barrier is that many manufacturing industries are relatively subscale in world terms, because they have been sized to serve just the domestic market. This means that it can be more difficult to achieve a satisfactory return on investment for an automation project.

During recent consultation with ASI steel product manufacturer members, many commented that they had made multiple applications for grant or matching funding under various schemes to assist with automation projects, without success. The conclusion drawn was that in the main these funding schemes are not intended or designed for existing, traditional manufacturing industries to access; despite the very significant economic contribution these businesses make. Therefore, the ASI strongly recommends that the existing Modern Manufacturing Initiative or related funding schemes be expanded to include merit criteria that are focussed on assisting existing, traditional industries to invest in automation to improve labour productivity and overall competitiveness.

- **d) The strengths of Australia's existing manufacturing industry and opportunities for its development and expansion?**

This item has largely been addressed in the responses to items b) and c).

An additional point to add is that in both relative and absolute terms, the Australian steel industry employs highly sophisticated process technology that requires a highly skilled and well-educated workforce to operate it. The ongoing training and replacement of the next generation of this workforce helps to underpin the engineering and science components of the excellent tertiary education system in this country, including both the vocational training and university sectors. An example of this mutually beneficial intersection of industry, academia, and research is the very successful [Steel Research Hub](#), which is co-funded by the Australian Research Council (ARC) and steel industry partners. The ASI recommends that this model of collaborative co-funded academic research and development continue to

be supported by the Commonwealth, and ideally expanded to a broader range of steel industry subsectors.

- **e) The sectors in which Australian manufacturers enjoy a natural advantage in energy, access to primary resources and skilled workers over international competitors, and how to capitalise on those advantages?**

This item has largely been addressed in the responses to item c).

- **f) Identifying new areas in which the Australian manufacturing industry can establish itself as a global leader.**

This item has largely been addressed in the responses to item a). The ASI believes that **renewable energy infrastructure** is the key area where Australian manufacturing industry has the potential to grow and establish world class capability with long term export potential. This view is based on the significant forecast demand for investment in this area in Australia, which if managed favourably from a policy perspective, will enable local industry to confidently invest in highly competitive, state-of-the-art manufacturing capability.

The long-term pipeline of Defence capability building projects, for both land based and naval forces, also offers significant domestic manufacturing opportunities that could ultimately have export potential.

The common theme in both these examples is that government policy needs to be carefully designed so as to encourage local participation, whilst not being in breach of free trade agreements and WTO rules. This point will be further addressed in the response to item g) following.

- **g) The role that government can play in assisting our domestic manufacturing industry, with specific regard to:**
 - i. research and development;
 - ii. attracting investment;
 - iii. supply chain support;
 - iv. government procurement;
 - v. trade policy;
 - vi. skills and training;
- **h) The opportunity for reliable, cheap, renewable energy to keep Australia's manufactured exports competitive in a carbon-constrained global economy and the role that our manufacturing industry can play in delivering the reliable, cheap, renewable energy that is needed?**

The ASI, in consultation with its members, has developed a comprehensive set of policy recommendations, or 'white paper', covering the topics mentioned in item g). Rather than reproduce sections of this white paper in isolation, we have included the complete document as an appendix to this submission. The relevant sections are cross referenced with the abovementioned topics in the table below.

Inquiry Topic	ASI White Paper reference
g) The role that government can play in assisting our domestic manufacturing industry, with specific regard to:	
i. Research and development	Pages 16 through 18
ii. Attracting investment	
iii. Supply chain support	Pages 30 through 32
iv. Government procurement	Pages 21 through 26
v. Trade policy	Pages 27 through 29, and below
vi. Skills and training	Pages 19 through 20
h) The opportunity for reliable, cheap, renewable energy to keep Australia's manufactured exports competitive in a carbon-constrained global economy and the role that our manufacturing industry can play in delivering the reliable, cheap, renewable energy that is needed?	
	Pages 18 through 19

In regard to **Trade Policy**, recent ASI membership consultation raised the following important feedback themes for particular emphasis:

1. The Anti-Dumping System despite being complex and time consuming to engage with, remains a very important trade remedy tool, particularly for local manufacturers of steel intensive finished products.
2. The typical time required for an investigation and final determination to be completed is too long and needs to be reduced to under 12 months.

Mark Cain

Chief Executive
Australian Steel Institute



ENSURING A SUSTAINABLE AUSTRALIAN STEEL INDUSTRY **IN THE 2020s AND BEYOND**

WHITE PAPER | OCTOBER 2020

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AUSTRALIAN STEEL INSTITUTE

ABOUT THE AUSTRALIAN STEEL INSTITUTE

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

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

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

LEADERSHIP AND ADVOCACY

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

It exists to represent the Australian steel industry and to support its future growth, so that the industry can maintain and create jobs and income for Australia, and provide 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.

COORDINATION

The ASI acts as the focal point for the steel industry, providing leadership on all major strategic issues affecting the industry. It focuses particularly on economic, environmental and social sustainability, and works with government, the media and other associations to provide an independent voice for industry. This includes promoting the advantages of local content procurement in the nation's interest, both to the client and to government.

TECHNICAL SUPPORT

The technical support arm of the ASI facilitates events and technical training at both shop floor vocational and degree qualified continuing professional development level, as well as case study seminars and awards. The ASI also publishes industry-leading journals based on the latest research.

The technical references provided through the ASI's electronic online resources and library are proudly the best in the southern hemisphere. With longstanding links to global research and other steel industry associations such as the World Steel Association, the ASI can offer a truly international solution.

OUR VISION

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

OUR MISSION

To promote steel as the material of choice.

To promote the capability and capacity of the Australian steel supply chain.

To provide leadership in advocacy, compliance, safety, sustainability and technical education.



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Image courtesy of Bisalloy, Australia's only
high-performance quenched and tempered plate
steel products manufacturer.

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RECOMMENDATIONS

Image courtesy of Molycop, whose product lines include grinding media, casters and the Comsteel range of forged railway wheels and axles.

The Australian steel industry consists of four primary steel producers, supported by over 300 steel distribution outlets throughout the country and numerous manufacturing, fabrication and engineering companies.

Australia's primary steel producers and steel product manufacturers together form a strategically important value chain that has the capability to supply in excess of 90 per cent of the steel grades and qualities required in this country.

If special categories such as very large diameter pipe, stainless steel, electrical steel, and tinplate are excluded, then the capability is significantly closer to 100 per cent.

According to the Australian Bureau of Statistics, the Australian steel supply chain, from basic iron and steel production through to downstream users such as fabricators, employed nearly 110,000 Australians in 2017-2018 and generated annual revenue in the order of \$29 billion.

Steel is fundamental to a modern society.

It is used in the buildings in which we work, live and play and the transport infrastructure we use. Steel is also a vital component in the energy generation and transmission industries, in the extraction of minerals, oil and gas and in manufacturing and agriculture.

The following recommendations should be adopted by federal, state and territory governments to ensure the continued development of a sustainable Australian steel industry in the 2020s and beyond.

DEVELOPMENT OF AN AUSTRALIAN INDUSTRY POLICY

Australia has traditionally had a sector-neutral industry policy relying on the efficient and honest operation of a rules-based international trading system, buttressed by the negotiation of free trade agreements – a policy that has been described as being purist in nature.

However, the National COVID-19 Coordination Commission has commissioned a report from Mr Andrew Liveris to devise a long-term strategy to deliver a competitive manufacturing sector to help in re-building the economy.

Government has placed emphasis on the development of

'advanced manufacture' in the development of industry policy. Australia is exquisitely placed to provide the world trading community with 'green steel' produced in a sustainable manner that limits the level of carbon emissions from steel production, principally through the use of hydrogen.

In addition, the Steel Research Hub and the Facility for Intelligent Fabrication based at the University of Wollongong are world-leading institutions that are developing and delivering innovative solutions and breakthrough technologies in steelmaking and fabrication.

These attributes are reason enough for the Australian steel and fabrication industry to be part of an industry policy promoting the development of an advanced manufacturing capacity, thereby securing both safe, long-term, well-paying employment, as well as greater supply chain security.

Accordingly:

- **So as to facilitate investment decisions, jurisdictions should establish clearly identified pipelines of infrastructure to be developed.**
- **A general industry policy for Australia should be developed.**
- **Government and industry should continue to support the Steel Research Hub and the Facility for Intelligent Fabrication as institutions designed to enhance the advanced manufacturing capabilities of the Australian steel manufacturing and fabrication industry.**
- **A fund similar in nature to the European Research Fund for Coal and Steel should be established.**
- **Government should invest in steel flagship projects designed to develop the use of low-emission steel technologies not currently used in Australia.**
- **The labour market needs of the steel manufacturing and fabrication industry should form an identifiable part of any labour market analysis undertaken by the National Skills Commission.**
- **The knowledge and skills required to be demonstrated under relevant qualifications recognised under the Australian Qualifications Framework should be examined to see if they remain suitable for purpose.**

PROCUREMENT

The ASI considers the concept of value for money used by Australian governments is relatively narrow and overly focusing on achieving the cheapest cost option rather than the option that benefits the economy and communities as a whole. Appropriate guidelines that identify what constitutes 'value for money' should be developed.

Another continuing issue for the Australian steel industry is the requirement to compete with jurisdictions that do not meet international labour or environmental standards.

A whole family of Australian Standards ensures safe and economic use of steel. These standards are used as a matter of course by Australian-based members of the steel supply chain, as regulated by former state and federal governments.

Government procurement contracts should require the use of products that meet relevant Australian Standards, or their equivalent.

Finally, to ensure supply chain security, it is also important that the procurement policies of Australian governments provide as much opportunity as possible for Australian steel and fabricated products to be used in Australian infrastructure.

This means the continued development of policies such as the Victorian Industry Participation Policy, which identifies specific projects as being strategic projects, for which minimum content requirements can be specified.

This will require the Australian Government to continue to ensure that schemes designed to support the development of small to medium sized enterprises (SMEs) continue to remain outside the scope of free trade agreements negotiated by the Australian Government.

Accordingly:

- **Government procurement regulatory instruments should make mandatory adherence to the Principles for Procurement and Conformance of Construction Products set out in the Australasian Procurement and Construction Council (APCC) document *Procurement of Construction Products – A Guide to Achieving Compliance*.**
- **Government procurement documentation should apply a weighting in favour of procurements providing local benefits to the areas in which relevant infrastructure is being constructed.**
- **Legislation should permit the declaration of projects of strategic importance, which may specify (amongst other things) a local content requirement.**
- **The accreditation concept already applied within the NSW and South Australian procurement policy frameworks should be extended so that:**
 - (a) **All structural steel products should be sourced from mills with Australasian Certification Authority for Reinforcing and Structural Steel (ACRS) third-party certification;**

(b) **All fabricated products should be obtained from suppliers accredited under the National Structural Steelwork Compliance scheme; and**

(c) **All structural steel and fabricated products should be sourced from businesses accredited under the steel industry's Environmental Sustainability Charter; and**

(d) **Steel meeting the standards specified in the newly created Australian Standard 5131 should be used by all governments when entering into contracts for the construction of all forms of building. This should be a condition imposed by the Commonwealth for any jurisdiction receiving Commonwealth funds for infrastructure projects.**

- **Governments should model regulations relating to issues such as determining value for money on regulation 67 of the *Public Contracts Regulations 2015* (UK).**
- **Governments should establish mechanisms to permit the confidential reporting of the use of non-compliant product in the construction of government funded infrastructure.**
- **The general Australian reservation contained in government procurement chapters of free trade agreement disapplying the agreement to forms of preference to benefit small and medium enterprises should remain policy.**

ENSURING A FAIR AND COMPETITIVE TRADING ENVIRONMENT

The Australian steel industry is internationally trade exposed and operates in one of the most open and competitive regions for steel supply in the world.

However, for the industry to be able to prosper it is important to ensure that international markets operate in a fair, efficient manner, and that Australia's ability to impose a remedy against unfair trade is as robust and effective as possible within the World Trade Organisation (WTO) Anti-dumping Agreement. This is particularly important as the world comes out of the COVID-19 crisis.

Reflecting this concern does not mean that the Australian steel industry is seeking to be shielded from genuine competition. Dumping and foreign government subsidisation of goods exported to Australia is not genuine competition and can distort markets and injure Australian manufacturers.

The government's explanatory memorandum that accompanied the 2017 *Amendment to the Customs Act* highlighted the damage caused by unfair trade;

The type of damage that is expected includes reduced revenue, production capacity, employment and investment (including foreign investment) for the Australian industry. The damage can be particularly exacerbated in industries with high barriers to entry and exit. Production that ceases in these industries is more difficult, and therefore less likely, to be resumed if the injurious dumping is addressed at a later stage.

It is recognised that a small market such as Australia cannot be self-sufficient in all steel products. It is in the interests of our customers to have a choice of suppliers—both local and international—that all compete on a level playing field.

It is therefore important that Australia maintains an effective and efficient anti-dumping system that is accessible to the small and medium enterprises that constitute much of the Australian steel and manufacturing industry.

Accordingly, with respect to anti-dumping trade measures the Australian Government should consider the following recommendations:

- **Streamline the ‘Review of Measures’ and ‘Duty Assessment’ processes to ensure that the correct amount of duty is collected and paid.**
- **Streamline the Lesser Duty Rule so that it is based on the industry applicant full cost to make and sell and an appropriate level of profit to allow for re-investment.**
- **Allow the Australian industry applicant to nominate form of duties to ensure the measures are as effective as possible for their market.**
- **Increase the resources of the Commission to improve investigation timelines and accuracy of outcomes. The ASI recommends the appointment of personnel with specific industry experience to assist with the technical aspect of investigations.**
- **Extend the period for which dumping securities can be converted to interim dumping duties from four months to six months, as permitted under WTO rules, to make measures effective sooner.**
- **Review of SME access and assistance arrangements to improve the access and ability of SMEs to utilise Australia’s anti-dumping system.**
- **Strengthen the anti-circumvention framework by:**
 - **Modernising the anti-circumvention legislation to clarify that duty absorption applies to the exporter’s behaviour, not just that of the importer.**
 - **Modernising the transshipment provisions of the anti-circumvention legislation to align with the intent of the European methodology, which allows the measures to be extended to all exporters from a third country, except for those that can verify that they are bona fide exporters.**
- **Alter the Customs Act to reinstate differential duties so that they are more accurate and effective for different models of the goods.**

PUBLIC SAFETY

Two separate Parliamentary Committees have found non-conformance with Australian Standards.

In many circumstances this issue of non-compliant substitutions concerns building surveyors or inspectors who do not have the engineering expertise, knowledge, or often the opportunity to identify steel defects, or check whether the steel supplied is compliant.

Moreover, observable defects such as substandard welding that needed to be ground out and replaced, laminations in plate that could cause catastrophic failure, substandard corrosion protection affecting the life of an asset and generally poor workmanship were found, unfortunately, to be commonplace on imported structural steelwork.

The former Building Ministers’ Forum endorsed the development of a number of the recommendations from the 2018 Shergold and Weir *Building Confidence Report* including action on education and training, model Continuing Professional Development (CPD) requirements, a Code of Conduct for Building Surveyors, support for performance solutions in building regulations, and definition of complex buildings.

All these reforms are well and good – but it is small comfort if an owner is stuck with a dangerous or inadequate building requiring repair through the incorporation of non-compliant product.

Queensland has passed legislation amending its *Building and Construction Commission Act 1991*, which is designed to ensure non-conforming product is not used in Australian buildings and infrastructure.

Similar legislation should be in force throughout Australia.

At the same time, Workplace Health and Safety (WHS) regulations (or the codes of practice that sit under them) should be modified to better define the link between non-compliant construction products and risk/safety. Key to this is actually addressing non-conformance at the construction level i.e. non-compliant builders. Most cases involving non-compliant material will actually be by non-compliant builders. Consequently, the NSW Building Commissioner is moving to a focus on the builder.

Accordingly:

- **Uniform national legislation creating a ‘chain of responsibility’ on anyone who manufactures, imports or supplies a building product to ensure non-conforming building products are not incorporated into buildings.**
- **Only high-risk building products certified by accredited third-parties as meeting standards prescribed in the National Construction Code (NCC) should be used in buildings.**
- **The risks to health and safety posed by the use of non-conforming products in construction should be identified in WHS regulations and Codes of Practice.**

Should these recommendations be adopted, a manufacturing sector of vibrant export-oriented SMEs with a long-term future, properly supported to encourage both innovation and the development of a workforce with strong vocational capabilities – an Australian *Mittelstand* – can be created.

This will lead to a steel manufacturing and fabrication industry providing supply chain security and environmentally clean, safe products for use in construction, resources, manufacturing and infrastructure.

1. INTRODUCTION

Image courtesy of Boralloy, Australia's only high-performance quenched and tempered plate steel producer.

"The lucky country needs to become the smart country, because we are running out of luck," says Dr Jens Goennemann, the CEO of the Advanced Manufacturing Growth Centre (AMGC), a body set up under the Abbott government to promote the manufacturing sector. Australia has long relied on digging up commodities, particularly coal, and sending it to global markets. There is an urgent need for us to expand from an economy that extracts and farms to one that adds value and manufactures complex things in a sustainable way. "The simple truth is that if you want to play a relevant role on the international stage, and you cannot make complex things, you will wake up empty-handed," says Goennemann. And, if you cannot make complex things, you cannot respond effectively to a crisis, be it a pandemic, a military incursion or global warming. His argument is not an ideological one but a practical one: if the mining sector collapses, or there's a trade war and China stops taking our agricultural products, then what?"

- Make Australia make again Weekend Australian 23 May 2020¹

Between a bushfire crisis and the COVID-19 pandemic, Australia has had a challenging 2020.

Over the course of the first half of this year, the Prime Minister has made a number of announcements that change both the way in which the country's government operates, through the National Cabinet process, together with some changes in policy direction.

However, from crisis comes opportunity. The challenges of 2020 provide decision-makers in all levels of government with an opportunity to reconsider the issue of what should be done to ensure a sustainable Australian steel industry in the 2020s and beyond.

Steel is fundamental to a modern society.

It is used in the buildings in which we work, live and play and the transport infrastructure we use. Steel is also a vital component in the energy generation and transmission industries, in the extraction of minerals, oil, and gas and in manufacturing and agriculture.

The maintenance and continued development of a resilient Australian steel manufacturing and fabrication industry is important for two specific reasons:

1. To ensure a robust industry capable of ensuring the

continued supply of steel product during times of supply chain instability; and

2. To provide all Australians with the confidence that steel products used in Australia's infrastructure comply with Australian Standards as specified by designers and architects and so create infrastructure that will operate in a safe manner in the years and decades to come.

THE AUSTRALIAN STEEL INDUSTRY

The Australian steel industry consists of four primary steel producers, supported by over 300 steel distribution outlets throughout the country and numerous manufacturing, fabrication and engineering companies.

Australia's primary steel producers and steel product manufacturers together form a strategically important value chain that has the capability to supply in excess of 90 per cent of the steel grades and qualities required in this country. If special categories such as very large diameter pipe, stainless steel, electrical steel, and tinplate are excluded, then the capability is significantly closer to 100 per cent.

According to the Australian Bureau of Statistics, the Australian steel supply chain, from basic iron and steel production through to downstream users such as fabricators, employed nearly 110,000 Australians in 2017-2018 and generated annual revenue in the order of \$29 billion.

¹ <https://www.theaustralian.com.au/weekend-australian-magazine/can-australian-manufacturing-become-great-again/news-story/4500599ff4a0750697cca36806fd9eb>

Table 1 illustrates the main elements of the Australian steel supply chain:

Table 1 – Australian steel supply chain

PRIMARY STEEL PRODUCTION		
SECTOR	FLAT PRODUCTS	LONG PRODUCTS
PROCESSES	<ul style="list-style-type: none"> - Cokemaking - Sintering - Ironmaking - Steelmaking (BOF) - Continuous Casting (Slab) - Hot Rolling (Plate / Strip) - Cold Rolling - Continuous Metal Coating - Continuous Coil Painting 	<ul style="list-style-type: none"> - Cokemaking - Sintering - Ironmaking - Steelmaking (BOF/EAF) - Continuous Casting (Slab / Bloom / Billet) - Hot Rolling (Rod / Bar / Beam) - Ingot Making
COMMON PRODUCTS	<ul style="list-style-type: none"> • Hot Rolled Coil • Cold Rolled Coil • Plate • Metal Coated Strip • Painted Strip • Welded Beam 	<ul style="list-style-type: none"> • Rail and Sleeper • Merchant Bar • Specialty Bar • Specialty Rod • Reinforcing Rod and Bar • Hot Rolled Structural
SECONDARY STEEL PRODUCTION		
PROCESSES	<ul style="list-style-type: none"> - ERW Pipe and Tube Forming - Electro-galvanizing - Heat treatment 	<ul style="list-style-type: none"> - Wire Drawing - Galvanized Coating - PVC Coating - Reinforcing Mesh Manufacture - Forging
COMMON PRODUCTS	<ul style="list-style-type: none"> • Precision Tube • Structural Pipe • Galvanized Pipe • Quench and Tempered Plate 	<ul style="list-style-type: none"> • Plain Wire • Barbed Wire • High Tensile Wire • Grinding Media
DISTRIBUTION AND PROCESSING		
PROCESSES	<ul style="list-style-type: none"> - Slitting - Shearing - Cut to length - Machining - Pre-drilling - Pre-cutting - Profiling - De-burring 	<ul style="list-style-type: none"> - Inventory Management - Warehousing / Stocking - Order Collation - Logistics - Temporary Storage Solutions - Bundling and Packaging - Pre-assembly - Installation Coordination
COMMON PRODUCTS	<ul style="list-style-type: none"> • Mults / Slits • Sheets 	<ul style="list-style-type: none"> • All Primary Products • All Secondary Products

The product is used for the applications set out in Tables 2 and 3:

Table 2 – Building and construction applications

CONSTRUCTION MODELLING		
OUTPUTS	- Detailed Design	- Component Drawings
FABRICATION		
PROCESSES	<ul style="list-style-type: none"> - Coping - Boring / Drilling - Machining - Cutting 	<ul style="list-style-type: none"> - Welding - Hot Dip Galvanizing - Painting - Assembly and Transport
COMMON PRODUCTS	<ul style="list-style-type: none"> • Beams • Columns • Girders • Gantries • Platforms 	<ul style="list-style-type: none"> • Towers • Supports • Staircases • Rolling stock • Truck Chassis and Trailers
STEEL REINFORCING		
PROCESSES	<ul style="list-style-type: none"> - Welding - Cutting 	<ul style="list-style-type: none"> - Drawing - Bending - Fabrication
COMMON PRODUCTS	<ul style="list-style-type: none"> • Mesh • Rock Bolts 	<ul style="list-style-type: none"> • Prefabricated elements • Fitments
ROLL-FORMING		
PROCESSES	- Profiling	- Folding and Bending
COMMON PRODUCTS	<ul style="list-style-type: none"> • Roof Sheetting • Cladding • Rainwater Goods • Structural Decking 	<ul style="list-style-type: none"> • Purlins and Girts • Framing • Culvert Pipe • Ductwork

Table 3 – Manufacturing applications

PROCESSES	<ul style="list-style-type: none"> - Machining - Punching - Pressing - Drawing - Forging / Upsetting - Hot Dip Galvanizing 	<ul style="list-style-type: none"> - Seaming - Welding - Heat Treatment - Soldering / Gluing - Powder Coating - Enamelling
COMMON PRODUCTS	<ul style="list-style-type: none"> • Ovens and Stoves • Air Conditioners • Water Tanks • Hot Water Heaters • Insulated Panels • Componentry and Brackets • Caravans • Trailers • Toolboxes 	<ul style="list-style-type: none"> • Fasteners • Coil and Leaf Springs • Nail Plate • Furniture and Cabinets • Racking and Shelving • Cable Trays and Ladders • Pipe Hangers • Struts • Meter Boxes

Table 4 below shows Australian iron and steel production the period 2013 to 2018.

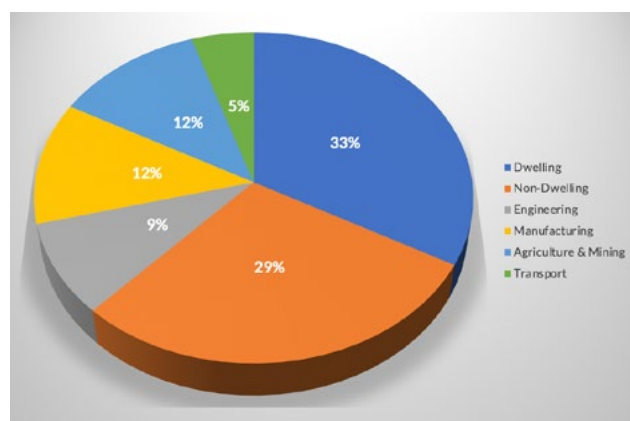
Table 4 – Australian iron and steel production (million tonnes)

PRODUCTION	2013	2014	2015	2016	2017	2018
Pig Iron	3.477	3.282	3.594	3.642	3.758	3.882
Ingots	0.061	0.026	0.025	0.026	N/A	N/A
Crude Steel	4.688	4.607	4.925	5.259	5.328	5.689
Hot Rolled Products	4.400	4.092	4.307	4.693	4.606	4.680
Hot Rolled Long Products	1.850	1.679	1.679	1.954	1.603	1.603
Hot Rolled Flat Products	2.549	2.413	2.628	2.739	3.003	3.077
Railway Track Material	0.108	0.089	0.089	0.089	N/A	N/A
Hot Rolled Bars (excl. concrete reinforcing bars)	0.790	0.577	0.577	0.644	0.672	0.672
Wire Rod	0.690	0.720	0.720	0.927	0.931	0.931
Hot Rolled Coil, Sheet, and Strip (<3mm)	2.289	2.160	2.415	2.501	2.709	2.747
Other Metal Coated Sheet and Strip (excl. Tin Mill Products)	1.195	1.343	1.367	1.473	1.536	1.613
Non-metallic Coated Sheet and Strip	0.569	0.622	0.656	0.719	0.724	0.761
Tubular Products	0.190	0.155	0.155	0.155	N/A	N/A

Source: World Steel Statistical Yearbook 2019

Figure 1 – Steel product market segments

Major flat product market segments 2017-2018

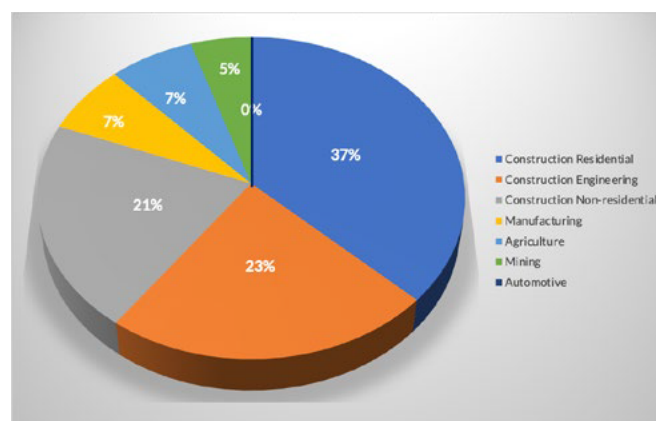


Source: BlueScope Steel

Some specialised steel types, most notably stainless steel and tinplate, are not manufactured in Australia. Markets for these products are served by imports.

Specialised products produced locally include railway track and sleepers, pipe and tube, and plate.

Major long product market segments 2019-2020



Source: InfraBuild Steel

The majority of steel end use is in the building and construction sector. Figure 1 (opposite) sets out the major flat product market sectors for Australian manufactured steel in 2017-2018.

Australia competes in a global market that has both significant over-capacity and widespread market access issues. Australian export levels are set out in Table 5.

Table 5 – Australian steel exports

EXPORTS	2013	2014	2015	2016	2017	2018
Semi-finished and Finished Products (M tonnes)	0.631	0.683	0.841	0.776	0.979	0.998
Ingots and Semis (million tonnes)	0.028	0.059	0.049	0.041	0.018	0.095
Long Products (million tonnes)	0.099	0.099	0.128	0.119	0.087	0.110
Flat Products (million tonnes)	0.438	0.447	0.579	0.529	0.809	0.724
Tubular Products (million tonnes)	0.038	0.045	0.061	0.065	0.039	0.042
Total Value of Exports (A\$B)	0.78	0.62	0.72	0.60	0.87	N/A

Source: World Steel Statistical Yearbook 2019

Table 6 sets out the level of steel imports into Australia.

Table 6 – Australian steel imports

IMPORTS	2013	2014	2015	2016	2017	2018
Pig Iron (million tonnes)	0.010	0.013	0.012	0.011	0.017	0.013
Semi-finished and Finished Products (M tonnes)	2.208	2.978	2.868	1.935	2.269	2.290
Ingots and Semis (million tonnes)	0.003	0.032	0.002	0.016	0.003	0.001
Long Products (million tonnes)	0.730	0.855	0.806	0.914	1.126	1.077
Flat Products (million tonnes)	0.629	0.808	0.714	0.634	0.671	0.661
Tubular Products (million tonnes)	0.844	1.281	1.344	0.369	0.465	0.549
Total Value of Imports (A\$B)	3.48	3.64	4.39	3.14	2.45	N/A

Source: World Steel Statistical Yearbook 2019

According to the World Steel Association, the top three steel producing countries in 2018 were China (928 million tonnes), Japan (104 million tonnes) and India (106 million tonnes). Both Australian domestic steel producers are multinational companies with international steelmaking operations. BlueScope was ranked the 63rd largest producer in the world in 2018 with production of 5.91 million tonnes, while Liberty Steel Australia produced 2.35 million tonnes in the same period.

This level of import and export is made to cater for the apparent level of steel use, indicated in Table 7.

Table 7 – Apparent steel use in Australia

APPARENT USE	2013	2014	2015	2016	2017	2018
Apparent Crude Steel Use (million tonnes)	6.376	7.142	6.967	6.477	6.025	6.091
Apparent Crude Steel Use per Capita (kg)	274	303	291	267	245	245
Apparent Finished Steel Use (million tonnes)	5.757	6.449	6.291	5.849	5.441	5.500

Source: World Steel Statistical Yearbook 2019

Despite extensive industry restructuring and some very high-profile 'business transformations' over the last decade, domestic steel production and the associated downstream industries remain a significant contributor to the Australian economy.

The steel industry is also noteworthy in terms of having a high proportion of jobs and businesses located in regional areas or non-capital cities, where unemployment is typically higher than the national average.

The industry is technically complex and requires a highly skilled workforce to support it, which in turn encourages the ongoing presence of high-quality tertiary education institutions in regional areas.

As Table 8 makes clear, the steel industry employs many Australians, with an employment pattern heavily skewed to regional areas and smaller cities such as Newcastle, Wollongong and Whyalla.

Table 8 – Employment

SEGMENT	EMPLOYMENT
Primary steel production	22,320
Heavy fabrication	38,554
Medium fabrication and general manufacturing	48,952
Total	109,826

Source: ABS 81550DO003_201718 Australian Industry, 2017-18 (Manufacturing Industry Data Cube)

These figures all emphasise the importance of steel and steel products to the Australian economy.

The vast majority of these businesses are amongst the 47.4 per cent of businesses employing between one and 19 employees.²

THE COMMITMENTS OF GOVERNMENT POST COVID-19

Australian state and federal governments have acted together during the course of the COVID-19 pandemic.

A national cabinet consisting of the Prime Minister and the nation's premiers and chief ministers have been created to co-ordinate national action.

An expenditure of \$180 billion in infrastructure has also been announced by the Australian Government, with joint assessment teams accelerating approvals on vital projects including the inland rail between Melbourne and Brisbane, the Marinus Link between Tasmania and Victoria and the Olympic Dam extension in South Australia.³

This will go a long way towards the continued development of the Australian economy, including the steel industry.

However, so as to give industry the confidence and certainty to invest it is imperative that all levels of government create an identified pipeline of infrastructure, as well as an estimated time of completion of the infrastructure.

An example of what can be done is the website produced by Infrastructure NSW. It provides a forward view of infrastructure under development by the NSW Government.⁴

RECOMMENDATION

To facilitate industry capacity and capability investment decisions, all levels of government should establish clearly identified pipelines of infrastructure intended to be developed.

The Prime Minister has also set out how Australian governments intend to ensure the continued development of the Australian economy post COVID-19.

On 26 May 2020, he said:

We will not retreat into the downward spiral of protectionism. To the contrary, we will continue to be part of the global supply chains that can deliver the prosperity we rely on to create jobs, support incomes and build businesses.

An educated and highly skilled workforce that supports not just a thriving and innovative services sector, but a modern, competitive and advanced manufacturing sector.

The skilled labour businesses need to draw on, the affordable and reliable energy they need, the research and technology that they can draw on and utilise, the investment capital and finance that they can access, the markets they

² The Australia Institute *A Fair Share for Australian Manufacturing: Manufacturing Renewal for the Post-COVID Economy* (2020): 57 - <https://www.tai.org.au/sites/default/files/A%20Fair%20Share%20for%20Australian%20Manufacturing%20%5BWEB%5D.pdf>

³ Australian Government Department of Infrastructure, Transport, Regional Development and Communications - Infrastructure Investment Program <https://investment.infrastructure.gov.au/>

⁴ <https://www.infrastructure.nsw.gov.au/industry/construction-industry/pipeline-of-projects/>

can connect to, the economic infrastructure that supports and connects them, the amount of government regulation they must comply with, and the amount and the efficiency of the taxes they must pay, in particular whether such taxes encourage them to and to employ.

Now that is the change agenda of our job making plan, to enable Australia to emerge from this crisis and set up Australia for economic success over the next three to five years.⁵

This appears to suggest a possible change in government policy direction.

TOWARDS AN AUSTRALIAN INDUSTRY POLICY?

Australia has traditionally had a sector-neutral industry policy relying on the efficient and honest operation of a rules-based international trading system, buttressed by the negotiation of free trade agreements – a policy that has been described as being purist in nature.

As a 2014 Senate Committee report⁶ indicated:

3.7 Witnesses expressed concern that Australia's commitment to the non-discrimination principle⁷ was idealistic and that other countries were taking steps to protect their domestic industries. For example, Ms Lynne Wilkinson, CEO of The Australian Companies Institute Limited (AUSBUY) argued:

Every other country looks after itself first, but we seem to be the ones, at our expense, who look after the international obligations. We are purists and idealists. In terms of the government procurement process, there is very often laziness, lack of integrity, naivety and lack of accountability in that process. So, they are the things that we would like to see changed, and it really needs to come from the top. The Commonwealth government needs to say, 'We're going to support local businesses.' We have never signed any free trade agreements under which we have not failed and suffered. We signed a free trade agreement with [America] in 2005; we still have tariffs for another 11 years with that. So, we cannot say that we are very smart. We are very smart at giving away what we have, but we are not very smart at building what our people have built for the last 226 years.⁸

The purist position subsequently remained.

In 2019, the Australian Government rejected a recommendation contained in the Senate Economics Reference Committee's report *Australia's Steel Industry: Forging Ahead* that the Australian Government develop an overarching steel policy, saying:

Australia has amongst the world's most open economic settings, supported by an effective anti-dumping system. Consistent with this, the Government's industry policy supports a business environment that encourages innovation and enables growth for globally competitive industries.⁹

However, the National COVID-19 Coordination Commission has commissioned a report from Mr Andrew Liveris to devise a long-term strategy to deliver a competitive manufacturing sector to help in re-building the economy.

As has been reported:

A former chair and CEO of the Dow Chemical Company, Mr Liveris helped write manufacturing policy for US presidents Barack Obama and Donald Trump — and is now doing the same for Prime Minister Scott Morrison.

He says the pandemic brought Australia's need for domestic manufacturing to the front of people's minds.

"All the PPE items that maybe were not available, everyone suddenly got very attentive to having them [made domestically]," he says.

"That really acutely brought into focus the notion of manufacturing and manufacturing capabilities."

He points to global rankings of economic complexity, which rate how diverse and complex a nation's exports are. Australia is the world's 87th most complex country according to Harvard Growth Labs' Economic Complexity Index.

"For a country that is a first world country to have such a low economic complexity economy, it needs to be remedied," Mr Liveris says.

He says governments need to ensure their citizens have access to basics such as healthcare, energy, defence, technology, food and water.

"These are key national imperatives that need to be addressed through having capability onshore," Mr Liveris says.

"This is not picking winners and losers, this is sectorial focus, and brought into acute focus by the pandemic and the crisis.

"I think this means that we need to have a narrative that says, 'Look, I'm going to get very good at certain areas; I'm going to be a world-beater in certain areas.'¹⁰

⁵ <https://www.pm.gov.au/media/address-national-press-club-260520>

⁶ Senate Finance and Public Administration References Committee *Commonwealth Procurement Procedures* (2014): http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Finance_and_Public_Administration/Commonwealth_procurement_procedures/Report/index

⁷ Described in paragraph 3.4 of the Senate Committee report as being an obligation, under international free trade agreements, which 'necessitate all government procurement to be non-discriminatory and for all suppliers to be treated equitably based on their commercial, legal, technical and financial abilities and not discriminated against due to size, foreign affiliation or ownership, location, or the origin of goods or services'.

⁸ See paragraph 3.7 of the *Senate Commonwealth Procurement Procedures* report: 16

⁹ Australian Government *Australian Government response to the Senate Economics Committee Report: Australia's steel industry: forging ahead* (2019): 9

¹⁰ *Keeping the focus on Australian manufacturing after coronavirus*, ABC 30 June 2020: <https://www.abc.net.au/news/2020-06-30/andrew-liveris-manufacturing-in-australia-after-coronavirus/12387448>

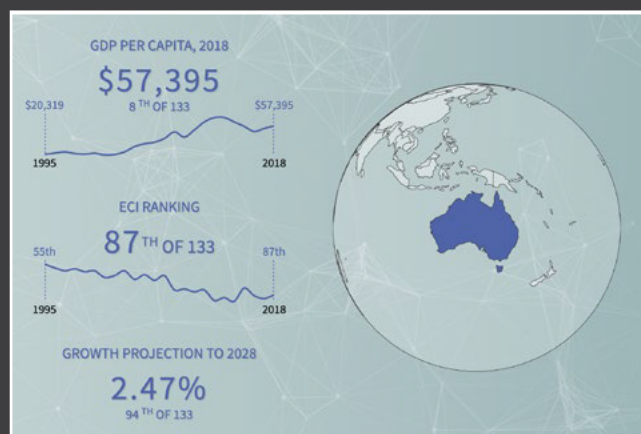
The Harvard complexity report set out in Box 1 below does not make for happy reading:

Box 1 – Harvard Atlas of Economic Complexity: Australia

Australia is a high-income country, ranking as the eighth richest economy per capita out of 133 studied. Its 25 million inhabitants have a GDP per capita of \$57,395 (\$51,036PPP; 2018). GDP per capita growth has averaged 1.0 per cent for the past five years, below regional averages.

Australia ranks as the 87th most complex country in the Economic Complexity Index (ECI) ranking. Compared to a decade prior, Australia's economy has become less complex, worsening five positions in the ECI ranking. Australia's worsening complexity has been driven by a lack of diversification of exports. Moving forward, Australia is positioned to take advantage of a moderate number of opportunities to diversify its production using its existing knowhow.

Australia is less complex than expected for its income level. As a result, its economy is projected to grow slowly. The Growth Lab's 2028 Growth Projections foresee growth in Australia of 2.5 per cent annually over the coming decade, ranking in the bottom half of countries globally.¹¹



The Government has placed emphasis on the need to develop 'advanced manufacture' in the development of industry policy.

Steel manufacturing and fabrication should be regarded as being described in this manner.

Australia is exquisitely placed to provide the world trading community with 'green steel' produced in a sustainable manner that limits the level of carbon emissions from steel production, principally through the use of hydrogen.

A report to the Council of Australian Governments (COAG) by Deloitte identified steelmaking as having the potential to create more value from the extraction of hydrogen than merely using the product for straight fuel substitution, thus creating an important export for Australia, with the COAG National Hydrogen policy ultimately deciding:

Abundant clean hydrogen will present the opportunity to decarbonise sectors currently dependent on coal, gas and liquid fossil fuels, to revitalise old industries and start new ones. It could give Australian manufacturers of energy-intensive products such as steel a comparative market advantage because they will be able to use low-cost hydrogen near where it is produced.¹³

And the Grattan Institute has said:

Australia has an historic opportunity to create a new, export-focused manufacturing sector based on globally competitive renewable energy. The opportunity is more than building wind and solar farms – we can use wind and solar to make energy-intensive 'green' commodities. If we get it right, we will resolve a climate conundrum that has stretched our political fabric for more than a decade.¹⁴

Moreover, the Steel Research Hub based at the University of Wollongong was established to develop, and ultimately deliver, innovative solutions and breakthrough technologies in steel, providing the manufacturing sector with uniquely competitive processing methodologies and differentiated end-user products since 2015.

Similarly, the Facility for Intelligent Fabrication is a collaboration bringing together academic research with the TAFE sector and companies in the welding and fabrication sector, with a focus on developing new methodologies that significantly improve resource intensity and utilisation while maintaining the productivity, quality and life of manufacturing facilities.

For supply security, environmental and employment security reasons, it is important that policy settings are designed to support these forms of initiatives.

This is discussed more in [Chapter 2](#).

GOVERNMENT PROCUREMENT POLICY

The ASI considers the concept of value for money used by Australian governments is relatively narrow and overly focusing on achieving the cheapest cost option, rather than the option that benefits the economy and communities as a whole. Appropriate guidelines that identify what constitutes 'value for money' should be developed.

There are also some shortcomings in considering 'whole of life' costing considerations when making infrastructure procurement decisions, with factors including the time savings involved in making local purchases not given sufficient weight by purchasers.

¹¹ <https://atlas.cid.harvard.edu/countries/14>

¹² Deloitte *Australian and Global Hydrogen Demand Growth Scenario* COAG Energy Hydrogen Strategy Taskforce (2019): 58

¹³ COAG Energy Council *Australia's National Hydrogen Policy* (2019): 76

¹⁴ Grattan Institute *Start With Steel A Practical Plan to Support Carbon Workers and Cut Emissions* (2020): 3 - <https://grattan.edu.au/wp-content/uploads/2020/05/2020-06-Start-with-steel.pdf>

A final continuing issue for the Australian steel industry is the requirement to compete with jurisdictions not meeting international labour or environmental standards, rather than product meeting Australian Standards.

NSW and South Australia have policies requiring procurement contracts to have conditions specifying that:

- Steel meeting Australian Standards is to be used;
- Steel must be sourced from mills with Australasian Certification Reinforcing and Structural Steel (ACRS) third party certification; and
- Steelwork must be sourced from steel fabricators independently certified to the recently created National Structural Steelwork Compliance Scheme, which requires relevant products satisfying the provisions of AS 5131.

This should be a national standard in force in all jurisdictions.

Finally, to ensure supply chain security, it is also important that the procurement policies of Australian governments provide as much opportunity as possible for Australian steel and fabricated products to be used in Australian infrastructure.

This means the continued development of policies such as the Victorian Industry Participation Development Policy, which identifies specific projects as being strategic projects, for which minimum content requirements can be specified.

This is discussed more in [Chapter 3](#).

EFFICIENT OPERATION OF TRADE RULES

For industry to prosper, it is important to ensure that international markets operate in a fair, efficient manner as the world comes out of the COVID-19 crisis.

An *Analysis of steel and aluminium report to the Anti-Dumping Commission* (2017) has observed:

(T)he nature and extent of Asian government interventions, and the relative magnitude of Chinese production, has meant that these interventions have been major contributing factors—but not the only contributors—to sustained global overcapacity, ongoing excess production, and depressed world prices.

In advocating government actions to address market distortions that underpin sustained global overcapacity, the OECD has highlighted that ‘excess capacity in one region can displace production in other regions, thus harming producers in those markets’, including through ‘unfair trade practices such as dumping’.¹⁵

Reflecting this concern does not mean industry is seeking to completely replace steel imports. Far from it.

Australia has a number of companies producing niche

products sold throughout the world. A small market such as Australia cannot be self-sufficient in all steel products. It is in the interests of our customers to have a choice of suppliers—both local and international.

However, it is appropriate that an efficiently operating anti-dumping system that is accessible to the SMEs (that constitute much of the Australian steel and manufacturing industry) and which finishes investigations quickly is maintained.

This is discussed in greater detail in [Chapter 4](#).

PUBLIC SAFETY

Finally, two separate Parliamentary Committees have found non-conformance with standards, with:

- The April 2020 NSW Public Accountability Committee's report into the Regulation of Building Standards, Building Quality and Building Disputes expressing alarm to hear that ‘shonky’ practices are endemic within the building and construction industry;¹⁶
- A 2017 report of the Senate's Economic References Committee finding evidence that legal loopholes in contracts and gaps in regulatory regimes may allow imported fabricated steel to avoid complying with the same standards as steel made in Australia.¹⁷

In many circumstances this issue of non-compliant substitutions concerns building surveyors or inspectors who do not have the engineering expertise, knowledge, or often the opportunity to identify steel defects, or check whether the steel supplied is compliant.

The former Building Ministers' Forum endorsed the development of a number of the recommendations from the 2018 Shergold and Weir *Building Confidence Report* including action on education and training, model CPD requirements, a Code of Conduct for Building Surveyors, support for performance solutions in building regulations, and definition of complex buildings.

Queensland has passed legislation amending its *Building and Construction Commission Act 1991*¹⁸ creating a **chain of responsibility** on those who manufacture, import or supply a building product in an endeavour to ensure non-conforming building products are not incorporated into a building.

Similar legislation should be in force throughout Australia. At the same time, amendments to WHS regulations (or codes of practice sitting under them) should be made to better define the link between non-compliance construction products and risk/safety.

This matter is discussed in greater detail in [Chapter 5](#).

The first matter to consider is the place Australian steel manufacturing and fabrication has in an enhanced national industry policy that encourages advanced manufacturing.

¹⁵ https://www.industry.gov.au/sites/default/files/2019-05/analysis_steel_aluminium_report_-_august_2016.pdf : 5

¹⁶ <https://www.parliament.nsw.gov.au/lcdocs/inquiries/2540/PAC%20-%20Regulation%20of%20building%20standards%20quality%20disputes%20-%20Final%20report%20-%20Report%20no%206.pdf> : 13

¹⁷ Senate Economics References Committee (2017) *Australia's Steel Industry: Forging Ahead*

¹⁸ Through the *Building and Construction Legislation (Non-Conforming Building Products – Chain of Responsibility and Other Matters) Amendment Act 2017*

2. INDUSTRY POLICY

Image courtesy of InraBuild, one of Australia's leading integrated steel manufacturing, processing, distribution and recycling businesses.

Going forward, in a world that was already marked by growing economic nationalism, the challenge is to get the balance right for Australia by having domestic capacity in key certain areas, while not engaging in a wholesale retreat from the openness that underpins our prosperity.

We need to better interrogate how certain supply chains work and whether factors to do with public health, national security, or market concentration mean we need to take steps to make some more resilient.

Alongside this is Australia's role as an advanced manufacturing nation. I am not talking about mass consumer goods like cars and washing machines.

Instead, our focus should be technology-led manufacturing using our skills, R&D, and highly-trained workforce.

Trade Minister Senator Simon Birmingham speech – Trading Australia Towards the Future, speech to the National Press Club, Canberra 17 June 2020¹⁹

In 2017, the Anti-Dumping Commission said:

Industry policy has an important role in contributing to the Agenda by enabling growth and productivity for globally competitive industries through a range of policy actions.

The government's policy actions in support of trade liberalisation and more open global markets, such as through free trade agreements with Australia's trading partners, also play a key role in supporting the government's Agenda.

Australia's trade remedies system operates within the framework established by the WTO. This framework forms an integral element of a free and open global trading system. Most developed countries and many developing countries also operate trade remedies regimes.

It is important to recognise that anti-dumping measures do not seek to stop imports or give an unfair competitive advantage to Australian producers. Dumping and foreign government subsidisation of goods exported to Australia

is not genuine competition and can distort markets and injure Australian manufacturers. A robust and effective anti-dumping system is an essential part of the government's commitment to free and fair trade.²⁰

This is the traditional Australian policy position.

However, as discussed in the introduction there appears an increasing willingness to develop an industry policy.

It is important that the steel manufacturing and fabrication industry is recognised in an industry policy, for two reasons.

The first is so Australia retains its own sovereign steel production capacity.

Steel occupies a strategically essential role in Australia's sovereign production capabilities, particularly at time where there is unprecedented global uncertainty in supply chains. It is a critical input in many areas of Australia's society and economy, from residential and commercial construction and manufacturing, through to mining, agriculture and

¹⁹ <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22media%2Fpressrel%2F7397843%22;src1=sm1>

²⁰ Anti-Dumping Commission *Analysis of Australia's Steel Manufacturing and Fabricating Markets Report to the Commissioner of the Anti-Dumping Commission* (2017):5 https://www.industry.gov.au/sites/default/files/2019-05/adc_steel_fabrication_report_november_2017.pdf

environmental protection. All these essential downstream and related industries rely on steel to function.

The Government has established a set of sovereign industrial capability priorities as part of an overall defence industrial capability plan designed to support current critical capabilities.²¹

Identifying those industries possessing national strategic importance to the Australian economy generally should also occur.

RECOMMENDATION

A general industry policy for Australia should be developed.

Secondly, steel production and fabrication can be identified as being advanced manufacturing.

It is not 'old' technology or a 'legacy' industry.

One definition used by Australian governments of what constitutes advanced manufacturing is:

- Collaborative R&D and design-led thinking
- Innovative business models and effective supply chain capabilities
- The effective use of disruptive technologies, systems and cutting-edge materials
- A focus on customisation and exports
- World-best practices and processes
- New ways to manufacture existing products and the manufacture of new products
- The provision of high-value-added services and innovative solutions.²²

It should be noted that Australia is already regarded as being a world leader in the development of some steel applications and coating technologies.

As the Executive Director of the National Association of Steel-Framed Housing told the Senate Committee, Australia is seen as a world leader in the design and construction of steel-framed buildings using cold-formed steel.

Technologies are also exported overseas. This includes the development and application of sophisticated CAD and CAM systems to manufacture steel frames.

However, he went on to say that, in these areas, overseas countries have been catching up with their technology and, in some cases, surpassing Australia's leading position.²³

THE STEEL RESEARCH HUB

The Steel Research Hub based at the University of Wollongong was established to develop and deliver innovative solutions and breakthrough technologies in steel, thus providing the manufacturing sector with uniquely competitive processing methodologies and differentiated end-user products since 2015.²⁴

It has attracted funding of almost \$13 million in the five years to 2021 (\$25 million over five years when both cash and in-kind are included) from both industry and government and is testament to the critical importance of this industry in Australia and the importance both industry and government place on collaborative, cross-disciplinary research.

The Australian Government has now funded the Hub for a further four years until 2025.

The Steel Research Hub activities are focussed in four main areas:

- New methodologies that significantly improve resource intensity and utilisation while maintaining the productivity, quality and life of manufacturing facilities,
- Novel approaches to next generation products incorporating improved functionality such as higher strength, ductility, durability and resilience, and step-change performance in anti-corrosion treatments for products,
- New processing capability and more productive manufacturing facilities and new applications of enabling the technology of the Fourth Industrial Revolution to achieve a generational shift in capability across the supply chain, and
- Sustainable steel manufacturing.

The Hub also has a sustainable steel manufacturing programme with the objective to help maintain Australia's competitiveness in iron and steelmaking, with attention to both economic and environmental sustainability. There are two key areas:

- Economic sustainability through enhanced productivity and flexibility of raw material usage in steelmaking; and
- Environmental sustainability through lower greenhouse gas emissions and greater recycling of plant waste.

²¹ <https://www.defence.gov.au/spi/industry/capabilityplan/SovereignIndustrialCapabilityPriorities.asp> and <https://www.defence.gov.au/spi/industry/CapabilityPlan/Docs/SICP-Factsheet1.pdf>

²² Advance Queensland *Queensland Advanced Manufacturing 10 Year Roadmap and Action Plan* (2016):6 <https://cabinet.qld.gov.au/documents/2016/Dec/AdvMan/Attachments/Roadmap.PDF>

²³ Senate Economics References Committee *Australia's Steel Industry: Forging Ahead* (2017): https://www.apf.gov.au/Parliamentary_Business/Committees/Senate/Economics/Futureofsteel45th/Report: 18

²⁴ <http://steelresearchhub.uow.edu.au/>

An example of the relevant research undertaken relates to increased utilisation of Australian raw materials.

The investigation of the sintering and assimilation behaviour of complex raw material blends (that incorporated conventional Australian iron ores, fluxes and recycled plant by-product streams) identified the optimal operational conditions with respect to blast furnace conditions.

The knowledge generated will give ironmakers more flexibility in reducing costs and help deliver confidence in greater use of Australian raw materials.

It is clear the work of the Steel Research Hub should be continued, so Australia can keep pace with international competitors. An example of the work of the research hub is set out in Box 2.

Box 2 – Innovative Coating Technologies

The fundamental research undertaken in this program significantly increased existing capability and new knowledge on the microstructure development of next generation metallic coated steel products, as well as corrosion performance in the field.

These projects provided a more thorough understanding of the mechanisms responsible for the development of stable, high quality coatings of optimal thickness during continuous coatings processes. For example, through thermodynamic and high temperature modelling research, an in-depth understanding was developed of how operational factors affect the generation and growth of intermetallic compound particles in the coating bath.²⁵

THE FACILITY FOR INTELLIGENT FABRICATION

Similarly, the Facility for Intelligent Fabrication is a collaboration bringing together existing University of Wollongong research with the technical and further education sector's complementary training and facilities and Weld Australia's network of companies in the welding and fabrication sector.²⁶

The Facility is advancing projects including the use of augmented and virtual reality, the integration of smart sensors in the manufacturing process, the use of information from a computer aided design (CAD) file to develop the most optimal path for welding robots to traverse whilst making products and the development of enhanced robotic handling processes.²⁷

These examples are reason enough for the Australian steel and fabrication industry to be part of an industry policy

promoting the development of an advanced manufacturing capacity, thereby securing both safe, long-term, well-paying employment, as well as greater supply chain security.

RECOMMENDATION

Government and industry should continue to support the Steel Research Hub and the Facility for Intelligent Fabrication as institutions designed to enhance the advanced manufacturing capabilities of the Australian steel manufacturing and fabrication industry.

FURTHER INCENTIVE TO INVEST IN INNOVATION

It is noted that on 17 July 2020 the Council of the European Union recommitted to funding for a Research Fund for Coal and Steel that funds research in areas such as new sustainable and low-carbon steelmaking and finishing processes, advanced steel grades and applications and in the conservation of resources, protection of the environment and the 'circular economy' through, for example, improving techniques for recycling obsolete steel and by-product from various sources and improving the quality of steel scrap.²⁸

A similar fund should be established by government to build on Australia's comparative advantages and develop a clean, green steel industry, such as the steel flagship project, discussed below.

RECOMMENDATION

A fund similar in nature to the European Research Fund for Coal and Steel should be established.

GREEN STEEL

Developing an advanced manufacturing culture in Australia would be encouraged through supporting the development of a 'green steel' industry in Australia.

Green steel is explained in Box 3 (on the following page).

²⁵ Ibid

²⁶ <https://fif.org.au/>

²⁷ <https://fif.org.au/projects/>

²⁸ Council of the European Union (2020) A Council Decision amending Decision 2008 376/EC on the adoption of the Research Programme of the Research Fund for Coal and Steel and on the multiannual technical guidelines for this programme - https://www.parliament.gv.at/PAKT/EU/XXVII/EU/02/74/EU_27449/imfname_10994458.pdf

Box 3 – What is Green Steel?²⁹

Steel is a refined form of iron metal. Making it produces large quantities of greenhouse gas emissions, primarily from the use of coal as a ‘reductant’ – the carbon in coal reacts chemically with the oxygen in iron ore, leaving iron metal and carbon dioxide.

Steel is also made using natural gas instead of coal, in a process known as ‘direct reduction’. This involves splitting natural gas into a mix of carbon monoxide and hydrogen, and using these gases to reduce iron ore to iron metal. Gas-based direct reduction roughly halves the carbon dioxide emitted per tonne of steel.

But lower-emissions steel is still not ‘green steel’. For this you need a carbon-free reductant. The best candidate is pure hydrogen – using it to make steel leaves only water as a by-product.

Other very low-emissions steel-making techniques are possible, such as gas-based direct reduction with carbon capture and storage.

It is relatively easy to make low-emissions recycled steel from scrap. No reductant is required, and so the main source of emissions is the electricity used to melt the steel (in an ‘electric arc furnace’). Even using coal-based electricity, recycled steel produces about one quarter of the emissions of new ‘ore-based’ steel made using coal.

..... To tackle climate change, the world will need large volumes of decarbonised ore-based steel over coming decades. For this reason, this report focuses on low-emissions ore-based steel-making.

The former COAG Energy Council has established a national hydrogen strategy for Australia.

They say:

Australian energy ministers share a vision for a clean, innovative, safe and competitive hydrogen industry that benefits all Australians and is a major global player by 2030. But 2030 is just one milestone on Australia’s hydrogen journey. More exciting possibilities lie beyond it.

Our major energy trading partners have set clear targets as waypoints to becoming ‘hydrogen societies’. By 2050, Japan alone intends to import up to 10 million tonnes of hydrogen per year. The Republic of Korea, China, and the United States will have millions of hydrogen vehicles on their roads. The European Union will be using hydrogen for heating, transport and industrial applications to meet its 2050 target of net zero emissions.

Beyond 2030, the cost of making, storing, moving and using clean hydrogen will become increasingly competitive with other fuels in an energy-hungry world. In a decade, leading energy analysts estimate that in some applications, such as transport, the cost of clean hydrogen will be the same as or even cheaper than using fossil fuels.

Abundant clean hydrogen will present the opportunity to decarbonise sectors currently dependent on coal, gas and liquid fossil fuels, to revitalise old industries and start new ones. It could give Australian manufacturers of energy-intensive products such as steel a comparative market advantage because they will be able to use low-cost hydrogen near where it is produced.³⁰ (emphasis added)

Australia should take the opportunity to leverage this advantage to create an efficient value-added industry that would add to Australia’s sovereign industry capacity.

The Grattan Institute has observed that Australia produces 38 per cent of the world’s iron ore and 18 per cent of the world’s metallurgical coal yet produces only 0.3 per cent of the world’s steel³¹ and so proposes a steel flagship project would involve incumbent and potential new steel suppliers seeking government funding to invest in low-emissions steel technologies not currently used in Australia.

Environmental and strategic considerations dictate that this proposal should be supported.

RECOMMENDATION

Government should invest in a steel flagship projects designed to develop the use of low-emissions steel technologies not currently used in Australia.

SKILLS

Finally, vocational education can be a key enabler of Australia’s post COVID-19 economic recovery.

The Prime Minister has announced the National Skills Commission has been established and will now provide detailed labour market analysis, including an annual report that sets out the skill needs of Australia.

The needs of the steel industry should be taken into account, both at the higher education and vocational educational level.

²⁹ Grattan Institute Start with steel: *A practical plan to support carbon workers and cut emissions*: 20 - <https://grattan.edu.au/wp-content/uploads/2020/05/2020-06-Start-w-th-steel.pdf>

³⁰ COAG Energy Council *Australia’s National Hydrogen Policy* (2019): 76

³¹ Grattan Institute (2020): 5

RECOMMENDATION

The labour market needs of the steel manufacturing and fabrication industry should form an identifiable part of any labour market analysis undertaken by the National Skills Commission.

There is a range of different careers in steel fabrication, including boilermakers, mechanical and pipe fitters, welders and sheet metal workers and riggers or structural steel installers and erectors that are offered by the Australian steel manufacturing and fabrication industry.

Industry is working to ensure there is in place industry-led training and certification programs³² designed to develop the skills and expertise in various aspects of steel manufacturing, assembly and installation, so that the estimated 3,800 jobs anticipated to open up in the primary metal and metal product manufacturing and fabricated metal product manufacturing industries each year until 2024 can be filled.³³

There is therefore scope for government to ensure that financial support is made available to ensure that incentives are in place to upskill by providing viable vocational educational options whilst ensuring that qualifications recognised under the Australian Qualifications Network are suitable for purpose.

RECOMMENDATION

The knowledge and skills required to be demonstrated under relevant qualifications recognised under the Australian Qualifications Framework should be examined to ensure they remain suitable for purpose.

Any industry policy must be accompanied by suitable procurement policies.

These are now discussed.

³² Australian Steel Institute *Steel Australia* (Winter, 2020) *ASI Vocational Training Initiatives*: 20
³³ Shah and Dixon *Future job openings for new entrants by industry and occupation* (2018): 65

3. PROCUREMENT POLICY

Image courtesy of BlueScope, a global leader in premium branded, coated and painted steel products.

The Australian construction industry operates in a global marketplace and utilises a vast, increasingly complex and innovative range of construction products, many of which are manufactured overseas.

As there are hundreds of thousands of building and construction products on the market - produced both domestically and internationally - it is extremely difficult to ascertain whether or not they all comply with the National Construction Code (NCC) and/or conform to the requirements of the relevant Australian or international standards, where they exist.

The compliance and durability of construction products are major risk factors which need to be managed as they impact significantly on the service life and quality of building and construction projects.

Evidence suggests that the market penetration of non-conforming products in several key construction product sectors in Australia may be up to 50 per cent. This is a sobering and alarming statistic.

- Australian Procurement and Construction Council – *Procurement of Construction Products – A Guide to Achieving Compliance* (2nd edition):³⁴

It is important that procurement policies achieve two outcomes.

The first is to permit Australian suppliers reasonable access to infrastructure projects funded by governments.

The second is to ensure that ethically produced goods satisfy Australian laws, such as the Commonwealth's *Modern Slavery Act 2018*.³⁵

The Australasian Procurement and Construction Council (APCC) published the *Australian and New Zealand Government Framework for Sustainable Procurement*, which contained the following principles that guide the implementation of sustainable procurement:

1. Adopt strategies to avoid unnecessary consumption and manage demand;
2. In the context of whole-of-life value for money, select products and services which have lower environmental impacts across their life cycle compared with competing products and services;

3. Foster a viable Australian and New Zealand market for sustainable products and services by supporting businesses and industry groups that demonstrate innovation in sustainability; and
4. Support suppliers to government who are socially responsible and adopt ethical practices.³⁶

Further guidance is set out in 12 principles in the APCC publication *Procurement of Construction Products – A Guide to Achieving Compliance* (2015).

These principles set out what constitutes 'best practice' as to how building products should be procured. They are set out in [Attachment 1](#).

This publication was prepared by Australian and New Zealand government agencies with responsibility for procurement for their governments. They should follow it.

³⁴ https://9104f275-f216-4fd2-9506-720eb252b4fc.filesusr.com/ugd/473156_54e042e91f914e81a2e55b6a9bbbc301.pdf

³⁵ <https://www.legislation.gov.au/Details/C2018A00153>

³⁶ https://9104f275-f216-4fd2-9506-720eb252b4fc.filesusr.com/ugd/473156_81d25df78fcf4e76a79a609a5ac9c110.pdf: 8

RECOMMENDATION

Government procurement regulatory instruments should make mandatory adherence to the Principles for Procurement and Conformance of Construction Products set out in the APCC document *Procurement of Construction Products – A Guide to Achieving Compliance*.

benefits test for all significant procurement activities, where a weighting of up to 30 per cent may be applied. The purpose of the test is to evaluate the benefits that any supplier would bring to the local area.⁴⁰

Victoria has a requirement under the *Local Jobs First Act 2003* that a responsible minister set local content and other requirements for identified strategic projects. Unless an exemption is granted, the responsible minister must set these requirements at no less than 90 per cent for a construction project, or 80 per cent for a services or maintenance project related to a strategic project.⁴¹

Finally, the *NSW Public Private Partnership Guidelines* require a public interest evaluation considering amongst other things, whether a proposal meets the Government's objective relating to the economic and regional development in the area concerned, including investment and employment growth.⁴²

These are principles that should be adopted in all jurisdictions.

ACCESS TO THE PROCUREMENT PROCESSES

The Australian Industry Participation National Framework³⁷ commits the Australian Government and state and territory governments to adopting a consistent national approach to maximise Australian industry participation in major projects in Australia and overseas.

Each jurisdiction also has its own industry participation policies aimed at increasing Australian industry participation.

For instance, the Australian Government requires those responsible for:

- Major public and private projects with capital expenditure of \$500 million or more;
- Australian Government procurements of \$20 million or more; or
- Projects receiving Australian Government grants (or payments from the Clean Energy Finance Corporation or the Northern Australia Infrastructure Facility of \$20 million or more.

to develop a plan that requires proponents to provide full, fair and reasonable opportunity for Australian industry to compete for work.³⁸

Most jurisdictions have developed similar sorts of plans, as a requirement to develop and implement a Local Industry Participation Plan for all projects in receipt of Commonwealth payments of \$20 million or more is a requirement under the National Partnership on Land Transport Infrastructure Projects and similar arrangements.³⁹

However, some jurisdictions do more than merely ask proponents how they will go about providing Australian industry the ability to tender to provide products for projects.

Queensland has a local benefits test under its Queensland Procurement Policy which requires agencies to conduct a local

RECOMMENDATIONS

Government procurement documentation should apply a weighting in favour of procurements providing local benefits to the areas in which relevant infrastructure is being constructed.

Legislation should permit the declaration of projects of strategic importance, which may specify (amongst other things) a local content requirement.

QUALITY

As the Australasian Procurement and Construction Council says in its document *Procurement of Construction Products: A Guide to Achieving Compliance*:

Evidence suggests that the market penetration of non-conforming products in several key construction product sectors in Australia may be up to 50 per cent. This is a sobering and alarming statistic.⁴³

Observable defects such as substandard welding that needed to be ground out and replaced, laminations in plate that could cause catastrophic failure, substandard corrosion protection affecting the life of an asset and generally poor workmanship were found unfortunately to be commonplace on imported structural steelwork.

³⁷ <https://www.industry.gov.au/regulations-and-standards/australian-industry-participation>

³⁸ <https://www.industry.gov.au/sites/default/files/user-guide-for-developing-an-australian-industry-participation-plan.pdf>

³⁹ As indicated in the Commonwealth submission to the Senate Rural and Regional Affairs and Transport References Committee Inquiry into Australia's rail industry: https://www.infrastructure.gov.au/departments/government_responses/response-inquiry-rail-industry.aspx

⁴⁰ Office of the Chief Advisor (Procurement) Local Benefits Test (2019):4 https://www.hpw.qld.gov.au/_data/assets/pdf_file/0024/3795/localbenefitstest.pdf

⁴¹ Victorian Government Local Jobs First Policy Under the Local Jobs First Act 2003 (2018):9

https://localjobsfirst.vic.gov.au/_data/assets/pdf_file/0019/25273/Local-Jobs-First-Policy-October-2018.pdf

⁴² NSW Government Treasury NSW Public Private Partnership Guidelines (2017): 28

<https://www.treasury.nsw.gov.au/sites/default/files/2017-07/TPP17-07%20NSW%20Public%20Private%20Partnerships%20Guidelines%202017-1.pdf>

⁴³ APCC (2nd ed t, 2015): 5

There also is a price depressing effect from these imports that affects a sector of local fabricators that are forced to chase price at the expense of maintaining their quality systems and procedures.

The knock-on effect is that currently many fabricators and steelwork manufacturing SMEs are unable to maintain a reasonable profit that would allow them to reinvest in their businesses, such as new technology like robotic automation.

Testing by the steel industry has also identified metallic coated and pre-painted steels that do not meet Australian Standards and regulations. Examples include substandard metallic coating and paint thicknesses and non-conforming levels of lead in paint.

The non-compliances are not limited to poor quality and bad workmanship but extend to deliberate fraudulent behaviour with examples such as falsified test certificates, welds made with silicone rubber and then painted, attachment of bolt heads with silicon rather than a through bolt and water filled tube to compensate for underweight steelwork with fraudulent claims that their products meet particular Australian Standards.

This issue of non-compliant substitutions concerns building surveyors or inspectors who do not have the engineering expertise, knowledge, or often the opportunity to identify steel defects, or check whether the steel supplied is compliant.

Builders and project managers may take on the responsibility of site inspection but often do not have the skills or knowledge to understand compliance at a material or fabrication level.

Moreover, for structural steelwork there is currently no reliable system for surveillance of imported building products apart from product failure. However, if defects with major structural steel items are discovered, the prime contractor often has no alternative to meet the time constraints but to accept faulty product or try to patch repair any defects.

The implementation of a system that requires the supplier and all stakeholders in the construction chain to ensure that the products that they are selling are certified to comply with relevant standards and fit-for-purpose responsibilities within their scope will be good for Australia.

In 2014, ASI implemented a National Structural Steelwork Compliance scheme that requires steelwork fabricators to elect to be audited for compliance capability. It is not mandatory and relies on contractor engagement and good purchasing practice for its success.

It is modelled on the steel product compliance principles used in the UK where there is a risk categorisation for each type of structure and the fabricator capability requirements are commensurate with the level of complexity and nature of the risk profile involved. This is also a voluntary scheme as per the model used in the USA.

The scheme is open to all fabrication companies from any country and provides the engineer and client reassurance

that the subcontractor is certified as being capable of carrying out the work to Australian Standard requirements at a predetermined risk category of the project.

Steel reinforcing and structural steel product manufactured in or imported into Australia is covered by a compliance scheme managed by the Australasian Certification Authority for Reinforcing and Structural Steels (ACRS). This scheme seeks to certify compliant structural and reinforcing steel by auditing at the steel mill level. It is well established and has a very good track record in ensuring compliant quality steel is used in construction.

South Australia requires that contractors purchase reinforcing bar and mesh, pre and post tensioning strand structural steel from a steel manufacturer that has been certified by the Australasian Certification Authority for Reinforcing and Structural Steels (ACRS) as complying with AS/NZS 4671, 4672, 1163, 3678, 1594 and 3679.1 and 3679.2 standards. Contractors must also retain records to provide evidence of the supply of steel from an ACRS accredited mill and must make such records available to the Office of the Industry Advocate for review, upon request.⁴⁴

In a similar vein, NSW has a direction issued by the NSW Procurement Board, which requires (amongst other things) compliance with AS 5131 *Structural Steelwork – Fabrication and Erection* and will, wherever practicable, specify the use of certified steel fabricators and erectors.

It is set out in [Attachment 2](#).

ENVIRONMENTAL SUSTAINABILITY IS IMPORTANT.

As steel is recognised as a sustainable material, there was a need to establish mechanisms for companies to determine what a sustainable steelwork supplier is and how to identify one.

The ASI Environmental Sustainability Charter (ESC) was established in 2010 to encourage the steel industry channel to operate in a more environmentally responsible way and to develop a means of accrediting committed downstream enterprises associated with steel manufacturing, fabrication or services.

The accreditation is designed to be used by regulators, environmental rating agencies and bodies such as the Green Building Council of Australia.

To become an ESC member, it is necessary to sign the Charter declaration committing the company to: operating its business to reduce its environmental footprint; increasing the efficiency of its resource use; demonstrating environmental responsibility and sharing its knowledge of sustainability with others; and seeking sustainability in its choice of sub-contractors and suppliers.

Accordingly, it is recommended that government procurement policies should make it a mandatory requirement for procurers to source steel products from businesses accredited under the ESC.

⁴⁴ Government of South Australia *South Australian Industry Participation Policy* (2018):9

RECOMMENDATIONS

The accreditation concept already applied within the NSW and South Australian procurement policy frameworks should be extended so that:

1. All structural steel products should be sourced from mills with Australasian Certification Authority for Reinforcing and Structural Steel (ACRS) third-party certification or equivalent;
2. All fabricated products to be obtained from suppliers accredited under the National Structural Steelwork Compliance scheme or equivalent;
3. All structural steel and fabricated products should be sourced from businesses accredited under the steel industry's Environmental Sustainability Charter; and
4. Steel meeting the standards specified in the newly created Australian Standard 5131 should be used by all Governments when entering into contracts for the construction of all forms of building. This should be a condition imposed by the Commonwealth for any jurisdiction receiving Commonwealth funds for infrastructure projects.

that stock a depth and range of steel products enabling fabricators to quickly source material to respond quickly and cost-effectively to any changes.

Australian steel distributors can also supply processed steel to fabricators to further speed production schedules.

Finally, a whole family of Australian Standards ensures safe and economic use of steel.

Australian Standards are used as a matter of course by Australian-based members of the steel supply chain.

They ensure mechanical properties, chemical composition, dimensional and mass tolerance. They cover welding, painting, galvanising and design to deliver quality and reliable solutions. Like links in a chain, if one Standard's requirements are not met, the whole system is likely to fail.

The Australian steel supply chain demonstrates a strong commitment to WHS, believing that all injuries, occupational illnesses and incidents are preventable. Steel manufacturers enjoy global-industry-low, benchmark levels for Lost Time Injury Frequency Rates (LTIFR) and Medical Treatment Injury Frequency Rates (MTIFR).

These are clearly matters that should be dealt with exhaustively in any guidance given with regards to 'whole of life' and 'value for money' issues.

Maintenance of this supply chain capacity (jobs, capabilities, skills and investment) also clearly offers social and environmental advantages to the nation, as well as providing procurers with a greater choice of vendor.

The UK Government has recently published the *Public Contracts Regulation 2015*, which is accompanied by a procurement policy note⁴⁵ reading:

The new PCRs 2015 provide greater clarity and scope to assess the most economically advantageous tender on a cost-effective basis that explicitly includes environmental and/or social criteria where they are linked to the subject matter of the contract and are transparent and non-discriminatory.

Where relevant and proportionate, in-scope organisations should take full advantage of these new flexibilities when letting major contracts such as construction, or infrastructure. Environmental criteria could include the carbon footprint of construction materials. Social criteria could include taking into account the benefits of employment and supply chain activity, including the protection of the health and safety of staff involved in the production process, the social integration of disadvantaged workers or members of vulnerable groups among the staff performing the contract, such as the long-term unemployed, or training in the skills needed to perform the contract, such as the hiring of apprentices.⁴⁶

VALUE FOR MONEY AND WHOLE OF LIFE CONSIDERATIONS

The ASI considers the definition of what constitutes 'value for money' used by many Australian governments in procurement documentation is construed in a relatively narrow way, overly focusing on achieving the cheapest cost option rather than the option that benefits the economy as a whole. In addition, 'whole of life' considerations are not given appropriate weight as they relate to large infrastructure projects.

Purchasing locally provides other significant savings for a project's whole-of-life costing, like lower inventory to manage, reduced lead times and improved after-sales support.

Continuity of work within the local industry helps ensure that the existing high skills base is available for ongoing maintenance. Onsite inspection costs can be significantly reduced where the personnel involved are resident in the region.

Locally fabricated steelwork can take advantage of road, rail or local sea transportation, maximising flexibility and economy in meeting delivery schedules and ensuring that project schedules are met.

Regular face-to-face contact between the builder, fabricator and detailer ensures that delays are minimised when design or site erection schedule changes arise. The industry is serviced by a network of steel distribution centres throughout Australia

⁴⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/473545/PPN_16-15_Procuring_steel_in_major_projects.pdf
⁴⁶ Procurement Note: 5

Value for money is achieved by balancing the benefits of economic development on the one hand with other criteria such as price, quality and delivery. The setting of the minimum weighting takes this balance into account.⁴⁷ Value for money evaluation should incorporate triple bottom line, social, economic and environmental sustainability considerations. Value for money should also consider whole of life costing.

RECOMMENDATION

Australian governments should model regulations relating to issues such as determining value for money on regulation 67 of the *Public Contracts Regulations 2015* (UK).

RECOMMENDATION

Governments should establish mechanisms to facilitate the confidential reporting of the use of non-compliant product in the construction of government funded infrastructure.

The regulation is set out in [Attachment 3](#).

CONFIDENTIAL REPORTING

Launched in September 2018, Confidential Reporting on Structural Safety – Australasia ([CROSS-AUS](#)) commenced operation. It is a concept that was originated in the UK.

Based on reporting techniques developed by NASA for the aviation industry, CROSS-AUS is a confidential reporting scheme that captures and shares lessons learned in the construction industry with the aim of preventing future failures.

The ASI believes that to augment the existence of CROSS-AUS, Australian governments should establish a cell within the relevant Department with principal responsibility for procurement policy to allow 'whistle-blowers' to report the use of non-compliant product in government funded infrastructure in much the same way that reports of malpractice in other areas of administration can be reported.

For this to work, procurement documentation will need to contain provisions that requires suppliers and contractors to provide all reasonable assistance and all relevant documents necessary to determine whether non-compliant product has been used in government funded infrastructure.

INTERNATIONAL TREATIES

There is a general requirement to treat overseas parties on no less favourable terms than Australian firms when governments are making procurement decisions for infrastructure falling within scope of an international trade agreement.⁴⁸

This is particularly the case in relation to the Agreement on Government Procurement, to which Australia acceded on 5 May 2019.⁴⁹

It adopts a very purist approach to government procurement.

The *WTO and Government Procurement* page of the WTO website is instructive.⁵⁰

It is set out in Box 4 (on the following page).

⁴⁷ South Australia Industry Participation Plan

⁴⁸ See for example Article 15.2.1 of the Australia- US Free Trade Agreement:

<http://dfat.gov.au/about-us/publications/trade-investment/australia-united-states-free-trade-agreement/Pages/chapter-fifteen-government-procurement.aspx>

⁴⁹ <https://www.dfat.gov.au/trade/organisations/wto/Pages/wto-agreement-on-government-procurement>

⁵⁰ https://www.wto.org/english/tratop_e/gproc_e/gproc_e.htm

Box 4 – The WTO and Government Procurement page of the WTO Website

Government agencies often need to purchase goods and services with public resources and for public purposes to fulfil their functions. Such purchases are generally referred to as government/public procurement.

Achieving 'value for money' is a primary aim of most procurement regimes. But how? Open, transparent and non-discriminatory procurement is generally considered to be the best tool to achieve this goal as it optimises competition among suppliers. At the same time, there are competing policy goals: many governments also make use of government procurement to achieve other domestic policy goals, such as the promotion of specific local industry sectors or social groups.

Providing preferential treatment for domestic goods, services and suppliers discriminates against foreign suppliers and therefore acts as a trade barrier in this sector. These barriers are not addressed by the multilateral rules of the WTO as government procurement is explicitly exempted from the main disciplines of both the General Agreement on Tariffs and Trade (GATT — see [Article III: 8a](#)) and the General Agreement on Trade in Services (GATS — see [Article XIII:1](#)).

The liberalization of government procurement markets holds the potential to generate benefits both in terms of procurement efficiency and commercial interests. Therefore, WTO countries have worked on this issue on three fronts, namely via:

- (i) the plurilateral [Agreement on Government Procurement](#) (GPA)
- (ii) [Doha Development Agenda \(DDA\) Working Group on Transparency in Government Procurement](#) (which is currently inactive)
- (iii) [GATS negotiations on government procurement](#).

Among these three areas, work on the GPA is the most active and has produced substantial trade liberalization. On 6 April 2014, the revised GPA came into force and marks a significant milestone of the WTO. (emphasis added)

It is clear the normative effect of the Agreement is to attempt to use its terms to encourage trade amongst nations in a way free from what are perceived as being 'distortions' coming from domestic policy considerations.

However, Article 15 of the US-Australia Free Trade Agreement (for example) permits terms and conditions relevant to the evaluation of tenders according to essential requirements and evaluation criteria set out in tender documents⁵¹, whilst Chapter 15, Annex A, Section 7, General Notes provides:

This Chapter (Chapter 15, dealing with government procurement) does not apply to:
(a) any form of preference to benefit small and medium enterprises;

In other words, this allows for preferences to SMEs.⁵²

The nature of the Australian steel manufacturing and fabrication industries is such that it remains necessary for the SME 'carve out' to continue.

RECOMMENDATION

The general Australian reservation contained in government procurement chapters of free trade agreements disapplying the agreement to forms of preference to benefit small and medium enterprises should remain policy.

Finally, it would appear that one of the outcomes of the COVID-19 crisis is a new-found understanding of the importance of ensuring there is a capacity for a nation to have an ability to produce vital goods (such as steel) where international supply chains fail.

One of the more important international agreements facilitating free and open trade are those dealing with when and how trade measures may be imposed.

They are now discussed.

⁵¹ See Articles 15.6.1(e) and 15.9.6 of the Australia-US Free Trade Agreement. In the case of the Trans Pacific Partnership (currently in abeyance), it expressly permits procurement documentation to list the relevant importance of the criteria: see Article 15.13.1(c)

⁵² For completeness it should be noted that the GPA also has the SME 'carve out'.

4. TRADE MEASURES

On the supply side, continuing global excess capacity and overproduction of primary steel products can influence global and Australian steel fabrication industries.....

First, the ongoing demand/production imbalance of primary steel can flow through into steel fabrication markets and distort those markets. An imbalance in demand and production of steel fabricated products in some regions can lead to dumping of excess production into other markets.

This will have adverse effects on steel fabrication industries competing with dumped imports—this is consistent with the OECD's concern about the displacement effects of trade practices like dumping.

.....

Second, the ongoing demand/production imbalance in primary steel markets can create distortions in markets for steel fabricated products as a result of responses by some exporters to trade remedies on primary steel products that are being dumped or subsidised. Specifically, trade remedies on primary steel products could, in some circumstances, result in the diversion of those products into downstream markets, where trade remedies are not in place to address dumping and foreign subsidisation.

- Anti-Dumping Commission Analysis of Australia's Steel Manufacturing and Fabricating Markets Report to the Commissioner of the Anti-Dumping Commission (2017):⁵³

The Australian Government has said Australia's trade remedies system operates within the context of the government's overall economic strategy to promote business growth, employment and global competitiveness, and that:

It is important to recognise that anti-dumping measures do not seek to stop imports or give an unfair competitive advantage to Australian producers. Dumping and foreign government subsidisation of goods exported to Australia is not genuine competition and can distort markets and injure Australian manufacturers. A robust and effective anti-dumping system is an essential part of the government's commitment to free and fair trade.⁵⁴

However, the Australian steel manufacturing and fabrication industry does not fear foreign competition. It merely wants an

international marketplace free from distortion, as is made clear in Box 5 (on the following page).

As the Anti-Dumping Commission said in its 2016 Analysis of Steel and Aluminium Markets:

Asian governments are not unusual in intervening in steel and aluminium markets. However, the nature and extent of Asian government interventions, and the relative magnitude of Chinese production has meant that these interventions have been major contributing factors—although not the only contributors—to sustained global overcapacity, ongoing excess production, the build-up of large stockpiles (especially aluminium), and depressed world prices.

Many of the policies adopted by Asian governments

⁵³ https://www.industry.gov.au/sites/default/files/2019-05/adc_steel_fabrication_report_november_2017.pdf

⁵⁴ Anti Dumping Commission Analysis of Australia's Steel Manufacturing and Fabricating Markets: 5

Box 5 – Keep anti-dumping system (BlueScope steel) – The Australian 10 June 2020⁵⁵

One regrettable economic trend made worse by COVID-19's disruptions to supply chains has been the surge in tariffs and trade barriers used by countries as political weapons.

The trend is indefensible and risks further inflaming global geostrategic tensions at a time when the world economy is most fragile.

While it is a term that is sometimes maligned, the aim of countries should be to practise “free and fair” trade.

Simply, countries should trade with each other to the greatest extent possible without restrictions such as tariffs, quotas and non-tariff barriers. But that also means they should play by the rules of world trade and individual trade agreements.

Free and fair trade does not mean trade without rules. Some restrictions are perfectly reasonable, and they include biosecurity and national defence measures.

But where countries violate trade rules, such as by providing illegal subsidies or imposing trade restrictions without reasonable cause, there must be effective measures to combat and compensate for this behaviour.

BlueScope has been a strong supporter of free-trade agreements that reduce barriers to trade in steel. For example, we have been enthusiastic supporters of the Indonesia-Australia Comprehensive Economic Partnership Agreement, and have already signed a new customer for exports from our Port Kembla Steelworks to Indonesia.

This 5,000-tonne order (with another 5,000 tonnes imminent) is a small part of the 800,000 tonnes of steel we export from Australia each year — but it is yet another example of why Australia can be a competitive manufacturer on the global stage.

We are also supportive of the elimination of trade barriers in Australia. Most steel products made in Asia — the largest steelmaking region in the world — enter Australia tariff-free, as a result of free-trade agreements or because they come from developing countries.

The reality is that in a small market like Australia, we cannot and should not be self-sufficient in all steel products. It is in the interests of our customers to have a choice of suppliers, local and international. Despite the claims of some, Australia is an open market, with more than 2 million tonnes of steel imports each year.

As Australia heads out the front door with the giant task to resurrect our economy after COVID-19, we should check we have locked the back door — and that means a well-resourced, effective anti-dumping system. The risk of a COVID-induced surge in dumped steel from our region is very real and would be disastrous for Australian industry and jobs.

There should be continued bipartisan support for the impartial and professional way in which the Anti-Dumping Commission has operated. Now is not the time to weaken Australia's anti-dumping system.

would meet the OECD's definition of being market distorting in that they have the effect of sustaining ongoing overcapacity by supporting the building of new capacity or keeping inefficient facilities in operation⁵⁶.

It was therefore of concern that the Commission's 2017 analysis of the 2016 report said:

Chinese crude steel production reached a record level in June 2017, based on World Steel Association data. The increase in production, in response to higher steel prices, may reflect speculative stockpiling and futures trading, due to concerns of supply shortages following government announcements on the winter curtailment policy and supply-side reforms.

However, in the short to medium-term, with small, less efficient mills and smelters being squeezed out of the

industry in China—in order to raise the efficiency of energy usage in Chinese industry—the remaining large/efficient producers face reduced competition. The resultant increased margins for those surviving producers has tended, and will tend, to encourage increased production, eventually restoring Chinese production to pre-rationalisation levels.⁵⁷

and is disappointing that in 2020 the Chinese Government continues to merge and support state owned steelmaking enterprises as well as imposing variable VAT rebates and export taxes and so distorting Chinese export prices vis-à-vis that which would be considered normal commercial prices in the absence of government intervention.⁵⁸

For smaller businesses, such as those involved in fabrication and manufacturing of finished goods, a period of unfair competition will cause significant long-term financial damage and/or threaten viability.

⁵⁵ <https://www.theaustralian.com.au/business/keep-antidumping-system/news-story/8baac4e87cb6b7bab184e64b7100b7a4>

⁵⁶ Page 43

⁵⁷ Page 33

⁵⁸ BlueScope Steel Industry questionnaire provided for Anti-Dumping Commission case number 522 relating to aluminium zinc coated steel from the People's Republic of China: https://www.industry.gov.au/sites/default/files/adc/public-record/522_-_013_-_questionnaire_-_australian_industry_-_bluescope_steel_limited.pdf

Investigations must be promptly and efficiently conducted, and trade measures appropriate and proportionate to deal with distortions in the market place resulting from the behaviour of foreign governments.

In this context, the following recommendations are made.

Finally, it is important to ensure the safety of all Australians through ensuring that building materials used in construction conforms with Australian Standards.

This issue is now discussed.

RECOMMENDATIONS

- Streamline the 'Review of Measures' and 'Duty Assessment' processes to ensure that the correct amount of duty is collected and paid.
- Streamline the Lesser Duty Rule so that is based on the industry applicant full cost to make and sell and an appropriate level of profit to allow for re-investment.
- Allow the Australian industry applicant to nominate form of duties to ensure the measures are as effective as possible for their market.
- Increase the resources of the Commission to improve investigation timelines and accuracy of outcomes. The ASI recommends the appointment of personnel with specific industry experience to assist with the technical aspect of investigations.
- Extend the period for which dumping securities can be converted to interim dumping duties from four months to six months, as permitted under WTO rules to make measures effective sooner.
- Review of SME access and assistance arrangements to improve the access and ability of SMEs to utilise Australia's anti-dumping system.
- Strengthen the anti-circumvention framework by:
 - Modernising the anti-circumvention legislation to clarify that duty absorption applies to the exporter's behaviour not just that of the importer.
 - Modernising the transshipment provisions of the anti-circumvention legislation to align with the intent of the European methodology which allows the measures to be extended to all exporters from a third country, except for those that can verify that they are bona fide exporters.
- Alter the *Customs Act* to reinstate Differential duties so that they are more accurate and effective for different models of the goods.

5. PUBLIC SAFETY

Image courtesy of Steel Mains, Australia's leading manufacturer of steel pipes for the water industry.

Finally, it goes without saying that the committee was alarmed to hear of the shonky practices that are endemic within the building and construction industry, including at its in-camera hearings. This evidence shone a light on how we have ended up with a glut of defective buildings and an industry in crisis. This testimony resonates with the evidence given by numerous other inquiry participations.

- NSW Legislative Council Public Accountability Committee Regulation of building standards, building quality and building disputes Final Report (2020), p. 13

It is very concerning when a parliamentary committee uses the term 'shonky' in a report.

The NSW Public Accountability Committee report into the regulation of building standards, building quality and building disputes⁵⁹ is one of a number of recent parliamentary committee reports which indicated conformance failures in building materials.

One example cited in the report said:

Australian Foundation Systems Pty Ltd, a screw pile, concrete foundation systems and steel sheet pile solutions manufacturing and installation business, underscored that certifiers are relying on the information that they receive from building practitioners. According to the submission, hand written records are a problem because they can be falsified and manipulated to look viable. It reported that with the absence of visual inspections by certifiers this gives practitioners 'far too much opportunity to cheat and then inform the certifier that the product and installation has met a specification required by the engineer'. Australian Foundation Systems Pty Ltd emphasised that it is much cheaper for builders to use 'inferior products that are not fit for purpose, or sub optimal installation' and avoid

responsibility by relying on false compliance certificates that are backed up by the certifiers insurance policy.⁶⁰

whilst a Senate Economics Committee report on the Australian steel industry found:

The inquiry received alarming evidence regarding the safety risks posed by products that do not meet Australian standards, including steel used in bridges, poles, caravans, trailers and safety structures used on mining sites. Most steel fabricated in Australia conforms to appropriate standards produced by Standards Australia, with contracts in many instances requiring proof of third-party certification. However, evidence provided to this inquiry suggested that legal loopholes in contracts and gaps in regulatory regimes in some instances may allow imported fabricated steel to avoid complying with the same standards as steel made in Australia, meaning that Australian steel incurs a higher cost base than imported products that do not necessarily have to meet the same level of quality.⁶¹

These types of concerns led the former Building Minister's Forum⁶² to commission Peter Shergold and Bronwyn Weir to

⁵⁹ <https://www.parliament.nsw.gov.au/lcdocs/inquiries/2540/PAC%20-%20Regulation%20of%20building%20standards%20quality%20disputes%20-%20Final%20report%20-%20Report%20no%206.pdf>

⁶⁰ Page 84

⁶¹ Senate Economics References Committee *Australia's Steel Industry: Forging Ahead* (2017): https://www.apf.gov.au/Parliamentary_Business/Committees/Senate/Economics/Futureofsteel45th/Report

⁶² With the creation of the National Cabinet concept, the current system of ministerial councils and forums created under the former Council of Australian Governments (COAG), and COAG itself, has been abolished. A new system of committees sitting under the National Cabinet and the new National Federation Reform Council is being developed.

undertake what is known as the *Building Confidence Report*⁶³. Under its terms of reference, the report examined a wide range of issues relating to roles, responsibilities and accountabilities of different parties, education and training, licensing and accreditation, accuracy of design and documentation, quality control and assurance, competencies of practitioners, the integrity of private certification, inspection regimes, auditing, enforcement practices, product importation and chain of custody.⁶⁴

The former Building Ministers' Forum has indicated an intention to (amongst other things):

- Provide a new definition for 'complex buildings' with the intention of incorporating it into the 2022 version of the National Construction Code;
- Amend NCC 2019 to ensure that building practitioners have a consistent and robust process to follow in developing and implementing innovative solutions to meet the building safety and health outcomes;
- Develop a national model registration and licensing framework for building Practitioners – something for which a discussion paper has been published;⁶⁵
- Develop a national building information database portal, which will include the consistent collection and sharing of building and practitioner information;
- Encourage continuing professional development training for building practitioners on the NCC; and
- Develop a national dictionary of terminology for the construction industry.⁶⁶

NSW has also created a new duty of care during 2020 on people carrying out construction work (as defined) to exercise reasonable care to avoid economic loss to landowners for economic loss caused by defective building.⁶⁷

Various state governments are currently in the process of examining and implementing a number of the recommendations from Shergold and Weir, which is a step in the right direction.

Whilst the outcomes are promising, one area is not being dealt with in a uniform manner. That is ensuring that non-conforming product is not used in the first place.

After all, it is all a bit late to seek compensation **after** defective building products have been used. It would be far better to prevent their use **before** buildings have been erected.

The *Building Confidence Report* indicated:

Regulation of the building product supply chain is warranted, and product recall and/or prohibition powers should exist for high-risk building products. However, it has not been recommended that all building regulators be given such powers. It is a matter for governments to decide whether such powers should sit with building or consumer affairs regulators. On one matter we are clear: if building regulators are to be given powers to regulate the supply chain, this work should not detract from their primary role.⁶⁸

Queensland has passed legislation amending its *Building and Construction Commission Act 1991*⁶⁹ creating a **chain of responsibility** on those who manufacture, imports or supplies a building product in an endeavour to ensure non-conforming building products are not incorporated into a building.

Conversely, NSW has passed the *Building Products (Safety) Act 2017*, which merely permits the Secretary of the Department administering building safety to prohibit the use of declared products, and that's about all.

Amendments to this legislation proposing provisions along the lines of the Queensland law support by the NSW Building Products Industry Council were unsuccessful.⁷⁰

The rejected amendments are set out in [Attachment 4](#).

RECOMMENDATION

Uniform national legislation creating a 'chain of responsibility' on anyone who manufactures, imports or supplies a building product to ensure non-conforming building products are not incorporated into buildings should be introduced.

⁶³ Building Ministers' Forum *Building Confidence – Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia* (2018) – https://www.industry.gov.au/sites/default/files/July%202018/document/pdf/building_ministers_forum_expert_assessment_-_building_confidence.pdf

⁶⁴ *Building Confidence*: 3

⁶⁵ Australian Building and Construction Board *National Registration Framework for Building Practitioners Discussion Paper* (2020): https://consultation.abcb.gov.au/engagement/dp-national-registration-framework/user_uploads/national-registration-framework-for-building-practitioners-1.pdf

⁶⁶ From communique

⁶⁷ Through the *Building and Design Practitioners Act 2020* (NSW)

⁶⁸ *Building Confidence*: 21

⁶⁹ Through the *Building and Construction Legislation (Non-Conforming Building Products – Chain of Responsibility and Other Matters) Amendment Act 2017*

⁷⁰ NSW Legislative Assembly Hansard 22 November 2017:29

MANDATORY THIRD-PARTY CERTIFICATION OF HIGH-RISK BUILDING PRODUCTS

Conformance will also be assisted if the use of identified high-risk building products materials certified by accredited third-parties as meeting standards set out in the National Construction Code be made mandatory.

Assessing the compliance of construction products is a complicated and difficult field with few in the supply chain adequately trained to properly assess compliance, regardless of whether they are registered or not.

dangers of using non-conforming product and in failing to follow Australian Standards, as well as ensuring that relevant parties have a documented plan setting out how they will ensure products meeting relevant standards are used in construction.

Clearly identifying the link between non-compliant construction products and risk/safety in the manner will ensure conforming building materials are used in Australian buildings.

RECOMMENDATION

Only high-risk building products certified by accredited third-parties as meeting standards prescribed in the NCC should be used in buildings.

RECOMMENDATION

That the risks to health and safety posed by the use of non-conforming products in construction be identified in WHS regulations and Codes of Practice.

HARMONISING BUILDING AND WHS LAWS

Non-compliant construction products are a demonstrable risk to the health and safety of the community.

Workplace Health and Safety (WHS) laws prescribes a 'duty of care' for all persons conducting a business or undertaking that is involved in the construction of a building to ensure, so far as is reasonably practicable, that the health and safety of others is not put at risk from work carried out as part of the conduct of the business or undertaking.⁷¹

Codes of practice can be made for the purposes of WHS law.

They have a special status because an approved code is automatically admissible as evidence in court proceedings under the WHS Act and Regulations. Courts may have regard to a code as evidence of what is known about a hazard, risk or control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.⁷²

Safety outcomes would be further enhanced if relevant WHS Regulations and the relevant Codes of Practice (particularly the 2012 *Safe Designs of Structures Code of Practice*⁷³) drew the connection between non-compliant building products and risk-minimised WHS outcomes more definitively.

One way of doing this would be through amending the Safe Design of Structures Code to specifically address construction product compliance through the provision of guidance on the

⁷¹ Subsection 19(2) of the model WHS law used as the basis for the laws in force in each Australian jurisdiction

⁷² <https://www.safeworkaustralia.gov.au/system/files/documents/1702/cop-and-guidance-fact-sheet.pdf>

⁷³ <http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/698/Safe%20Design%20of%20Structures.pdf>

6. CONCLUSION

There had been a renewal of the compact between the community and manufacturing, and people now I think are stepping up and saying 'we've got to fight more for it'.

-Innovation and Science Australia Chair Andrew Stevens, reported in Andrew Stevens on post-COVID industry Policy Innovation Aus, 12 May 2020

Mr Andrew Stevens, the Chair of Innovation and Science Australia, has been reported as pushing the case for driving industry policy through the better understanding of 'industrial advantage', which he defines as being:

..... areas of the economy or market niches where we can identify both comparative advantage plus competitiveness.

By understanding where and how Australia has high industrial advantage will help in the looming discussions about sovereign need, and identifying where the nation must build capability and where it should manage sovereign need through other means, like stockpiling and inventory management.

In a perfect market sector where Australia has a high industrial advantage, so that we have comparative advantage and businesses that are highly competitive and where there is a high sovereign need, then you'll have a strong domestic and export market and it is highly likely that Australia will have businesses that are world leading in that area.

Conversely, where there is low sovereign need and low industrial advantage where we are highly dependent on imports, we won't have a comparative advantage and unlikely to have globally competitive businesses in these areas.⁷⁴

It is imperative the nation maintains the high industrial advantages it has in the manufacturing and fabrication of steel that have been identified in this paper, through the encouragement of technical innovation and the development of trade skills of employees, so ultimately the nation is ready to provide the world marketplace with clean green steel (and fabricated products made from green steel) flowing from the coming use of hydrogen as a fuel.

This will provide Australia with a strategic sovereign capacity to provide the materials meeting high quality standards that can be used in infrastructure, thus providing economic value add and stable well-paying jobs (particularly in regional Australia) whilst meeting Australia's international obligations.

The ASI hopes that the recommendations contained in this White Paper will go a long way towards the development of a sustainable steel industry for Australia in the 2020s and beyond.

If they are, a manufacturing sector of vibrant export-oriented SMEs with a long-term future, properly supported to encourage both innovation and the development of a workforce with strong vocational capabilities – an Australian *Mittelstand* – can be created.

Australian Steel Institute
October 2020

⁷⁴ Andrew Stevens on post-Covid Industry Policy, reported in InnovationAus, 12 May 2020 - <https://www.innovationaus.com/andrew-stevens-on-post-covid-industry-policy/>

80 Collins Street in Melbourne features a unique
cantilevering design made possible with the use of
structural steel, made possible by OnumaBuild.

ATTACHMENTS

ATTACHMENT 1:

PRINCIPLES CONTAINED IN *PROCUREMENT OF CONSTRUCTION PRODUCTS: A GUIDE TO ACHIEVING COMPLIANCE*

PRINCIPLE 1:

All relevant legislation must be complied with including, but not limited to, building, workplace health and safety, and consumer laws.

PRINCIPLE 2:

Contract documentation should clearly specify product standards and the required evidence of conformity.

Product standards should refer to relevant Australian Standards. Where there are no relevant Australian Standards, relevant international standards or authoritative industry sources should be utilised.

PRINCIPLE 3:

All construction products procured should conform to the requirements in the contract documentation.

PRINCIPLE 4:

The selection of the required evidence of conformity should be based on the intended use and risk exposure (likelihood and consequence of failure) of each construction product.

PRINCIPLE 5:

Construction product conformity requirements should refer to relevant Australian Standards. Where there are no relevant Australian Standards, appropriate international standards or authoritative industry sources should be utilised.

PRINCIPLE 6:

Evidence of construction products meeting specified standards should be demonstrated by conformity assessment including, but not limited to, product certification, testing or inspection, as set out in the contract documents.

PRINCIPLE 7:

Evidence of the source of construction products and their authenticity should be obtained and retained.

PRINCIPLE 8:

Project managers should obtain and retain contemporary and credible documentary evidence to demonstrate conformity of all construction products.

PRINCIPLE 9:

Responsibility for managing conformity assessment outcomes at each stage of the project should be appropriately allocated in the contract documentation.

PRINCIPLE 10:

Where third party conformity assessment bodies are relied upon to provide evidence of conformity, they should be accredited by:

- Joint Accreditation System of Australia and New Zealand (JAS-ANZ) – for product certification, management systems, certification and inspection bodies
- National Association of Testing Authorities, Australia (NATA) – for testing and calibration laboratories and inspection bodies
- Accreditation bodies that are signatories to relevant international multilateral/mutual recognition arrangements and have the relevant scope associated with the conformity assessment activity.

PRINCIPLE 11:

Where construction products are supplied without required evidence of conformity, or where doubt exists about product conformity, product testing to an appropriate level may assist in ascertaining construction product quality.

PRINCIPLE 12:

Without adequate evidence of product conformity, the product should not be used in construction.

ATTACHMENT 2:

REGULATION OF THE BRITISH *PUBLIC CONTRACTS REGULATIONS 2015*

67.— (1) Contracting authorities shall base the award of public contracts on the most economically advantageous tender assessed from the point of view of the contracting authority.

(2) That tender shall be identified on the basis of the price or cost, using a cost-effectiveness approach, such as life-cycle costing in accordance with regulation 68, and may include the best price-quality ratio, which shall be assessed on the basis of criteria, such as qualitative, environmental and/or social aspects, linked to the subject-matter of the public contract in question.

(3) Such criteria may comprise, for example—

(a) quality, including technical merit, aesthetic and functional characteristics, accessibility, design for all users, social, environmental and innovative characteristics and trading and its conditions;

(b) organisation, qualification and experience of staff assigned to performing the contract, where the quality of the staff assigned can have a significant impact on the level of performance of the contract; or

(c) after-sales service and technical assistance, delivery conditions such as delivery date, delivery process and delivery period or period of completion.

(4) The cost element may also take the form of a fixed price or cost on the basis of which economic operators will compete on quality criteria only.

(5) Award criteria shall be considered to be linked to the subject-matter of the public contract where they relate to the works, supplies or services to be provided under that contract in any respect and at any stage of their life cycle, including factors involved in—

(a) the specific process of production, provision or trading of those works, supplies or services, or

(b) a specific process for another stage of their life cycle, even where those factors do not form part of their material substance.

(6) Award criteria shall not have the effect of conferring an unrestricted freedom of choice on the contracting authority.

(7) Award criteria shall—

(a) ensure the possibility of effective competition; and

(b) be accompanied by specifications that allow the information provided by the tenderers to be effectively verified in order to assess how well the tenders meet the award criteria.

(8) In case of doubt, contracting authorities shall verify effectively the accuracy of the information and proof provided by the tenderers.

Weighting

(9) The contracting authority shall specify, in the procurement documents, the relative weighting which it gives to each of the criteria chosen to determine the most economically advantageous tender, except where this is identified on the basis of price alone.

(10) Those weightings may be expressed by providing for a range with an appropriate maximum spread.

(11) Where weighting is not possible for objective reasons, the contracting authority shall indicate the criteria in decreasing order of importance.

ATTACHMENT 3:

NSW PBD-2016-03: CONSTRUCTION STANDARDS AND CONFORMANCE

Per his award-winning Olympic Stadium was made possible with 30,000 tonnes of steel, supplied by n raBuild. Image courtesy of n raBuild.

DESCRIPTION

NSW Government agencies must ensure that construction materials and processes are fit for purpose when procuring construction goods and services. This includes requiring compliance with relevant Australian or international standards.

DETAILED OUTLINE

This Direction applies to the procurement of construction goods and services by a government agency within the meaning of the Public Works and Procurement Act 1912. It replaces Procurement Board Direction *PBD 2015-01C Use of recognised industry standards when planning and delivering infrastructure*.

The NSW Procurement Board supports the use of open and recognised industry standards wherever practicable when planning and delivering infrastructure as a way of enabling Australian and international suppliers to compete fairly for opportunities. These standards and processes must be capable of recognising domestic and international suppliers in a way which complies with Australia's Free Trade Agreement commitments. The Board also acknowledges the role that recognised independent testing and certification bodies play in delivering assurance about the quality of materials used in infrastructure. Agencies are encouraged to disclose publicly the source of major components and materials on infrastructure projects valued at \$10 million or above.

The Board is concerned that non-conforming and non-compliant building products and construction materials are potentially affecting the quality, safety and whole of life-time performance of buildings and structures constructed for the NSW community. Government agencies are responsible for ensuring that they achieve value for money when procuring construction goods and services. This includes ensuring that a building or structure procured by an agency is fit for its planned purpose and, where relevant, that construction materials and processes used in construction are fit for purpose.

DIRECTION

The Board **directs** government agencies to take the following actions when procuring construction goods and services:

1. Identify and document the intended purpose or purposes of the procurement, including the anticipated uses and period of use.
2. Identify and assess risks arising from non-conforming or non-compliant building products and construction materials, taking account of the intended purpose or purposes of the procurement.
3. Ensure these risks are managed as far as practicable, taking into account:
 - legal obligations relating to workplace health and safety, public safety and environmental protection
 - compliance with the relevant design and performance standards in the National Construction Code
 - other relevant international and Australian Standards and technical specifications.
4. Contractually require compliance with relevant standards for building products, construction materials and construction or manufacturing processes. This includes but is not limited to standards specified by the Board in the attachment to this Direction.
5. Ensure compliance with relevant standards is assured by contractors, including where relevant by third party independent certification.

The Board authorises the NSW Chief Procurement Officer to amend the attached list of contractually required standards and to publish standard contractual provisions dealing with compliance and assurance. The authority of the NSW Chief Procurement Officer is subject to approval by the Construction Leadership Group established by the Board.

AS/NZS 5131

The Board is aware that Standards Australia released a draft of AS/NZS 5131 *Structural steelwork— Fabrication and erection* for public comment in March 2016. This Standard when finalised will set out minimum requirements for the construction of structural steelwork. It will form an important benchmark for NSW government construction projects.

The Board will require compliance with AS/NZS 5131 when it is finalised where it is relevant to the construction project and will specify the use of certified steel fabricators and erectors, wherever practicable. The Board's Construction Leadership Group is authorised to:

- set a timetable for steel fabricators and erectors to demonstrate that they can achieve *compliance with AS/NZS 5131
- recognise certification schemes or other arrangements which will be taken as evidence of compliance capability.

Note: Standards Australia published AS/NZS 5131:2016 *Structural steelwork - fabrication and erection* on 8 December 2016. The NSW Government requires that contractors be able to demonstrate compliance with this standard by 1st October 2017.

ATTACHMENT

Government agencies must specify and contractually require compliance with a standard in this table where the standard is relevant to a construction project. An agency can accept certification assurance identified in this table as evidence of compliance.

STANDARD	RECOGNISED COMPLIANCE ASSURANCE
AS/NZS 1163: 2006 Cold formed structural steel hollow sections	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 1594:2002 Hot rolled steel flat products	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 3678: Structural steel - Hot rolled plates, floor plates and slabs	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 3679.1: Structural steel - Hot rolled bars and sections	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 3679.2: Structural steel – Welded I sections	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 4671: Steel reinforcing materials	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 4672: Steel prestressing materials	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 5131 Structural steelwork - fabrication and erection*	None specified

* Inserted 26 April 2017

ATTACHMENT 4:

EXTRACTS FROM AMENDMENTS PROPOSED TO THE *BUILDING PRODUCTS (SAFETY) BILL 2017*(NSW)

Image courtesy of AusraBuild, one of Australia's leading integrated steel manufacturing, processing, distribution and recycling businesses.

No. 15 Chain of responsibility and building product recalls

Page 4. Insert after line 31:

8 Non-conforming building products

A building product is a non-conforming building product for a use in a building if:

- (a) the use of the building product in a building poses a safety risk; or
- (b) the building product does not or will not comply with the relevant regulatory provisions, or the building product does not perform, or is not capable of performing, for the use to the standard it is represented to perform by a person in the chain of responsibility for the building product.

No. 16 Chain of responsibility

Page 5. Insert after line 29:

Part 2 Duties of persons in chain of responsibility

Division 1 General provisions about duties

9 Relationship with safety laws

- (1) If a provision of this Part and a provision of a safety law deal with the same thing and it is possible to comply with both provisions, a person must comply with both provisions.
- (2) However, to the extent it is not possible for the person to comply with both provisions, the person must comply with the provision of the safety law.
- (3) Evidence of a contravention of this Part is admissible in any proceedings for an offence against a provision of a safety law.
- (4) If an act, omission or circumstances constitute an offence under this Part and a safety law, the offender is not liable to be punished twice in relation to the act, omission or circumstances.
- (5) In this section:
safety law means the Work Health and Safety Act 2011.

10 Principles applying to duties

- (1) This section sets out the principles applying to duties persons have under Division 2.
- (2) A person may have more than 1 duty because of the functions the person performs or is required to perform.
- (3) More than 1 person can concurrently have the same duty.
- (4) Each person must comply with the duty to the standard required under Division 2 even if another person has the same duty.
- (5) If more than 1 person has a duty for the same matter, each person:
 - (a) is responsible for the person's duty in relation to the matter; and
 - (b) must discharge the person's duty to the extent to which the person:
 - (i) has the capacity to influence and control the matter, or
 - (ii) would have the capacity but for an agreement or arrangement purporting to limit or remove that capacity.

11 Code of practice about discharging duties

- (1) The Minister may, by order published on the NSW legislation website, make a code of practice that states a way of discharging a duty a person has under this Part.
- (2) Sections 40 and 41 of the Interpretation Act 1987 apply in relation to an order under subsection (1) in the same way as they apply to a statutory rule.
- (3) A code of practice, or an order amending or repealing a code of practice, commences on the day the order is published on the NSW legislation website or a later day specified in the order.
- (4) A code of practice ceases to have effect 10 years after it commences.
- (5) A code of practice is admissible in proceedings for an offence against this Part as evidence of whether or not a duty under this Part has been complied with.
- (6) Nothing in this section prevents a person from introducing evidence of compliance with the duty in a way that is different from the code of practice.

Division 2 Duties

12 Who is person in chain of responsibility

A person is a person in the chain of responsibility for a building product if:

- (a) the person:
 - (i) designs, manufactures, imports or supplies the building product; and
 - (ii) knows, or is reasonably expected to know, that the building product will or is likely to be used in a building; or
- (b) the person does the building work by which the building product is used in a building.

13 Primary duty of person in chain of responsibility

Each person in the chain of responsibility for a building product must, so far as reasonably practicable, ensure that the product is not a non-conforming building product for an intended use in a building.

14 Additional duty relating to accompanying information

- (1) A person in the chain of responsibility for a building product who designs the building product must ensure, so far as reasonably practicable, that, if the person gives the design to another person who is to give effect to the design, the design is accompanied by the required information for the product.
- (2) A person in the chain of responsibility for a building product who manufactures, imports or supplies the product must ensure, so far as reasonably practicable, that when the person gives the product to another person the product is accompanied by the required information for the product.
- (3) For the purposes of subsection (2), a person gives a building product to another person if the person:
 - (a) sells, supplies or otherwise transfers the building product to the other person; or
 - (b) facilitates the sale, supply or transfer of the building product to another person.
- (4) A person who does the building work by which a building product is used in a building must ensure, so far as reasonably practicable, that the owner of the building is given the information about the product prescribed by the regulations for this subsection.
- (5) The regulations may prescribe the following requirements in relation to the information required under this section:
 - (a) the matters that must be included or provided for in the information;
 - (b) the matters that must not be included or provided for in the information;
 - (c) the form in which the information must be given.
- (6) In this section:

required information means information about the product that:

 - (a) for each intended use of the product, states or otherwise communicates the following:
 - (i) the suitability of the product for the intended

use and, if the product is suitable for the intended use only in particular circumstances or subject to particular conditions, the particular circumstances or conditions;

- (ii) instructions about how the product must be used in a building to ensure it is not a non-conforming building product for the intended use; and

- (b) complies with the requirements for the information, if any, prescribed by the regulations.

Division 3 Offences relating to duties

15 Failure to comply with duty

A person commits an offence if:

- (a) the person has a duty under Division 2; and
- (b) the person fails to comply with the duty.

Maximum penalty: 1,000 penalty units.

16 Duty about representations about building products

A person must not make a representation, or permit a representation to be made, that the use of a building product in a building complies, or will comply, with the relevant regulatory provisions if the person knows, or ought reasonably to know, that the use of the building product does not, or will not, comply with the relevant regulatory provisions.

Maximum penalty: 1,000 penalty units.

17 Duty to notify non-conforming building product

- (1) If a person in the chain of responsibility for a building product becomes aware, or reasonably suspects, that the building product is a non-conforming building product for an intended use in a building, the person must, as soon as practicable and within 2 days after becoming aware or forming the suspicion, give the Secretary notice of the matter.

Maximum penalty: 50 penalty units.

- (2) If the person is aware of a notifiable incident that was or may have been caused by the use of the building product for the intended use, the notice under subsection (1) must also include notice of the notifiable incident.
- (3) The notice under subsection (1):
 - (a) must be given as soon as practicable but, in any case, within 2 days after the person becomes aware that, or forms the suspicion that, a building product is a non-conforming building product for an intended use; and
 - (b) must be given in a form approved by the Secretary.
- (4) In proceedings in which a person is charged with an offence under this section, it is a defence to the prosecution of the offence if the person charged proves that the person had a reasonable excuse for the act or omission concerned.

18 Duty to comply with directions of Secretary

- (1) The Secretary may, by written notice given to a person in the chain of responsibility for a building product, direct the person to take stated action within a stated period to remove or minimise the safety risks posed by the use of the building product in a building.
- (2) Subsection (1) applies only if the Secretary is satisfied on reasonable grounds:
 - (a) that the use is an intended use; and
 - (b) that the building product is or may be a non-conforming building product in relation to the use; and
 - (c) that the use poses a safety risk.
- (3) A person given a direction under this section must comply with the direction.

Maximum penalty: 50 penalty units.

19 Duty to notify notifiable incident

- (1) A person in the chain of responsibility for a building product who becomes aware, or reasonably suspects, that a notifiable incident was or may have been caused by the use in a building of a building product that is a non-conforming building product in relation to that use must give the Secretary notice of the notifiable incident.
- Maximum penalty: 100 penalty units.
- (2) The notice under subsection (1):
 - (a) must be given as soon as practicable but, in any case, within 2 days after the person becomes aware that, or forms the suspicion that, a notifiable incident has occurred; and
 - (b) must be given in a form approved by the Secretary.

- (3) In proceedings in which a person is charged with an offence under this section, it is a defence to the prosecution of the offence if the person charged proves that the person had a reasonable excuse for the act or omission concerned.

20 Secretary may require remedial action

- (1) The Secretary may, by written notice given to a person, direct the person to do the following within the period stated in the direction:
 - (a) remedy a contravention of this Part;
 - (b) take stated steps to prevent the contravention from continuing or being repeated.
- (2) The Secretary may give a direction under this section only if the Secretary is satisfied on reasonable grounds that the person:
 - (a) has contravened a duty under this Part; or
 - (b) has contravened a duty under this Part in circumstances that make it likely that the contravention will continue or be repeated.
- (3) The period stated in the direction must be at least 28 days unless the Secretary is satisfied that, if the direction is not required to be complied with within a shorter period:
 - (a) a substantial loss will be incurred by, or a significant hazard will be caused to the health or safety of, a person because of the contravention, or
 - (b) the contravention will cause a significant hazard to public safety or the environment generally.
- (4) A person given a direction under subsection (1) must comply with the direction.

Maximum penalty: 1,000 penalty units.

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Construction of the new Sydney Olympic Stadium—
part of the Sydney Olympic Stadium project, which is
underpinned by Australia's steel supply chain.
Image courtesy of raBuild.



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