

# Your Assured Steel Products Supply Chain



**The CARES Sustainable Constructional Steel  
Scheme Summary Report 2018/2019**



## **SUPPLIERS**

Take a look at the  
global reach of  
the scheme

## **PERFORMANCE**

See the latest data  
and targets to 2020

## **SPECIFY**

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procure sustainable  
steel products

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## About this report

This report focuses on the latest updates and performance of the CARES' Sustainable Constructional Steel (SCS) Scheme. The data covers calendar year 2018 and updates cover changes to the scheme or its operating environment to publication in Autumn 2019. It shows how a CARES-approved supply chain for constructional steel can help reduce business risk and provide a range of other benefits. For information on the wider operations of CARES and other certification schemes offered by CARES please refer to our website and annual operating plan.

The principles within the BS 8902: 2009 and Global Reporting Initiative (GRI) Standard 101, inform the report's development. 2015 is the baseline year for the sector's environmental, social and economic metrics used in the report. We welcome your comments and feedback on this report and on how the constructional steel sector can contribute to a sustainable future.

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## What is CARES?

CARES is an independent, not-for-profit certification body. It operates for the benefit of the construction industry offering certification schemes for companies that produce materials, components or offer services, primarily to the reinforced concrete industry. Clients can specify CARES approved companies and products with the confidence that they will comply with the relevant product or system standards and without the need for verification testing by the purchaser or contractor.

CARES is governed by its Board and advised by its Policy Advisory Committee composed of the following Members: Association for Consultancy and Engineering, Heathrow Airport Ltd, British Association of Reinforcement, Civil Engineering Contractors Association, CONSTRUCT, Highways England, Institution of Structural Engineers, Post-Tensioning Association, UK Steel Association. The Chairman's nominees are representatives from; the International Steel Trade Association, contractor MACE, British Independent Reinforcement Fabricators Association, Office for Nuclear Regulation (ONR/HSE) and Rail Safety and Standards Board.

The CARES Sustainability Committee is a technical advisory group made up of stakeholders from the construction industry, independent experts and representatives from the steel industry. Its role is to review and advise on the Sustainable Constructional Steels Scheme.

## The Sustainable Constructional Steel (SCS) Scheme

CARES is accredited by the UK Accreditation Service (UKAS) to provide certification for management systems, product conformity and – the subject of this Report – sustainability management and performance.

The SCS Scheme operates in compliance with BS 8902: 2009 'Responsible sourcing sector certification schemes for construction products'. This Standard provides a framework for the responsible management, development, content and operation of sector certification schemes applicable to the supply of construction products. Specifically developed for the constructional steel supply chain: the scheme enables suppliers to declare the sustainability performance of their products and organisation.

Recognition of higher levels of performance, beyond the mandatory pass level, can be gained through achieving 1, 2 or 3 Rosettes in the CARES Rosette Rating System.

Through the SCS Scheme, CARES collates environmental and social performance indicators and sets targets for future performance as shown on page 7. A key benefit for the end user is that constructional steel products from CARES-approved suppliers are traceable, allowing an assured, identity preserved, chain of custody from mill to site.

# Chairman's statement:

## A new chapter in CARES contribution towards Sustainable Development

2018 and 2019 have been significant years for CARES and the steel and construction industries. In July of 2019 Professor Les Clark, my longstanding predecessor, retired from his role as Chair of CARES. Les has left a considerable legacy for me to build upon. His tireless efforts have helped strengthen and grow CARES through periods of enormous challenge and change. His support has helped position the organisation as a trusted, independent partner at the forefront of the challenges and opportunities that lie ahead.

Steel's contribution towards sustainable development is one of them and it is becoming increasingly critical to reducing life cycle impacts of construction and infrastructure projects. CARES anticipated this global trend by introducing the Sustainable Constructional Steels Scheme in 2011, many years ahead of other related schemes that are emerging in other parts of the steel industry. It is now time to accelerate performance towards sustainability and to link this more closely to science and context-based transition pathways. For example, implementing the UK Governments response to the Paris Agreement on Climate Change will mean all sectors will have to contribute to meeting a net zero emission economy by 2050.

For a sector which produces approximately 8% of global greenhouse gas emissions, this will mean significant investments in novel production technologies, increasing utilisation of renewable energy and more than ever, extensive collaboration between raw material suppliers, steel producers and fabricators, their construction clients and the societies they operate within. This year, we have been extensively engaging with these stakeholders, investigating options to better meet the changing expectations of construction clients, particularly in the UK.

As well as investigating thresholds for greenhouse gas emissions, our engagement and training has continued to focus on improving ways to maintain human rights, build safer and fairer labour conditions and understand how social-economic value is created by the industry all within the context of digitisation and technology improvements. We have supported industry initiatives, including exploring ways to identify and reduce incidents of Modern Day Slavery in constructional supply chains. The outcomes of these engagements will enhance the SCS scheme and feed into other schemes that are being developed to match specific market needs in regions around the world.

CARES has also actively participated in many other industry forums and events. It has contributed to the start of the revision process for the BS 8902: 2009 standard, the basis of the SCS scheme. It has continued to support ethical business practices and responsible sourcing through representation on panels and presentations at conferences including: the International Federation for Structural Concrete 6th International fib Congress and other fib conferences, the EFRS International Symposium on Iron & Steel and the Responsible & Ethical Leadership for Global Construction Supply Chains Conference 2019. It has actively supported the development of the ResponsibleSteel™ Standard as an Associate Member.

CARES maintains its accreditation by UKAS to certify to the ISO 45001 Health and Safety Standard and ISO 14001:2015, the Environmental Management Standard, both prerequisites of the SCS scheme. We remain accredited to BS 8902:2009 Responsible Sourcing Sector Certification Schemes for Construction Products, which covers the SCS scheme and the BES 6001 Responsible Sourcing Standard for Construction Products, which CARES is licensed to certify against. SCS certification can contribute towards higher levels of green building rating system performance, including within BREEAM UK New Construction 2018 and the UAE ESTIDAMA Pearl. One of the unique requirements of the SCS is the requirement to have a verified company-specific Environmental Product Declaration (EPD) to EN 15804, which are accepted by the US Green Building Council's LEED certification. The EPDs also meet client demands for detailed information on the materials they specify and positions CARES certified companies well as digital information is increasingly shared and used in the construction sector.

Our role is to provide confidence to construction clients that their choice of materials is supporting more transparent and responsible construction supply chains and growth in the SCS scheme is testament to this. I welcome readers to this report and invite you to explore the CARES Sustainable Constructional Steel Scheme and its performance.



**Steven Brunswick**  
Chairman of CARES




## Locations of CARES sustainability scheme-approved suppliers

CARES has global reach. The SCS Scheme is internationally recognised as the preferred certification system for sustainable constructional steel. CARES-approved suppliers benefit from the wide acceptance of CARES-approved steel by green building rating systems around the world. The map shows CARES-approved suppliers, those which have started to achieve higher performance levels under the Rosette Rating System and their locations.

Rating:  **PASS**

### Belarus

- Open Joint-Stock Company Byelorussian Steel Works-management company of Byelorussian Metallurgical Company holding (Zhlobin, Belarus) 

### France

- ALPA, Gargenville


### Germany

- ArcelorMittal Hamburg GmbH, Hamburg

### Netherlands

- Van Merksteijn B.V., Almelo

### Ireland

- Brazil & Co. (Steel) Ltd. T/A Fairyhouse Steel, Ratoath 
- Midland Steel Reinforcement Supplies, Mountmellick, Co Laois 

### Portugal

- SN Maia - Siderurgia Nacional, S.A., San Pedro Fins, Maia
- SN Seixal, Siderurgia Nacional, S.A., Seixal

### Qatar

- Qatar Reinforcement Company, W.L.L., Doha
- Qatar Steel Company(QSC), Mesaieed

### Spain

- Megasa Siderúrgica SL, Naron

### Turkey

- Bastug Metalurji Sanayi A.S., Osmaniye
- Colakoglu Metalurji A.S., Gebze
- Diler Iron and Steel Co Inc., Gebze
- Ekinciler Iron & Steelworks Inc., Iskenderun
- HABAS A.S., Izmir
- ICDAS Celik Enerji Tersane Ve Ulasim Sanayi A.S., Biga 
- Izmir Demir Celik Sanayi A.S., Izmir
- Kaptan Demir Celik Endustrisi Ve Ticaret AS
- Kroman Celik Sanayi A.S., Gebze
- Yazici Iron & Steel Co Inc., Iskenderun
- Yesilyurt Demir Celik, Samsun

### United Arab Emirates

- Conares Metal Supply Ltd, Rebar Mill, Dubai
- Emirates Steel Industries, ICAD I, Mussaffah, Abu Dhabi
- Hamriyah Steel FZC [Sharjah, United Arab Emirates]
- Union Iron & Steel Company L.L.C Mussafah, Abu Dhabi

### United Kingdom

- ArcelorMittal Kent Wire Limited, Chatham
- ArcelorMittal Kent Wire Limited T/A AMCS, Chatham
- Capital Reinforcing Ltd, Bromborough 
- F Brazil Reinforcements Limited, Canvey Island
- Hy-Ten Reinforcement Co Ltd, Chatham 
- Lemon Groundwork Solutions Ltd, Wickford
- Midland Steel Reinforcement Supplies, London Thamesport
- Outokumpu Stainless Ltd. T/A ASR Rod Mill and Sheffield Stainless Bar, Long Products, Sheffield 
- Outokumpu Stainless Ltd. T/A Sheffield Stainless Bar, Long Products, Sheffield 
- Roe Bros & Co Ltd, Peterborough
- Thames Reinforcements Ltd, Sheerness

### Ukraine

- ArcelorMittal Kryviy Rih PJSC., Kryviy Rih

### Oman

- Jindal Shadeed Iron and Steel LLC Sohar
- Sohar Steel, Sohar

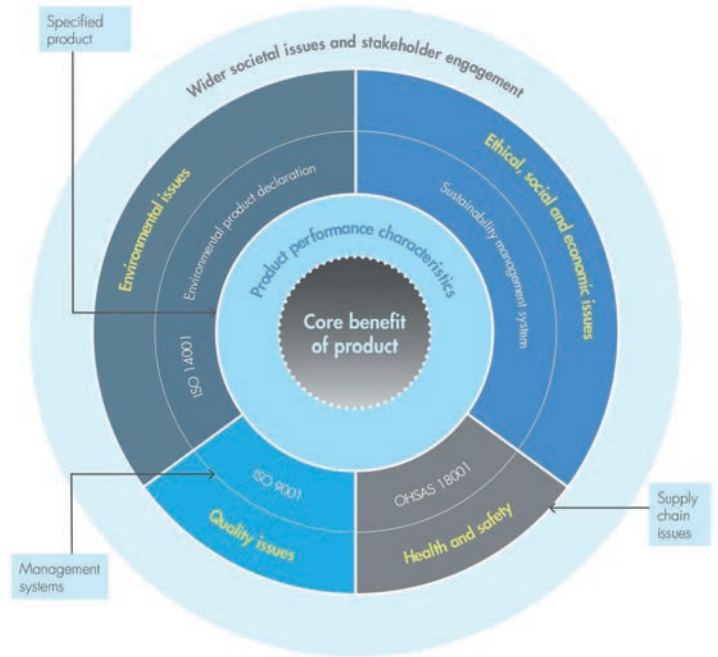
### Key

- Reinforcing Steel Producers (Electric Arc Furnace)
- Reinforcing Steel Producer (Integrated Iron and Steel Plant)
- Feedstock Coil Producer
- Structural Steel Producers
- Stainless Steel Reinforcing Bar Processor
- Flat Steel Producers
- Stainless Steel Reinforcing Bar Producers and Processors
- Reinforcing Steel Processors (Fabricators)

# Providing assurance to the construction industry

## Scheme coverage – the ‘extended’ product applied to reinforcing steel

The concept of the extended product can be used to illustrate the demands placed upon a modern construction material supply chain, as shown here. CARES Product conformity standards are the basis of assurance for the physical product, which is shown in the centre of the diagram. Clients also want reassurance beyond the physical product, extending their concern into the management of environmental impacts and labour conditions throughout the supply chain. Management systems, as shown further out from the centre in the diagram, are a requirement of the SCS Scheme in order to demonstrate that the range of issues, illustrated in the next concentric circle out, are being continually improved. The final concentric circle reflects stakeholder engagement, the effectiveness of which is also a requirement of the scheme.



## Traceability through CARES SCS product markings

All CARES steels are 100% traceable at a batch and product level to the original steel producer. Many of its raw materials are also traceable to their source. Product traceability starts with a unique cast number. Molten steel is cast and rolled, where the unique CARES bar marks are added to each piece of rebar. It is then batched and delivered to the fabricator. Batches of product will carry the labels shown to the right. During cutting or bending the cast number is accompanied by a ‘bar schedule reference’ with the ‘bar mark’ retained during this process, before final delivery and use on site.

## Product marking

The CARES mark identifies a specific mill in a specific country



Trust the CARES mark

Country = 7 ribs

Mill = 7 ribs



Product labelling:



SUSTAINABILITY

## Environmental Product Declaration (EPD)

An Environmental Product Declaration (EPD) is a transparent way of communicating a Life Cycle Assessment (LCA) of the environmental impacts of a product in a common format based on common rules. The CARES EPD covers Life Cycle stages from the extraction of raw materials, through processing, manufacture, refurbishment to eventual end-of-life and disposal. The data, verified by BRE, is produced in accordance with ISO 15084. EPD’s are required for each supplier and CARES also produces an average for the SCS Scheme.



## Project specifications

To specify reinforcement steel that meets government and private sector responsible sourcing requirements and to gain rating credits in building rating schemes, such as the BREEAM UK New Construction: 2018, use text as shown below in your specifications. For more information contact us.

### Steel Reinforcement

All reinforcement shall conform to the 2005 versions of BS 4449, BS 4482 or BS 4483 as appropriate. All stainless steel reinforcement shall conform to BS 6744:2005.

All reinforcement shall be cut and bent in accordance with BS 8666:2005. The reinforcement shall be obtained from firms holding valid CARES product conformity scheme certificate of approval for the production and supply of the steel reinforcement.

### Reinforcement traceability system

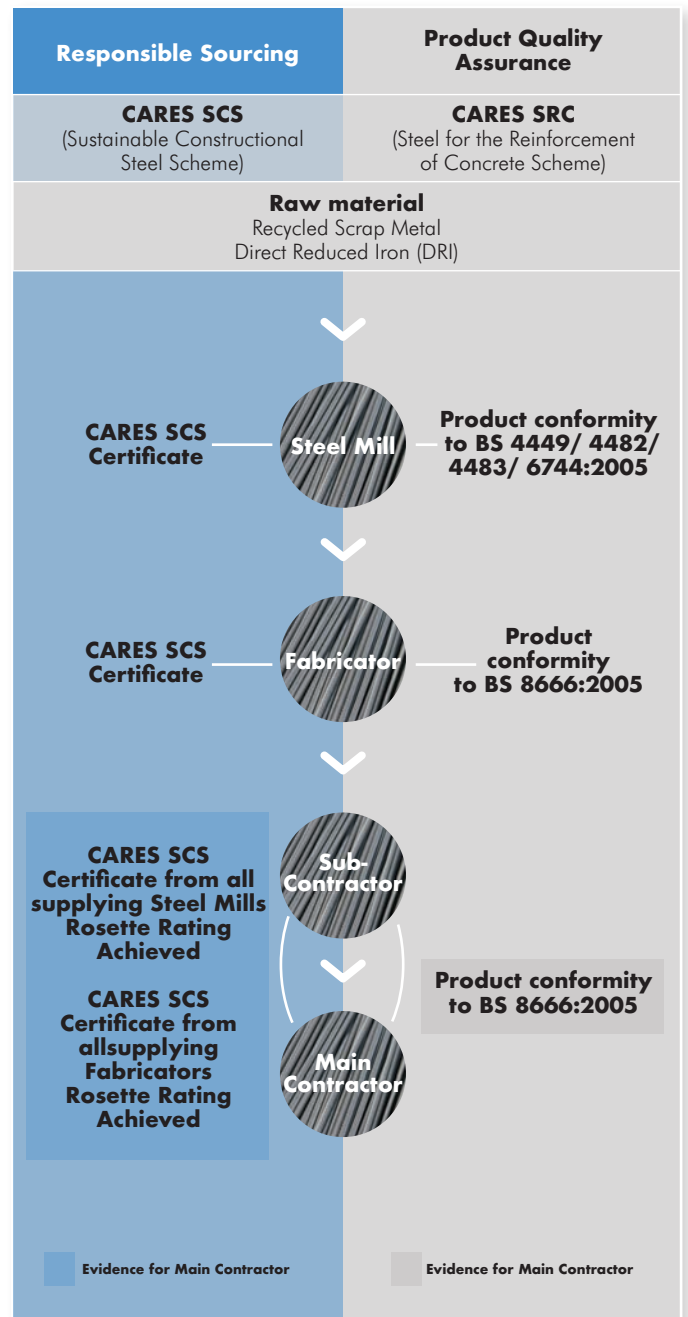
All reinforcement delivered to site shall be fully traceable to the cast/heat/batch number, reinforcement supplier and reinforcement manufacturer. The reinforcement product test data shall be provided and a valid CARES certificate of approval shall be provided for the reinforcement supplier(s) and reinforcement manufacturer(s). Each bundle of reinforcement - straight bar, cut/bent, fabric, reinforcement mat, or pre-assembled welded fabrication - shall be identifiable with a suitable and durable tag or label securely attached to the product.

### Digital construction

All reinforcement manufacturers and suppliers shall use the CARES Cloud digital traceability platform and digital record.

### Sustainable construction and responsible sourcing

All reinforcement suppliers shall hold a valid CARES Sustainability Constructional Steels scheme Certificate of Approval for the manufacture and/or fabrication issued by CARES. This certificate can be enhanced by providing the Rosette Rating System ratings achieved by the manufacturer and/or fabricator, where achieved. The reinforcement manufacturer shall additionally provide an independently verified Environmental Product Declaration (EPD) which conforms to EN 15804.



“Mace is proud to be a responsible business. Our vision is to be the industry leader in shaping cities and building sustainable communities. To demonstrate this and give confidence to our stakeholders that we are achieving our sustainability goals such as reducing our carbon emissions and improving responsible sourcing of materials, it’s vital that we can obtain robust information and data from credible and preferably third party verified sources, such as through the CARES SCS certification.”

**Andrew Kinsey, Environmental Strategy Manager, Mace**



# Performance: Environmental, Economic and Social

The following table summarises performance from 2015-2018 against key scheme metrics. It includes approved producers using recycled steel in the Electric Arc Furnace process. It excludes those which use the Direct Reduced Iron and Blast Furnace processes, rolling mills and fabricators. It includes targets to 2020 set from a 2015 baseline. The current status from the baseline towards the target is indicated.

Aspect	Key Metrics	2015	2016	2017	2018	Target 2020	Status
<b>Environment</b>	Employees at ISO 14001 certificated sites (%)	98	98	100	100	100%	Achieved
	Material Efficiency - % for producer (tonnes billet, bloom or slab produced as % of total raw materials)	82.9	83.1	82.3	82.6	Increase 2%	Off track
	Global Warming Potential (kg CO <sub>2</sub> e per tonne of carbon steel bar produced) <sup>1</sup>	840	840	898	760 <sup>2</sup>	Decrease 2.5%	Progress made
	Water Use m <sup>3</sup> per tonne of steel	1.01	0.93	0.93	24	Reduce 10%	Progress made
	Post-consumer steel scrap recycled in approved product (% by mass) <sup>3</sup>	96.9	98.1	97.3	95	Increase 1.4%	Off track
	Waste to landfill (kg per tonne of steel)	58	43	47	26	Reduce 60% to 19	Progress made
	Waste to incineration (Kg per tonne of steel)	0.46	0.04	0.02	0.01	Zero waste to incineration	Progress made
<b>Health &amp; Safety</b>	Employees at OHSAS 18001 or ISO 45001 certificated sites (%)	97	100	100	100	100%	Achieved
<b>Ethical, Social, and Economic</b>	Total number of environmental and social complaints resulted in a successful prosecution by an external Regulator in the data collection/reporting period <sup>4</sup>	0	1	5	0	Maintain 0	Achieved
	Skills and Training (Development of Employees) (Number of training hours per employee and contractor)	27	22	23	24	Increase by 5%	Off track
	Community Relations - Approved producers who have a policy in place to increase engagement with community stakeholders (%)	100	100	100	100	Maintain	Achieved
	Community Relations - Approved producers who have specific systems in place to deal with local community complaints (%)	100	100	100	100	Maintain	Achieved
	Approved producers who have externally audited accounts for the latest financial reporting period (%)	100	100	100	100	Maintain	Achieved
	Approved producers who implement a policy to comply with ethical business practices (%)	100	100	100	100	Maintain	Achieved
	Suppliers evaluated against responsible sourcing policy and the social and environmental issues listed in CARES SCS Applicable Appendix's Section 3. (vi) (%)	n/a	13	20	13	75%	Off track
	Reporting Sustainability Performance to Stakeholders - Publication of CSR/ Sustainability Report on yearly basis (%)	n/a	19	27	24	100%	Progress made

An 'Approved' product or 'approved' suppliers refer to product and suppliers approved under the CARES SCS Scheme.

1 Relating to direct, indirect and avoided scrap burden. Scrap burdens - the world steel industry follows the 'substitution/avoided burden' approach to recycling at end-of-life and assigns environmental impacts to ferrous scrap. Consuming scrap increases GHG emissions. Producing scrap (for recycling) gives a credit, reducing the overall carbon footprint. In this assessment it is assumed that the recycling rate at end of life is 92%.

2 This figure comes from CARES Sector Average EPD report which is updated every 3 years. It includes data from 2016 for 3 companies which are not due to have their EPD's updated until 2020 and data for 6 companies which is complete but has not finished the verification process at the time of publication.

3 Data excludes stainless steel production and 2 companies which have been using Direct Reduced Iron as feedstock in 2018.

4 This includes a financial penalty, an enforcement notice, a prohibition notice, and/or a prosecution.

# Your Assured Steel Products Supply Chain



## Better for customers

**Product Quality certification**

**Full traceability from steel mill to construction site**

**Sustainable Constructional Steel certification**

**Attract rating credits in BREEAM UK New Construction**

The CARES mark identifies a specific mill in a specific country



Trust the CARES mark

Country = 7 ribs

Mill = 7 ribs



### Tell us what you think

This is our eighth report where we seek to capture how the CARES Sustainable Constructional Steel supply chain impacts on the environment, society and the economy. We welcome your feedback.

### CARES

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