

Six reasons to choose steel &  
Six reasons why steel contributes to intergenerational wellbeing



6 reasons to choose steel	Supporting facts include...	Hashtags for social media and comms
It is extremely <b>resilient/durable</b>	<ul style="list-style-type: none"> <li>• Wide range of corrosion-resistance levels (product for every environment)</li> <li>• Very customisable (its properties can be changed to suit the application)</li> <li>• Superior strength under compression and tension</li> <li>• Best choice to suit NZ’s seismic conditions</li> <li>• Known, predictable and strong fire performance*</li> </ul>	<p>#steelisstrong #steelforseismic</p>
It is surprisingly <b>low-carbon</b> over its <u>lives</u>	<ul style="list-style-type: none"> <li>• Low-carbon lives (“note, that I specifically use the term lives”)</li> <li>• Embodied carbon only looks at a narrow point in time. Lifecycle analysis (cradle to cradle) gives a truer indication of overall carbon performance and that is where steel has a great story.</li> <li>• Superior circular economy performance in terms of repair / reuse / repurpose / recycle (i.e. steel has multiple lives)</li> </ul> <p><i>“An impact assessment, using lifetime energy use as one environmental indicator, showed a difference of 2% for energy use between the health building designs, with timber the highest user. For CO<sub>2</sub> releases, the three materials in the health building were within 3% of each other with steel and timber the lowest emitters. Due to lack of data for NZ conditions it was not possible to include other environmental impacts, however the report notes that other environmental considerations may well influence the ranking of alternative materials. For example, concrete and steel materials have environmental advantages in recycling, and cement manufacturers uses waste materials in production” (BRANZ, 2006).</i></p> <ul style="list-style-type: none"> <li>• Long-lifespan</li> </ul> <p><i>“The longer a building lifespan, the more embodied emissions in building materials are amortized over time, particularly reducing the overall impact, as long as building energy efficiency performance is not comprised” (Stiebert et al., 2019).</i></p>	<p>#circulareconomy #sustainablesteel #steelhasmultiplelives #steelliveson #zerocarbonsteel #cradletocradletocradle</p>

	<ul style="list-style-type: none"> <li>• Limited, if any, on-site waste</li> <li>• Arguably most recycled building material on the planet**</li> <li>• HERA's carbon offset program provides a zero carbon steel option</li> </ul>	
It enables a wide range of <b>sustainable</b> choices	<ul style="list-style-type: none"> <li>• Enables wider use of other materials (concrete needs steel, timber benefits from steel)</li> <li>• Enables wider range of designs (<i>e.g.</i> spans and cantilevers), allowing greater design innovation and sustainable design</li> <li>• Because you know precisely what you are getting you are not having to over-engineer structures, hence you use less material</li> </ul>	#steelsupportsdesigninnovaton #steelsupportssustainabledesign #steelgivesyouoptions
It is <b>cost-competitive</b>	<ul style="list-style-type: none"> <li>• Comparable up-front costs</li> <li>• Often needs less maintenance than other construction products</li> </ul>	#steelislowmaintenance #affordability
It is a <b>low-risk</b> building solution	<ul style="list-style-type: none"> <li>• Available in short timeframes/leadtimes</li> <li>• Compliant with NZ's extensive evidence-based performance standards</li> <li>• Tried and true</li> <li>• Steel is the backbone of NZ's infrastructure and building stock</li> <li>• Seismic and fire performance</li> <li>• With the testing regimes in place in most of the steel standards there is quantifiable quality within the fabrication of steel.</li> <li>• The properties are uniform throughout the material</li> </ul>	#steelisspeedy #trustinsteel #thirdpartyverification #steelisthebackboneofNZ #steelisstrong
It is enduringly <b>beautiful</b>	<ul style="list-style-type: none"> <li>• Stainless steel and weathered steel</li> <li>• Timeless (never out of fashion)</li> <li>• Customisable to the look/performance/lifetime that is wanted (can be almost anything)</li> </ul>	#steelisbeautiful #enduringbeauty

\*refer to HERA podcast with A/Prof Charles Clifton for detailed explanation <https://www.hera.org.nz/stp-ep44-charles-clifton/>

\*\* HERA has commissioned thinkstepANZ to quantify steel recycling in New Zealand. Report is due in April 2021.

BRANZ (2006) Timber in Government Buildings – Cost and Environmental Impact Analysis. Report No: E408. 36pp. [Note: the Client for this report was Ministry of Agriculture and Forestry.](#)

Stiebert, S; Echeverria, D; Gass, P; and Kitson, L. (2019) Emission Omissions: Carbon Accounting Gaps in the Built Environment. International Institute for Sustainable Development Report, 63pp.

6 reasons why steel contributes to intergenerational wellbeing	Supporting facts include...	Hashtags for social media and comms
Steel enables a wide range of <b>sustainable</b> choices	<ul style="list-style-type: none"> <li>• Steel is an enabler for a low carbon future- <i>i.e.</i> there is no renewable energy without steel (hydro, solar, wind, wave, hydrogen and geothermal all need steel)</li> <li>• Enables wider use of other materials (concrete needs steel, timber benefits from steel)</li> <li>• Enables wider range of designs (<i>e.g.</i> spans and cantilevers), allowing greater design innovation and sustainable design</li> <li>• Because you know precisely what you are getting you are not having to over-engineer structures, hence you use less material</li> </ul>	<p>#sustainablesteel  #renewablesneedsteel  #steelsupportsdesigninnovaton  #steelsupportssustainabledesign  #steelgivesyouoptions</p>
The steel industry is an integral part of local / regional <b>communities</b> nationwide	<ul style="list-style-type: none"> <li>• Most of the growth in metals manufacturing is occurring in the regions (MBIE, 2018)</li> </ul>	<p>#jobsinsteel  #madeinAotearoa</p>
The steel industry complies with an <b>evidence-based standards</b> system	<ul style="list-style-type: none"> <li>• SFC</li> <li>• Third party verification schemes</li> <li>• Strong H&amp;S focus in the industry</li> </ul>	<p>#trustinsteel  #thirdpartyverification  #steelisthebackboneofNZ</p>
The industry has made significant <b>investment</b> in value-added, vertically integrated products and technologies	<ul style="list-style-type: none"> <li>• Significant contributor to NZ's GDP</li> <li>• Supports a local value chain</li> <li>• Projects are less likely to be delayed due to supply issues</li> </ul>	<p>#steelsupportsthenation  #jobsinsteel  #madeinAotearoa  #steelisspeedy</p>
The steel industry's products comprise a core part of NZ's <b>physical infrastructure</b>	<ul style="list-style-type: none"> <li>• Steel is a NZ natural resource</li> <li>• Value-adding a natural resource</li> <li>• Steel is the backbone of NZ's built environment and infrastructure</li> </ul>	<p>#steelisthebackboneofNZ</p>

<p>The steel sector is <b>dynamic</b> and forward-thinking</p>	<ul style="list-style-type: none"> <li>• First industry in NZ to use the Living Standards Framework to assess its economic contribution</li> <li>• Aotearoa Steel Transformation Agenda</li> <li>• SFC/SSC Certification</li> <li>• Carbon calculator global first</li> </ul>	<p>#innovationinmetals  #livingstandardsframework  #Aotearoasteeltransformationplan  #zerocarbonsteel</p>
<p>The industry's <b>diverse</b> employees enjoy high-value career prospects</p>	<ul style="list-style-type: none"> <li>• The industry has a strong commitment to industry training and inclusion.</li> <li>• For every three FTEs employed in New Zealand's Steel Industry a further eight FTEs are employed throughout the rest of the New Zealand economy (BERL, 2020).</li> <li>• Combined, 28,290 FTEs can be linked to the operation of New Zealand's Steel Industry, beyond those directly employed in the industry (BERL, 2020).</li> </ul>	<p>#jobsinsteel  #careersinsteel  #womeninsteel  #Māoriinsteel  #diversityinsteel</p>

Note: HERA has just commissioned a LSF assessment for steel (vs metals) by BERL- due April 2021.

BERL (2020) New Zealand Steel Industry: Employment Created Outside the Industry (available from SCNZ)

MBIE (2018) Beyond Commodities: Manufacturing into the Future. <https://www.mbie.govt.nz/assets/f0f81b6194/new-zealand-manufacturing-sector-report-2018.pdf>

### Guidelines for use

This can be used by all members of the Sustainable Steel Council and shared with their members (if an industry association) or their channel (if a company). It must be sent out unrevised, i.e. in its current format, and with the Sustainable Steel Council logo intact. When sharing this with members and the channel, it must be noted that it is a document prepared by the Sustainable Steel Council. It should not be loaded onto any member's website. Links should be given back to the Sustainable Steel Council website page ([www.sustainablesteel.org.nz](http://www.sustainablesteel.org.nz)). Its intended use is to assist the industry to use a unified voice and consistent messaging when responding to questions relating to the sustainability credentials of steel, or in proactively promoting these benefits. The term "steel" includes stainless steel. The hashtags are intended to be used across the industry and we should start to use these when communicating through digital channels.