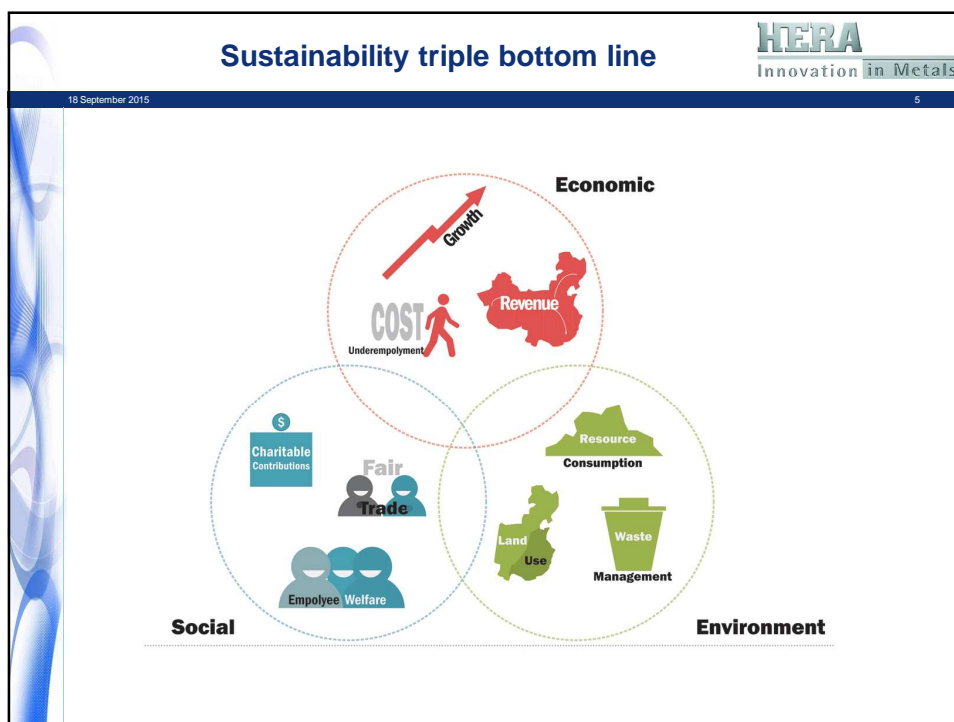


HERA
Innovation in Metals

18 September 20154

New Green Star Steel Credits

Dr Stephen Hicks
HERA General Manager Structural Systems



Principles of Government Procurement



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1. Plan and manage for great results
2. Be fair to all suppliers
3. Get the right supplier
4. Get the best deal for everyone
 - Get best value for money – account for all costs and benefits over the lifetime of the goods or services.
 - Make balanced decisions – consider the social, environmental and economic effects of the deal.
5. Play by the rules

Sustainable Steel Council (SSC)



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Formed in December 2009 with the following members:

- **Steel producers**
 - New Zealand Steel
 - OneSteel
 - Pacific Steel
- **Manufacturing Industry Associations**
 - National Association of Steel-framed Housing (NASH)
 - Steel Construction New Zealand (SCNZ)
 - New Zealand Stainless Steel Development Association (NZSSDA)
 - New Zealand Metal Roofing Manufacturers (NZMRM)
- **Research & Development**
 - Heavy Engineering Research Association (HERA) - **Chair**
- **Australian/NZ Association connections**
 - Building Products Innovation Council (BPIC)
 - Australasian Coatings Association (ACA)
- **Coatings industry**
 - Galvanizing Association of New Zealand (GANZ)
 - Paint Manufacturers
- **Supply chain distributors**
 - Easysteel
 - Steel & Tube
- **Contractors and Builders**
 - Hawkins



SSC Activities

18 September 2015

- Working with NZGBC on the revision of the steel credit**
- Australasian Environmental Product Declaration (EPD) Programme seed-funded by SSC and Building Research Levy**
 - Negotiated 50% discount on first three EPDs developed for SSC members

AUSTRALASIA EPD

ENVIRONMENTAL PRODUCT DECLARATION

<http://epd-australasia.com/>

<http://www.sustainablesteel.org.nz/>


Earlier NZGBC greenstar steel credit

18 September 2015

Aim: To encourage and recognise the reduction in embodied energy and resource depletion associated with reduced use of virgin steel.

- One point is awarded where:**
 - 60% of all steel, by mass, in the project either has a postconsumer recycled content greater than 50%, or is re-used.
- Two points are awarded where:**
 - 90% of all steel, by mass, in the project either has a postconsumer recycled content greater than 50%, or is re-used.


If the material cost of steel represents less than 1% of the project's total contract value, this credit is 'Not Applicable' and is excluded from the points available used to calculate the Materials Category Score.



Greenstar rating tools

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<p>GBCA (up to 2 points)</p> <ul style="list-style-type: none"> Prerequisite: <ul style="list-style-type: none"> Member of worldsteel Climate Action Programme Steelmaker holds a valid ISO 14001 <u>EMS</u> Product sustainability <ul style="list-style-type: none"> Minimum steel grade: <ul style="list-style-type: none"> ≥ 350 MPa UBs and Ucs ≥ 450 MPa RHS, SHS and CHS ≥ 400 MPa WBs Responsible industry <ul style="list-style-type: none"> Fabricator is accredited to the ASI Environmental Sustainability Charter 	<p>NZGBC 2015 (up to 3 points)</p> <ul style="list-style-type: none"> Prerequisite: <ul style="list-style-type: none"> Member of worldsteel Climate Action Programme Steelmaker holds a valid ISO 14001 <u>EMS</u> or Enviro-Mark Diamond level certification Product sustainability (up to 3 points) <ul style="list-style-type: none"> Reused product (no recycled) Eco-labels, etc. Responsible industry (up to 1 point) <ul style="list-style-type: none"> Fabricator holds a <ul style="list-style-type: none"> valid ISO 14001 EMS or Enviro-Mark NZ Diamond level certification (100% weighting) Enviro-Mark NZ Gold or Platinum (75% weighting)
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worldsteel Climate Action Programme (CAP)


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- Aim is to collect and report CO2 emissions data on a site-by-site basis to give an overall emission intensity for the production of steel at that site.
- Data collection methodology and standard is designed to ensure sites that report emissions use the same boundaries and parameters.
- Once data is reported back to the member companies by worldsteel, they can develop plan to make reductions in emissions and obtain a level closer to the best in class.
- Participation is open to all steel-producing sites or companies, worldsteel members and non-members alike
- Companies and associations that are accredited members of the CAP: <http://www.worldsteel.org/steel-by-topic/climate-change/members.html>
- Selection of CAP members for 2014-2015:


















Quality Management System (QMS)

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- ISO 3834 is for quality management in welding fabrication
- It is governed by the same quality management principles as ISO 9001 however it includes requirements specific to welding as welding is a special process because the final result and quality may not be capable of being verified by testing
- This means that welding requires continuous control over all relevant inputs listed in ISO 3834
- As the human factor has a key role in the production of welded products ISO 3834 also considers qualification/competency of people involved



Environmental Management System (EMS)

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- ISO 14001 is for environmental management. This means what the organization does to:
- minimize harmful effects on the environment caused by its activities,
- to conform to applicable regulatory requirements, and to
- achieve continual improvement of its environmental performance.




Generic standards

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ISO 14001 is a generic standards. That is to say that the same standard can be applied:

- **to any organization, large or small, whatever its product or service,**
- **in any sector of activity, and**
- **whether it is a business enterprise, a public administration, or a government department.**



Processes, not products

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- **ISO 14001 concerns itself with the way an organization goes about its work.**
- **They are not product standards.**
- **They are not service standards.**
- **They are process standards.**
- **They can be used by product manufacturers and service providers.**
- **ISO 14001 gives the requirements for what the organization must do to manage processes affecting the impact of its activities on the environment**

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ENVIRO-MARK SOLUTIONS



- Environmental certifications developed by Landcare Research, 100% government owned
- Reputation built on over a decade of experience
- Credibility backed by international accreditations

Landcare Research
Manaaki Whenua

JAS-ANZ
www.jas-anz.org/register

Environment Agency

CDP
DRIVING SUSTAINABLE ECONOMIES

A selection of certified organisations

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Orbit
Corporate Travel
part of the House of Travel group

Yealands
ESTATE WINES

Kāpiti Coast
DISTRICT COUNCIL
Māori Whakamāori, Ka Tika Whakamāori

VILLA MARIA
ESTATE

RICOH

city care

ALSTOM

combined

meridian

BMW

BRIDGESTONE
Your Journey, Our Passion

UCC
UNIVERSITY OF
CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

bam

ASP
access floors

AM
TAMAKI PAENGA HIRA
AUCKLAND WAR MEMORIAL MUSEUM

Antarctica New Zealand

EEOA
Energy Efficiency and
Conservation Authority
Te Tari Tiaki Pūngao

antipodes
WATER COMPANY LIMITED

LAING O'Rourke

EASIYO

BRANZ

OfficeMax

TOYOTA

SNOWBERRY

COUNTIES
MANUKAU
HEALTH


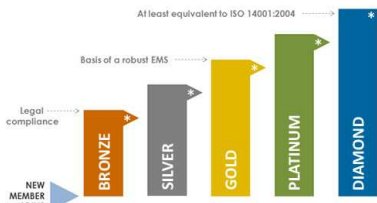
What each Enviro-Mark level covers

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- Bronze**
 - Scoping your EMS and ensuring legislative compliance.
- Silver**
 - On-going compliance, identifying and assessing environmental hazards, and setting your policy commitments.
- Gold**
 - Planning and progressing environmental improvements and emergency preparedness.
- Platinum**
 - Monitoring, measurement, control of operations and training - formalising the systems you have implemented.
- Diamond**
 - (considered equivalent to an ISO 14001 EMS)
 - Document control, internal auditing, and management review.

Note: Each higher level "nests" all those below. So at Gold you are meeting the audit criteria for Gold, Silver and Bronze. At Diamond, you are meeting all criteria.

* Independent verification and then Landcare Research certification at each step

The Enviro-Mark Process

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1. Uses audit checklists as a GAP analysis tool to identify your obligations,
2. Check you are meeting those obligations,
3. Fix anything that is missing or wrong,
4. Auditor confirms your systems are meeting the obligations,
5. Organisation is certified (may make claims and use logos).

To assist with this, Enviro-Mark offers one-on-one help, detailed guidance materials, and worked examples.

Experience shows it's a mistake to bite off too much in one go!

Enviro-Mark BRONZE




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Covers legislation we are all supposed to be complying with, but often don't know what that entails. Main Acts include:

- Health and Safety in Employment Act 1992
- Resource Management Act 1991
- Hazardous Substances and New Organisms Act 1996
- Building Act 2004
- Fire Service Act 1975
- Local Government Act 2002
- Land Transport Act 1998
- Ozone Layer Protection Act 1996
- Radiation Protection Act 1965
- Waste Minimisation Act 2008
- Biosecurity Act 1993


Enviro-Mark SILVER



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Building on Bronze: Ongoing compliance and understanding risks/opportunities:

Ongoing compliance	Understanding your risks/opportunities
<ul style="list-style-type: none"> • Keeping up to date • Monitoring your performance 	<ul style="list-style-type: none"> • Understanding how what you do causes environmental change • Identifying significant areas to work on



Enviro-Mark GOLD

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Making sensible changes

- Building on Silver
- Each significant area is looked at
- Not all significant opportunities will be practicable
- Identify Targets and take action
- Measure and monitor progress
- Ensure proactive emergency preparedness has been considered



NZGBC Innovation challenge credit

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- Opportunity for an additional 2-points in greenstar through Environmental Product Declarations (EPDs)
- EPDs (also sometimes known as Type III labels) provide an internationally recognised format for declaring environmental performance of a product in a comparable way.
- Third-party verification ensures all information is credible and consistent.
- Unlike many self-declared 'green' labels, an EPD does not claim whether a product is more sustainable or greener than another.
- Similar to nutrition information panels on food packaging found at the local supermarket.
- 3 BlueScope (Australia) steel EPDs published through the Australasian EPD Programme
 - Welded beams and columns
 - Hot rolled coil
 - XLERPLATE®



Conclusions

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- The sustainability triple-bottom line directly achieves the government's procurement principle of 'get the best deal for everyone' in the context of achieving making balanced decisions by considering the social, environmental and economic effects
- Enviro-Mark is a recognized third-party EMS in New Zealand which, is demonstrated by the 2015 NZGBC greenstar steel credit.
- Together with the SFC, Enviro-Mark EMS provides a point of difference between local and imported fabricated steelwork.

WELCOME TO



STEEL
AGENDA
2015



**STEEL
AGENDA
2015** | Aotea Centre, Auckland
Thursday, 3 September



2.00pm SCNZ AGM

2.30pm New Green Star Credits
Dr Stephen Hicks, Structural Systems General Manager, HERA

3.00pm Afternoon Tea

3.30pm Understanding the Chinese Structural Steel Sector
Daniel Pillai, Director, AWI Group

4.00pm Case Study: Christchurch Bus Interchange
Dave Anderson, General Manager, John Jones Steel

4.40pm Steel Fabricator Certification Presentation
Upper NZI, Aotea Centre

6.30pm Networking Drinks
Ballroom Foyer, Rendezvous Hotel

7.30pm Industry Awards Gala Dinner
Grand Ballroom, Rendezvous Hotel