



EPDs: Do your products need them?

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Agenda

1. What is an EPD?
2. Why develop EPDs? The value proposition.
3. How to develop EPDs
4. Case studies

What is an EPD?

An Environmental Product Declaration, EPD®, is a registered document that provides relevant, verified and comparable information about the environmental impact of goods and services.



EPDs a Definition

- **Objective** - internationally accepted and valid LCA methods
- **Neutral & Credible** – Critical review
- **Coverage** - a range of relevant environmental issues
- **Comparable** - PCRs
- **Content** - EPDs contain information, not only figures.
- **Life time** - Typical validity is 3-5yrs with annual review

EPD: An environmental nutrition label



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adle to grave Life Cycle Assessment



s Bengtsson, Director

Product Environmental Claims

- **Type I:**
Certified eco-labels
 - Overall environmental preference



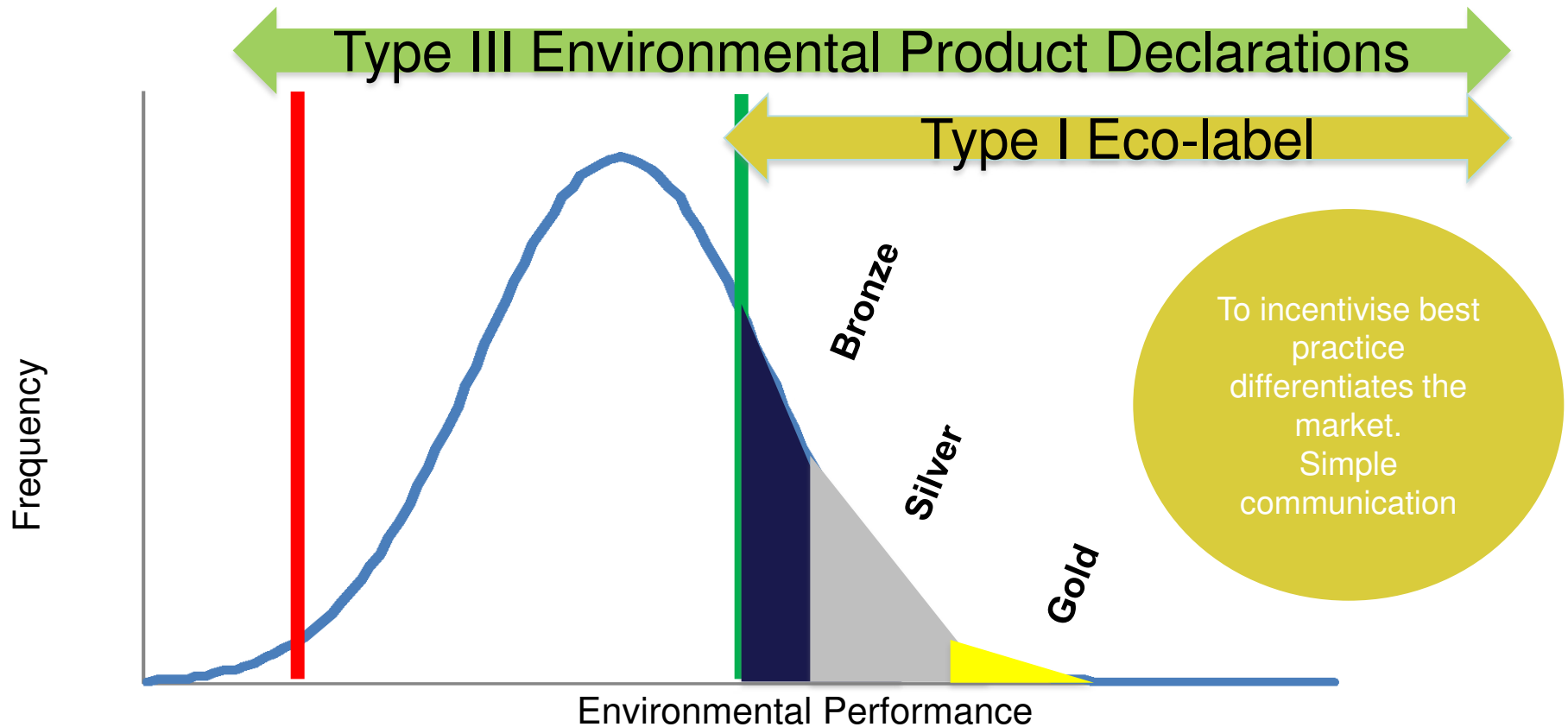
- **Type II:**
Self-declared environmental claims
 - Not 3rd party verified



- **Type III:**
Environmental Product
Declarations
 - 3rd party verified but no preference



Type I vs. Type III



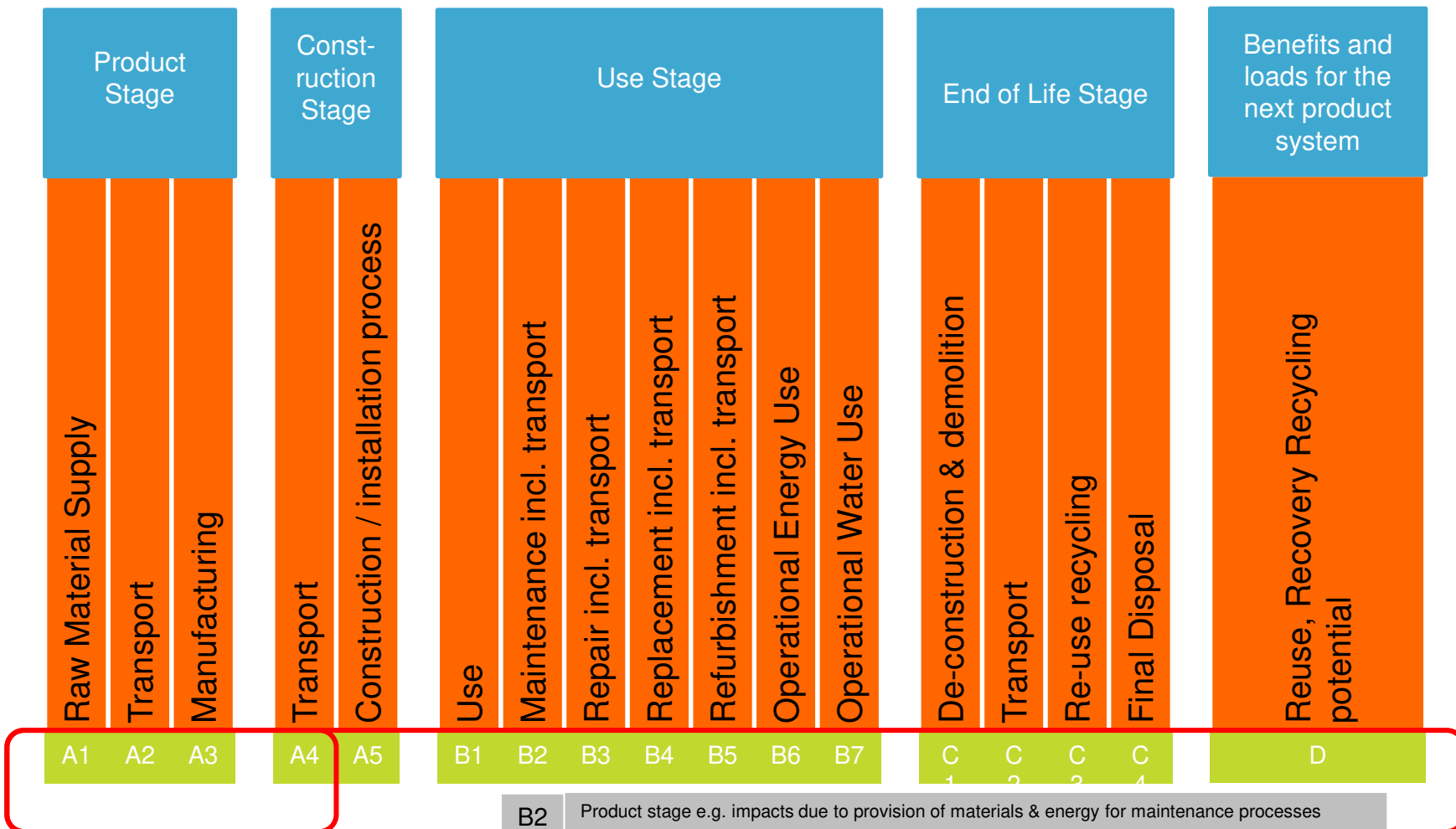
Australian & International EPD Programs for Timber

- Australasian EPD Program (Australia/NZ)
- Global GreenTag (Australia)
- International EPD System (Sweden)
- Institute Construction and Environment (IBU) (German/Austrian)
- Norwegian EPD Foundation
- BRE Global (UK)
- Japan Ecoleaf program
- UL Environment (Canada/USA)
- FP Innovations (Canada/USA)
- American and Canadian Wood Council EPD Program.
- American Hardwood Export Council

Standards – EN15804



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B2	Product stage e.g. impacts due to provision of materials & energy for maintenance processes
B2	Use stage, e.g. impacts due to the maintenance processes
B2	End of life stage e.g. end of life management for materials applied during maintenance

Why develop EPDs. The value proposition

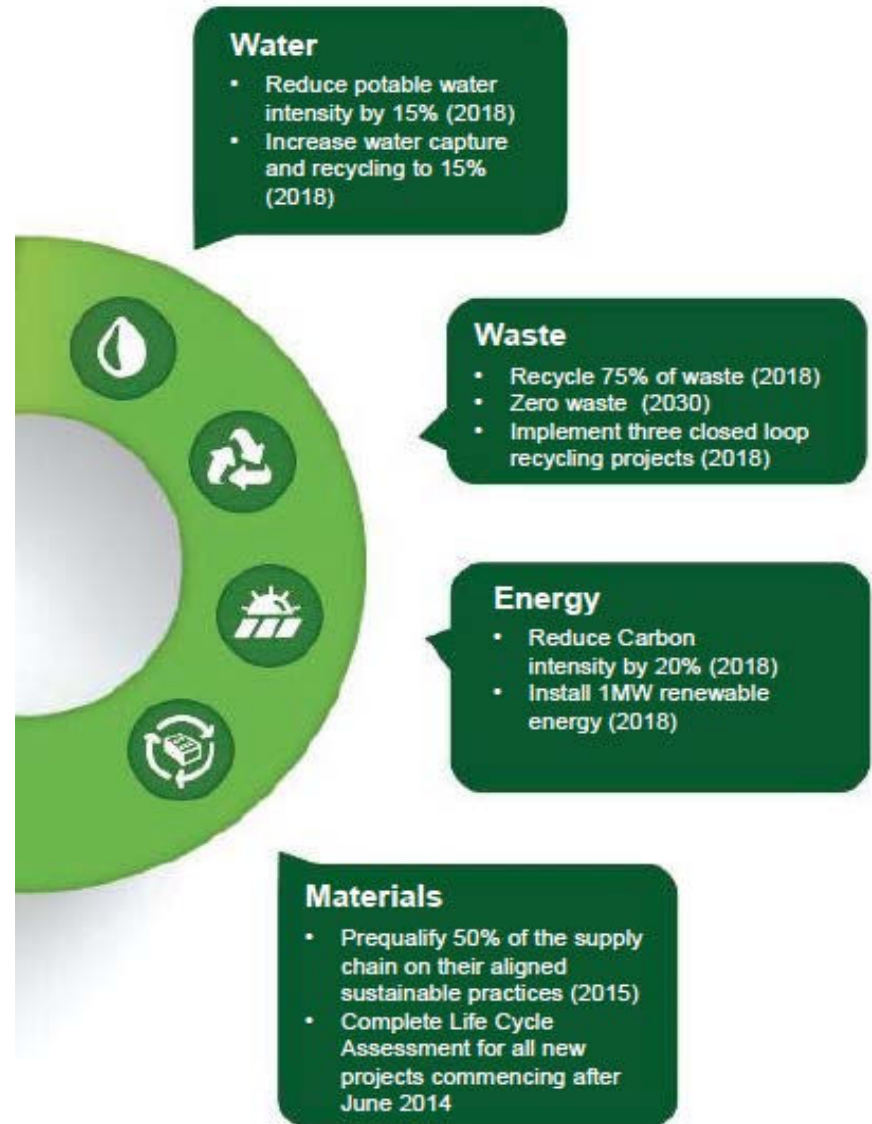
Today, the global market has an increased demand for science-based, verified and comparable information about environmental performance of goods and services.



Government, producers, manufacturers, companies – need to understand, measure and take responsibility for their environmental and social impacts.

The Value Proposition

- Available to all
- Procurement/market share gains
- Risk management/cost of failure avoidance
- B2B and Supply chain engagement



The Value Proposition: Recognition



Credits for undertaking lifecycle analysis and EPDs are included in Green Star 2014.



Credits available for undertaking a lifecycle approach and implementing EPDs.



LEED v4 awards credits for Building Product Disclosure & Optimization



Green Star Detail

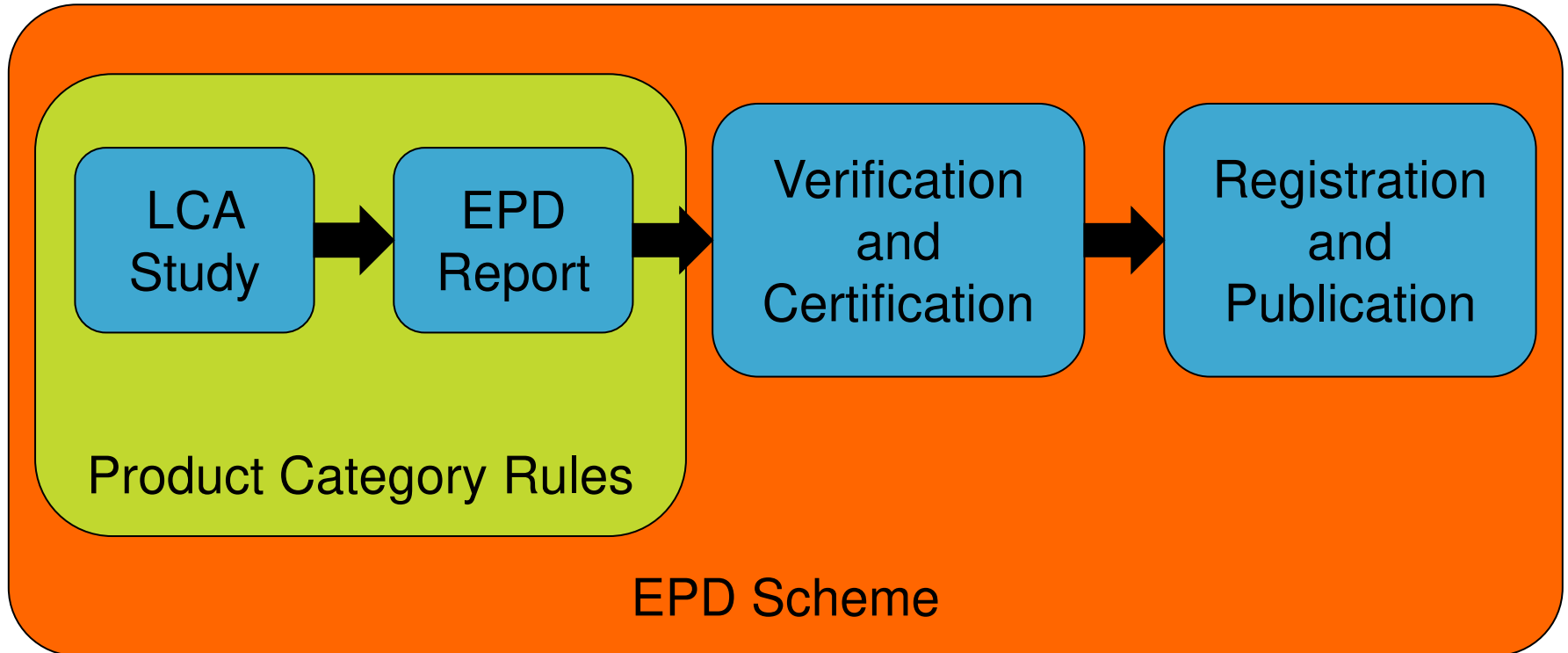
Up to 3 points are awarded when products meet transparency and sustainability requirements under one of the following initiatives:

Product Transparency and Sustainability	Product Characteristic	Credit Factor
Transparency and Sustainability Initiative: Product Sustainability Factor	<ul style="list-style-type: none"> • Reused Product 1 • Recycled Product Fraction of product that is recycled material • Product has Type A Third Party Certification • Product has Type B Third Party Certification • Product has Type C Third Party Certification • Environmental Product Declarations - product-specific • Environmental Product Declarations – industry-wide • Stewardship Program • Manufacturer ISO 14001 Certification 	<p style="text-align: center;">1</p> <p style="text-align: center;">%</p> <p style="text-align: center;">1</p> <p style="text-align: center;">0.75</p> <p style="text-align: center;">0.5</p> <p style="text-align: center;">0.5</p> <p style="text-align: center;">0.25</p> <p style="text-align: center;">0.5</p> <p style="text-align: center;">0.25</p>

How to Develop EPDs



How to develop EPDs



How to develop EPDs



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Identify Appropriate PCR

Life Cycle Assessment

1-4 months

Define Goal and Scope

- Intended audience
- Functional unit (e.g. m²)
- System diagram and scope
- Data sources
- Benchmarking

Build Life Cycle Inventory

- Production data, waste data
- Expected lifespan of product and maintenance intervals
- End of life fate, e.g. disposal, recycling, reuse.

Impact Assessment

- Global warming
- Air quality
- Water usage and quality
- Toxicity to human life and ecosystem functioning
- Resource use

Draft EPD Report

1-2 Weeks

3rd Party Verification

4-6 Weeks

Summary Report & Presentation

1-2 Weeks

ISO 14025 compliance

Case Studies

How is LCA being used in the market?



Case studies: EPDs connecting strategy, assets and products

STRATEGIC PROJECT LEVEL

T for NSW
NWRL
SLR
WestConnex
Precincts



ASSET COMPONENT LEVEL

Buildings
Stations
Car Parks
Depots
Warehouses



PRODUCT AND SUPPLY CHAIN LEVEL

Trains
Lighting
Concrete
Steel
Glass



Case studies: Whole of Building LCA

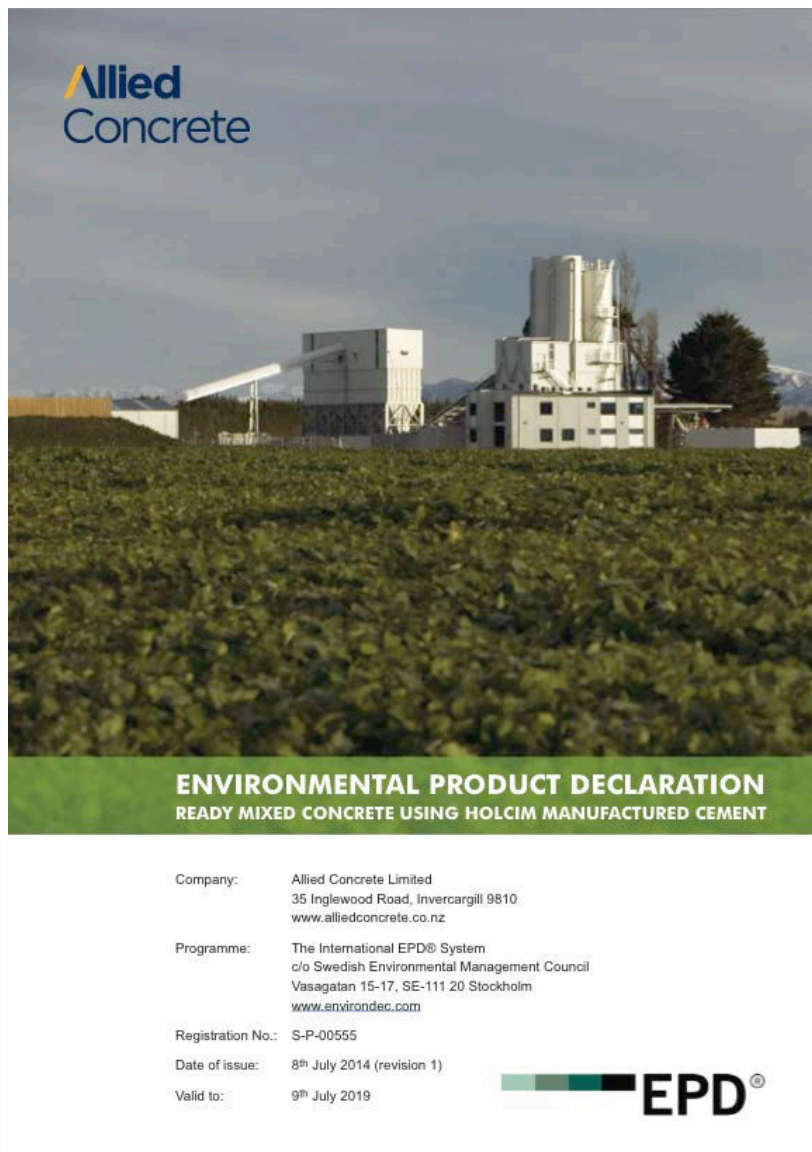
- Mirvac
- Watpac
- Probuild



Product Level EPDs: Allied Concrete



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Ready Mixed Concrete Using Holcim Cement

- Published July 2014 by the International EPD® System
- EPD Freely downloadable www.environdec.com

Company: Allied Concrete Limited
35 Inglewood Road, Invercargill 9810
www.alliedconcrete.co.nz

Programme: The International EPD® System
c/o Swedish Environmental Management Council
Vasagatan 15-17, SE-111 20 Stockholm
www.environdec.com

Registration No.: S-P-00555

Date of issue: 8th July 2014 (revision 1)

Valid to: 9th July 2019



Cross Laminated Timber



PARAMETER / UNIT	Quantity
CML2001 - Global warming (kg CO2 equivalents (GWP100))	1,81E+02
CML2001 - Acidification of land and water (kg SO2 equivalents)	1,14E+00
CML2001 – Eutrophication (kg PO4 equivalents)	3,84E-01
CML2001 - Photochemical ozone creation (kg C2H2 equivalents)	9,14E-01
CML2001 - Ozone depletion (kg CFC 11 equivalents)	1,47E-05
CML2001 - Depletion of abiotic resources (elements)(kg Sb equivalents)	1,29E+00
CML2001 - Depletion of abiotic resources (fossil) (MJ net calorific value)	2,67E+03



Why Edge Environment?



- In depth knowledge of Australian context
- Forefront of LCA agenda
- Cost efficient
- Partners, not consultants



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