Environmental Product Declaration

S-P-07498. HOT ROLLED WIRE ROD AND REINFORCING STEEL PRODUCTS (100% RENEWABLE ELECTRICITY)

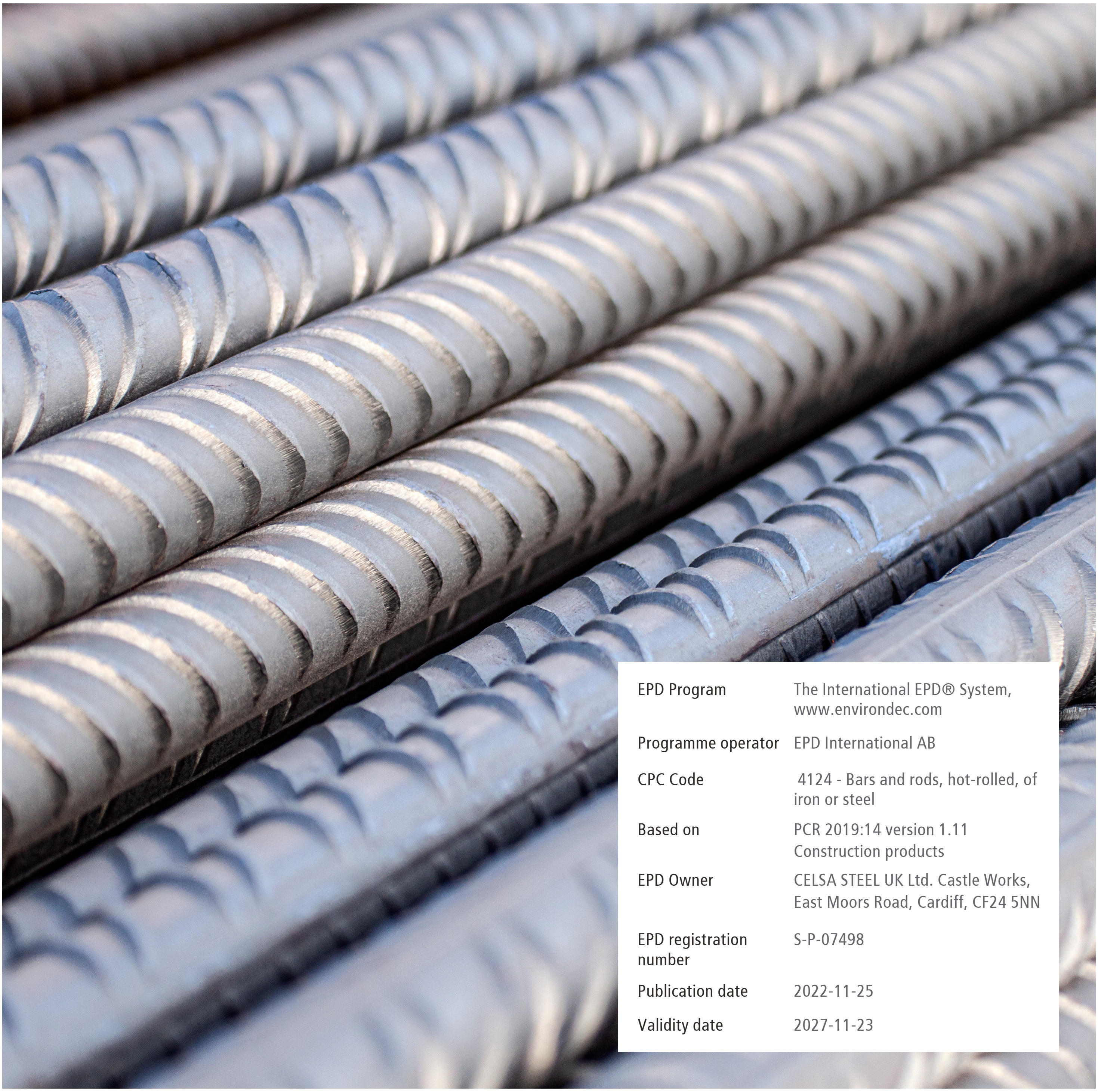
In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019

EPD®

ECO PLATFORM EPD VERIFIED

CELSA™ GROUP

1st Producer of Circular Steel *in Europe*



EPD Program	The International EPD® System, www.environdec.com
Programme operator	EPD International AB
CPC Code	4124 - Bars and rods, hot-rolled, of iron or steel
Based on	PCR 2019:14 version 1.11 Construction products
EPD Owner	CELSA STEEL UK Ltd. Castle Works, East Moors Road, Cardiff, CF24 5NN
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0 Celsa Steel UK

Celsa Steel UK belongs to the Celsa Group of companies. Celsa, later to become Celsa Group, was established in 1967 reinforcing the bar re-rolling mill. Four decades later, Celsa Group has grown to be one of the largest steel manufacturers in Europe, producing over 10 million tonnes of steel each year. They have group companies in Spain, the UK, Poland, Norway and France.

About us

Acquired in 2003, Celsa Steel UK is the largest producer of reinforcement in the United Kingdom and one of the largest manufacturers of other steel long products. From our facilities in Cardiff, we produce and deliver around 1.2 million tonnes of finished product each year, mainly to the UK and Irish markets.
Our facilities consist of a state-of-the-art melt shop built in 2006, and two production facilities: one for reinforcing products and wire rod, the other for merchant bar and light sections.
Celsa directly employ over 800 staff members and several hundred sub-contractors in South Wales.

Products

At Celsa UK we are committed to providing our customers with a diverse range of high quality steel products. Through our customer focused approach we aim to develop our product portfolio to meet the dynamic needs of the market, whilst ensuring that the highest quality standards are maintained through improved internal controls and quality assurance.
Each of our products and processes is subject to stringent quality control to ensure that our products conform to the British and European Standards through BBA and CARES approval and CE marking.

Rod & Bar Mill

Our rod and bar mill is capable of producing 890,000 tonnes each year for a wide range of reinforcing and wire rod products. In 2006 we invested £10 million in a new four-line spooler mill, making ours the first UK mill to produce hot spooled coil, a process vital for achieving grade 500C properties in coil format.

Process

Scrap arrives at our facilities by rail and by road for delivery to the melt shop. There are over 20 different grades of scrap, each representing a different of quality. Scrap ranges from scrapped cars – which often contain impurities such as copper from copper wiring – to turnings from machining factories where the steel tends to have fewer tramp elements. Each of our products has a different recipe for the scrap employed depending on its final use. Some wire rods can be drawn down to just 0.5mm diameter by our customers, so it is essential that the scrap we use for such products has few impurities.

Once the correct scrap recipe is prepared, the scrap is charged into the furnace, and an electrical discharge is applied through graphite electrodes. This produces high current electrical arcs, which melt the scrap to form molten steel. Once the scrap is all melted, there is a further refining of the molten steel, before the furnace is tapped into a refractory-lined ladle further processing.

When steel is tapped from the EAF into the ladle, the main alloying elements are added to the molten steel. These elements, such as manganese and silicon will combine with unwanted impurities such as oxygen and sulphur preventing them from having a harmful effect on steel properties. Manganese and silicon are also used to strength the steel.

The ladle of molten steel is moved to the ladle arc station. Here the temperature and composition of the steel are adjusted to tightly controlled limits, to ensure that the steel is of the right analysis to produce the required properties in the finished products. Alloying elements such as manganese, vanadium or boron may be added to produce the necessary strength, ductility or toughness in the final steel.

Once the ladle of molten steel is of the required temperature and chemical composition, it is moved to the continuous caster. The molten steel is run through a gate in the base of the ladle, and into a tundish. The tundish is a bath-shaped refractory-lined vessel, which acts as a reservoir for the molten steel during the casting process. In the base of the tundish are six nozzles from which the molten steel flows into six moulds, where the steel will start to solidify. The moulds are copper tubes and cooling water is pumped through them to accelerate the solidification process. As this solidification occurs, the strand of steel continuously withdrawn from the mould, as molten steel is fed from the tundish above. The solidifying strand is straightened, and then cut to the required length by gas torches. This produces billets, up to 15m in length, which will then be rolled down to the finished products.

The cast billets of steel are then transferred by rail to one of our two rolling mills. One mill is used for bar and coil products and the other for sections.

For reinforcing bar, billets are reheated to around 1150ºC in a gas-fired furnace. Reheating makes the steel softer and more deformable, so that the final shape can be produced more economically, and using less energy. Once up to temperature the billets are pushed into the rolling stands, each of which has a pair of grooved cylindrical steel rolls. As the steel is forced through the grooves, the area of the cross section is reduced. This process is repeated continually over several stands, with the cross section reducing each time until the required dimensions are achieved. In the case of reinforcing steels, notches are cut into the grooves of the final rolling stand and the steel that fills these notches forms the ribs on the bar surface.

In order to achieve the strength and ductility of grade 500C reinforcing steel, the steel is cooled by high pressure water jets.
and transferred to a cooling bed where they cool further in still air. The bars are sheared to the required customer lengths, bundled, labelled, and moved into storage, awaiting despatch.

1 Product Information

Product description and applications

The product consists of 100 % recycled steel produced by the Electric Arc Furnace route from post-consumer and pre-consumer scrap.

Celsa produce Grade B500C high ductility hot rolled, ribbed steel reinforcement bar at the Rod & Bar Mill, for use in the reinforcement of concrete. This can also be supplied in spooled coils, known as High Yield Coil. The Rod & Bar Mill also manufactures hot rolled flat bars for use in the automobile, naval and agricultural industries; mild steel coil (known as wire rod for mesh) used in the production of reinforcing mesh for concrete; low carbon steel coil known as 'other wire rod' which can be used for a variety of different applications including fencing, general wire, nails and supermarket trolleys.

The results in this EPD are an average representative of all steel products manufactured for CELSA at the Rod & Bar Mill. Averages are obtained through the total production, total consumption of raw materials and total generation of waste and emissions in CELSA facilities.

Technical data and composition

The mains characteristics and chemical composition of Rod & Bar Mill products are shown below.

Products do not contain any of the substances listed on the "Candidate List of Substances of Very High Concern (SVHC) for authorisation".

Packaging

Steel straps are used for the transport of the products to the customer. This input is included in the scope of EPD and is recyclable following delivery. Packaging of raw materials used in manufacturing is outside the scope.

Recycling and disposal

Steel products are highly recyclable. During manufacturing, all unfit material and discards are fed back into the billet production.

In the same way, when an steel product reaches the end of its life, it is systematically and selectively collected and sent for recycling or can even be reused.

Incorporation of post-consumer steel scrap at the beginning of the product system results in reduced of environmental burdens. In module D only the net benefits of recycling and reuse, i.e. the recycling/reuse benefits at the end of life minus the benefits already considered in the module A1 due to steel scrap content are reported. In this EPD, the scrap not collected at the end of life is sent to landfill.

Chemical composition	%
Fe	95
FeSi,SiMn, CuSi, FeB, Al, FeV, C & other charge additives	5
Material	**%**
Post-consumer scrap	85.7
Pre-consumer scrap	14.3
Renewable material	0
Biogenic carbon dioxide	0
Packaging	**%**
Steel strap - packaging (versus product)	0.08

Property (steel product from the Rod & Bar Mill)	Value, units
Size (diameter options)	10, 12, 16, 20, 25, 32, 40 & 50 mm
Size (length options)	Standard lengths of 6, 12, 14 & 16 m (dependent on diameter) Special lengths of between 6 – 18 m are also available by prior order
Length tolerance	-0 + 100 mm
Yield strength	500 MPa
Bend & Fatigue requirements	BS 4449
Bond requirements	BS 4449, BS 5400-4:1990, BS EN 1992-1-1:2004
Welding requirements	BS 4449, BS 7123:1989
Stress ratio: Ultimate tensile strength/Yield strength (Rm/Re)	1.15 to 1.35
Lineal density	0.616 kg (10 mm), 0.888 kg (12 mm), 1.579 kg (16 mm), 2.466 kg (20 mm), 3.854 kg (25 mm), 6.313 kg (32 mm), 9.864 kg (40 mm) & 15.413 kg (50 mm)
Uniform elongation (Agt)	≥ 7.5 %

2 LCA Information

Declared unit
1000 kg of hot rolled wire rod and reinforcing steel products produced with 100% renewable electricity mix with guarantee of origin.

Goal and scope
This EPD evaluates the environmental impacts of 1000 kg of steel products from cradle to gate with modules C1-C4 and module D. This EPD is the basis for B2B communication for customer and relevant stakeholders within the value chain of steel products.

System boundaries
This EPD provides information on the production stage of steel products (raw material supply, transport to plants and manufacturing) and their end-of-life. Recycling/reuse potential of steel with burden savings due to use in a second product systems is also reported. The information is presented in a modular way separated in the following stages.

A1-3 - Cradle to gate
This module includes the provision of all materials, products and energy, as well as waste processing up to the end-of-waste state (i.e., when the waste flow is no longer considered a waste material but a raw material for a subsequent cycle) or disposal of final residues during the product stage.

Processes relating to resource extraction e.g., raw materials used to produce the steel, are included therm in the system. All energy used in factories and factory support offices is included but energy used in head offices and sales offices etc. are excluded. Maintenance of equipment is also not included. The electricity consumed at the plant has been adapted to specific power mix supply.

The aggregation of the modules A1, A2 and A3 is allowed by EN 15804. This rule is applied in this EPD and denoted by A1-3.

C1 - Dismantling
This module has been modelled assuming that 100% of products are used as concrete reinforcement, i.e., as ntegrated into other structures. For rebars has been used generic dataset from Ecoinvent for the treatment of waste reinforcement steel. Default data to estimate environmental burdens are shown in the table below.

C2 - Transport to waste processing
Transport is calculated on the basis of a scenario with the parameters described in the attached table.

C3 - Waste processing for reuse, recovery and/or recycling
This module has been modelled using the generic datasets from Ecoinvent for the treatment of waste reinforcement steel and waste bulk iron.

C4 - Final disposal
Environmental burdens associated with Module C4 have been calculated considering the default rates for landfilling described in prEN 17662 (see table below).

D - Benefits and loads beyond the product system
Module D has been calculated for the recycling and the reuse flows using the protocols stated in EN 15804:2012+A2: 2019 - Annex D with figures and formulae described in prEN 17662 (see table below).

Benefits are assessed at the point of functional equivalence, i.e. where the substitution of EAF steel (recycling route) or light structural steel (reuse route) take place. In the recycling process, melting yield for post-consumer scrap was taken into account.

Stage	Production			Construction		Use							End-of-life				Resource
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Module	Raw materials supply	Transport	Manufacturing	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Dismantling	Transport	Waste processing	Disposal	Reuse, recovery or recycling potentials
Declared module	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	UK	UK	UK	-	-	-	-	-	-	-	-	-	EU27	EU27	EU27	EU27	EU27
Specific data	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	<10%																
Variation - sites	not relevant			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X - Module declared / ND - Not declared

Data collection

Foreground inventory data was provided by CELSA UK and refers to the two manufacturing locations: Melt Shop (Tremorfa Works, Cardiff) and Rod & Bar Mill (Castle Works, Cardiff). Inventory data includes raw material, packaging material, consumable items, process energy, water use, direct air, water and solid emissions, as well as the production of co-products.

This inventory data was compiled in July 2022 using questionnaires issued by Anthesis Lavola and completed by CELSA UK, which were iteratively refined. The inventory data refers to the 12-month period between January 2021 and December 2021, representing conventional operation conditions.

Database(s) and LCA software used

The LCA modelling of CELSA UK steel products was carried out using SimaPro 9.3 LCA software which was the most up-to-date version available at the time of the LCA.

Unless otherwise indicated, all relevant background LCI datasets were sourced from the Ecoinvent database v3.8 (Ecoinvent, 2021; Wernet et al., 2016). In certain cases, the original Ecoinvent datasets were adapted to the specific requirements of the LCA analysis. These modified datasets have been distinctly identified in this report and the changes are clearly described.

The 100% renewable electricity mix was modelled as reported in the energy guarantee of origin certificate, with a value of GHG-GWP of 0.070 kg CO_2 eq/kWh.

Data Quality

The quality of the data used to calculate this LCA meets the following requirements:

- The data used in the LCA were as up to date as possible (updated within the last 10 years for generic data and within the last 5 years for manufacturer-specific data).

- Used background data are of recognised prestige and acceptance in the technical and scientific fields. In particular, the Ecoinvent database, in the most recent version existing at the time of the study, is considered to be of preferential use.

- Regionally specific datasets were used to model the energy consumption (electricity, natural gas or diesel). For the processes of transport, production of raw materials or end-of-life, datasets were chosen according to their technological and geographical representation of the actual process.

Estimates and Assumptions

The main hypotheses and assumptions made in this study are as follows:

- Post-consumer steel scrap was modeled as burden free when entering the system althought transport to the plant was included. In module D only the burdens and benefits of the net output flow of post-consumer scrap or reused product are reported.

- Direct CO2 emissions generated in the smelter due to the combustion of elemental carbon and the calcination of carbonates present in the raw materials have been modelled on the basis of stoichiometric ratios. It was assumed to have complete oxidation of the elemental carbon and complete calcination of carbonates.

- Metal scrap transport distances were calculated using a scrap purchasing database. Entries to this database included: point of origin of the metal scrap, distance travelled, means of transport and load. Based on this information, a weighed transport distance of scrap transported by train and by road was calculated. A similar database was used to obtain the transport distances for the rest of the raw materials. Due to the wide range of products included in this database, and the large number of points of origin, a country base analysis was carried out to define the weighted contribution of each location for each product category.

- Recovery rates for reuse and recycling, and landfilling rates were calculated using the default data provided in Annex I of "prEN 17662 Product category rules complementary to EN 15804 for Steel, Iron and Aluminium structural products for use in construction works". Recovery and landfilling rates for R&B mill products have been calculated considering the default values weighted for rebar. This standard draft was also consulted to obtain default values for distances for module C2.

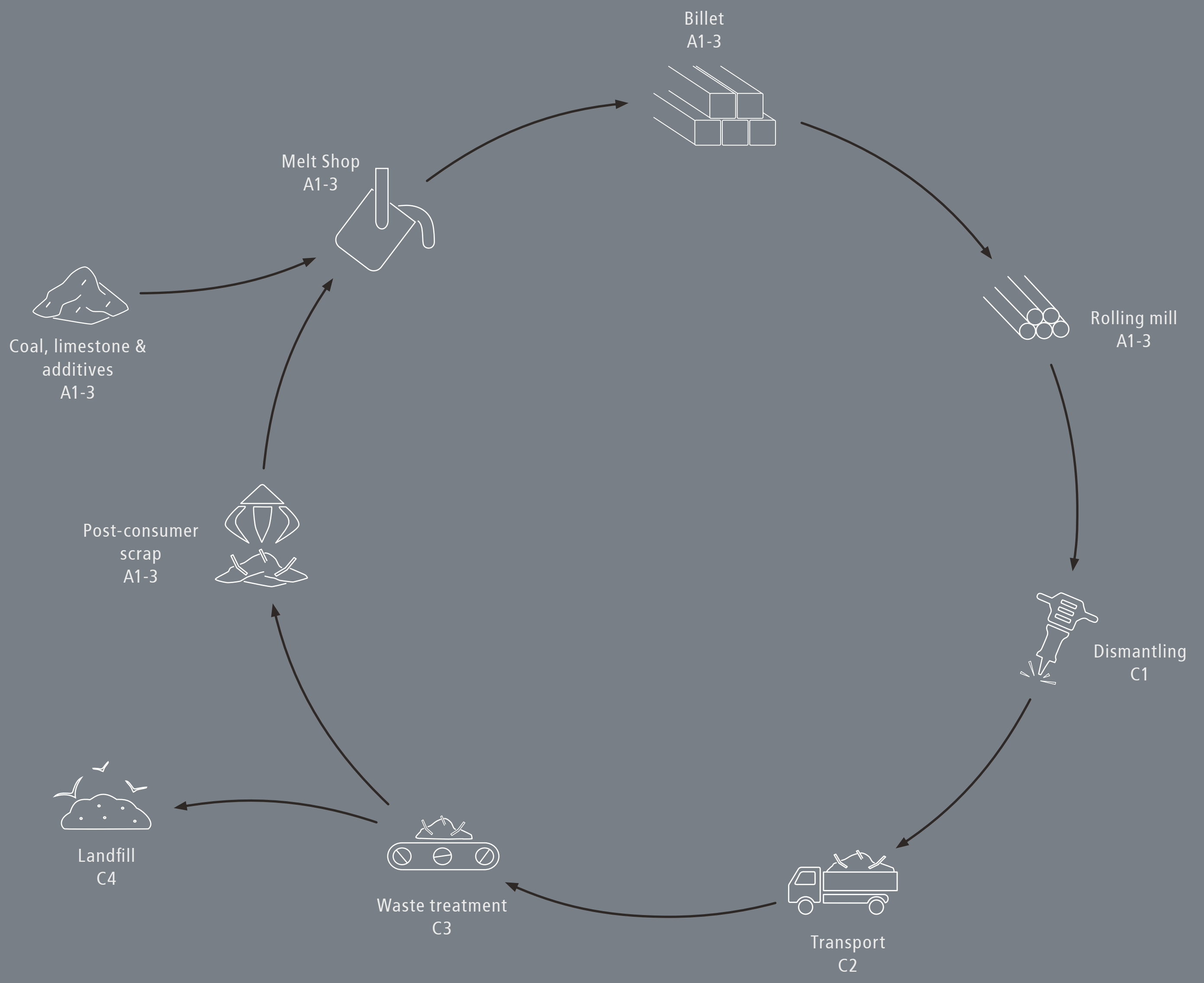
Allocation

Total energy consumption was attributed entirely to total production. This is also the case for raw materials and waste generation.

The steel making process generates coproducts which have a commercial application. These include the EAF steelmaking slag and EAF steel dust (both produced only in Melt shop), and the mill scale (produced both in Melt shop and in R&B Mill). For Melt shop, a physical allocation method based on the calorific value of the coproducts has been used. This methodology is based on the procedures developed by the World Steel Association and EUROFER (see references). For the R&B Mill, an economic approach was applied to determine the allocation of environmental flows between the laminated products and the mill scale.

Cut-off criteria

Criteria for the exclusion of inputs and outputs were defined according to requirements "EN 15804: 2012+A2 2019 Core rules for the product category of construction products". Where there is insufficient data for a unit process in the LCA study, the cut-off criteria was set at 1% of the total mass of input of that process. The total of neglected input flows per module was set at a maximum of 5% of energy and mass use. Based on this cut-off criteria, ancillary materials (such as expendable components, spare parts and chemicals for wastewater treatment, etc.) have been excluded from the analysis".



C1 module parameters

Diesel burned for rebar	626 MJ/t

C2 module parameters

Transport by road	Transport, freight, lorry 16-32 t
Diesel consumption	0.037 kg/tkm
Distance to CDW treatment*	100 km

(*) prEN 17662

C3 module parameters

Energy carrier	Electricity, low voltage {GB}
Consumption for rebar (kWh)	3.7 kW/t

C4 and D modules parameters

Recovery rate (recycling)*	90%
Landfill*	10%
Distance to recycling*	100 km
Distance to EoL*	200 km
Efficiency for steel recycling	95%

(*) prEN 17662

3 Environmental Information

Average steel product from the Rod & Bar Mill

Basic environmental impacts	Units	A1-3	C1	C2	C3	C4	D
GWP-GHG	kg CO_2 eq	3.24E+02	5.67E+01	1.94E+01	1.36E+00	5.17E-01	-7.56E+01
GWP-total	kg CO_2 eq	3.30E+02	5.73E+01	1.96E+01	1.38E+00	5.28E-01	-7.95E+01
GWP-fossil	kg CO_2 eq	3.28E+02	5.73E+01	1.96E+01	1.37E+00	5.27E-01	-7.97E+01
GWP-biogenic	kg CO_2 eq	1.83E+00	1.59E-02	1.05E-02	9.55E-04	1.04E-03	2.73E-01
GWP-luluc	kg CO_2 eq	5.48E-01	4.52E-03	6.98E-03	1.69E-03	1.47E-04	-1.28E-02
ODP	kg CFC-11 eq	3.72E-05	1.24E-05	4.46E-06	1.46E-07	2.17E-07	-2.50E-06
AP	mol H^+ eq	1.90E+00	6.00E-01	5.63E-02	5.77E-03	5.00E-03	-3.88E-01
EP-freshwater	kg P eq	9.65E-03	2.09E-04	1.57E-04	3.74E-05	5.90E-06	-4.70E-03
EP-freshwater	kg PO_4 eq	2.96E-02	6.41E-04	4.81E-04	1.15E-04	1.81E-05	-1.44E-02
EP-marine	kg N eq	5.40E-01	2.65E-01	1.11E-02	1.23E-03	1.72E-03	-7.52E-02
EP-terrestrial	mol N eq	7.68E+00	2.90E+00	1.25E-01	1.43E-02	1.90E-02	-8.53E-01
POCP	kg NMVOC eq	1.68E+00	7.98E-01	4.78E-02	3.75E-03	5.51E-03	-4.15E-01
ADPE (1)	kg Sb eq	2.77E-03	8.79E-05	5.41E-04	9.97E-06	4.82E-06	-1.35E-03
ADPF (1)	MJ	4.33E+03	7.89E+02	2.96E+02	3.24E+01	1.47E+01	-6.63E+02
WDP (1)	m^3 eq	6.20E+01	1.06E+00	8.39E-01	6.19E-02	6.60E-01	-6.85E+00

Additional environmental impacts	Units	A1-3	C1	C2	C3	C4	D
PM (1)	disease inc.	3.81E-05	1.59E-05	1.25E-06	3.60E-08	9.70E-08	-6.23E-06
IRP (2)	kBq U235 eq	1.56E+01	3.38E+00	1.30E+00	5.22E-01	6.04E-02	1.25E-01
ETP-fw (1)	CTUe	1.38E+04	4.76E+02	2.39E+02	2.13E+01	9.55E+00	-4.45E+03
HTP-c (1)	CTUh	2.30E-06	1.66E-08	6.65E-09	6.55E-10	2.21E-10	-4.36E-07
HTP-nc (1)	CTUh	6.16E-05	4.08E-07	2.51E-07	1.57E-08	6.79E-09	8.38E-06
SQP (1)	Pt	4.25E+04	1.01E+02	2.07E+02	3.16E+01	3.09E+01	-2.16E+02

Resource use	Units	A1-3	C1	C2	C3	C4	D
PERE	MJ	8.93E+03	4.27E+00	4.24E+00	5.87E+00	1.19E-01	-6.04E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	8.93E+03	4.27E+00	4.25E+00	5.87E+00	1.19E-01	-6.04E+01
PENRE	MJ	4.66E+03	8.38E+02	3.15E+02	3.41E+01	1.56E+01	-6.99E+02
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	4.66E+03	8.38E+02	3.15E+02	3.41E+01	1.56E+01	-6.99E+02
SM	kg	8.57E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3 eq	2.50E+00	4.06E-02	3.17E-02	6.25E-03	1.57E-02	-1.53E-01

Waste categories	Units	A1-3	C1	C2	C3	C4	D
HWD	kg	1.20E+00	2.15E-03	7.76E-04	2.73E-05	2.20E-05	-6.80E-03
NHWD	kg	1.02E+02	9.34E-01	1.44E+01	9.08E-02	1.00E+02	-3.08E+01
RWD	kg	1.94E-02	5.48E-03	2.02E-03	2.63E-04	9.67E-05	-7.44E-05

Other ouput flows	Units	A1-3	C1	C2	C3	C4	D
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	1.69E+02	0.00E+00	0.00E+00	9.00E+02	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE-e	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE-t	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

BASIC ENVIRONMENTAL IMPACTS. GWP-GHG -Global Warming Potential, GWP-fossil - Global Warming Potential - fossil fuels, GWP-biogenic - Global Warming Potential - biogenic, GWP-luluc - Global Warming Potential - land use and land use change, GWP-total - Global Warming Potential - total, ODP - Depletion potential of the stratospheric ozone layer, AP - Acidifcation potential, Accumulated Exceedance, EP-freshwater - Europhication potential - freshwater, EP-freshwater - Europhication potential - freshwater, EP-marine - Europhication potential - marine, EP-terrestrial - Europhication potential - terrestrial, POCP - Photochemical Ozone Creation Potential, ADPE - Abiotic depletion potential - non-fossil resources, ADPF - Abiotic depletion potential - fossil resources, WDP - Water (user) deprivation potential.

ADDITIONAL ENVIRONMENTAL IMPACTS. PM - Particulate Matter emissions, IRP - Ionizing radiation, human health, ETP-fw - Eco-toxicity - freshwater, HTP-c - Human toxicity, cancer effect, HTP-nc - Human toxicity, non-cancer effects, SQP - Land use related impacts/Soil quality.

RESOURCE USE. PERE: Renewable primary energy as energy carrier; PERM: Renewable primary energy resource as material utilization; PERT: Total use of renewable primary energy resources; PENRE: Non-renewable primary energy as energy carrier; PENRM: Non-renewable primary energy as material utilization; PENRT: Total use of non-renewable primary energy resources; SM: Use of secondary materials; RSF: Use of renewable secondary fuels; NRSF: Use of non-renewable secondary fuels; FW: Net use of fresh water.

WASTE. HWD: Hazardous waste disposed; NHWD: Non-hazardous waste disposed; RWD: Radioactive waste disposed.

OTHER OUTPUT FLOWS. CRU: Components for re-use; MFR: Materials for recycling; MER: Materials for energy recovery; EE-e: Exported energy (electricity); EE-t: Exported energy (thermal).

(1) The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.
(2) This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and

4 Contacts

EPD Program	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com
Third-Party Verifier	TECNALIA R&I CERTIFICACION S.L. Anardi, 5 20730 Azpeitia, Gipuzkoa (Spain)
EPD Owner	Celsa Steel UK Castle Works East Moor Road Cardiff CF24 5NN UK
EPD Author	ANTHESIS-LAVOLA Rambla Catalunya, 6, 2ª 08007 Barcelona (Spain)

1st Producer of Circular Steel *in Europe*

5 Program Information

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025 and the requirements given in the product category rules document for Construction Products and Construction Services (EN 15804) and the general program guidelines by The International EPD® System. The results shown in this EPD are based on the LCA for CELSA Steel UK products according to standard ISO 14044:2006.

This EPD is not comparative assertions and are either not comparable or have limited comparability when they cover different life cycle stages or are based on different Product Category Rules. EPDs of construction products may not be comparable if they do not comply with EN 15804. EPDs within the same product category but from different programmes may not be comparable. The EPD owner is responsible for its content, as well as to preserve supporting documentation during the period of validity that justifies the data and statements that are included.

EPD Program	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com - info@environdec.com
EPD registration number	S-P-07498
EPD owner	Celsa Steel UK Ltd. Castle Works, East Moors Road, Cardiff, CF24 5NN
Functional unit	1000 kg of hot rolled wire rod and reinforcing steel products
System boundaries	Cradle to gate with modules C1-C4 and module D
Published	2022 - 11 - 25
Valid until	2027 - 11- 23
Reference year for data	2021
Product group classification	UN CPC Code: 4124 - Bars and rods, hot-rolled, of iron or steel
Product Category Rules	PCR 2019:14 version 1.11 Construction products. Based on CEN standard EN 15804. ISO standard ISO 21930 and CEN standard EN 15804 serves as the core Product Category Rules (PCR)
PCR review was conducted by	The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact
Independent verification of the declaration and data, according to ISO 14025:2006	**X** External __ Internal **X** EPD verification __ EPD Process certification
Third-party verifier	Maria Feced. TECNALIA R&I CERTIFICACION S.L. Accredited by ENAC, nº 125/C-PR283
Procedure for follow-up during EPD validity involves third party verifier:	**X** Yes __ No

6 References

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