Statement of Verification

BREG EN EPD No: 000839 Issue: 01

This is to verify that the Environmental Product Declaration provided by:

Philip Grahame International Ltd

are in accordance with the requirements of:

EN 15804:2012+A2:2019

and

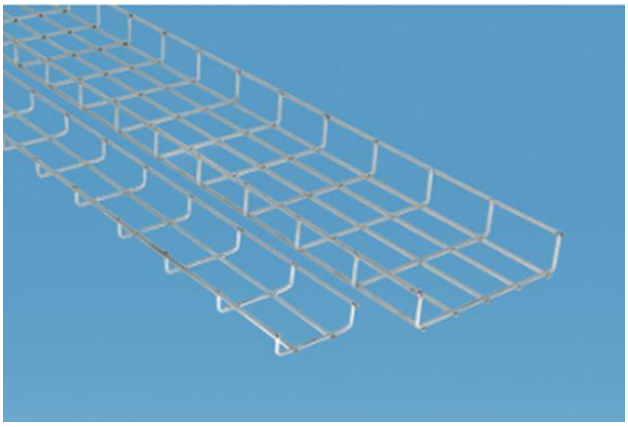
BRE Global Scheme Document SD207

This declaration is for:
1 kg of hot-dip pre-galvanised steel Cable Basket for the support and accommodation of cables, electrical equipment and communication systems of cables.

Company Address

Philip Grahame International Ltd
Unit 7 Lonebarn Link
Springfield Business Park
Chelmsford
CM2 5AR

PHILIP GRAHAME
Member of NIEDAX GROUP



Signed for BRE Global Limited

Emma Baker
Operator

13 August 2026	13 August 2026	12 August 2031
Date of this Issue	Date of First Issue	Expiry Date

BRE Global Verified EPD

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ECO PLATFORM EPD VERIFIED

Environmental Product Declaration

EPD Number: 000839

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE 2025 Product Category Rules (PN 514 Rev 3.2) for Type III environmental product declaration of construction products to EN 15804:2012+A2:2019
Commissioner of LCA study	**LCA consultant/Tool**
Philip Grahame International Ltd Unit 7 Lonebarn Link Springfield Business Park Chelmsford CM2 5AR	Francis Yu/ LINA A2
Declared/Functional Unit	**Applicability/Coverage**
1 kg of hot-dip pre-galvanised steel Cable Basket for the support and accommodation of cables, electrical equipment and communication systems of cables.	Product average.
EPD Type	**Background database**
Cradle to Gate with Module C and D	Ecoinvent 3.8

Demonstration of Verification
CEN standard EN 15804 serves as the core PCR [a]
Independent verification of the declaration and data according to EN ISO 14025:2010 ☒Internal ☐ External
(Where appropriate [b])Third party verifier: Kim Allbury
a: Product category rules b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4)

Comparability
Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A2:2019 for further guidance

Information modules covered

Product			Construction		Use stage							End-of-life					Benefits and loads beyond the system boundary
					Related to the building fabric					Related to the building							
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal		Reuse, Recovery and/or Recycling potential
☑	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☑	☑	☑		☑

Note: Ticks indicate the Information Modules declared.

Manufacturing site

F-27250 Rugles,
France

Processing site

Unit 7 Lonebarn Link,
Springfield Business Park,
Chelmsford,
CM2 5AR

Construction Product:

Product Description

In the electrical wiring of buildings, a cable basket system is used to support insulated electric cables used for power distribution and communication. Cable baskets are used as an alternative to open wiring or electrical conduit systems and are commonly used for cable management in commercial and industrial construction.

They are especially useful in situations where there is multiple dropouts required as cables can exit the basket between the wires.

Cable basket systems are designed for use as supports for cables and not as enclosures giving full mechanical protection. For this reason, double insulated cables are installed on cable baskets and typically fastened by cable ties.

The design of the Philip Grahame cable basket provides installers with total flexibility for fastening cables. The EPD is for 1 kg of pre-galvanised steel Cable Basket. This EPD includes all sizes of cable basket products available at Philip Grahame International Ltd. On a kg basis, all cable basket products are identical in terms of product composition and manufacturing process. There is no variance in the results on a kg basis for the different product variants.

The EPD covers the three basket tray types:

- Medium basket Tray
- Heavy basket tray
- Deep heavy basket tray.

Special finish versions (epoxy powder coated black/white) are excluded as are accessories (clamps / couplers / brackets / etc).

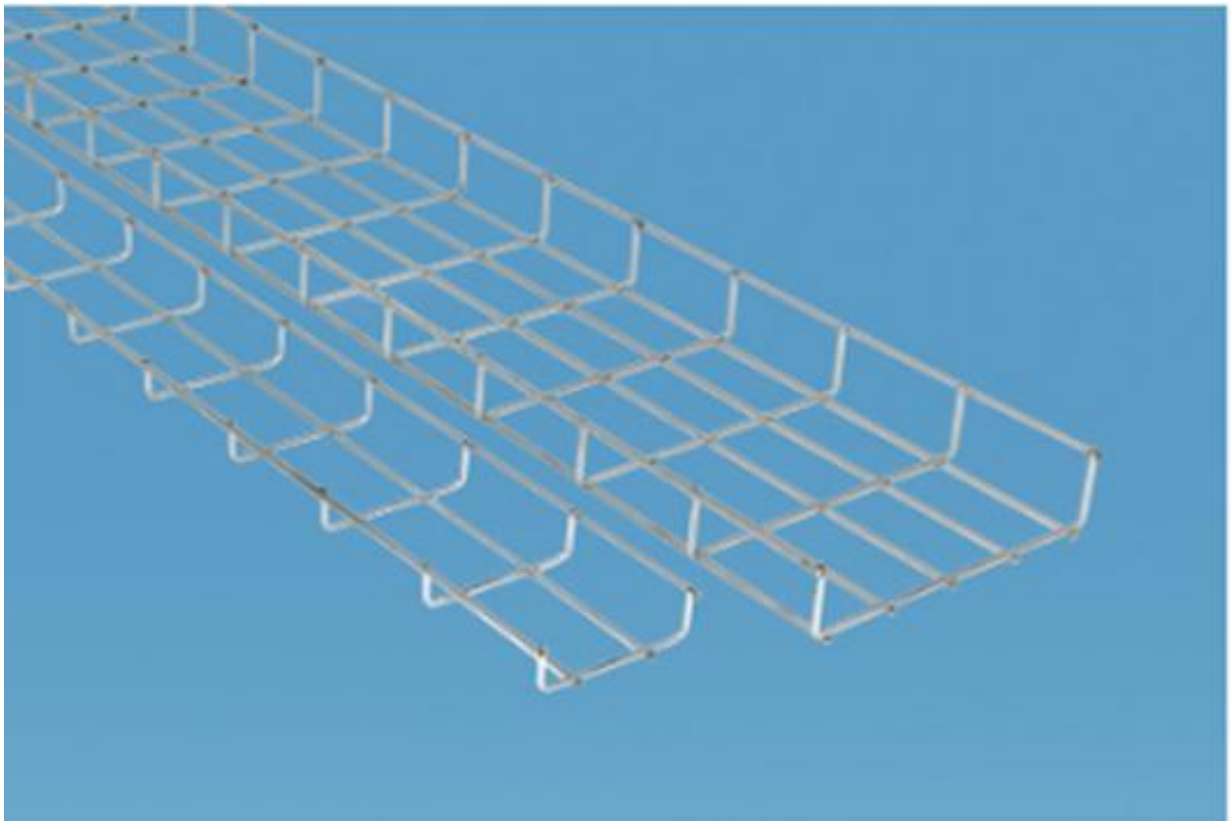
The specifications included in the EPD are as follows:

Cable Basket Sizes & Weights		
Product Code	**Product Size (mm)**	**Product Weight (Kg)**
WB30/100/G	100 x 30	1.66
WB30/150/G	150 x 30	2.11
WB30/200/G	200 x 30	2.56
WB30/300/G	300 x 30	3.46
WB55/50/G	50 x 55	1.66
WB55/100/G	100 x 55	2.11
WB55/150/G	150 x 55	2.56
WB55/200/G	200 x 55	3.81
WB55/300/G	300 x 55	4.95
WB55/400/G	400 x 55	6.08
WB55/450/G	450 x 55	6.65
WB55/500/G	500 x 55	7.22
WB55/600/G	600 x 55	8.36
WB105/100/G	100 x 105	3.81
WB105/150/G	150 x 105	3.46
WB105/200/G	200 x 105	4.95
WB105/300/G	300 x 105	6.08
WB105/400/G	400 x105	7.22
WB105/450/G	450 x 105	7.79
WB105/500/G	500 x 105	8.36
WB105/600/G	600 x 105	9.49

Technical Information

Property	Value, Unit
BS EN 61537:2007 Cable management. Cable tray systems and cable ladder systems	Conforms
Physical dimensions	All dimensions are measured in millimetres. Basket Tray is manufactured in 3m lengths.
Basket tray section	Basket Tray is constructed with a 100mm by 50mm grid pattern. The longitudinal wires run on the underside of the tray. Up to 200mm wide – 4.0mm Wire Diameter 300 to 600mm wide – 4.5mm Wire Diameter Basket Trays are manufactured with a sidewall height of 30mm, 55mm or 105mm.

Note: The technical information is gathered from the product specification document, please contact Philip Grahame for details, see https://philipgrahame.co.uk/



Main Product Contents

Material/Chemical Input	%
Steel Wire Rod (EAF)	98
Zinc	2

Manufacturing Process

Philip Grahame Cable Basket is manufactured from wire mesh panels supplied by a manufacturer in France.

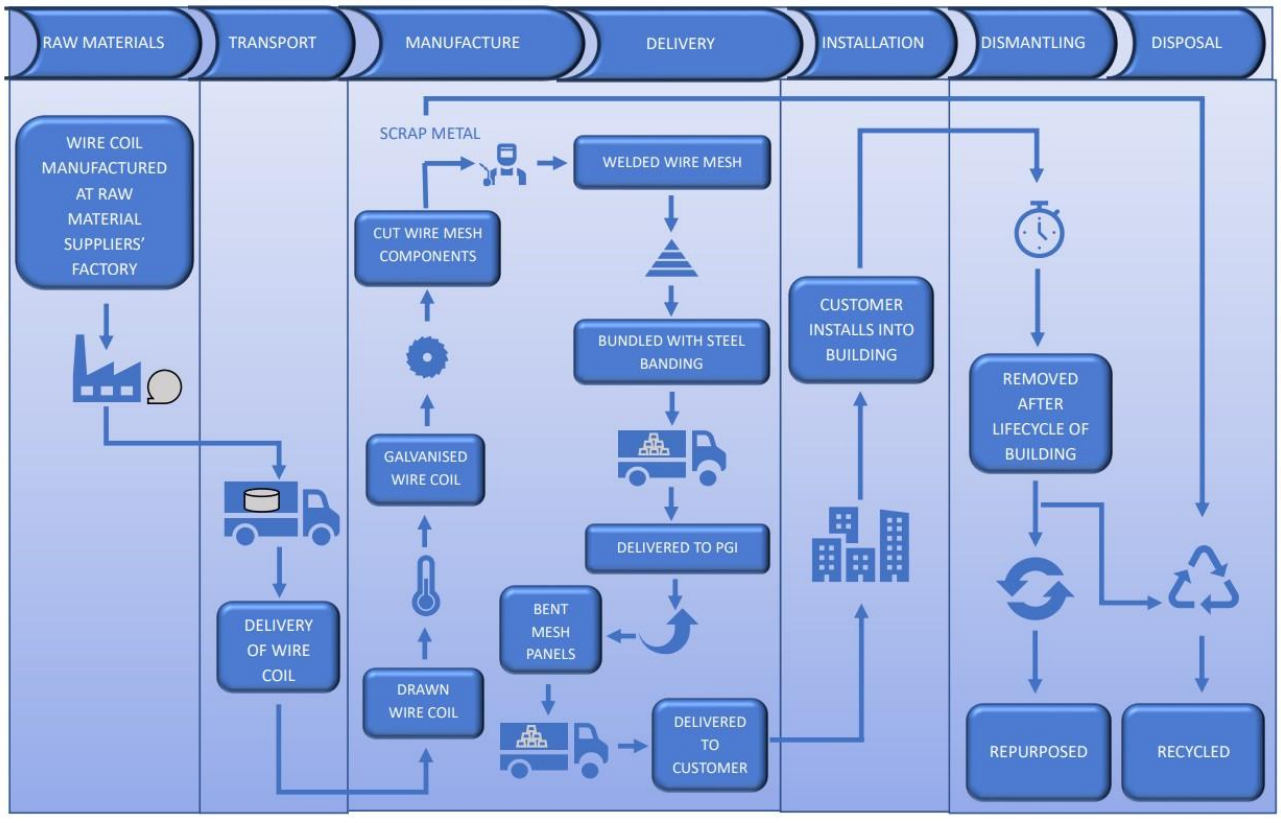
The French manufacturer uses wire rod supplied by ArcelorMittal (the supplier EPD is not used in the LCA as it uses a different database from ecoinvnent. Therefore, a bespoke ecoinvnent 3.8 dataset has been used for the LCA). The wire rod is transported to the French manufacturer by road, where it is then drawn to the precise size, and galvanised using a unique process. The galvanising process is controlled by BS EN 10244. The galvanised wire is then cut to length and welded together to create the mesh panel.

The mesh panel is then delivered to Philip Grahame International Ltd by road, where it is processed and bent to create a basket shape on a hydraulic press brake. The manufacturing facility is controlled by a BS EN ISO 9001 Quality management system along with a BS EN ISO 14001 Environmental management System.

The product received from France is packaged on wooden pallets and using steel strapping. The French manufacturer has already disclosed their waste from this. The packaging waste has been covered in the LCA. PGI do not reuse the packaging themselves, but the pallets were being collected for reuse by third party– therefore this has not been included as an additional waste stream.

Philip Grahame delivers direct to end users through their own fleet of vehicles. A FORS Silver accredited fleet of vehicles have the latest Euro classification engines to allow entry into inner-city low emission zones. There are 11 HGV and LGV vehicles so that the appropriate vehicle can be selected for any delivery route. All vehicles are equipped with satellite tracking and full vehicle telematics to ensure efficient route planning and also to monitor driving standards. A multi-drop delivery service is operated so that the environmental impact can be reduced for each delivery.

Process flow diagram



Construction Installation

Basket Tray lengths can be joined using either standard Joint Clamps or with Quick-Couplers. Earth Braids can be supplied for additional earthing. Site manufactured fittings can be made using Joint Clamps, Fixing Clamps and Joint Strips. Other accessories are available for particular installation requirements. These can be seen on page 35 to 38 of our Cable Containment Systems Catalogue which is also available online at www.philipgrahame.co.uk.
Module A5 is not measured in this EPD as it's not a part of the scope.

Use Information

Under normal conditions of use the product requires no servicing or maintenance throughout the life of the product. Module B is not measured in this EPD as it's not a part of the scope.

End of Life

Cable Basket installations are essentially a kit of parts and can easily be dismantled and reused. Bolted connections allow components to be removed in prime condition and easily reused. It means that parts of Cable Basket installations can be continually reused, when this is not possible, they can easily be recycled. Steel product that requires no pre-processing to meet its end-of-life state. Industrial average end-of-life data of steel waste has been used according to BRE PCR PN 514 Rev 3.2, i.e. 95% of waste to recycling, 5% of waste to landfill.

Life Cycle Assessment Calculation Rules

Declared / Functional unit description

1 kg of hot-dip pre-galvanised steel Cable Basket for the support and accommodation of cables, electrical equipment and communication systems of cables.

System boundary

This is a cradle-to-gate with module C&D LCA, reporting all production life cycle stages of modules A1 to A3 and end-of-life stages C1-C4 and D. This LCA has been assessed in accordance with the modular approach as defined in EN15804:2012+A2:2019 and BRE Product Category Rules (PN 514 Rev 3.2).

A1 – Raw materials: raw materials used to manufacture the cable basket in France.
A2 – Transport: raw materials transport to the French factory, and transport of the product from France to the UK for processing.
A3 – Manufacturing: energy used at the French manufacturing site to produce the cable basket, and energy used at the UK site for further processing.

Data sources, quality and allocation

Specific primary data derived from Philip Grahame's production process at the manufacturing facility F-27250 Rugles, France and the processing facility Unit 7 Lonebarn Link, Springfield Business Park, Chelmsford, CM2 5AR, has been modelled using the LINA A2 LCA and the ecoinvent 3.8 database. In accordance with the requirements of EN15804:2012 + A2:2019, the most current available data has been used. The manufacturer-specific data from Philip Grahame covers a period of one year (01/01/2024 – 31/12/2024). Secondary data has been obtained for all other upstream and downstream processes that are beyond the control of the manufacturer (i.e., raw material production) from the ecoinvent 3.8 database. All ecoinvent datasets are complete within the context used and conformed to the system boundary and the criteria for the exclusion of inputs and outputs, according to the requirements specified in EN15804:2012+A2:2019.

This LCA is for 1kg of pre-galvanised steel cable basket. The site manufactures other products in addition to pre-galvanised steel cable basket, and the EPD product accounts for 1.2% by mass of the whole-site production. The data of electricity, gas and production waste at the manufacturing site in France has been taken from actual measurement. In addition, the same 1.2% mass allocation has been used to calculate non-production waste, water usage and discharge for the manufacturing site in France, according to the provisions of the BRE PCR PN514 Rev 3.2 and EN 15804:2012+A2:2019. Allocation by sales in kg has been used to calculate energy, water usage and discharge for the processing site in the UK, according to the provisions of the BRE PCR PN514 Rev 3.2 and EN 15804:2012+A2:2019. Site wide values for energy, water and wastewater have been taken from bills. Production waste consists of pieces cut from the steel and the actual amount of waste generated is recorded. Total non-production waste is estimated and allocated by mass to the basket product.

EN 15804+A2, Annex E (table E.1) has been used to assess the data quality of relevant data:

Quality Level	Geographical representativeness	Technical representativeness	Time representativeness
Very Good	Data from area under study.	Data from processes and products under study. Same state of technology applied as defined in goal and scope (i.e. identical technology).	Less than 3 years difference between the reference year according to the documentation, and the time period for which data are representative.

Specific French and UK datasets have been selected from the ecoinvent LCI for this LCA. The quality level of geographical and technical representativeness is therefore very good. The quality level of time representativeness is very good as the background LCI datasets are based on ecoinvent v3.8 which was

compiled in 2021. Therefore, there is less than 3 years between the ecoinvent LCI reference year and the time period for which the LCA was undertaken.

Location -based approach has been used for the electricity.
French consumption mix (2021) was used for electricity with an emissions factor of 0.082 kgCO2e/kWh.
EU Natural gas data (at industrial furnace) was used with an emissions factor of 0.256 kgCO2eq/kWh.
UK consumption mix (2022) was used for electricity with an emissions factor of 0.239 kgCO2e/kWh.

Cut-off criteria

A cut-off approach by EN 15804+A2 has been used in the EPD, and the characterisation factors are based on Annex C of EN15804 Standard. All processes associated with the manufacturing of the product have been included. All inputs of raw materials, packaging, ancillaries, transport, energy, water use/discharge and waste have been included. The manufacturing process does not create any significant direct emissions to air, water or soil, therefore, these are not measured. Upstream extraction and /or processing of inputs are included within the use of the background datasets within LINA.

LCA Results - 1 kg of pre-galvanised steel Cable Basket for the support and accommodation of cables, electrical equipment and communication systems of cables.

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CO_2 eq	kg CFC11 eq	mol H^+ eq	kg $(PO_4)^{3-}$ eq
Product stage	Raw material supply	A1	1.15E+00	1.12E+00	2.99E-02	9.99E-04	5.46E-08	4.74E-03	6.17E-04
	Transport	A2	1.74E-01	1.74E-01	1.48E-04	6.83E-05	4.03E-08	7.06E-04	1.12E-05
	Manufacturing	A3	1.82E-01	1.44E-01	3.41E-02	1.08E-04	1.29E-08	5.65E-04	3.92E-05
	Total (Consumption grid)	A1-3	1.50E+00	1.43E+00	6.42E-02	1.17E-03	1.08E-07	6.01E-03	6.68E-04
95% to recycling, 5% to landfill Scenario									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.06E-02	3.06E-02	2.61E-05	1.20E-05	7.08E-09	1.24E-04	1.97E-06
	Waste processing	C3	5.47E-02	5.47E-02	1.93E-05	5.46E-06	1.17E-08	5.68E-04	1.69E-06
	Disposal	C4	2.64E-04	2.63E-04	2.61E-07	2.49E-07	1.07E-10	2.48E-06	2.41E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.15E-01	-5.17E-01	1.62E-03	-1.46E-04	-2.06E-08	-1.88E-03	-2.04E-04

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
GWP-biogenic = Global warming potential, biogenic;
GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;
AP = Acidification potential, accumulated exceedance; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts									
			EP-marine	EP-terrestrial	POCP	ADP-mineral& metals	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m^3 world eq deprived	disease incidence
Product stage	Raw material supply	A1	1.06E-03	1.08E-02	4.41E-03	2.70E-05	1.36E+01	3.75E-01	8.88E-08
	Transport	A2	2.13E-04	2.32E-03	7.12E-04	6.05E-07	2.63E+00	1.18E-02	1.50E-08
	Manufacturing	A3	2.83E-04	1.53E-03	5.34E-04	9.19E-07	7.17E+00	8.15E-02	8.93E-09
	Total (Consumption grid)	A1-3	1.55E-03	1.47E-02	5.65E-03	2.85E-05	2.34E+01	4.68E-01	1.13E-07
95% to recycling, 5% to landfill Scenario									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.74E-05	4.09E-04	1.25E-04	1.06E-07	4.62E-01	2.08E-03	2.64E-09
	Waste processing	C3	2.52E-04	2.76E-03	7.58E-04	2.81E-08	7.50E-01	1.73E-03	1.52E-08
	Disposal	C4	8.61E-07	9.42E-06	2.74E-06	6.01E-10	7.35E-03	3.37E-04	4.99E-11
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.45E-04	-4.72E-03	-2.60E-03	-3.90E-07	-5.23E+00	-3.71E-02	-3.46E-08

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts							
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U^{235} eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.68E-01	3.60E+01	3.05E-08	3.17E-08	3.19E+00
	Transport	A2	1.35E-02	2.05E+00	6.65E-11	2.15E-09	1.81E+00
	Manufacturing	A3	2.78E-01	3.49E+00	4.00E-10	2.22E-09	3.10E+00
	Total (Consumption grid)	A1-3	4.60E-01	4.16E+01	3.10E-08	3.61E-08	8.10E+00
95% to recycling, 5% to landfill Scenario							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.38E-03	3.61E-01	1.17E-11	3.78E-10	3.18E-01
	Waste processing	C3	3.38E-03	4.39E-01	1.70E-11	3.18E-10	9.55E-02
	Disposal	C4	3.27E-05	4.64E-03	1.18E-13	3.05E-12	1.54E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-9.25E-03	-1.55E+01	-2.76E-09	-1.06E-08	-1.02E+00

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, primary energy								
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	1.12E+00	0.00E+00	1.12E+00	8.21E+00	0.00E+00	8.21E+00
	Transport	A2	3.71E-02	0.00E+00	3.71E-02	2.58E+00	0.00E+00	2.58E+00
	Manufacturing	A3	2.59E-01	7.84E-01	1.04E+00	7.02E+00	3.61E-01	7.38E+00
	Total (Consumption grid)	A1-3	1.41E+00	7.84E-01	2.20E+00	1.78E+01	3.61E-01	1.82E+01
95% to recycling, 5% to landfill Scenario								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	6.51E-03	0.00E+00	6.51E-03	4.54E-01	0.00E+00	4.54E-01
	Waste processing	C3	4.20E-03	0.00E+00	4.20E-03	7.36E-01	0.00E+00	7.36E-01
	Disposal	C4	6.27E-05	0.00E+00	6.27E-05	7.22E-03	0.00E+00	7.22E-03
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.08E-01	0.00E+00	-1.08E-01	-5.18E+00	0.00E+00	-5.18E+00

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;
PERM = Use of renewable primary energy resources used as raw materials;
PERT = Total use of renewable primary energy resources;
PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;
PENRM = Use of non-renewable primary energy resources used as raw materials;
PENRT = Total use of non-renewable primary energy resource

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	6.88E-01	3.78E-05	0.00E+00	1.21E-02
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	2.93E-04
	Manufacturing	A3	8.25E-03	6.11E-07	0.00E+00	2.32E-03
	Total (Consumption grid)	A1-3	6.96E-01	3.84E-05	0.00E+00	1.47E-02
95% to recycling, 5% to landfill Scenario						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	5.15E-05
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	4.28E-05
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	7.88E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-9.00E-04

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	4.58E-01	2.57E+00	5.40E-05
	Transport	A2	2.90E-03	5.15E-02	1.78E-05
	Manufacturing	A3	1.86E-02	2.27E-01	8.13E-05
	Total (Consumption grid)	A1-3	4.80E-01	2.85E+00	1.53E-04
95% to recycling, 5% to landfill Scenario					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	5.10E-04	9.05E-03	3.13E-06
	Waste processing	C3	9.88E-04	6.92E-03	5.18E-06
	Disposal	C4	7.65E-06	1.08E-04	4.82E-08
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.77E-02	-9.82E-01	-5.54E-06

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed

LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing output flows – at end of life								
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
			kg	kg	kg	MJ per energy carrier	kg C	kg C
Product stage	Raw material supply	A1	0.00E+00	9.02E-05	2.79E-07	4.64E-02	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	1.06E-05	4.56E-09	4.87E-04	0.00E+00	8.45E-03
	Total (Consumption grid)	A1-3	0.00E+00	1.01E-04	2.84E-07	4.69E-02	0.00E+00	8.45E-03
95% to recycling, 5% to landfill Scenario								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;
MFR = Materials for recycling

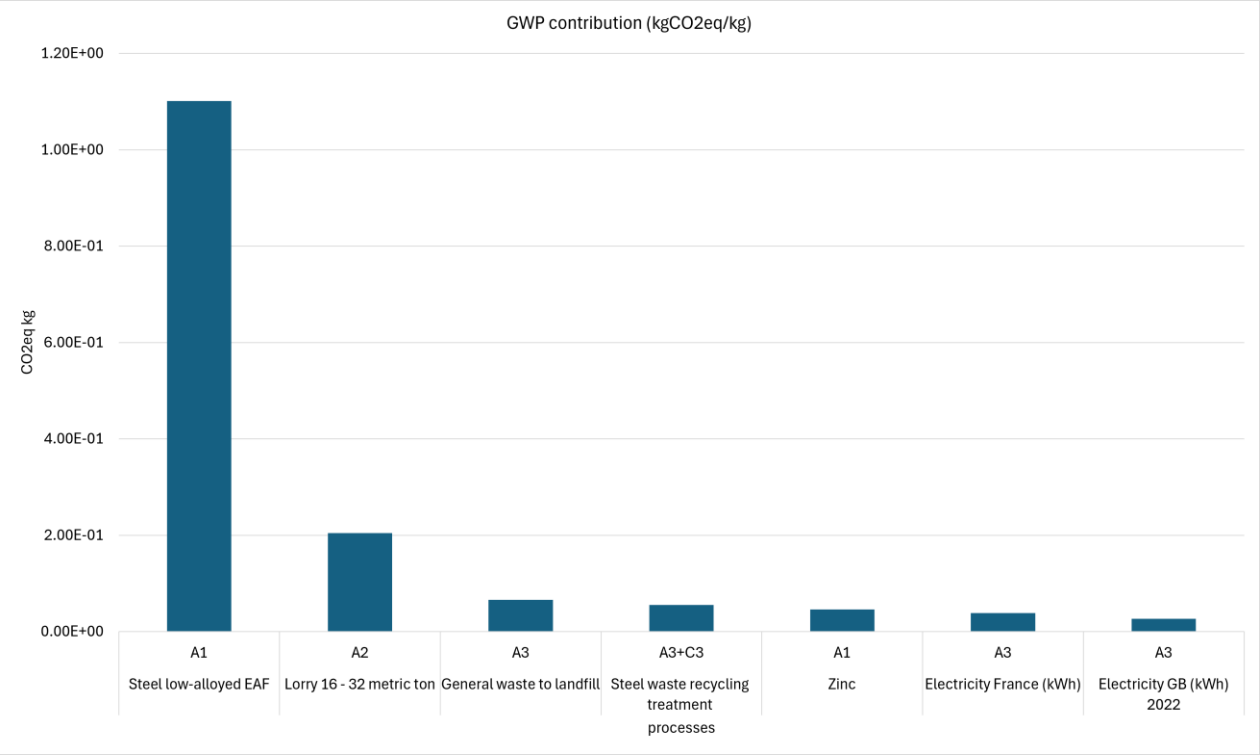
MER = Materials for energy recovery;
EE = Exported Energy

Scenarios and additional technical information

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
C1 – Deconstruction	Cable Basket installations are essentially a kit of parts and can easily be dismantled and reused. Bolted connections allow components to be removed in prime condition and easily reused. It means that parts of Cable Basket installations can be continually reused, when this is not possible, they can easily be recycled due to the material used. 100% recovery rate has been assumed for the waste product from the demolition site.		
C2 – Transport from site to pre-processing facility or landfill	184km by road has been modelled for module C2 as a typical distance from the demolition site to factory.		
	Diesel/ 16-32 t lorry	kg/km	0.3
	Distance	km	184
C3 - Pre-processing of uninstalled product	Cable Basket produced by Philip Grahame is made entirely of 100% galvanised steel. An industrial average end-of-life scenario of steel waste has been used according to BRE PCR PN 514 Rev 3.2, i.e. 95% of steel waste to recycling. Pre-processing has not been included in Module C3 because it is assumed to be very small and effectively negligible.		
	95% of steel goes waste to recycling	kg	0.95
C4 - Disposal	An industrial average end-of-life scenario of steel waste has been used according to BRE PCR PN 514 Rev 3.2, i.e. 5% of steel waste to landfill.		
	5% of steel goes waste to landfill	kg	0.05
Module D	Benefits and loads beyond the system boundary (Module D) accounts for the environmental benefits and loads resulting from the steel that is used as a raw material in steel making process via EAF and that is collected for recycling at end of life. These benefits and loads are calculated by excluding the pre-existing recycled steel that is used in the primary process. At the end of life, 95% of the product (i.e. 0.95kg) will be recycled, 5% will have lost due to wear. In order to calculate the benefits of the product at Module D, the pre-existing recycled content will be excluded, and the benefits will be calculated for virgin steel. According to the supplier EPD for steel, 67.8% of recycled content is included in the raw material. As the supplier cannot be directly used due to different database, a bespoke dataset for EAF steel with 67.8% of recycled content has been created. Therefore, 32.2% of the virgin material can be considered as Benefits and Loads Beyond the System Boundary. Consequently, 0.95*32.2%=0.3059kg per declared unit of the product will be claimed for benefits from recycling.		
	Benefits due to steel waste to recycling	kg	0.3059

Interpretation

Out of the total mass of input materials, galvanised steel represents 100% of the total input raw materials (steel from EAF 98% + zinc 2%). The bulk of the environmental impacts and primary energy demand are attributed to the manufacturing phase, covered by information modules A1-A3 of EN15804:2012+A2:2019. As a result, steel production contributes the most on GWP and overall environmental impacts.



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