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# Steel Industry Contribution to New Zealand



Title: Steel Industry Contribution to New Zealand

Report version: 2.2

Report date: 04/06/2020

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# Introduction

The steel sector in New Zealand is a crucial part of construction and infrastructure projects. Steel is produced in New Zealand from ironsand and processed into a range of downstream applications, including roofing, cladding, reinforcing and structural beams.

As a local manufacturing industry, the steel industry is a significant contributor to wellbeing in New Zealand, through economic activity, good jobs, environmental stewardship, and a focus on health and safety. However outside of the industry itself this is not well understood. The Sustainable Steel Council (SSC) seek to build greater understanding of the contribution by developing, in conjunction with members, a series of communicable case studies which embody the sector's contribution to communities and infrastructure in NZ.

SSC seek to express these case studies in the context of the Living Standards Framework (LSF) and the UN's Sustainable Development Goals (SDGs) or. By expressing the sector's contribution to wellbeing in the context of these frameworks, the stories are told in a common 'language' understood by all. Additionally, as New Zealand has set targets under these frameworks, the sector is able to communicate directly how it contributes to these.

This report summarises the framework developed to build this understanding of the steel industry's contribution to New Zealand, its application to the first case study, and the recommendations for framework application to future case studies.

# Goal and Scope

## The Goal of this Case Study Framework

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Construction procurement is complex, and the focus is commonly on least-cost rather than value-added, on capital costs rather than the costs over the life of the building, and on reducing embodied carbon without considering other environmental and social consequences.

In the context of steel building products in New Zealand, this is particularly relevant when comparing local versus overseas supply chains. The local industry has a 'beyond compliance' approach, with excellent health and safety records, a focus on staff and community wellbeing, and continuous improvement of environmental performance. Steel materials sourced from overseas do not have these same credentials, often coming from countries with weak regulations protecting people and the environment, and through supply chains with poor oversight.

Heavy fabricated steel is the predominant building system choice for commercial and industrial structures. While we know little about overseas supply chains, we *can* show how local steel products contribute to wellbeing in New Zealand. This relates to more than just an economic benefit to New Zealand; there are social, community, health and wellbeing benefits for example. The goal of this framework and case study is to discover exactly how the steel industry in New Zealand contributes to wellbeing (in the context of existing frameworks), and provide a framework that can be used to demonstrate this in future case studies.

## Scope

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thinkstep proposed a four part process to this project:

- Part 1: Review the SDGs, the Living Standards Framework and existing materiality assessments of members to identify key indicators
- Part 2: Create mapping between the positive impacts throughout the sector's supply and value chains and the SDGs/LSF
- Part 3: Apply the mapping to an example case study from within the industry to establish the chosen scenario's contribution to the SDGs/LSF
- Part 4: Develop a framework for future case studies

The intention is to establish a robust blueprint identifying where and how the sector's value and supply chains impact the objectives of the frameworks. This mapping will provide the steel sector with the information required to communicate how particular projects contribute to New Zealand's wellbeing and sustainability ambitions.

# Part 1: Frameworks and Indicators Used

To look at the ways in which a project like this contributes to New Zealand, two widely-known frameworks were used. These are explained further below.

## The Living Standards Framework

The Living Standards Framework is used by the New Zealand Treasury. This framework includes four 'capitals' which generate wellbeing, and twelve 'domains' which are an indication of current wellbeing. These domains cover a broad range of wellbeing indicators, covering economic, environmental, and social aspects.

The capitals are Natural, Social, Human, and Financial and Physical, which provide a simple way of checking that contributions are made across all of the areas that the New Zealand Treasury monitors. This part of the framework is a very high-level view. The twelve domains of current wellbeing are slightly more granular, and apply to specific categories of indicators. The domains and indicators can be seen in Figure 1 below.



**Figure 1 : Living Standards Framework (Source: NZ Treasury)**

One important note about this framework is that some indicators are entirely subjective (many aspects of social capital, as well as the domain 'subjective wellbeing'). This means the data can only be collected at the level of individual people within the industry. This cannot easily be done in a case study, so proxies are used, such as reported incidents of discrimination, and the presence of policies which facilitate healthy workplace cultures.



## The UN Sustainable Development Goals

The second framework used is the set of 17 UN Sustainable Development Goals. These goals are used globally to indicate priorities and targets within governments and businesses. Every country in the world has signed up to these goals, and New Zealand released its first [Voluntary National Review](#) in 2019. The goals cover areas that the private sector may not usually address (e.g. poverty and hunger), as well as areas that tie in closely with many companies' sustainability and business goals. The full list of goals can be seen in Figure 2.



Figure 2: The 17 Sustainable Development Goals (Source: UN)

## Practicalities of Using these Frameworks

Larger organisations often have the capacity to dedicate staff time to detailed sustainability work. The SDGs, for instance, are commonly used by larger companies to set sustainability metrics and convey those in reporting. As an example, BlueScope steel (owner of New Zealand Steel), has identified six SDGs to focus on: good health and wellbeing, gender equality, clean water and sanitation, decent work and economic growth, responsible consumption and production, and climate action. This gives a basis for reporting, and BlueScope includes the data related to these SDGs in their annual sustainability report.

For managers of small to medium sized enterprises (SMEs), it can be harder to understand the role of sustainability in their business, as well as their business's role in sustainability of the industry as a whole. This case study framework translates the LSF and SDGs into practical questions that can be asked in SMEs, relating to metrics that either are already tracked, or can be tracked in future years, without requiring deep internal knowledge of the frameworks.

## Part 2: Indicator Mapping

### Assessing Steel Industry Data

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The activities and typical metrics collected within the steel industry in New Zealand were assessed against the living standards framework and the UN Sustainable Development Goals, with key indicators being selected.

Initially, thinkstep-anz proposed two indicator lists: a project-specific indicator list, and a company-specific indicator list, the former to measure specific impacts related to the project, and the latter to be used for broader performance assessment of companies that supplied materials to the project.

After presenting the suggested indicator frameworks (see Annex A) to the SSC, it was decided that the company-specific metrics list had significant overlap with the existing SSC Audit Tool. Since some companies were already familiar with the tool, it was decided that this tool be used in place of the original indicator list. (This decision ultimately influenced the results of the case study quite strongly, as responses were received from almost all companies, however quantitative data was lacking. This is addressed in Part 4 of this study).

### Mapping Indicators to Frameworks

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The LSF domains and SDGs associated with all project-specific and company-specific indicators were recorded, and can be found in Annex A.



## Part 3: Example Case Study

This section explains how the building for the example case study was chosen, the study participants, and the results.

### The Process

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The building was selected as a potential case study by SSC, as some of the suppliers had already shown interest in being part of a case study like this. Initial contact was made in late 2018, though it took until early 2019 to gain approval to use the building.

Results were compiled in February 2020 and a draft report reviewed by Sustainable Steel Council then. This report was completed in March 2020.

### The Building

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The building used for this case study is a new Air New Zealand logistics building at Auckland Airport. This is a portal-framed building with optimised steel beams, a reinforced concrete foundation as well as steel cladding and roofing.

All of the steel was manufactured in New Zealand by New Zealand Steel. The building structure was designed and built with optimised steel beams. These beams are specifically engineered for the loadings expected for this particular building, and according to Steltech they use on average 28% less steel than conventional commodity parallel sections. The reinforcing for the project was produced by Pacific Steel, and fabricated by Taranaki Reinforcing. The cladding and roofing for the project was ColorSteel Maxx, produced by NZ Steel and fabricated by Dimond Roofing.

The companies below took part in this case study, providing information on their practices and the products supplied for this project.



Contractor: Cook Construction.

Steel Manufacturer New Zealand Steel

Fabricated Steel manufacturer Steltech

Structural Steel Fabricator Grayson Engineering

Reinforcing Manufacturer Pacific Steel

Reinforcing Fabricator Taranaki Reinforcing (data yet to be provided)

Steel Roofing/Cladding Manufacturer: New Zealand Steel

Steel Roofing/Cladding Rollformer: Dimond Roofing

## Project-Level Results

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### Safety

With 340 people inducted to the site, there were only two lost-time injuries. This is an excellent record for such a large project. Looking upstream, none of the manufacturers involved in the project have had any WorkSafe violations over the past five years, meaning that the safety record surrounding this project is exemplary.

### Jobs

While 340 people were inducted to site, the project supports companies that employ many more. The suppliers to this project in total employ over 2,000 people in New Zealand, and provide safety and skills training, all of which have health and wellness benefits.

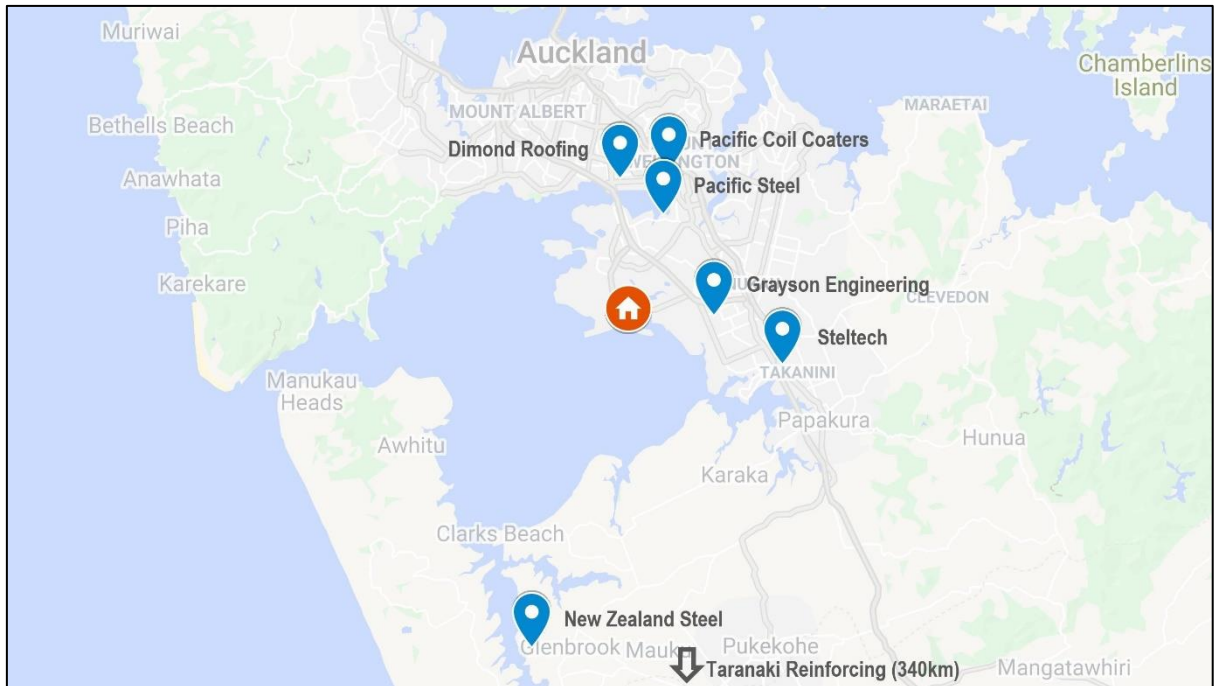
### Waste

Waste on the project was tracked closely. In total, 44.2 tonnes of construction waste was generated, equivalent to 6.8 kilograms per square metre of floor. Over 79% of this waste was diverted from landfill, either going to cleanfill/hardfill or recycling. Less than 10 tonnes of waste from the project went to landfill (approximately 4.5 typical 9m<sup>3</sup> skip bins).

Waste	Destination	Tonnes
Concrete	Cleanfill	20.8
Metals	Recycled	2.0
Wood	Recycled	11.2
Gypsum board	Recycled	1.0
Mixed	Landfill	9.2

### Keeping Dollars in New Zealand

The project used local contractors and suppliers, resulting in much of the economic activity remaining in New Zealand. All steel structural, reinforcing, cladding and roofing products were made in New Zealand from local ironsand - a production process unique to New Zealand. The extent of local sourcing, manufacturing and fabrication can be seen on the map below, with all but one supplier located within 50km of the building location (building location shown by the red 'home' marker, suppliers by blue markers).



Take structural beams as an example: Ironsand was extracted at the Waikato North Head mine site, pumped in a slurry to Glenbrook where it was made into steel, transported to Steltech in Takanini where it was manufactured into optimised steel columns and beams, transported within Takanini to Grayson Engineering where the steel structure was fabricated, then taken to be erected on site.

## Supplier Results for SSC Audit Tool

The main steel product suppliers to this project were asked to complete the Sustainable Steel Council's audit tool, which asks a range of questions about environmental, social and governance metrics. This tool contains questions about metrics that companies in the steel sector are likely to track, and is multiple choice, asking if the company meets certain criteria.

The results from the suppliers are shown below in **Error! Reference source not found..** These questions have been mapped to the LDF and SDG frameworks (see Annex A), but for clarity only the results are shown in this table. While every effort has been made to clarify these results, some inaccuracies may remain – particularly where scores of zero have been entered, indicating that the company does not even partially meet that criterion.

The areas where all companies met the criteria in full were: responsible sourcing of steel, no WorkSafe prosecutions, no environmental breaches, fuel tracking, diversity and inclusion, sustainability organisation membership, air travel tracking, staff wellness and staff mental health. This is very useful information for determining the areas where contribution is made to the frameworks. This is especially relevant when comparing local steel products with imported products – buyer of these products can therefore feel confident in knowing that every part of the supply chain is meeting extremely high standards of wellbeing and environmental stewardship.

Some follow-up was done for specific quantitative indicators - for example for training hours – but a more structured approach for gathering quantitative data is recommended (see Part 4).

**Table 1: Supplier results from the SSC Audit Tool. Higher scores are better. In general 0 = not compliant with criterion, 1 = not compliant but willing to review, 2 = recently compliant, 3 = fully compliant**

Question	Company Scores*				
	1	2	3	4	5
Does the member source from "Responsible Steel Makers" as per the definition in World Steel Association's Climate Action Programme?	3	3	3	3	3
Does the member have a recognised Environmental Management System (EMS)?	3	1	1	3	3
Has the member been prosecuted by WorkSafe for a health and safety incident in the last 5 years?	3	3	3	3	3
Does the member accept returned product for disposal (circular economy) at end of life?	0	0	2	2	0
Does the member purchase electricity from a certified 100% renewable supplier?	0	0	3	0	3
Does the member have a Register of Impacts and Aspects for their operations?	3	1	2	3	3
Does the member employ anyone aged under 15 years on their workforce?	3	3	0	3	3
Does the member have a Supplier Code of Conduct?	3	1	1	1	3
Does the member have a Waste Minimisation Program in place?	3	3	3	3	1
Does the member perform a monthly audit of the environmental risks of their operations?	3	0	3	3	1
Does the member have a Sustainability Policy in place?	1	1	1	3	3
Does the member have a HSE committee with scheduled meetings?	3	0	3	3	3
Has the member been prosecuted for an environmental breach by a local regulatory authority within the last 5 years?	3	3	3	3	3
Does the member have a policy around contributions to registered charities/educational institutions or local communities?	3	0	3	3	3
Does the member track and monitor fuel, gas, water and electricity usage on their sites?	3	3	2	3	3
Does the member have a policy for diversity and inclusivity for their employees?	3	3	2	3	3
Is the member also a member of the New Zealand Green Building Council (NZGBC), Sustainable Business Council (SBC) or Sustainable Business Network (SBN) or Life Cycle Association of New Zealand (LCANZ)?	3	3	3	3	3
Is the member tracking the spend and kms of airtravel done for business?	2	3	3	3	3
Is the member tracking the spend and kg of waste sent to landfill?	3	3	1	3	3

Question	Company Scores*				
	1	2	3	4	5
<b>Is the member tracking the spend and tonne/km of freight from external providers?</b>	3	3	1	3	1
<b>Does the member engage in a Wellness programme for their staff?</b>	3	3	3	3	3
<b>Does the member make mental services available to their staff if needed?</b>	3	3	3	3	3

\* 1 = NZ Steel and Pacific Steel (combined survey), 2 = Dimond Roofing, 3 = Grayson Engineering, 4 = Pacific Coilcoaters, 5 = Steltech. Note that Taranaki Reinforcing did not supply answers.



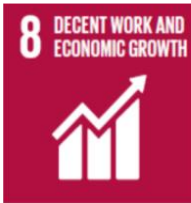


## Results as Contribution to Frameworks

Combining project-level and supplier-level data highlights certain areas where the companies involved contribute strongly to both frameworks. In Table 2, the LSF Capitals and LSF Current Wellbeing Domains where companies involved in the project have particularly strong contributions have been identified, with the specific contributions listed. The aligned SDGs are included also.


This table is not exhaustive, but shows the areas where the project (often through its suppliers) contributes most strongly to the frameworks. This shows that through selecting New Zealand suppliers of steel products for this building, the project has contributed to wellbeing in New Zealand through:

- Strong health and safety processes, including the mental wellbeing of staff
- Workplaces that encourage wellbeing, diversity and inclusion
- Good jobs that provide opportunities for upskilling and career advancement
- Companies that give back to local communities through donations
- Waste reduction through detailed tracking and transparent reporting
- Environmental stewardship through a commitment to use responsibly-sourced products, minimise energy and water use, and abide by all of New Zealand's environmental regulations.

**Table 2: Contributions to the Living Standards Framework (LSF) and Sustainable Development Goals (SDGs) from metals suppliers to this project**

LSF Capital	LSF Wellbeing Domain	SDG	Contribution from this Project
Human	Health		All steel product suppliers involved provide health, wellness and mental health services to their staff
	Safety		A strong safety focus means none of the companies involved in the project have had serious WorkSafe violations in the last 5 years
	Knowledge and skills		Suppliers to this project conducted over 20,000 hours of training for employees, from basic safety training, to on-the-job skills training, through to leadership and management (NZQA level 4)
Financial and physical	Jobs and earnings		Suppliers and contractors involved provide good-paying jobs with healthcare benefits and a wellbeing focus.
	Income and consumption		This project used 340 local workers on-site, and all steel products were produced and fabricated in New Zealand, providing economic benefit to the country. Steltech estimates that for every \$1 spent on their products, >90c returns to domestic economy, while an imported beam would only return 5c
Social	Social connection		All metals suppliers on this project provide employees with wellbeing and mental health benefits, as well as help for discrimination, ensuring they are happy and healthy at work.  Most of the suppliers have policies to donate regularly to local charities, educational institutions and/or communities.
	Cultural Identity		All manufacturers on the project have policies for diversity and inclusion; workers have the freedom to express their identity and culture.
Natural	Environment		Using optimised steel beams uses approximately 28% less steel compared to conventional commodity parallel sections, and this also means reduced transport fuel use, installation fuel use, and paint.
	Environment		79% of waste on the project was diverted from landfill.  Four of the steel suppliers/manufacturers have comprehensive waste minimisation programmes,



Natural			<p>know their top 3 wastes and are actively working towards reducing them.</p> <p>All steel product suppliers are tracking and monitoring fuel, gas, water and electricity usage.</p> <p>Two steel product suppliers accept material for recycling or disposal at end of life.</p> <p>None of the steel product suppliers have had any environmental breaches in the last 5 years.</p> <p>Cladding, roofing and reinforcing products in this project are covered by environmental product declarations (with further products expected to be covered soon)</p> <p>All steel product suppliers are members of sustainable business and/or sustainable building networks.</p>
	Environment		<p>All steel used on this project has been sourced from steel makers that are members of the World Steel Association's Climate Action Programme.</p> <p>All structural steel was fabricated and sourced locally (&lt;50km from the construction site), minimising transport and associated emissions.</p> <p>All suppliers are tracking and monitoring fuel, gas, water and electricity usage to maximise efficiency.</p> <p>All suppliers are tracking air travel</p>

## Data Gaps Remaining

Two main data gaps remain: economic information, and audit tool information from one supplier (Taranaki Reinforcing). Air New Zealand was not comfortable with any cost data from this project being released, which means no economic metrics were possible to include. The information from Taranaki Reinforcing can still be added to this document provided they supply it soon.

Another area that could be improved in future studies is involvement of smaller organisations downstream. The primary material manufacturers and processors (i.e. activities prior to fabrication) were the main contributors to this project, along with the main contractor (Cook Brothers Construction). This enabled fewer points for data collection, but does mean that data for specific subcontractors and fabricators on the project is missing. This is a difficult gap to address, because there will be many different subcontractors involved on a large project like this. This point is addressed further in Part 4.

## Contributing to National Efforts

New Zealand's [dashboard](#) on the SDG Index shows how New Zealand is performing towards achieving all of the SDGs by 2030. Challenges remain in all of the SDGs in **Error! Reference source not found.**, with the most significant challenges remaining in climate action and reduced inequalities. Indicators for both of these goals are moving in the wrong direction at a national level; the steel industry is working to address them through sustainability and diversity/inclusion initiatives.



Perhaps the biggest challenge remaining for the steel industry is use of coal in production – this is an area that the industry is acutely aware of and is addressed further in Part 4.

## Conclusions

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This case study indicates that through choosing steel products manufactured in New Zealand, tangible contributions to our economy, environmental stewardship and our communities will be made. Choosing New Zealand-made steel products means using companies that have had no environmental or safety breaches in the last five years; that all companies support the physical health, mental health and cultural identity of their staff, and that efforts are being made to reduce environmental footprints across the board.

In contrast, we know little about the stewardship of imported fabricated steel. Imported steel can be sourced from companies and nations that do not have the same level of regulations, policies and commitment to improvement that is present here in New Zealand. It is widely known that supply chains are coming under scrutiny due to poor environmental stewardship and issues such as modern slavery, and a way of avoiding these practices entirely is to make use of the local industry here in New Zealand.

## Part 4: Framework for Future Studies

Based on the process of developing the framework and the application to a case study, the learnings and suggestions for the framework to be used in future studies are supplied in this section.

### Learnings from Example Case Study

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The initial case study was intended to provide both an example of how a framework for measuring contribution to the SDGs and LSF could be applied, as well as uncover challenges and needs for future studies. These are reviewed below.

#### Indicators Used

The SSC Audit tool was used as the primary list of indicators. While the specific indicators were well-matched to both frameworks, the multi-choice 'compliance'-based nature of the questions meant that results had limited granularity. While all respondents were asked to elaborate on their answers, few did. This meant that almost all data captured was qualitative. Much of the quantitative data does exist, but a different process to capture data could result in much better collection of this data; this is discussed in the 'Case Study Process' section below.

The project-level indicator list was appropriate, but only a few of the questions could be answered as the data simply did not exist. This must be addressed in future projects, and is also discussed later in this section.

#### Data Collection Process and Timeline

The data collection process was straightforward, but took longer than anticipated, primarily for two reasons:

- 1) Signoff to use this particular building for a case study took longer than expected, partially due to this happening over the Christmas/New Year's period
- 2) Some suppliers took longer than expected to complete the audit tool and required multiple follow-ups. One supplier did not complete the tool.

Addressing this process from the start could help a case study come together much more quickly, and this also is addressed later in this section.

#### Steel Industry Performance

Based on the results of the case study, it appears that the industry is doing very well in most areas, but there is room improvement in some others. The larger suppliers in general were very receptive to this study, and provided information, through sometimes the timing to gather data was a hindrance, as data is kept in different departments.

Performance in some indicator areas could be improved, such as ensuring all parties in the supply chain have sustainability policies and supplier codes of conduct in place. This is a relatively simple step that would demonstrate commitment to the environmental part of the business. In general, it seems the industry has a very strong focus on health, safety and wellbeing, and while there are some standout organisations with respect to environmental performance, some could improve with respect to policies and metrics related to this.

It should be noted that climate change is tied to the technical processes involved in making steel. Much like the airline industry, drastically lowering carbon emissions from the industry would require a technological breakthrough; adding carbon (in the form of coal) is currently the only way to commercially produce steel. However, local steel producers have done some excellent environmental work on water re-use, capturing waste heat to generate electricity, working with Alinta to capture off-gases for electricity, and working with Lanzatech to turn waste gases into ethanol. Until a viable alternative carbon source for steel making exists, the New Zealand industry has a focus on improving efficiency wherever possible.

At the project level, data on waste, accidents, and people on site was collected, but detailed demographic and gender breakdowns were not available, and suggestions of collecting this were not met with enthusiasm. Further project-level metrics would be best discussed at the start of a project, to see what can be readily collected, and to allow a more detailed breakdown of job types, demographics, and practices onsite.

## Indicator List

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The original list of indicators that was proposed for the project is included in Annex A. While many of the indicators overlap somewhat with those in the SSC Audit Tool, there are fewer multiple-choice questions, instead there are questions to collect specific quantitative metrics, e.g. "Average hours of training per employee per year", "Median hourly earnings for employees". There are also some more specific indicators, such as breaking carbon emissions measurement into Scope 1+2 and Scope 3, as well as asking about the gender balance in companies.

It is recommended that at the start of a case study, the additional indicator list is reviewed to see what data can be collected for this particular study, and that any additional questions be added to the list in the SSC Audit Tool. In addition, the Audit Tool should be worked on together by the person preparing the case study and a staff member of each individual company, so that all metrics possible to collect for each indicator are noted, and data is collected on them. This will provide more quantitative data.

## Case Study Process

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A major difficulty with the example case study was the delay caused by waiting for responses from companies involved. A recommended process for future studies to streamline this would be:

- 1) Select the case study site before construction begins. Get the client on board with the study, and ensure they are willing to allow the use of some high-level cost data
- 2) Select indicator list (SSC Audit Tool plus additional indicators), and get cost data
- 3) Ensure one contact at each organisation is on-board before starting data collection
- 4) Check in throughout the build process
- 5) Gather final data as soon as project finishes – including quantitative and extra qualitative data (such as testimonials from the project)

A process such as this could save time on project management as expectations are set from the beginning.

## Possible Additions

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While this indicator list does allow for qualitative (and to some extent quantitative) contributions to the SDG and LSF frameworks, there are areas that are not well covered and could be interesting in a case study. Further economic analysis would be interesting – using spend ratios for NZ-made versus imported products could allow analysis of dollars retained in the local economy, as well as flow-on effects to particular regions and/or industries. Another piece of information that could be interesting is

further comparison with imported product in terms of specific social, economic and environmental impacts.

## Annex A: Indicator Frameworks

**Table A-1: Full SSC Audit Tool Framework Mapped to SDG and LSF Frameworks**

Category	Indicator	Question	LSF Capital	LSF Wellbeing Domain	SDG #	SDG Name
<b>Governance and ethics</b>	Responsible sourcing	Does the member source from "Responsible Steel Makers" as per the definition in World Steel Association's Climate Action Programme?	Natural, Financial and Physical	Environment	12 and 13	Responsible Consumption & Production, Climate Action
<b>Governance and Ethics</b>	Environmental management System	Does the member have a recognised Environmental Management System (EMS)?	Natural, Financial and Physical	Environment + Governance	11 and 12	Responsible Consumption & Production,
<b>Governance and Ethics</b>	Workplace incidents	Has the member been prosecuted by Worksafe for a health and safety incident in the last 5years?	Human, social	Safety	3 and 8	Good health and wellbeing, Decent Work and Economic Growth
<b>Environmental Impact</b>	Extended producer responsibility	Does the member accept returned product for disposal (circular economy) at end of life	Natural	Environment + Governance	12 and 13	Responsible Consumption & Production, Climate Action
<b>Environmental Impact</b>	Green electricity	Does the member purchase electricity from a certified 100% renewable supplier?	Natural	Environment	12 and 13	Responsible Consumption & Production, Climate Action
<b>Environmental Impact</b>	Register of impacts and aspects	Does the member have a Register of Impacts and Aspects for their operations?	Natural	Governance	3, 12, 13	Good Health and Wellbeing, Responsible Consumption & Production, Climate Action
<b>Governance and Ethics</b>	Child labour	Does the member employ anyone aged under 15 years on their workforce?	Human	Governance	8, 10	Decent Work and Economic Growth, Reduced Inequalities

Category	Indicator	Question	LSF Capital	LSF Wellbeing Domain	SDG #	SDG Name
<b>Governance and Ethics</b>	Sustainable procurement	Does the member have a Supplier Code of Conduct?	Financial and physical	Governance	9, 12, 13	Industry, Innovation and Infrastructure, Responsible Consumption & Production, Climate Action
<b>Environmental Impact</b>	Waste minimisation	Does the member have a Waste Minimisation Program in place?	Natural, Financial and Physical	Environment + Governance	12, 13	Responsible Consumption & Production, Climate Action
<b>Governance and Ethics</b>	Monthly environmental audit	Does the member perform a monthly audit of the environmental risks of their operations?	Natural	Environment + Governance	12, 13	Responsible Consumption & Production, Climate Action
<b>Governance and Ethics</b>	Sustainability policy	Does the member have a Sustainability Policy in place?	All four	Environment + Governance	Many	Many
<b>Governance and Ethics</b>	HSE Committee	Does the member have a HSE committee with scheduled meetings?	Human and social	Environment + Safety	3, 13, 14, 15	Good Health and Wellbeing, Climate Action, Life Below Water, Life on Land
<b>Environmental Impact</b>	Environmental incidents	Has the member been prosecuted for an environmental breach by a local regulatory authority within the last 5 years?	Social, natural	Environment	12, 13, 14, 15	Responsible Consumption & Production, Climate Action, Life Below Water, Life on Land
<b>Subjective Wellbeing &amp; Use of Time</b>	Donations to charity	Does the member have a policy around contributions to registered charities/educational institutions or local communities?	Social	Social connection / subjective wellbeing	9, 10	Industry, Innovation and Infrastructure, Reduced Inequalities
<b>Environmental Impact</b>	Fuel and energy monitoring	Does the member track and monitor fuel, gas, water and electricity usage on their sites?	Natural	Environment + Governance	12, 13	Responsible Consumption & Production, Climate Action

Category	Indicator	Question	LSF Capital	LSF Wellbeing Domain	SDG #	SDG Name
<b>Equality and Diversity</b>	Diversity and inclusivity	Does the member have a policy for diversity and inclusivity for their employees?	Human, social	Mental health + subjective wellbeing	3, 5, 10	Good Health and Wellbeing, Gender Equality, Reduced Inequalities
<b>Governance and ethics</b>	Sustainability association membership	Is the member also a member of the New Zealand Green Building Council (NZGBC), Sustainable Business Council (SBC) or Sustainable Business Network (SBN) or Life Cycle Association of New Zealand (LCANZ)?	Natural	Governance	12	Responsible Consumption & Production
<b>Environmental Impact</b>	Air travel tracking	Is the member tracking the spend and kms of airtravel done for business	Natural	Environment	12, 13	Responsible Consumption & Production, Climate Action
<b>Environmental Impact</b>	Waste tracking	Is the member tracking the spend and kg of waste sent to landfill	Natural	Environment	12	Responsible Consumption & Production
<b>Environmental Impact</b>	Logistics tracking	Is the member tracking the spend and tonne/km of freight from external providers	Natural	Environment	12, 13	Responsible Consumption & Production, Climate Action
<b>Health</b>	Staff wellness	Does the member engage in a Wellness programme for their staff	Human	Health + Jobs and Earnings	3	Good health and wellbeing
<b>Health</b>	Mental health	Does the member make mental services available to their staff if needed	Human	Mental Health	3	Good health and wellbeing



**Table A-2: Alternative indicator framework suggested from review of LSF and SDGs**

Category	Indicator	Question	LSF Capital	LSF Wellbeing Domain	SDG #	SDG Name
<b>Governance and Ethics</b>	Sustainability Association Membership	Is the company a member of a sustainable business group? (e.g. Sustainable Steel Council, SBN, SBC, LCA NZ)	Natural	Environment	9	Industry, innovation and infrastructure
<b>Governance and Ethics</b>	Supplier Code of Conduct	Does the company have a supplier code of conduct?	Human	Civic Engagement and governance	16	Ethics
<b>Governance and Ethics</b>	Safety Incidents	Has the company been prosecuted by WorkSafe for a health and safety incident in the last 5 years?	Human	Civic Engagement and governance	16	Ethics
<b>Governance and Ethics</b>	Environmental Incidents	Has the company been prosecuted for an environmental breach by a local regulatory authority within the last 5 years?	Natural	Civic Engagement and governance	16	Ethics
<b>Health</b>	Provision of health benefits	% of employees with health/wellness benefits	Human	Mental health	8	Decent work and economic growth
<b>Jobs and Earnings</b>	Wages	Median hourly earnings for employees	Human, Financial and Physical	Jobs and Earnings	8	Decent work and economic growth
<b>Knowledge and Skills</b>	Training	Average hours of training for each employee per year	Human	Knowledge and Skills	4	Education and lifelong learning
<b>Safety</b>	Workplace safety	Workplace accident rate (# of work-related injury claims per 1,000 full-time equivalent employees)	Human	Safety	3	Good health & wellbeing
<b>Environmental Impact</b>	Carbon emissions - Scope 1/2	Does company measure scope 1 & 2 emissions?	Natural	Environment	13	Climate action
<b>Environmental Impact</b>	Carbon emissions - Scope 3	Does company measure scope 3 emissions?	Natural	Environment	13	Climate action

Category	Indicator	Question	LSF Capital	LSF Wellbeing Domain	SDG #	SDG Name
<b>Environmental Impact</b>	Environmental Management System	Does company have a recognised Environmental Management System (EMS)?	Natural, Financial and Physical	Environment	12	Sustainable consumption and production
<b>Environmental Impact</b>	Sustainability Policy	Does company have a sustainability policy?	Natural	Environment	12	Sustainable consumption and production
<b>Environmental Impact</b>	Water	Does the company measure water use?	Natural	Environment	6	Clean water and sanitation
<b>Equality and Diversity</b>	Gender equality	% of women employed, divided by role (board member, senior management, all other staff)	Human	No specific domain	5	Gender equality
<b>Equality and Diversity</b>	Equal opportunity policy (diversity and inclusivity)	Does the company have policies/programmes promoting equal opportunities (regardless of gender and other diversities)?	Human	Cultural Identity	10	Reduce inequalities
<b>Equality and Diversity</b>	Financial literacy	Does the company have initiatives to enhance financial literacy for employees?	Human, Financial and Physical	Knowledge and skills	10 and 4	Reduce inequalities (and education/lifelong learning)
<b>Subjective Wellbeing &amp; Use of Time</b>	Discrimination	Total number of incidents of discrimination in past 5 years and corrective actions taken	Social	Subjective wellbeing	3	Good health & wellbeing

**Table A-3: Project-specific indicators suggested**

Category	Indicator	Question	LSF Wellbeing Domain	LSF Capital	SDG #	SDG Name
<b>Productivity and Economic Contribution</b>	Project costs spent locally	\$ value of project spending to NZ companies, by region	Income and consumption	Financial and Physical	9	Industry, innovation and infrastructure
<b>Environmental Impact</b>	Waste	kg of waste generated by type and disposal method	Environment	Natural	12	Sustainable consumption and production
<b>Environmental Impact</b>	Recycled content	tonnes of material input that is recycled	Environment	Financial and Physical	12	Sustainable consumption and production
<b>Environmental Impact</b>	Environmental product declarations	% of material input (by \$) that is covered under an EPD	Environment	Financial and Physical	12	Sustainable consumption and production
<b>Governance and Ethics</b>	SSC Sourcing	% of steel (by \$) sourced from responsible steel makers (as per definition of World Steel Association)	Civic Engagement and governance	Natural	8	Sustainable consumption and production
<b>Safety</b>	Workplace safety	Workplace accident rate for the project (# of work-related injury claims per 1,000 full-time equivalent employees)	Safety	Human	3	Good health & wellbeing
<b>Environmental Impact</b>	Water	Total water use on the project	Environment	Natural	6	Clean water and sanitation
<b>Metrics not tied to specific framework indicators</b>						
<b>Employment</b>	Total staff that worked on project	Total number of staff that worked on project				
<b>Costs</b>	Budget	Total project budget				
<b>Delivery</b>	On-time delivery	Was project delivered on-time? Y/N				
<b>Transport</b>	Transport Distances	Distance the main structural materials travelled from manufacturer to site, respectively.				

