Statement of Verification

BREG EN EPD No.: 000489 Issue 01

This is to verify that the

Environmental Product Declaration

provided by:

Philip Grahame International Ltd

BRE Global Verified EPD

is in accordance with the requirements of:

EN 15804:2012+A2:2019

and

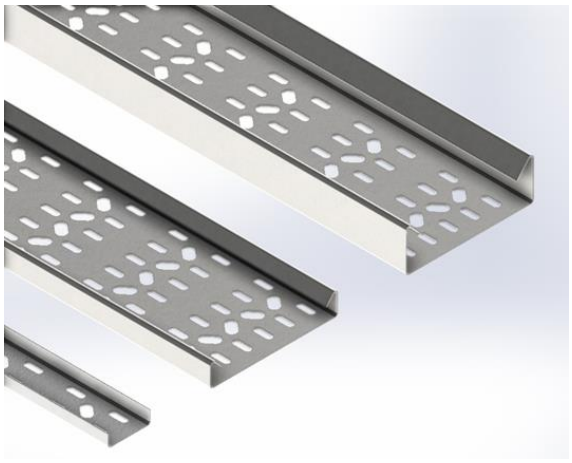
BRE Global Scheme Document SD207

This declaration is for:

1 kg of Pre-galvanised steel Cable Tray

Company Address

Montrose Road
Dukes Park Industrial Estate
Chelmsford
Essex, CM2 6TE
United Kingdom



PHILIP GRAHAME
Member of NIEDAX GROUP

Signed for BRE Global Ltd	Emma Baker Operator	26 May 2023 Date of this Issue
26 May 2023 Date of First Issue		25 May 2028 Expiry Date

BRE Global Verified EPD

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ECO PLATFORM EPD VERIFIED

Environmental Product Declaration

EPD Number: 000489

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE Environmental Profiles 2013 Product Category Rules for Type III environmental product declaration of construction products to EN 15804:2012+A1:2013
Commissioner of LCA study	**LCA consultant/Tool**
Philip Grahame Ltd Montrose Road, Dukes Park Ind Est, Chelmsford, Essex, CM2 6TE	Andrew Dutfield/ BRE LINA v2.0
Functional Unit	**Applicability/Coverage**
1 kg of Pre-galvanised steel Cable Tray for the support and accommodation of cables, electrical equipment and communication systems of cables over 30 years.	Product Average.
EPD Type	**Background database**
Cradle to Grave	ecoinvent v3.2

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: Nigel Jones
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+A1:2013. 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+A1:2013 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

Montrose Road,
Dukes Park Ind Est,
Chelmsford,
Essex, CM2 6TE

Construction Product

Product Description

In the electrical wiring of buildings, a cable tray system is used to support insulated electric cables used for power distribution and communication. Cable trays 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 changes to a wiring system are anticipated, since new cables can be installed by laying them in the tray, instead of pulling them through a pipe.

Cable tray 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 trays and typically fastened by cable ties and cleats.

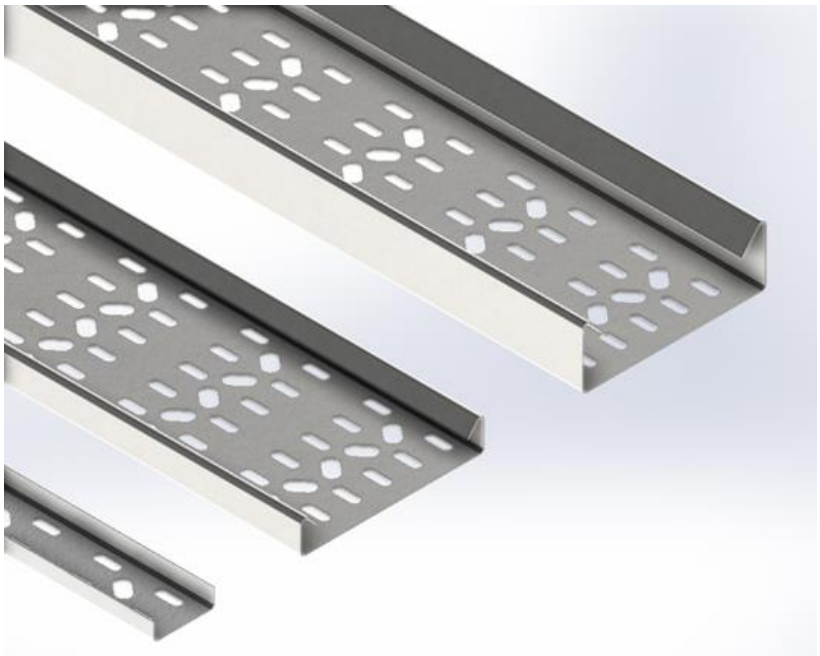
The distinctive slot pattern on the Philip Grahame cable tray provides installers with total flexibility for fastening cables. This EPD includes 3 types of trays suitable for different applications and cables: Standard Vertical Flange (SVL), Medium Duty Return Flange (MRL) and Heavy Duty Return Flange (HRL). The specifications included in the EPD are as follows:

Product Code	Product thickness (mm)	Coil Width (mm)	Coil Weights (kg)	Length of coil (m)	Quantity / coil
SVL/50/G	0.90	74.68	536	1016	339
MRL/50/G	0.80	117.10	841	1143	381
MRL/75/G	0.80	142.10	1020	1143	381
MRL/100/G	0.80	167.10	1200	1143	381
MRL/150/G	0.80	217.10	1559	1143	381

Product Code	Product thickness (mm)	Coil Width (mm)	Coil Weights (kg)	Length of coil (m)	Quantity / coil
MRL/225/G	0.80	292.10	2097	1090	363
MRL/300/G	0.90	367.10	2636	771	257
MRL/450/G	1.20	514.81	3696	412	137
MRL/600/G	1.50	664.80	4773	255	85
MRL/750/G	1.50	814.80	5850	208	69
MRL/900/G	1.50	964.80	6927	176	59
HRL/75/G	0.90	219.81	1578	1016	339
HRL/100/G	0.90	244.81	1758	1016	339
HRL/150/G	0.90	294.81	2117	960	320
HRL/225/G	1.20	369.81	2655	574	191
HRL/300/G	1.20	444.81	3194	477	159
HRL/450/G	1.50	592.50	4254	287	96
HRL/600/G	1.50	742.50	5331	229	76
HRL/750/G	2.00	892.50	6408	143	48
HRL/900/G	2.00	1042.50	7485	122	41

Technical Information

Property	Value, Unit
BS EN 61537:2007 Cable management. Cable tray systems and cable ladder systems	Conforms



Main Product Contents

Material/Chemical Input	%
Pre-Galvanised sheet steel	100

Manufacturing Process

Philip Grahame Cable Tray is manufactured from pre-galvanised steel to BS EN 10346. Pre-galvanized steel is produced by unwinding steel coil and passing it continuously through a bath of molten zinc and then past air jets to remove excess zinc from the surface. The process is closely controlled to produce a thin, even and ripple free zinc coating with very few imperfections.

Philip Grahame purchases all steel for the manufacture of Cable Tray from Tata Steel UK. To reduce scrap steel is purchased in coil form from Tata with the width of the coil cut precisely to the product width. Tata manufacture the wide coil in South Wales and then transport large wide coil by rail to their Steelpark Headquarters in the Midlands, where it is processed into the customers required widths.

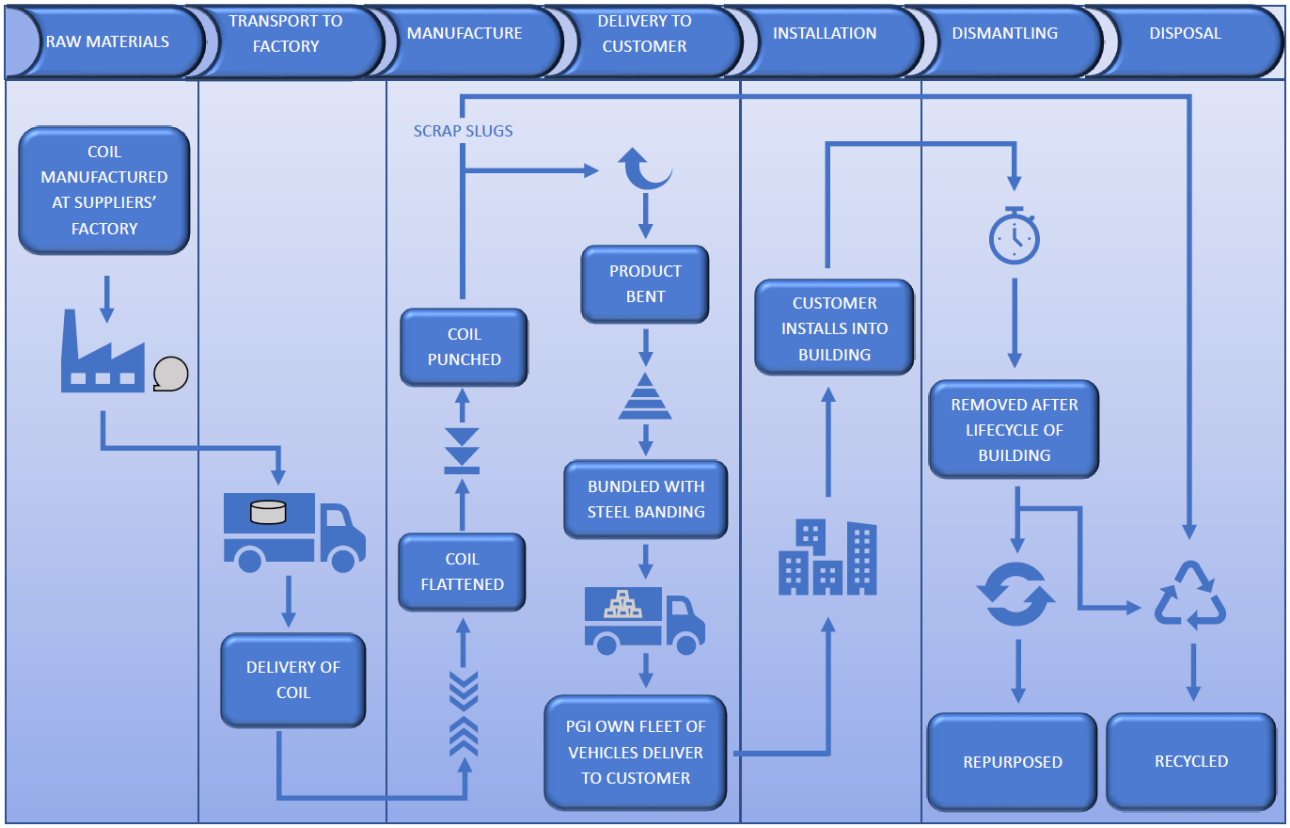
Wide coils of pre-galvanised steel are transported by rail from South Wales to Steelpark. Precision slitting of the master coil into final width coils to suit customer requirements is carried out on 3 slitting lines. Tata Steel use their own transport fleet to deliver full 24 tonne loads of coils direct to Philip Grahame Ltd in Essex. The coils do not require packaging and are simply steel banded and loaded onto flatbed lorries for forklift unload.

All manufacture is carried out at a state-of-the-art manufacturing facility in Chelmsford, Essex. The complete manufacturing facility is controlled by a BS EN ISO 9001 Quality management system along with a BS EN ISO 14001 Environmental management System. To manufacture the flat blank for a Cable Tray the coils are loaded onto a bespoke press line. The coil is unwound and flattened and then passed through a power press where the holes are punched into the steel. The coil is fed through a guillotine where it is cut to length and then conveyed to a stacking station where pallets of product are stacked.

All Cable Trays are produced in 3 metre lengths from coils that are the precise width of the product. The flat blanks are bent into the shape of a Cable Tray on a hydraulic pressbrake.

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 10 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

For the installation of the product, only standard tools are required.

Use Information

Under normal conditions of use the product requires no servicing or maintenance throughout the life of the product.

End of Life

Cable Tray 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 Tray installations can be continually reused, when this is not possible, they can easily be recycled due to the material used and never sent to landfill.

Life Cycle Assessment Calculation Rules

Functional unit description

1 kg of Pre-galvanised steel Cable Tray for the support and accommodation of cables, electrical equipment and communication systems of cables over 30 years.

System boundary

This is a cradle-to-grave LCA, reporting all life cycle modules A1 to C4 and module D, in accordance with EN 15804:2012+A1:2013.

Data sources, quality and allocation

The pre-galvanised steel cable tray functional unit is 1 kg of product. The data supplied relates to the Chelmsford site and covers the period 1st January to 31st December 2021. The site manufactures other products in addition to pre-galvanised steel cable trays. The only raw material is pre-galvanised steel and it has been allocated by proportion of actual usage, which is 39.5% of total usage by mass. Allocation by mass has been used to electricity, water usage and discharge, according to the provisions of the BRE PCR PN514 and EN 15804. Process waste consists of round shaped pieces cut from the sheet steel and the actual amount of waste generated is recorded. Total non-process waste is estimated and allocated by mass to the cable tray product.

Secondary data have been drawn from the BRE LINA database v2.0.96 and the background LCI datasets are based on ecoinvent v3.2 (2015).

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)	n/a
Fair	n/a	n/a	Less than 10 years of difference between the reference year according to the documentation, and the time period for which data are representative

The quality level of geographical and technical representativeness is Very Good. The quality level of time representativeness is Fair as the background LCI datasets are based on ecoinvent v3.2 which was compiled in 2015 and so there is less than 10 years between the reference year according to the documentation, and the time period for which data are representative.

Cut-off criteria

All raw materials and energy input to the manufacturing process have been included, except for direct emissions to air, water and soil, which are not measured. The inventory process in this LCA includes all data related to raw materials and packaging materials. There are no ancillary or consumable materials used and so none have been included. Process energy, water use and discharge and process and general waste are included.

LCA Results

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

Parameters describing environmental impacts									
			GWP	ODP	AP	EP	POCP	ADPE	ADPF
			kg CO_2 equiv.	kg CFC 11 equiv.	kg SO_2 equiv.	kg $(PO_4)^{3-}$ equiv.	kg C_2H_4 equiv.	kg Sb equiv.	MJ, net calorific value.
Product stage	Raw material supply	A1	2.27E+00	1.46E-07	2.64E-02	9.92E-03	2.39E-03	3.29E-04	3.02E+01
	Transport	A2	2.63E-02	4.84E-09	8.80E-05	2.32E-05	1.54E-05	6.93E-08	3.98E-01
	Manufacturing	A3	7.76E-02	9.20E-09	4.32E-04	1.07E-04	2.88E-05	9.03E-08	1.46E+00
	Total (of product stage)	A1-3	2.37E+00	1.60E-07	2.69E-02	1.01E-02	2.43E-03	3.30E-04	3.21E+01
Construction process stage	Transport	A4	6.69E-03	1.23E-09	2.24E-05	5.90E-06	3.90E-06	1.76E-08	1.01E-01
	Construction	A5	3.19E-01	2.00E-08	2.96E-03	1.12E-03	2.90E-04	2.95E-05	4.27E+00
Use stage	Use	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	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	0.00E+00
	Transport	C2	3.08E-02	5.66E-09	1.03E-04	2.71E-05	1.79E-05	8.10E-08	4.65E-01
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	3.49E-02	1.77E-10	7.06E-06	1.70E-04	7.21E-06	1.40E-09	1.37E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.38E+00	-8.91E-08	-1.61E-02	-6.05E-03	-1.46E-03	-2.01E-04	-1.84E+01

GWP = Global Warming Potential;
ODP = Ozone Depletion Potential;
AP = Acidification Potential for Soil and Water;
EP = Eutrophication Potential;
POCP = Formation potential of tropospheric Ozone;
ADPE = Abiotic Depletion Potential – Elements;
ADPF = Abiotic Depletion Potential – Fossil Fuels;

LCA Results (continued)

Parameters describing resource use, primary energy								
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	2.42E+00	7.32E-06	2.42E+00	3.21E+01	0.00E+00	3.21E+01
	Transport	A2	5.28E-03	1.97E-08	5.28E-03	3.95E-01	0.00E+00	3.95E-01
	Manufacturing	A3	9.79E-02	1.79E-07	9.79E-02	1.83E+00	0.00E+00	1.83E+00
	Total (of product stage)	A1-3	2.52E+00	7.52E-06	2.52E+00	3.43E+01	0.00E+00	3.43E+01
Construction process stage	Transport	A4	1.34E-03	4.99E-09	1.34E-03	1.00E-01	0.00E+00	1.00E-01
	Construction	A5	3.64E-01	9.44E-07	3.64E-01	4.61E+00	0.00E+00	4.61E+00
Use stage	Use	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	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	6.17E-03	2.30E-08	6.17E-03	4.62E-01	0.00E+00	4.62E-01
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.23E-03	3.12E-09	1.23E-03	1.71E-02	0.00E+00	1.71E-02
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.48E+00	-4.47E-06	-1.48E+00	-1.96E+01	0.00E+00	-1.96E+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)

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	0.00E+00	0.00E+00	0.00E+00	5.93E-02
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	8.62E-05
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	3.65E-04
	Total (of product stage)	A1-3	0.00E+00	0.00E+00	0.00E+00	5.98E-02
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	2.19E-05
	Construction	A5	0.00E+00	0.00E+00	0.00E+00	7.09E-03
Use stage	Use	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	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
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	1.01E-04
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	1.80E-05
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	-3.62E-02

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)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	5.16E-01	2.02E-01	6.82E-05
	Transport	A2	1.67E-04	1.85E-02	2.74E-06
	Manufacturing	A3	2.30E-04	3.93E-03	1.07E-05
	Total (of product stage)	A1-3	5.17E-01	2.24E-01	8.17E-05
Construction process stage	Transport	A4	4.23E-05	4.71E-03	6.97E-07
	Construction	A5	5.43E-02	2.52E-02	1.10E-05
Use stage	Use	B1	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	0.00E+00	0.00E+00	0.00E+00
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.95E-04	2.17E-02	3.20E-06
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	2.04E-05	5.03E-02	1.32E-07
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-3.15E-01	-1.23E-01	-4.16E-05

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

LCA Results (continued)

Other environmental information describing output flows – at end of life						
			CRU	MFR	MER	EE
			kg	kg	kg	MJ per energy carrier
Product stage	Raw material supply	A1	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
	Manufacturing	A3	0.00E+00	3.69E-02	0.00E+00	0.00E+00
	Total (of product stage)	A1-3	0.00E+00	3.69E-02	0.00E+00	0.00E+00
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	1.21E-03	0.00E+00	0.00E+00
Use stage	Use	B1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Maintenance	B2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Repair	B3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Replacement	B4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Refurbishment	B5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational energy use	B6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Operational water use	B7	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
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	1.01E+00	0.00E+00	0.00E+00
	Disposal	C4	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

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	Philip Grahame deliver direct to end users through their own fleet of vehicles. Their FORS Silver accredited fleet of vehicles have the latest Euro classification engines to allow entry into inner-city low emission zones. They have 10 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. They operate a multi-drop delivery service so that we can reduce the environmental impact for each delivery.		
	Diesel/ 16-32 t lorry	kg/vkm	0.3
	Distance	km	40
	Capacity utilisation (incl. empty returns)	%	26
	Weight of transported products	kg/unit	1.0
A5 – Installation in the building	Each length installed would use 8 of steel M6 screws and nuts to secure the coupling in an installation, total weight 0.06 kg, with washers the weight would be 0.06kg per length. Installation waste is minimal as there is no minimum order quantities and offer a return scheme based on resaleable condition for stock items. Site installations may require cutting and a small amount of site fabrication work to ensure the installation fits the building requirements.		
	Pre-galvanised steel Cable Tray waste at installation (3%)	kg	0.03
	Capacity utilisation (incl. empty returns)	%	26
	Transport of waste to landfill: Diesel/ 16-32 t lorry	kg/vkm	0.3
	Distance	km	184
B1 - Use B2 – Maintenance B3 – Repair B4 – Replacement B5 – Refurbishment	Under normal conditions of use pre-galvanised cable trays require no servicing or maintenance throughout the life of the product.		
Reference service life	The 30 years service life is derived from the life span of commercial buildings. After 30 years of electrical installation, there may be outdated infrastructure and advances in communications and building use necessitating building refurbishments and rebuilds.		
C1 – End-of-life deconstruction	Cable Tray 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 Tray installations can be continually reused, when this is not possible, they can easily be recycled due to the material used and never sent to landfill.		
C2 – End-of-life transport	Based on commercial recycling rates there is 0% reused with 95% being recycled.		
	Diesel/ 16-32 t lorry	kg/vkm	0.3
	Distance	km	184
	Capacity utilisation (incl. empty returns)	%	26
	Weight of transported products	kg/unit	1.007
C4 End-of-life disposal	Based on commercial recycling rates 0% is reused and 95% is recycled. The other 5% is assumed to be a natural loss during demolition.		

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
Module D	Cable Tray 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 Tray installations can in theory be continually reused but when this is not possible, they can easily be recycled due to the material used. However due to the load bearing nature of cable trays they are in fact difficult to reuse because the warranty of performance in a 'second' installation would not be available. This is because the load applied to the items or the quality of workmanship on the initial installation and end of life removal is not known. Therefore no reuse is assumed and 95% is recycled based on commercial recycling rates. The other 5% is assumed to be a natural loss during demolition and recycling. The recycling and reuse survey - SteelConstruction.info		

Interpretation

The pre-galvanised sheet steel is the only input material and will therefore have the largest environmental impact. The other impacts come from energy usage, water usage and waste generation.

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