Assured Steel Certification

ESTEP
Green Steel Dialogue/Workshop

27th Jan 2026

Sustainable Constructional Steels (SCS) Scheme

Version 9 and Version 10

Introduction

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Agenda

- Assured steel certification
- Green Steel – Definition
- 2050 Decarbonisation roadmap
- Sustainable Constructional Steels (SCS) Scheme v9
- Sustainable Constructional Steels (SCS) Scheme v10
- Integration of GWP Digital Data and Physical Materials
- Conclusions
- Q&A

CARES - Assured steel certification

- Independent, profit for purpose, product certification body, established in 1983.
- CARES certification provides confidence to the users, purchasers and specifiers of steels through a regime of third-party regulation, testing and inspection.
- Mission to make the CARES assured reinforcing steel supply chain the safest, most effective, efficient, digital and sustainable in the World.
- By ensuring all reinforcing steel products are quality assured, responsibly sourced and evidenced by CARES Digital Assurance Records.
- Offices in UK, Hong Kong, Singapore, Australia and UAE.

Conformity Assessment Services

- Product Certification
- Management System Certification
- Technical Approvals
- Post Tensioning
- UKCA mark
- CARES Sustainable Constructional Steels (SCS) Scheme
- BES 6001 Responsible Sourcing Certification
- ResponsibleSteel™ Standard Certification
- GSCC® Steel Climate Standard Certification

CARES - Global coverage

- More than 43 Countries
- More than 190 Steel Producers
- More than 410 Sites
- More than 1360 certificates

Green Steel - Definition

EU : No legally binding definition.

UK Gov (The steel strategy: the plan for steel) : Steel produced with significantly reduced or near-zero carbon emissions, making it a more environmentally sustainable option.

China (CISA) : No legally binding definition.

India (Ministry of Steel): Steel with CO_2 emissions less than 2.2 tonnes with CO_{2e} per tonne of finished product.

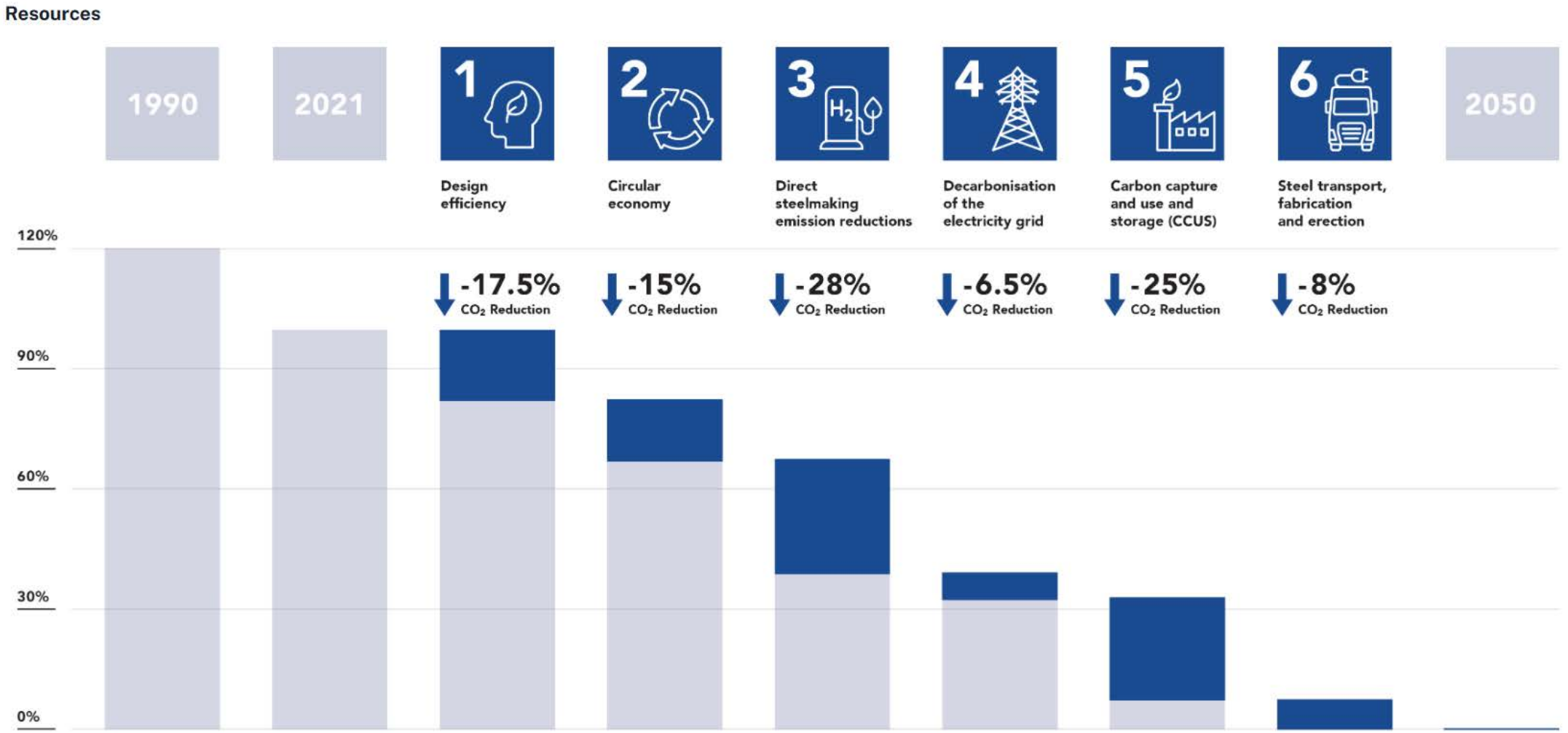
Singapore (GreenGov): Reinforcement steel produced in EAF, using 90% recycled steel content.

Artificial Intelligence (AI) : Steel produced with significant lower carbon footprint emissions compared to traditional methods.

Product	Since	Description	Emissions Intensity	Other Info
'Fossil-free steel', by SSAB/Hybrit (Sweden)	2021	steel produced via the **DRI-EAF** route using iron ore and **hydrogen**.	**less than 0.05** tCO_2eq / t of steel at scopes 1 and 2	Pilot production, used in prototypes in customers such as Volvo Group and watch maker TRIWA.
'Carbon neutral steel', by AVB (Brazil)	2021	steel produced in a **small-scale blast furnace**, using iron ore and eucalyptus **charcoal** (instead of metallurgical coal).	**0.06** tCO_2eq / t of crude steel in 2019; and **negative 0.40** tCO_2eq / t of crude steel in 2020.	AVB claimed to have become the first carbon neutral steel producer globally.
"Recycled and renewably produced steel", by ArcelorMittal (Europe)	2022	steel produced via the **EAF** route using 100% renewable electricity and a minimum of 75% recycled steel scrap.	**0.30** tCO_2eq / t of rolled steel (rebar), **0.33** (sections), **0.60** (hot-rolled coils), to **1.03** (organic coated steel), as per EPD.	72% reduction in CO_2eq emissions compared to conventional steel (calculated for steel pipes).
'Zero steel', by SSAB (Sweden)	2023	steel produced via the **EAF** route with a high proportion of recycled steel scrap and fossil-free energy.	**0.470** tCO_2eq / t of rolled steel (hot-rolled coils), to **1.030** (organic coated steel), on cradle-to-gate basis (covering upstream raw materials), as per EPD.	Used by customers including Volvo Group. SSAB also states that, in its own operations (incl. transportation), its 'Zero Steel' has **less than 0.05** tCO_2eq / t of steel at scopes 1 and 2.
"Certified carbon neutral steel", by Acciaieria Arvedi (Italy)	2023	steel produced via the **EAF** route using 100% renewable electricity and a high proportion of recycled steel scrap.	**0.924** tCO_2eq / t of rolled steel (hot-rolled coils), to **1.290** (organic coated steel), as per EPD.	Arvedi also states that, at site level, it achieves **0.133** tCO_2eq/t of steel at scopes 1 and 2, offset to zero via the purchase of voluntary carbon credits (VCUs).
"Green Steel" sections, by SWT (Germany)	2023	steel produced via the **EAF** route using 100% renewable electricity and a high proportion of recycled steel scrap.	**0.335** tCO_2eq / t of rolled steel (sections), at scopes 1 and 2.	Green steel products marketed in contrast with conventional "SWT steels" for all purposes.
"Green Steel sheet piles", or "Sustainable Sheet Piles", by Emsteel (UAE)	2023	steel produced via the **DRI-EAF** route using iron ore and **natural gas**.	**0.350** tCO_2eq / t of steel produced, "40% less carbon than that generated by the processes of other manufacturers".	A 'Green Steel Certificate' is provided, confirming the GHG emissions associated with the mass of products sold.
'Net zero steel' billets, by Arabian Gulf Steel Industries (UAE)	2024	steel produced in an **induction furnace** using 100% recycled steel scrap.	**0.007** tCO_2eq / t of crude steel at scope 1, offset to net zero via the use of carbon credits (VCUs).	AGSI also claims to have become the first steel plant in the world to achieve Carbon Neutrality.

Source: Source: 50 Shades of Green: Unpacking What Green Means for Steel, Oxford Institute for Energy Studies (June 2025)

2050 Decarbonisation roadmap



Source: BCSA 2050 decarbonisation roadmap (formally launched by Lee Rowley MP and Minister for Industry including steel on 22nd Nov 2021)

Sustainable Constructional Steels (SCS) Scheme v9

CERTIFICATE OF APPROVAL

Sustainable Constructional Steel (SCS) scheme v09 — Rating — Page 1 of 3

This is to certify that

ArcelorMittal Hamburg GmbH

at its establishment at

Dradenaustrasse 33, Hamburg, D-21129, Germany

has been approved by the Authority to the CARES sustainable constructional steel scheme for the following operational assessment schedule using the processes and procedures registered with the Authority. The scheme complies with BS 8902:2009.

CARES SCS Operational Assessment Schedule (v09) April 2020

Scope of certification:

Sustainable Constructional Steel Certification v09 as stated on the attached appendix

This certificate remains the property of the Authority and is issued subject to the Regulations of the Authority. This certificate is uncontrolled when printed. To check the validity of this certificate please scan the above Static QR Code with the CARES Cloud App or contact us on +44 1732 450000.

CERTIFICATE NUMBER	FIRST APPROVAL	ISSUE DATE	EXPIRY DATE
1319	27 January 2012	01 December 2023	01 December 2026

SIGNED FOR UK CERTIFICATION AUTHORITY FOR REINFORCING STEELS

Lee Brankley, Chief Executive Officer

The use of the Accreditation Mark indicates accreditation in respect of those activities covered by the accreditation certificate number 0002.

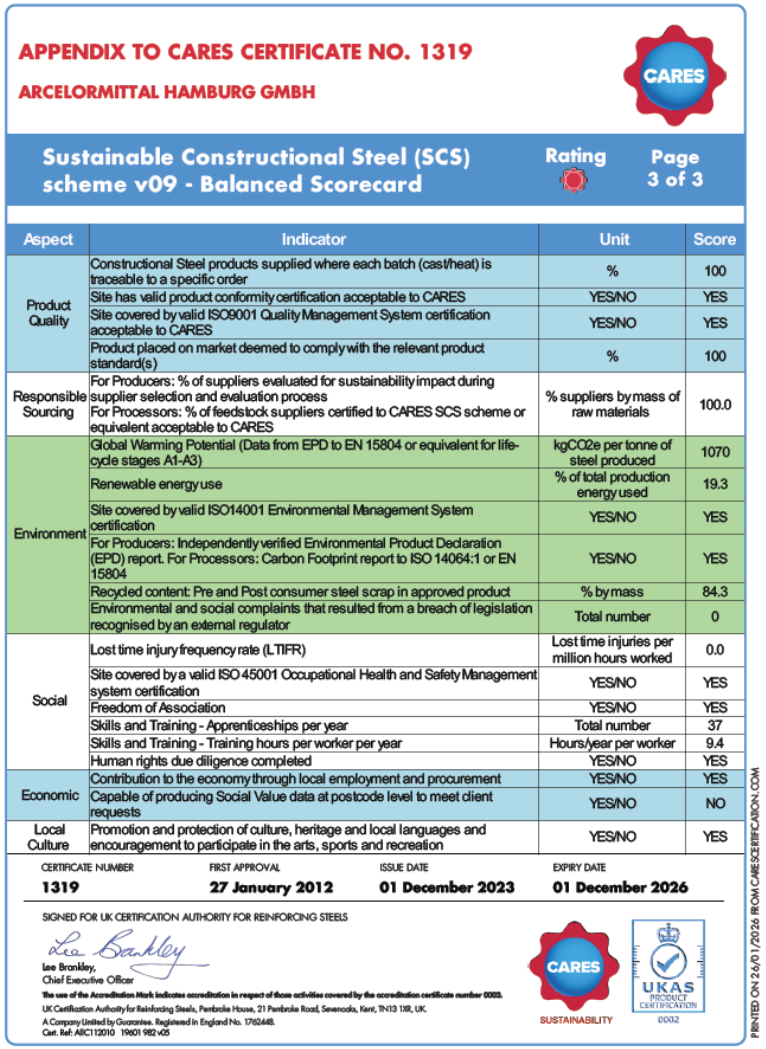
UK Certification Authority for Reinforcing Steels, Pembroke House, 21 Pembroke Road, Sevenoaks, Kent, TN13 1XR, UK.

A Company Limited by Guarantee. Registered in England No. 1762448.

Cert. Ref: AllC112010 19601 982-v05

SUSTAINABILITY

UKAS PRODUCT CERTIFICATION 0002



APPENDIX TO CARES CERTIFICATE NO. 1319

ARCELORMITTAL HAMBURG GMBH

Sustainable Constructional Steel (SCS) scheme v09 - Balanced Scorecard — Rating — Page 3 of 3

Aspect	Indicator	Unit	Score
Product Quality	Constructional Steel products supplied where each batch (cast/heat) is traceable to a specific order	%	100
	Site has valid product conformity certification acceptable to CARES	YES/NO	YES
	Site covered by valid ISO9001 Quality Management System certification acceptable to CARES	YES/NO	YES
	Product placed on market deemed to comply with the relevant product standard(s)	%	100
Responsible Sourcing	For Producers: % of suppliers evaluated for sustainability impact during supplier selection and evaluation process For Processors: % of feedstock suppliers certified to CARES SCS scheme or equivalent acceptable to CARES	% suppliers by mass of raw materials	100.0
Environment	Global Warming Potential (Data from EPD to EN 15804 or equivalent for life-cycle stages A1-A3)	kgCO2e per tonne of steel produced	1070
	Renewable energy use	% of total production energy used	19.3
	Site covered by valid ISO14001 Environmental Management System certification	YES/NO	YES
	For Producers: Independently verified Environmental Product Declaration (EPD) report. For Processors: Carbon Footprint report to ISO 14064:1 or EN 15804	YES/NO	YES
	Recycled content: Pre and Post consumer steel scrap in approved product	% by mass	84.3
	Environmental and social complaints that resulted from a breach of legislation recognised by an external regulator	Total number	0
Social	Lost time injury frequency rate (LTIFR)	Lost time injuries per million hours worked	0.0
	Site covered by a valid ISO 45001 Occupational Health and Safety Management system certification	YES/NO	YES
	Freedom of Association	YES/NO	YES
	Skills and Training - Apprenticeships per year	Total number	37
	Skills and Training - Training hours per worker per year	Hours/year per worker	9.4
	Human rights due diligence completed	YES/NO	YES
Economic	Contribution to the economy through local employment and procurement	YES/NO	YES
	Capable of producing Social Value data at postcode level to meet client requests	YES/NO	NO
Local Culture	Promotion and protection of culture, heritage and local languages and encouragement to participate in the arts, sports and recreation	YES/NO	YES

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SUSTAINABILITY

UKAS PRODUCT CERTIFICATION 0002

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- **Sustainability standard** including GHG emissions measuring, monitoring, reporting and target setting
- Specifically developed for the constructional steel supply chain and now in its **16th year**
- **Steel producers and fabricators** gain certification to provide confidence to construction clients
- Operates in compliance with **BS 8902** and accredited by UKAS to BS EN ISO/IEC 17065
- Prerequisites: Product conformity or Factory Production Control + ISO 9001 QMS + ISO 14001 EMS + ISO 45001 OHSMS
- **72 mandatory** criteria and **48 voluntary** criteria (120 in total) and 34 KPIs
- **Rosette Rating System** applied to measure the sustainability performance

Sustainable Constructional Steels (SCS) Scheme v9

Energy monitoring, % renewable energy usage and publication of the Global Warming Potential of the products are all scheme requirements

Extended Product Concept
Sustainable Constructional Steels (SCS) scheme requirements and alignment to the SDG's

The scheme requires continual improvement during production and processing and the development of performance linked to transition pathways informed by science. It's EPD's and other reporting requirements enhance transparency and support responsible production and consumption

Monitoring water use, raw materials inputs, emissions, ecotoxicity and biodiversity are scheme requirements

Policies, management processes and due diligence for human and labour rights, including non-discrimination are prerequisites of the scheme

The scheme is designed to reduce the negative impacts of buildings and infrastructure and to encourage and track innovation

Effective engagement is required and tracked by the scheme with collaborative solutions encouraged, with suppliers, customers and others

The scheme requires competence in sustainability and credits training of suppliers

Sustainable Constructional Steels (SCS) Scheme v9

GHG mandatory and voluntary credit criteria

SCS v9 - Site and product certification

2.7.1 Transparency and Accountability
The organisation shall determine methods to increase transparency, accountability and integrity of its operations, supply and distribution chains and shall publicly report strategies, management practices and performance of its material sustainability impacts. **[Mandatory]**

2.8.1Product Stewardship and Traceability
For steel producers only: Life Cycle Analysis (LCA) shall be carried out on the product(s) that results in an Environmental Product Declaration (EPD) to a defined standard that is made available on request. [Mandatory]
For processors only: A carbon footprint of its operations shall be carried out and made available on request. **[Mandatory]**

3.5.1 Climate Change Measurement and Monitoring
The organisation shall have a system for measuring and monitoring its Global Warming Potential (GWP) and reducing its Greenhouse Gas Emissions (GHG) and its emissions shall be under the defined performance thresholds. **[Mandatory]**

3.5.2 Climate Change - Global Warming Potential (GWP) performance
The organisation should assess performance against scoring thresholds. **[Credit / Voluntary]**

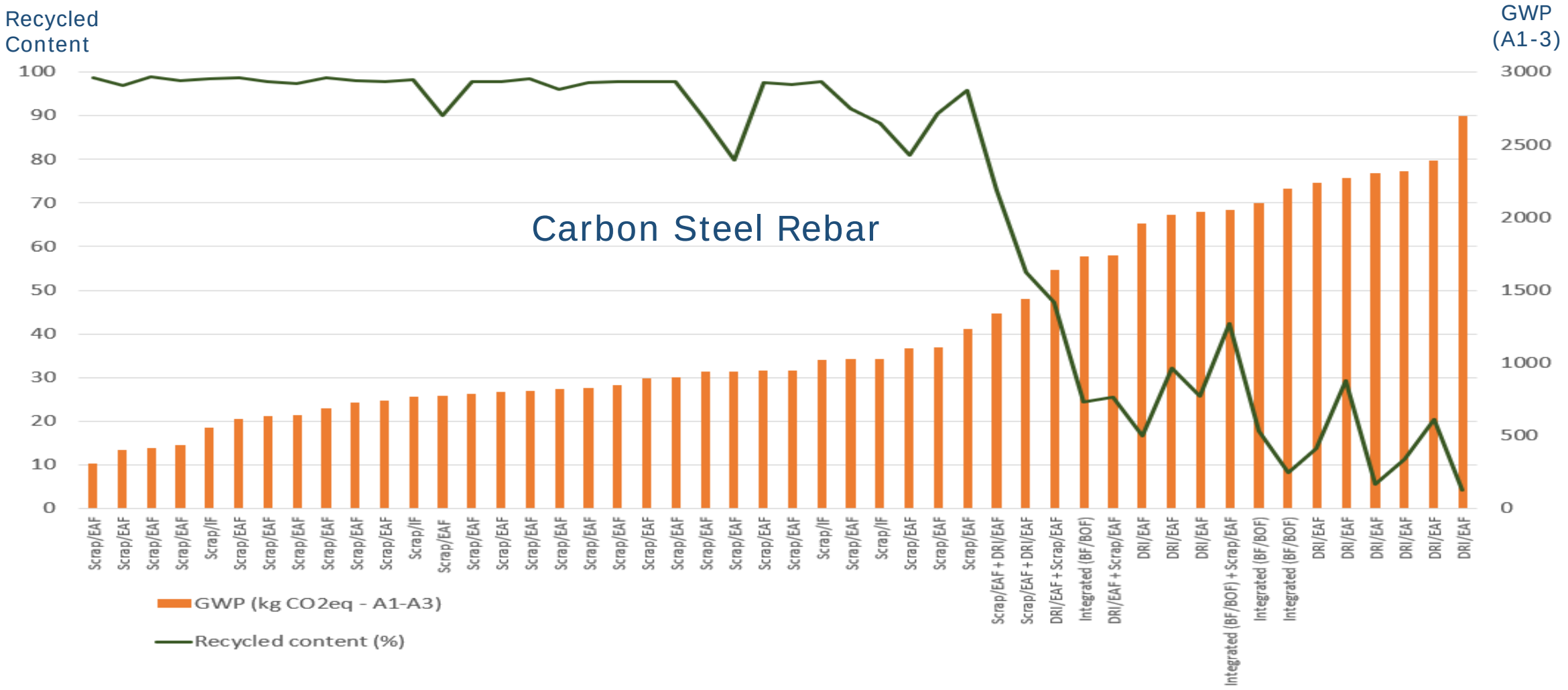
3.5.3 Climate Change Strategy
The organisation's corporate owner should define, make publicly available and implement a long- and medium-term strategy to reduce its greenhouse gas (GHG) emissions to levels that are compatible with the achievement of the goals of the Paris Agreement, with an aspiration to achieve net-zero GHG emissions through work with policy makers and others. **[Credit / Voluntary]**

3.5.4 Climate Related Financial Disclosures
The organisations corporate owner should implement the recommendations of the Task Force on Climate Related Financial Disclosures (TCFD) **[Credit / Voluntary]**

3.5.5 GHG emissions reduction targets and plan
The organisation should have a medium term (5-15 years) GHG target for the site that is aligned with the organisation's corporate owner's strategy and GHG emissions reduction targets and that is publicly reported. **[Credit / Voluntary]**

SCS scheme v9 and EPDs

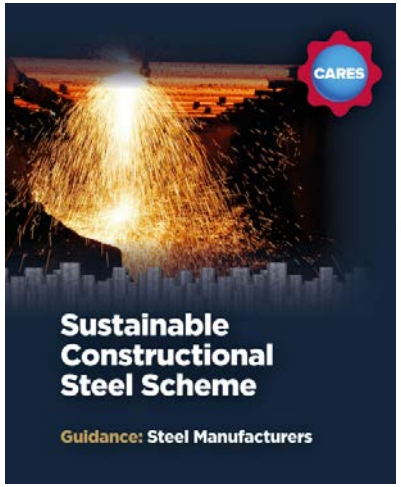
GWP and Recycled Content by Process Route per tonne product

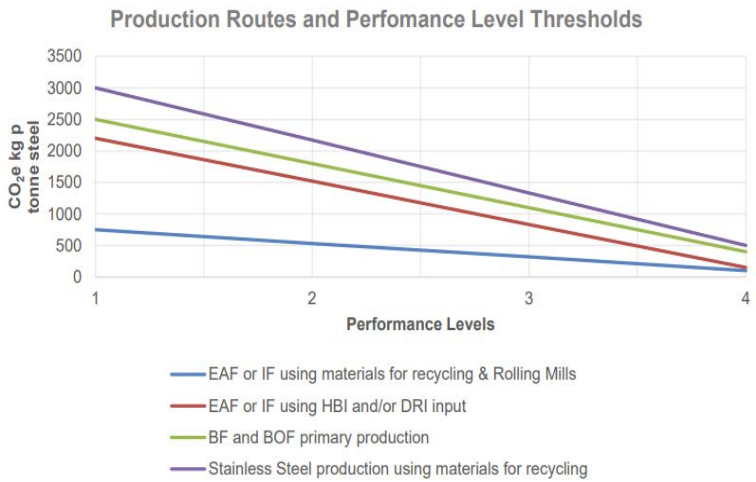


Source: CARES EPDs (https://www.carescertification.com/certification-schemes/environmental-product-declarations)

Sustainable Constructional Steels (SCS) Scheme v10

GHG criteria - Steel Manufacturers





Performance Level Thresholds				
Production Route	1	2	3	4
EAF or IF using materials for recycling and Rolling Mills using feedstock as input*	750	530	320	100
EAF or IF using HBI and/or DRI input	2200	1520	830	150
BF and BOF primary production	2500	1800	1100	400
Stainless Steel production using materials for recycling	3000	2170	1330	500

*: Feedstock billet GWP to be used

3.5.1 GHG Emissions Measurement, Monitoring and Reporting
The organisation shall have a system for measuring and monitoring its GWP and reducing its GHG Emissions. It shall report its GWP emissions in the defined format.

3.5.2 Climate Change – GWP performance
The organisation should assess GWP performance against scoring thresholds.

3.5.3 Semi-level GWP reporting
The organisation shall publish GWP at the first point of the casting of crude steel into semi-products.

3.5.4 Decarbonisation Strategy
The organisation's corporate owner shall define, make publicly available and implement a long- and medium-term strategy to reduce its GHG emissions to levels that are compatible with the achievement of the goals of the Paris Agreement, with an aspiration to achieve near-zero GHG emissions through work with policy makers and others.

3.5.5. GHG emissions reduction targets and plan
The organisation shall have a medium term (5-15 years) GHG emission target for the site that is aligned with the organisation's corporate owner's strategy and GHG emissions reduction targets and a plan on how the organisation will meet them. The targets and plan shall be publicly reported.

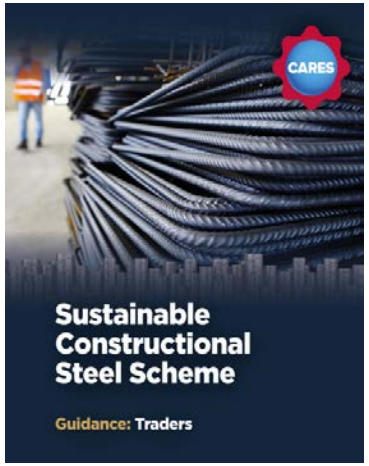
3.5.6 GHG emissions reduction innovations
The organisation should be credited for investment in solutions that can demonstrably reduce GHG emissions at a system level.

3.5.7 Climate Related Financial Disclosures
The organisation's corporate owner should implement the recommendations of the Task Force on Climate Related Financial Disclosures (TCFD) as incorporated into the IFRS S2 standard.

Sustainable Constructional Steels (SCS) Scheme v10

GHG criteria - Traders

SCS v10 - Site and product certification
Traders



3.3.1 GHG Emissions Measurement and Monitoring
The organisation shall have a system for measuring, monitoring and reducing its GHG Emissions.

3.3.2 GHG Emissions verification
The organisation should obtain third-party verification for its GHG emissions.

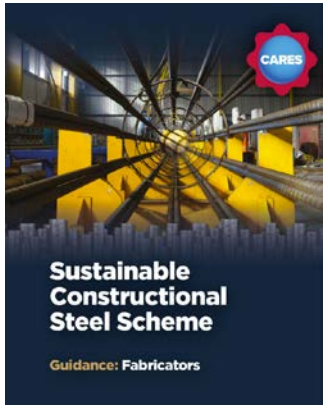
3.3.3 Product GHG Emissions Measurement and Monitoring
The organisation shall have a system for measuring and monitoring the GHG Emissions associated with trade in products.

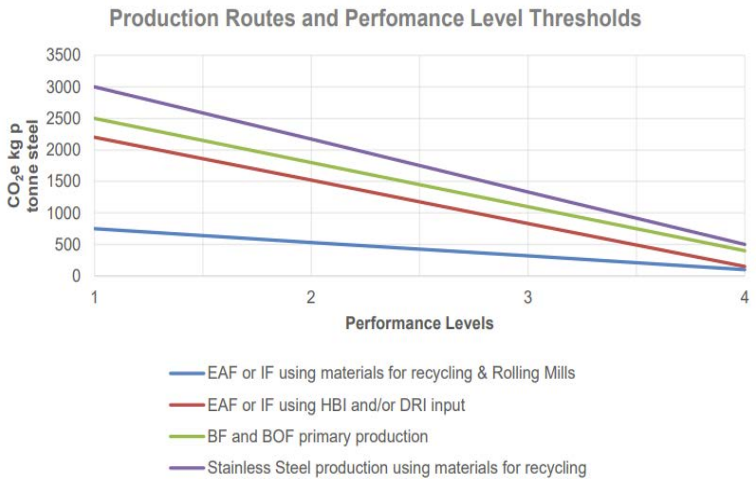
3.3.4 GHG emissions reduction targets and plans
The organisation should set and publish short (1-5 years) and medium term (5-15 years) GHG emissions reduction targets for emissions under its control. It shall document plans to achieve the targets and publicly report the targets and summary plans.

Sustainable Constructional Steels (SCS) Scheme v10

GHG criteria – Fabricators (Processor)

SCS v10 - Site and product certification Fabricators





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BF and BOF primary production	2500	1800	1100	400
Stainless Steel production using materials for recycling	3000	2170	1330	500

*: Feedstock billet GWP to be used

3.5.1 GHG Emission Measurement, Monitoring, and Reporting

The organisation shall have a system for measuring, monitoring, and publicly reporting its GWP.

3.5.2 Climate Change - GWP performance

The organisation should assess GWP performance against scoring thresholds.

3.5.3 Decarbonisation Strategy

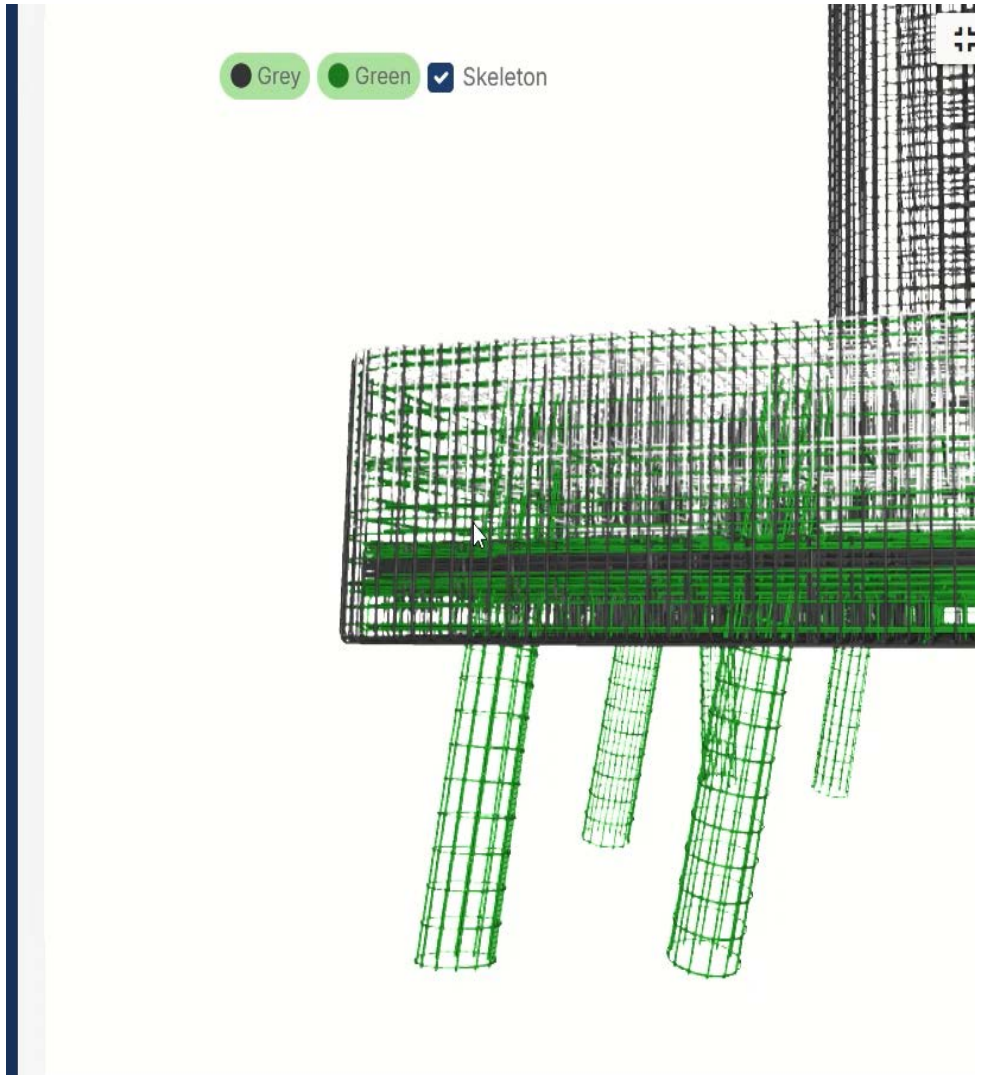
The organisation shall define, make publicly available and implement a strategy to reduce its GHG emissions to levels that are compatible with the achievement of the goals of the Paris Agreement, with an aspiration to achieve net-zero GHG emissions.

3.5.4 GHG emissions reduction targets and plan

The organisation should have short (0-5 years), medium (5-15 years) and long-term (15- 25 years) GHG emission reduction targets for the site and plans to achieve them aligned with its strategy and publicly reported.

Integration of GWP Digital Data and Physical Materials

- CARES Cloud enables the digital provision of reliable information and comprehensive updates to BIM models including GWP data.
- Supports compliance with the Golden Thread of Information by creating a robust and traceable digital record.
- Real-time information on sustainability offering an updated view on what could be considered Green Steel vs Grey Steel.



Conclusions

- Focus on both reducing CARES' direct environmental footprint and driving performance improvements across the sectors we influence (Estimate ~0.5% of global emissions)
- Enhance data accuracy for LCAs by improving data collection processes and addressing regional variability in carbon footprint calculations
- Commitment to sustainable practices and collaboration with global initiatives for industry-wide decarbonisation
- Support harmonising international standards such as The Steel Standards Principles (SSP)
- Support public procurement strategies and market-based initiatives to drive Green Steel demand

Thank you

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