Statement of Verification

BREG EN EPD No: 000795 Issue: 01

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

Doby Cleats Ltd TA Doby Verrolec

are in accordance with the requirements of:

EN 15804:2012+A2:2019

and

BRE Global Scheme Document SD207

This declaration is for:
1 unit of Channel Profile DS258 (slotted) weighing 4.68kg at a length of 3m

Company Address

Doby Cleats Ltd TA Doby Verrolec
Harelaw Industrial Est,
Annfield Plain,
DH9 8UJ

Hayley Thomson
Signed for BRE Global Limited — Operator

11 May 2026	11 May 2026	10 May 2031
Date of this Issue	Date of First Issue	Expiry Date

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Environmental Product Declaration

EPD Number: 000795

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE Environmental Profiles 2025 Product Category Rules for Type III environmental product declaration of construction products to EN 15804+A2 PN 514 Rev 3.2
Commissioner of LCA study	**LCA consultant/Tool**
Doby Cleats Ltd TA Doby Verrolec	Anthony Harrison/BRE LINA A2
Declared/Functional Unit	**Applicability/Coverage**
1 unit of Channel Profile DS258 (slotted) weighing 4.68kg at a length of 3m	Product Specific.
EPD Type	**Background database**
Cradle to Gate with options	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: Bala Subramanian
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(s)

Doby Cleats Ltd TA Doby Verrolec
Harelaw Industrial Est, Annfield Plain
DH9 8UJ

Construction Product:

Product Description

Doby Verrolec channel profiles provide reliable support for HVAC systems, electrical installations, and structural frameworks. The channel profile DS258 is manufactured from pre-galvanised mild steel in accordance with BS EN 10346:2015 DX51D +Z275 MAC. No additional treatment is required. The section can be supplied with pre-formed close pitch slots, removing the need for on-site drilling. Heavy gauge versions are produced with slot at the end of each length. Although multiple versions of the product are manufactured to cater to client-specific requirements, this LCA study is specific for Channel Profile DS258 (slotted) weighing 4.68kg at a length of 3m and does not include any other variations.

The profile conforms to BS EN 6946:1988 specification for metal channel cable support systems for electrical installations. Standard fittings and fastenings are available for use with this channel.

Technical Information

Property	Value, Unit
Channel dimensions	40x40mm
Gauge	1.5mm
Weight per metre	1.56 Kg
Finish	Slotted
Length	3m
British Standard steel grade and coating specification	BS EN 10346:2015 DX51D +Z275 MAC

*The data above has been sourced from Doby Cleats Ltd TA Doby Verrolec' s Website: https://www.dobyverrolec.com/en/products/suspension-systems/channel-profiles

Main Product Contents

Material/Chemical Input	%
Galvanised steel	100%

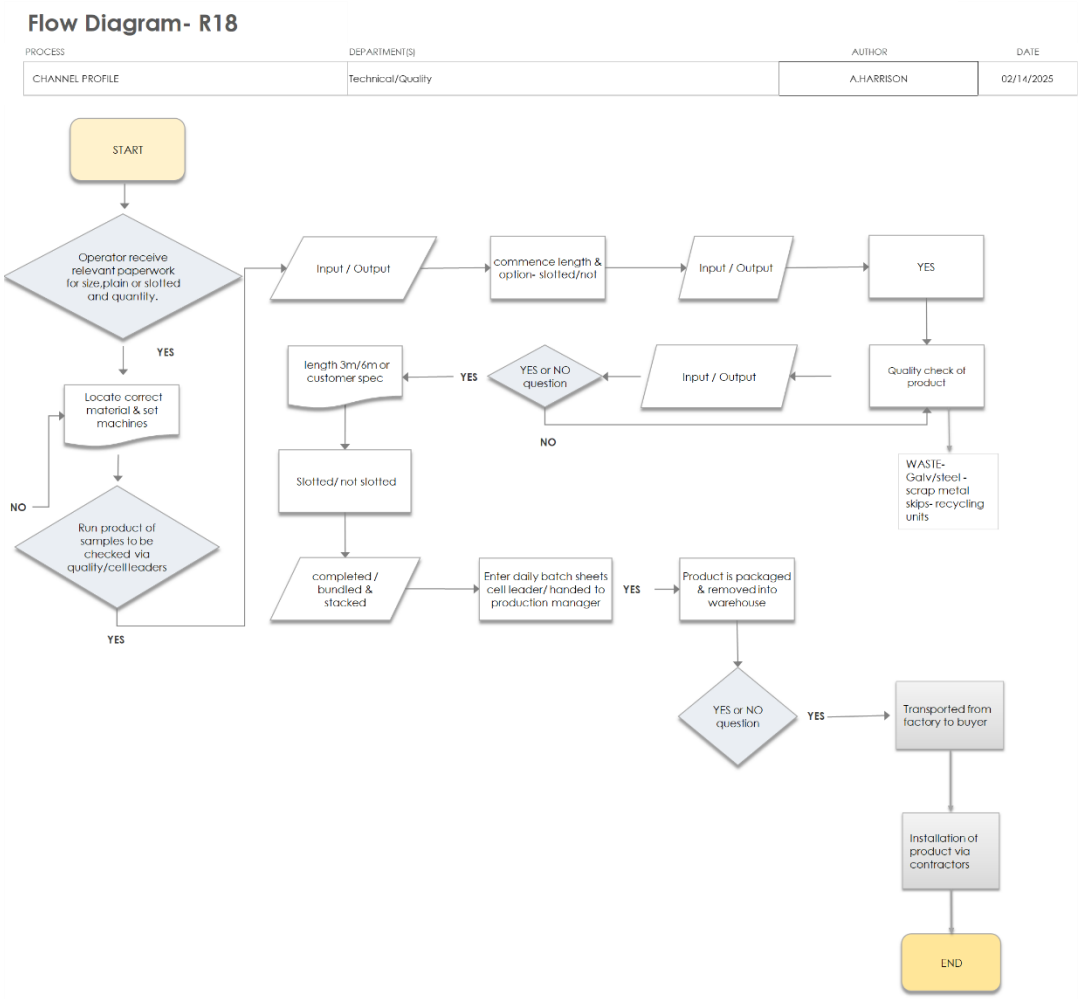
*The data above has been sourced from Doby Cleats Ltd TA Doby Verrolec' s brochure: https://www.dobyverrolec.com/client/files/Channel_brochure_30NOV221.pdf

Manufacturing Process

The correct thickness of rolls of mild galvanised steel coated to Z275 are set up on a de-coiler in which the steel is unrolled and passed through the lever rolls which in turn feeds the metal strip, now uncoiled, into the press in which, depending on the set up decided, will punch slotted holes out or leave plain. After the press, the metal will pass through the pits and onto the roll forming machine where it will be shaped by passing through a series of rolls in which it will run through onto a drop table. A shear will then cut the channel at its required length as it passes through (either 3m or 6m). This will then, as previously mentioned, drop down on to the drop table and be stacked and bundled, labelled, and will be put on the bundle stating the profile name and length. After this process, the waste produced is sent to a recycling facility.

The manufacturing process relies on grid electricity to power machinery (such as rollers, brake press, and drilling units) and natural gas for thermal energy needs during certain forming and processing stages.

Process flow diagram



Construction Installation

Once the product has been built at the factory, wooden chocks are used to stack and transport the product to site. There is no product waste during installation, as the channel profiles are manufactured to the required size (e.g., 3 m or 6 m) and delivered ready for installation without adjustment. Wooden chocks are returned to Doby Verrolec, where they are assessed for reuse in future deliveries. Chocks that have reached the end of their service life and are no longer usable are sent for recycling. For the assessment, wooden chock waste is calculated based on the total quantity supplied per declared unit, with end-of-life treatment accounted for as wood waste sent to recycling in modules A3/A5 for the biogenic carbon balance, and The bulk density of transport products is calculated by dividing the total mass of the transported products by the total transport volume they occupy per declared unit, representing the packing efficiency during transportation.

The channel profile requires simple standard fittings and fastenings to be secured to walls, ceilings, or other structures, depending on the needs of the job. The necessary equipment typically consists of a handheld drill for the fixings, or alternatively a screwdriver, depending on the installer's preference. Therefore, no ancillary materials are declared.

End of Life

Deconstruction of the product depends upon how the channel profile is attached to the support for HVAC systems, electrical installations, and structural frameworks.

The channel profile can be dismantled through the simple removal of fastenings or fixings. It is assumed that a handheld drill or screwdriver would be used for removing the fixings; hence, no significant energy or water use and no emissions are expected during the dismantling process.

The channel profile itself is made from Galvanised steel (M.S) with Z275 coating and should be sent to a metal recycling unit in a nearby area located to where product has been dismantled from the building. This is on the discretion of the owners/contractors doing the decommission. The end-of-life scenario is taken from industrial average's according to BRE's PCR PN514 v3.2. For structural steel hot rolled, 95% of steel is recycled and 5% is landfilled.

Life Cycle Assessment Calculation Rules

Declared / Functional unit description

1 unit of Channel Profile DS258 (slotted) weighing 4.68kg at a length of 3m

System boundary

In accordance with the modular approach as defined in EN15804:2012+A2:2019 and the BRE 2025 Product Category Rules (PN 514 Rev 3.2), this cradle-to-gate with options & modules C and D EPD includes the processes covered during the raw material extraction and manufacturing phase in modules A1 to A3, Construction modules (A4-A5), the End-of-Life scenarios in modules C1,C2,C3,C4 and the Benefits and load beyond the system boundary (module D) .

Data sources, quality and allocation

Specific primary data derived from Doby Verrolec Ltd have been modelled using LINA A2 software for the period 1st January 2023 to 1st January 2024. In accordance with the requirements of EN15804, the most current available data have been used. Secondary data have been obtained for all remaining upstream and downstream processes that are beyond the control of the manufacturer from the ecoinvent 3.8 database. All ecoinvent datasets are complete within the context used and conform to the system boundary and the criteria for the exclusion of inputs and outputs, according to the requirements specified in EN15804+A2:2019.
The 1-unit Channel Profile DS258 3m are not the only products manufactured at the Doby Verrolec Ltd factory. Therefore, a unit-based allocation of site process data has been carried out, as production is recorded per manufactured item. This determines the proportion of energy, water, waste, and packaging attributable to the production of Channel Profile DS258 (3 m), representing 0.33% of the site's total production. Doby Verrolec Ltd manufacture the Channel Profile DS258 in 3 and 6 metre lengths, with slotted and un-slotted options. For this LCA, the 3-metre slotted product has been selected, and the results are representative for this specific product. The mass balance for the Channel Profile DS258 was within tolerance, and no uplift of the input materials was required to cover production output and waste. However, it should be noted that a precise galvanised steel input material quantity for this specific product and style could not be obtained, so it has been calculated by summing the measured production output figure and measured production wastage figure.

Where specific datasets were not available, appropriate proxy datasets have been applied; in this instance, waste wood has been modelled using a modified proxy dataset, combining a transport dataset with biogenic emissions from an incineration dataset to ensure appropriate representation of biogenic carbon flows.

ISO14044 guidance. **Quality Level**	**Geographical representativeness**	**Technical representativeness**	**Time representativeness**
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).	There is less than 3 years between the Ecoinvent v3.8 (2021) LCI reference year, and the time-period for which the LCA was undertaken.

The quality level of geography, time and technological representativeness is Good as specific UK datasets have been selected from the ecoinvent LCI, and the background LCI datasets are from ecoinvent v3.8 which was compiled in 2021. Therefore, the most appropriate LCA data have been used. Location-based approach has been used for electricity in both modelling and results.

The GWP of the electricity dataset used for this EPD is: 1 kWh UK electricity = 2.39E-01 kgCO2eq (Electricity GB (kWh) market for electricity, medium voltage).

The GWP of the natural gas dataset used for this EPD is: 1 kWh UK natural gas = 2.32E-01 kgCO2eq (Natural gas, at industrial furnace kWh, GB).

Data quality has been assessed in accordance with Table E.2 of EN 15804+A2, Annex E. The Life Cycle Assessment (LCA) has been carried out in accordance with EN 15804+A2, applying the cut-off approach as defined within the standard. Characterisation factors have been applied in line with Annex C (Table C.1) of EN 15804+A2.

Cut-off criteria

All raw material, packaging and energy inputs to the manufacturing process and waste have been included, except for direct emissions to air, water, and soil, which are not measured. A precise galvanised steel input material quantity for this specific product and style could not be obtained, so it has been calculated by summing the measured production output figure and measured production wastage figure. The shear blade is used for cutting and accommodates all sizes. It is considered part of the manufacturing equipment and is not routinely replaced (only repaired or replaced if damaged and refurbished in-house); therefore, considered negligible and excluded from the system boundary under cut-off criteria.

LCA Results

(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	1.19E+01	1.18E+01	4.69E-02	1.12E-02	6.71E-07	1.55E-01	5.75E-03
	Transport	A2	1.80E-01	1.80E-01	1.53E-04	7.06E-05	4.16E-08	7.29E-04	1.16E-05
	Manufacturing	A3	7.51E-03	3.27E-02	-2.53E-02	3.78E-05	4.47E-09	1.24E-04	3.55E-06
	Total (Consumption grid)	A1-3	1.21E+01	1.20E+01	2.18E-02	1.13E-02	7.17E-07	1.56E-01	5.76E-03
Construction process stage	Transport	A4	3.89E-02	3.89E-02	3.32E-05	1.53E-05	9.00E-09	1.58E-04	2.51E-06
	Construction	A5	3.25E-02	3.65E-04	3.21E-02	4.44E-07	3.16E-11	7.67E-06	2.89E-07
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	3.89E-02	3.89E-02	3.32E-05	1.53E-05	9.00E-09	1.58E-04	2.51E-06
	Waste processing	C3	2.56E-01	2.56E-01	9.03E-05	2.55E-05	5.47E-08	2.66E-03	7.93E-06
	Disposal	C4	1.23E-03	1.23E-03	1.22E-06	1.16E-06	4.99E-10	1.16E-05	1.13E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.67E+00	-4.68E+00	1.47E-02	-1.33E-03	-1.87E-07	-1.70E-02	-1.85E-03

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	1.60E-02	5.73E-01	5.30E-02	4.47E-04	1.32E+02	5.87E+00	1.91E-06
	Transport	A2	2.20E-04	2.40E-03	7.35E-04	6.25E-07	2.72E+00	1.22E-02	1.55E-08
	Manufacturing	A3	4.59E-05	4.99E-04	1.46E-04	1.11E-07	6.45E-01	5.35E-03	2.57E-09
	Total (Consumption grid)	A1 -3	1.63E-02	5.75E-01	5.38E-02	4.48E-04	1.35E+02	5.89E+00	1.93E-06
Construction process stage	Transport	A4	4.75E-05	5.20E-04	1.59E-04	1.35E-07	5.88E-01	2.65E-03	3.36E-09
	Construction	A5	3.54E-06	3.80E-05	9.95E-06	1.18E-09	5.45E-03	5.74E-04	5.80E-11
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	4.75E-05	5.20E-04	1.59E-04	1.35E-07	5.88E-01	2.65E-03	3.36E-09
	Waste processing	C3	1.18E-03	1.29E-02	3.55E-03	1.32E-07	3.51E+00	8.11E-03	7.13E-08
	Disposal	C4	4.03E-06	4.41E-05	1.28E-05	2.81E-09	3.44E-02	1.58E-03	2.33E-10
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.03E-03	-4.27E-02	-2.35E-02	-3.53E-06	-4.73E+01	-3.36E-01	-3.13E-07

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	6.92E-01	4.72E+02	8.55E-08	4.61E-07	4.26E+01
	Transport	A2	1.40E-02	2.12E+00	6.87E-11	2.22E-09	1.87E+00
	Manufacturing	A3	1.04E-02	3.12E-01	4.08E-11	2.41E-10	2.41E+00
	Total (Consumption grid)	A1-3	7.16E-01	4.75E+02	8.56E-08	4.63E-07	4.68E+01
Construction process stage	Transport	A4	3.02E-03	4.59E-01	1.49E-11	4.81E-10	4.04E-01
	Construction	A5	9.90E-05	6.62E-03	6.63E-12	2.07E-11	1.15E-03
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	3.02E-03	4.59E-01	1.49E-11	4.81E-10	4.04E-01
	Waste processing	C3	1.58E-02	2.05E+00	7.95E-11	1.49E-09	4.47E-01
	Disposal	C4	1.53E-04	2.17E-02	5.52E-13	1.43E-11	7.22E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-8.38E-02	-1.40E+02	-2.50E-08	-9.62E-08	-9.24E+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	1.16E+01	0.00E+00	1.16E+01	1.30E+02	0.00E+00	1.30E+02
	Transport	A2	3.83E-02	0.00E+00	3.83E-02	2.67E+00	0.00E+00	2.67E+00
	Manufacturing	A3	2.43E-01	2.52E-01	4.95E-01	7.25E-01	7.65E-03	7.33E-01
	Total (Consumption grid)	A1-3	1.19E+01	2.52E-01	1.21E+01	1.34E+02	7.65E-03	1.34E+02
Construction process stage	Transport	A4	8.28E-03	0.00E+00	8.28E-03	5.77E-01	0.00E+00	5.77E-01
	Construction	A5	-2.80E-01	2.80E-01	6.00E-05	2.62E-03	0.00E+00	2.62E-03
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	8.28E-03	0.00E+00	8.28E-03	5.77E-01	0.00E+00	5.77E-01
	Waste processing	C3	1.97E-02	0.00E+00	1.97E-02	3.44E+00	0.00E+00	3.44E+00
	Disposal	C4	2.93E-04	0.00E+00	2.93E-04	3.38E-02	0.00E+00	3.38E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-9.74E-01	0.00E+00	-9.74E-01	-4.69E+01	0.00E+00	-4.69E+01

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	1.81E+00	0.00E+00	0.00E+00	1.45E-01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	3.03E-04
	Manufacturing	A3	9.70E-04	2.43E-07	0.00E+00	1.73E-04
	Total (Consumption grid)	A1-3	1.81E+00	2.43E-07	0.00E+00	1.45E-01
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	6.55E-05
	Construction	A5	0.00E+00	0.00E+00	0.00E+00	1.37E-05
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	6.55E-05
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	2.00E-04
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	3.69E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-8.15E-03

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	4.20E+00	2.11E+01	3.01E-04
	Transport	A2	2.99E-03	5.32E-02	1.84E-05
	Manufacturing	A3	8.78E-04	1.56E-02	3.37E-06
	Total (Consumption grid)	A1-3	4.20E+00	2.11E+01	3.23E-04
Construction process stage	Transport	A4	6.48E-04	1.15E-02	3.98E-06
	Construction	A5	1.15E-04	2.04E-02	4.82E-09
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	6.48E-04	1.15E-02	3.98E-06
	Waste processing	C3	4.62E-03	3.24E-02	2.42E-05
	Disposal	C4	3.58E-05	5.05E-04	2.26E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-4.32E-01	-8.89E+00	-5.01E-05

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	0.00E+00	0.00E+00	0.00E+00	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	4.21E-06	1.80E-09	1.94E-04	0.00E+00	7.84E-03
	Total (Consumption grid)	A1-3	0.00E+00	4.21E-06	1.80E-09	1.94E-04	0.00E+00	7.84E-03
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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

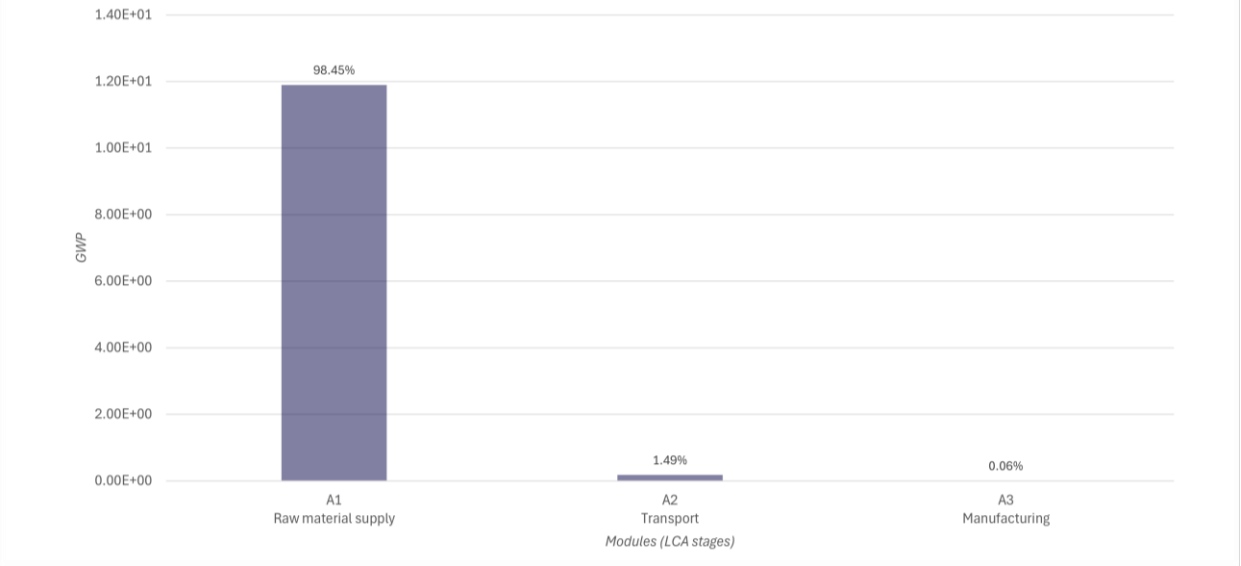
Scenarios and additional technical information

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
A4 – Transport to the building site	Lorry 16-32 ton - transports the product (Channel Profile DS258) via local haulage companies in which they transport the product along with other made products from Doby Verrolec to sites/ customers across the UK. A generic transport to site distance of 50 km has been selected as a reasonable average. End-users of the EPD can use this information to calculate a bespoke transport to site distance if required, i.e. divide the module A4 impacts by 50 and multiply them by a chosen distance.		
	Lorry 16-32 tonne	Litre of fuel type per distance or vehicle type	0.227
	Distance:	km	50
	Capacity utilisation (incl. empty returns)	%	26
	Bulk density of transported products	kg/pallet	3,510
A5 – Installation in the building	Channel profiles provide reliable support for HVAC systems, electrical installations, and structural frameworks. Their easy modification capabilities ensure a smooth installation process. There should not be the need for input or output of materials, energy & water. Simple standard fittings and fastenings is all it needs to secure the profile to walls, ceilings etc. to suit the needs and job at hand, equipment wise will be a hand held drill for the fastenings or even a screwdriver (this is depending on the customer's choice as they are to do the job and get the required supplies to secure the channel profile.) However, this is of the discretion of the fitter how they see fit to install the product not Doby Verrolec. In terms of packaging waste, all Wooden chocks are sent back to Doby Verrolec where it will be determined if they can be reused for future deliveries. If any have reached the end of their life and are unusable, they will be sent to recycling.		
	Wooden chocks to recycling	kg	0.02
C1 – Deconstruction	At the end-of-life, deconstruction takes place for the whole building, so deconstruction of the product will consist of simple removal from its installed position. The Profiles manufactured from galvanised steel are fully recyclable. Doby Verrolec recommends that the materials be sent to a local recycling unit that the customer/contractor decides upon based on their location. 100% recovery for the waste product from the demolition site. There is no use or need for materials, energy, water etc. for installation or removal purposes.		
C2 Transport	Doby Verrolec sells products to customers all over the UK. Local haulage companies collect the products and distribute them to customers using a 16-32 lorry, who in turn then may distribute the product further to a site or customer etc. for the installation of the Channel Profile DS258. Therefore, 50 km has been selected as a reasonable average distance to site, and if required, the end user of the EPD can calculate impacts for a bespoke distance by dividing the C2 impacts by 50 and multiplying them by whatever distance they choose. Doby Verrolec does not know where the Channel Profile will be sent/ go for their end-of-life destination i.e. recycling centres. However, Doby Verrolec does advise and tell customers that materials are recyclable for which it is their responsibility to carry out that process.		
	Distance	km	50

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
C3 – Waste Processing	There are no pre-processing activities that the steel component of the product undergoes before being sent to recycling centres. The Channel Profile DS258 is simply removed by hand tool. There is no need or requirement for the use of energy i.e. electric for equipment or materials since it is a simple installation and removal process for the product. Once the product has been removed, it is the responsibility of the Contractor to decide where they send the deconstructed product, although Doby Verrolec advise that it can be recycled since it is manufactured from galvanised steel. According to BRE PCR EN15804+A2, end-of-life scenario for structural steel (hot-rolled) best suits the Channel Profile DS257. It confirms that 95% will go to recycling and 5% will go to landfill. The quantity of steel available for recycling can be calculated as 4.446 kg (4.68 Kg x 0.95).		
	Recovered for recycling	kg	4.446
C4- Disposal	According to Appendix D of the BRE PCR EN15804+A2, the end-of-life scenario for hot-rolled structural steel, 5% cannot be separated during de-construction or isn't suitable for recycling, so will go to landfill. The total mass sent to landfill is therefore calculated as 0.234 kg (4.68 kg x 5%).		
	Steel waste to landfill	kg	0.234
Module D	According to BRE's PCR PN514 v3.2, industrial average end of life scenario for steel, 95% of reinforced steel is recycled and 5% is landfilled. "Benefits and loads beyond the system boundary" (module D) accounts for the environmental benefits and loads resulting from net steel scrap that is used as raw material in the 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. In the pre-processing stage, 4.446 kg of steel are recycled, initially which is a mix of scrap steel (37.6%) and virgin Steel (62.4%). To calculate the benefits of the product at Module D, the pre-existing content of scrap steel in the recovered Steel should be excluded from 4.446kg, i.e., 1.67kg of pre-existing content should be avoided and only 2.77kg steel should be considered in Module D. The dataset used to calculate the benefits of steel recycling was 'Pig iron {RER}I pig iron production I EN15804, S'.		
	Products Recycled Content (post-consumer)	kg	1.672
	Recovered for recycling	kg	4.446
	Benefits of recycling Steel	kg	2.774

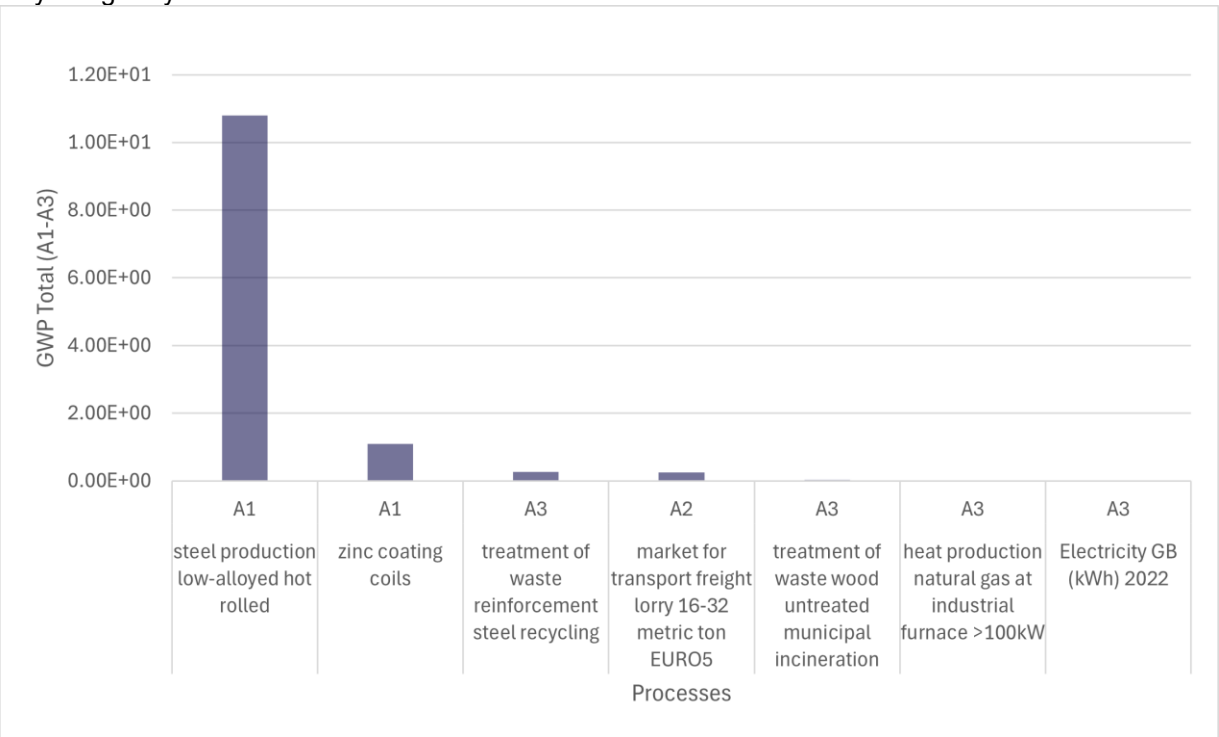
Interpretation

The results presented in Graph 1 indicate that the global warming potential (GWP) of the channel profile DS258-3m, limited to modules A1–A3, is predominantly influenced by module A1 (raw material supply). The contributions from modules A2 (transport) and A3 (manufacturing) are comparatively lower.



GWP total Figure 1

The process contribution shown in Graph 2 confirms that the majority of impacts within modules A1–A3 are attributable to upstream material production, in particular hot rolled steel, while other processes contribute only marginally.



Process contribution figure 2

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