



Emissions Declaration for Steel Reinforcement Bar (Rebar)

The Collie Steel Mill

April 2025



Creating A Greener Future For Australian Steel

At Green Steel of WA, we are focused on delivering the future of Australian infrastructure through innovation, local supply, and responsible manufacturing. Our mission is to support the construction of tomorrow's Australia by producing high-quality steel products with a commitment to sustainability, circularity, and low-emissions operations.

We are committed to operating to the highest environmental, social, and commercial standards. As part of our long-term sustainability goals, we aim to further minimise the carbon footprint of our operations — from sourcing and production, right through to distribution and product use.

Starting with using 100% Australian recycled steel, our approach includes maximising energy and resource efficiency across the full life cycle of our products. This means reducing emissions and waste in production, promoting the reuse and recycling of steel, and supporting the responsible application of materials in the built environment.

Our Emissions Declaration has been prepared in accordance with internationally recognised guidelines and reflects our commitment to transparency and continuous improvement. These declarations help our customers understand how our products may contribute to meeting their sustainability requirements, evaluating embodied carbon, and selecting materials aligned with their environmental objectives.

By combining responsible manufacturing, technical expertise, and data-backed transparency, Green Steel of WA is proud to support a more sustainable future for the construction and infrastructure sectors across Australia.





1 GENERAL INFORMATION

This declaration provides stakeholders with clarity on the expected environmental performance of our products, based on expected plant performance and known product parameters. It outlines the expected outcomes based on our philosophy of prioritising low-carbon and recycled materials, energy and water efficiency, and end-of-life recyclability.

The Life Cycle Assessment that supports it has been prepared in collaboration with the Curtin University Sustainable Engineering Group in alignment with the international standards and methodologies used in Environmental Product Declarations (EPDs), including ISO 14025 and EN 15804. The input information was derived from first principles calculations, cross-verified with performance figures from near identical Danieli plants operating overseas. This Environmental Declaration reflects Green Steel of WA's commitment to sustainability and environmental transparency from the earliest stages of project development.

As we progress toward operational readiness, we will undertake formal Life Cycle Assessments (LCAs) and pursue third-party certification through recognised programs such as the Australasian EPD Programme, Global GreenTag, or the CARES EPD Programme. This proactive approach supports future compliance with sustainability frameworks like Green Star and NABERS, and sets a clear foundation for credible, measurable environmental impact reduction.

2 PRODUCT DESCRIPTION

- Product Name: Steel Reinforcement Bar (Rebar) in length and coil
- Steel Grade: 500N made from 100% Australian recycled steel
- Production Process: Electric Arc Furnace (EAF) with continuous casting and rolling
- Intended Use: Structural reinforcement for concrete in a wide range of applications across the built environment
- Product Standard: AS 4671 (to be ACRS Certified)



3 EMISSIONS INTENSITY

Declared Unit: 1 tonne (1,000 kg) of finished rebar.

Category	Emission	Unit	Impact Category
Emissions from steelmaking (Cradle to Gate Global Warming Potential)	356	kg CO ² -equivalent per tonne of rebar	A1 - Raw material supply A2 – Transport to the Manufacturer A3 - Manufacturing

Notes on Impact Categories

These impact categories (A1–A3) reflect the cradle-to-gate embodied emissions of our recycled steel rebar which are significantly lower than those of blast furnace steel, especially when powered by renewable electricity.

- A1 Raw Material Supply** – Emissions from collecting, sorting, and processing of scrap steel (typically at scrap recycling yards) before it is sent to the mill for recycling as well as those from manufacturing minor inputs such as alloys, lime and other additives.
- A2 Transport to the Manufacturer** – Emissions from the transport of scrap and other raw materials to the site. This is expected to reduce over time with electrification of transport methods (trains and trucks).
- A3 Manufacturing** – The actual emissions from the mill to produce steel which mostly comes from emissions from the generation of electricity which powers the mill and direct process emissions from the steelmaking process.

4 METHODOLOGY

The following methodology was followed by our research partner Curtin University:

- Life Cycle Assessment (LCA) Standard: Conducted following ISO 14025, ISO 14040, ISO 14044 and EN 15804+A2.
- Global Warming Potential (GWP) Calculation: Following the product category rules for Construction Products and EN 15804+A2.
- Data Sources: Primary and secondary data (primary data for EAF process from steel plant vendor design).
- Third-Party Verification: Third-party verification and full EPD will be completed once plant operational data is available.



For further information

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