

Statement of Verification

BREG EN EPD No.: 000462

Issue 01

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

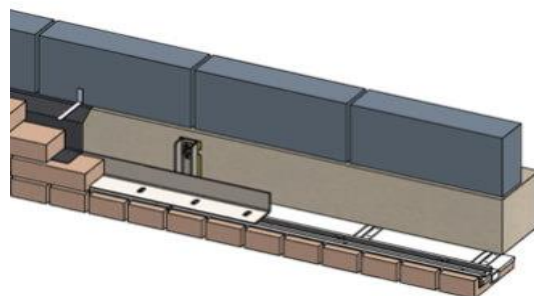


is in accordance with the requirements of:
EN 15804:2012+A1:2013
and
BRE Global Scheme Document SD207

This declaration is for:
Brick on Soffit System (B.O.S.S)

Company Address

IG Masonry Support
Ryder Close
Cadley Hill Industrial Estate
Derbyshire
DE11 9EU



Emma Baker
Operator

12 September 2022
Date of this Issue

12 September 2022
Date of First Issue

11 September 2027
Expiry Date



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Environmental Product Declaration

EPD Number: 000462

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
IG Masonry Support Ryder Close Cadley Hill Industrial Estate Derbyshire DE11 9EU	Flavie Lowres/LINA v2.0
Declared Unit	Applicability/Coverage
890 mm length and 215 mm width soffit @ 13.27 kg/unit including fixings	Product Average.
EPD Type	Background database
Cradle to Gate with options	ecoinvent

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:
Pat Hermon

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
A1	A2	A3	A4	A5	Related to the building fabric					Related to the building		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
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: Ticks indicate the Information Modules declared.

Manufacturing site(s)

The product B.O.S.S. is manufactured at IG Masonry Support’s factory

Ryder Close
 Cadley Hill Industrial Estate
 Derbyshire
 DE11 9EU

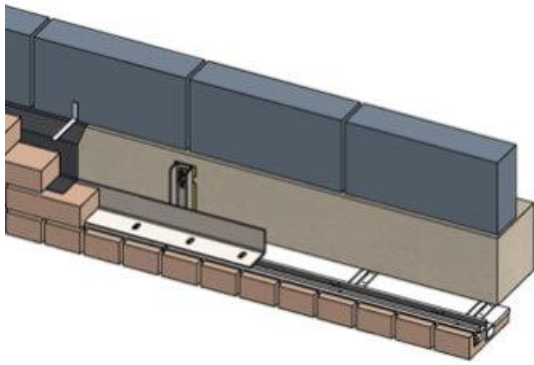
Construction Product

Product Description

B.O.S.S. is a lightweight, stainless steel, pre-fabricated brick slip soffit system designed to be quickly and easily bolted to IG’s Welded Masonry Support (WMS) to create spectacular brick soffits.

Technical Information

Property	Value, Unit
Structural performance	The system is non-structural but can support its self-weight and transfer wind actions to the supporting structure
Durability	Provided that the system is designed, installed and used in accordance with the manufacturer’s instructions, it will have a service life of 60 years



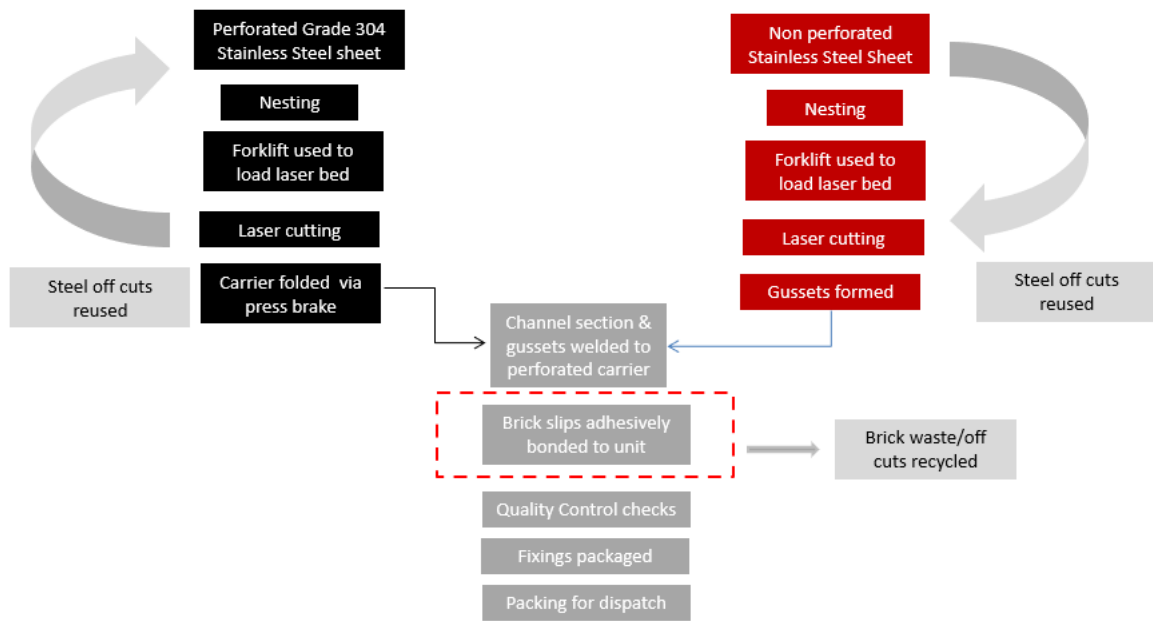
Main Product Contents

Material/Chemical Input	%
Stainless steel	85.2%
fixings	2.2%
adhesive	12.5%

Manufacturing Process

The fabrication of B.O.S.S. begins with nesting of perforated stainless steel. The carrier and gussets are nested and cut via laser cutting. The steel is then folded using a press brake to form the carrier profile. The gussets are welded onto the carrier, followed by a section of channel. Bricks which have been cut into slips (which are not included in this EPD) are adhesively bonded to the pre-cut & folded steel carrier. Quality checks are then conducted before product sign off. Only approved units are sent to packing and dispatch. The units are BBA approved.

Process flow diagram



Life Cycle Assessment Calculation Rules

Declared unit description

890 mm length and 215 mm width soffit @ 10.63 kg/unit including fixings

System boundary

This cradle-to-gate EPD has assessed in accordance with the modular approach as defined in EN15804:2012+A1:2013 and includes the processes covered in the manufacturing site and product stage A1 to A3 and use stages B1 to B7.

Data sources, quality and allocation

Specific primary data derived from the B.O.S.S. production process in Ryder Close, Cadley Hill Industrial Estate, Derbyshire. DE11 9EU factory, have been modelled using LINA v2.0 and the BRE LINA database v2.0.92. In accordance with the requirements of EN15804, the most current available data has been used. The manufacturer-specific data from B.O.S.S. covers a period of one year (01/01/2020 – 31/12/2020). 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 3.2 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. B.O.S.S. is not the only product to manufactured at the Ryder Close factory. Site wide values for energy, water and wastewater have been allocated on a mass basis. Figures for the raw materials, ancillary materials and packaging were from actual usages. Allocation of energy, water, and waste has been done according to the provisions of the BRE PCR PN514 and EN 15804.

The system is available in sizes to accommodate brick slips to achieve project design requirements: BOSS 65 x 215 mm with header bond, BOSS 65 x 327 mm with stretcher bond and BOSS 215 x 215 mm with half lap bond. The LCA covers all of the products in the range and results for all inputs are averaged based on total output in tonnes for all products and calculated average kg/unit.

Specific UK datasets have been selected from the ecoinvent LCI for this LCA. The quality level of geographical and technical representativeness is therefore good. The quality level of time representativeness is good as the background LCI datasets are based on ecoinvent v3.2 which was compiled in 2015. Therefore, there is approximately 5-6 years between the ecoinvent LCI reference year and the time period for which the LCA was undertaken

Cut-off criteria

All processes associated with the manufacturing process and fixings have been included. The impact of the bricks is not included in this EPD.

All inputs or outputs have been included and all raw materials, packaging and transport, energy, water use and wastes, are included, except for direct emissions to air, water and soil, which are not measured. Upstream extraction and/or processing of inputs are included within the use of the background datasets within LINA

LCA Results

(MND = module not declared; MND = module not declared; 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 ₂ H ₄ equiv.	kg Sb equiv.	MJ, net calorific value.
Product stage	Raw material supply	A1	1.36E+02	5.91E-06	6.90E-01	2.05E-01	7.50E-02	2.98E-03	1.50E+03
	Transport	A2	2.29E-01	4.21E-08	7.65E-04	2.02E-04	1.33E-04	6.03E-07	3.46E+00
	Manufacturing	A3	7.77E+00	5.07E-07	4.58E-02	1.07E-02	3.71E-03	1.52E-05	1.46E+02
	Total (of product stage)	A1-3	1.44E+02	6.46E-06	7.36E-01	2.16E-01	7.88E-02	2.99E-03	1.65E+03
Installation stage	Transport to site	A4	MND	MND	MND	MND	MND	MND	MND
	Installation	A5	MND	MND	MND	MND	MND	MND	MND
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	MND	MND	MND	MND	MND	MND	MND
	Transport	C2	MND	MND	MND	MND	MND	MND	MND
	Waste processing	C3	MND	MND	MND	MND	MND	MND	MND
	Disposal	C4	MND	MND	MND	MND	MND	MND	MND

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	2.84E+02	7.56E-04	2.84E+02	1.60E+03	0.00E+00	1.60E+03
	Transport	A2	4.59E-02	1.71E-07	4.59E-02	3.43E+00	0.00E+00	3.43E+00
	Manufacturing	A3	2.30E+01	9.43E-04	2.30E+01	1.80E+02	5.31E+00	1.86E+02
	Total (of product stage)	A1-3	3.07E+02	1.70E-03	3.07E+02	1.79E+03	5.31E+00	1.79E+03
Installation stage	Transport to site	A4	MND	MND	MND	MND	MND	MND
	Installation	A5	MND	MND	MND	MND	MND	MND
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	MND	MND	MND	MND	MND	MND
	Transport	C2	MND	MND	MND	MND	MND	MND
	Waste processing	C3	MND	MND	MND	MND	MND	MND
	Disposal	C4	MND	MND	MND	MND	MND	MND

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	1.31E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	7.49E-04
	Manufacturing	A3	0.00E+00	0.00E+00	0.00E+00	6.07E-02
	Total (of product stage)	A1-3	0.00E+00	0.00E+00	0.00E+00	1.37E+00
Installation stage	Transport to site	A4	MND	MND	MND	MND
	Installation	A5	MND	MND	MND	MND
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	MND	MND	MND	MND
	Transport	C2	MND	MND	MND	MND
	Waste processing	C3	MND	MND	MND	MND
	Disposal	C4	MND	MND	MND	MND

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	8.59E+01	2.10E+01	3.47E-03
	Transport	A2	1.45E-03	1.61E-01	2.38E-05
	Manufacturing	A3	5.02E-02	2.47E-01	8.49E-04
	Total (of product stage)	A1-3	8.60E+01	2.14E+01	4.34E-03
Installation stage	Transport to site	A4	MND	MND	MND
	Installation	A5	MND	MND	MND
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	MND	MND	MND
	Transport	C2	MND	MND	MND
	Waste processing	C3	MND	MND	MND
	Disposal	C4	MND	MND	MND

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	3.31E+00	0.00E+00	0.00E+00
	Total (of product stage)	A1-3	0.00E+00	3.31E+00	0.00E+00	0.00E+00
Installation stage	Transport to site	A4	MND	MND	MND	MND
	Installation	A5	MND	MND	MND	MND
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	MND	MND	MND	MND
End of life	Deconstruction, demolition	C1	MND	MND	MND	MND
	Transport	C2	MND	MND	MND	MND
	Waste processing	C3	MND	MND	MND	MND
	Disposal	C4	MND	MND	MND	MND

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
B1 – Use	Once installed, there is no impact during the use phase the BOSS system as it is placed behind the brick slips and cannot be accessed		
	No environmental impact	N/A	0
B2 – Maintenance	No maintenance is required during the use phase of the BOSS system as it is placed behind the brick slips and cannot be accessed		
	No maintenance	N/A	0
B3 – Repair	No repair is required during the use phase the BOSS system as it is placed behind the brick slips and cannot be accessed		
	No repair	N/A	0
B4 – Replacement	No replacement is required during the use phase the BOSS system is placed behind the brick slips. The BOSS system will therefore have the same lifespan as the building it is used on		
	No replacement	N/A	0
B5 – Refurbishment	No refurbishment is required during the use phase the BOSS system as it is placed behind the brick slips. The BOSS system will therefore have the same lifespan as the building it is used on		
	No refurbishment	N/A	0
Reference service life	50 years – as per the performances of Grade 304 Stainless Steel BS EN 10028-7:2007		
	Description of scenario	Click here to enter text.	enter value
B6 – Use of energy; B7 – Use of water	The product does not require any water or energy in use		
	Energy use	kWh	0
	Water use	kWh	0

References

BSI. Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products. BS EN 15804:2012+A1:2013. London, BSI, 2013.

BSI. Environmental labels and declarations – Type III Environmental declarations – Principles and procedures. BS EN ISO 14025:2010 (exactly identical to ISO 14025:2006). London, BSI, 2010.

BSI. Environmental management – Life cycle assessment – Principles and framework. BS EN ISO 14040:2006. London, BSI, 2006.

BSI. Environmental management – Life cycle assessment – requirements and guidelines. BS EN ISO 14044:2006. London, BSI, 2006.