





ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Multipanel Grant Westfield

EPD HUB, HUB-0959

Publishing date 15 December 2023, last updated on 15 December 2023, valid until 15 December 2028.





GENERAL INFORMATION

MANUFACTURER

Manufacturer	Grant Westfield
Address	Westfield Avenue, Edinburgh, EH11 2QH
Contact details	customerservices@multipanel.co.uk
Website	https://www.multipanel.co.uk/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Sam McGarrick (Blue Marble Environmental Partnerships Ltd.)
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☐ External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Multipanel
Additional labels	-
Product reference	-
Place of production	Edinburgh, UK
Period for data	2022 (Calendar Year)
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	- %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1m2
Declared unit mass	9.23 kg
GWP-fossil, A1-A3 (kgCO2e)	1.24E1
GWP-total, A1-A3 (kgCO2e)	2.75E0
Secondary material, inputs (%)	0.526
Secondary material, outputs (%)	79.3
Total energy use, A1-A3 (kWh)	107.0
Total water use, A1-A3 (m3e)	1.56E-1





PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Multipanel is the UK leading brand of waterproof shower and bathroom panels and is produced by Norcros Group (Holdings) trading as Grant Westfield. Grant Westfield was established in 1881 and was born from a passion for true craftsmanship, high quality design and expert manufacturing capabilities. Backed by over 140 years' experience in interior building design, our size and success has been pioneered by a carefully selected, skilled and driven workforce.

PRODUCT DESCRIPTION

Multipanel® wall panels are constructed with exterior grade MDF core certified to BS EN 622 part 5 and bonded under controlled conditions with a high-pressure decorative laminate to face, and a plain balancing laminate to rear.

All laminate products are certified to EN 438. Waterproof gluelines are D4 rated (BS EN 204). Grant Westfield are ISO 9001:2015, ISO 14001:2015, FSC-STD-40-004 V3-1 and PEFC- 2002:2020 certified. All work complies to these requirements or client's specifications. The core material has undergone rigorous testing to withstand extreme conditions. The core meets the requirements of class D4 (durability category) of BS 4965, making it suitable for use as a substrate for decorative laminate in areas of frequent, prolonged exposure to running or condensed water. These credentials make it perfect for use in interiors with wet and humid conditions such as bathrooms.

Further information can be found at https://www.multipanel.co.uk/.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	-	
Minerals	-	
Fossil materials	4	EU
Bio-based materials	96	Global

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	2.536
Biogenic carbon content in packaging, kg C	0.199

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1m2
Mass per declared unit	9.23 kg
Functional unit	1m2 covering surface of installed wall panel with an expected lifetime of 30 years, including install
Reference service life	30 years

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).





PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Pro	duct st	age		mbly			ι	Jse sta	ge			End	d of	Beyond the system boundaries							
A1	A2	А3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	C3	C4		D				
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling			

Modules not declared = MND. Modules not relevant = MNR.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The product comprises exterior-grade MDF covered with a high-pressure laminate (HPL) on the front and a thinner balancing layer on the back. Adhesive is used to bind the layers. (A1).

HPL is procured from a number of suppliers depending on the styles desired and a weighted average of transportation distances was calculated (A2).

Manufacturing takes place on-site in Edinburgh and involves medium-voltage electricity consumption from glue spreading and pressing machines, angle-plant, tongue & grove and grouting machines.

Production losses of 3.25% have been modelled (based on primary data). These manufacturing wastes are collected for recycling and conservatively assumed to travel 85km via >32 tonne lorry to the recycling plant.

Product cardboard packaging is included in the calculations (A3).

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Transport to customers is via depots and a typical scenario has been used - a distance of 65.8km via >32 tonne lorry (A4).

The installation process involves use of sealant and aluminium profiles. No installation losses are anticipated providing the product is installed correctly. Use of hand-held power tools using low-voltage electricity for installation has been included.

Cardboard packaging leaves the system at the point of installation and is assumed to be recycled (travelling 85km via >32 tonne lorry to a recycling plant) (A5).

PRODUCT USE AND MAINTENANCE (B1-B7)

The reference service life for the panel is set to 30 years to match the warranty provided by the manufacturer. During the use phase the product is assumed to be cleaned using detergent (B2).





In addition, replacement panels have been considered on the basis of returns data at 1.23% (B4).

PRODUCT END OF LIFE (C1-c4, D)

At the end of its life the product is removed by hand with no emissions (C1).

Transportation to waste treatment is assumed to be 85km (C2).

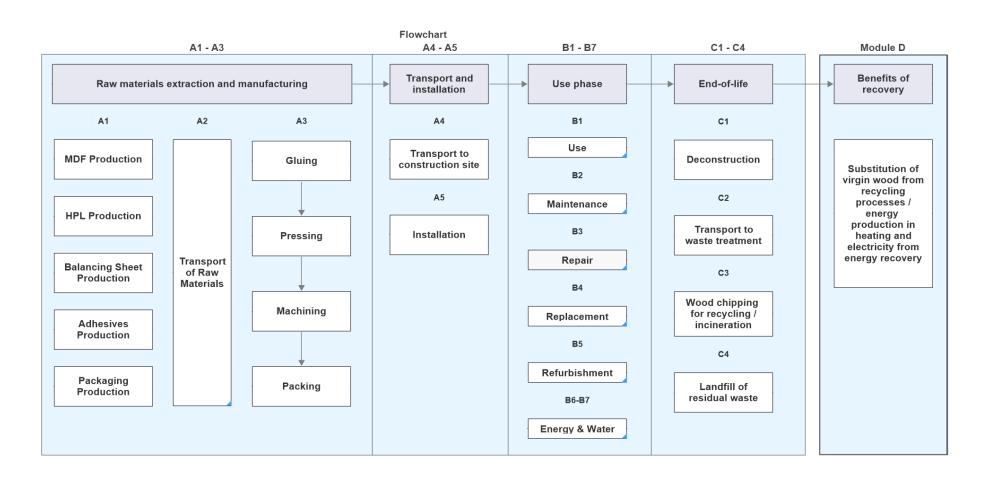
The MDF and HPL is assumed to be 50% recycled, 50% incinerated. The aluminium profiles are assumed to be recycled at a rate of 95% with the remaining 5% sent to landfill. Sealant used during the life of the product is conservatively assumed to be sent to landfill with no benefits (C3/C4).

Benefits and loads from recycling of waste wood and energy recovery from incineration are included, as are the benefits and loads from the recycling of aluminium (D).





MANUFACTURING PROCESS







LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

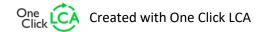
AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	- %

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent v3.8 and One Click LCA databases were used as sources of environmental data.







ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO₂e	1.92E+00	6.19E-01	2.12E-01	2.75E+00	1.09E-01	6.41E+00	0.00E+00	2.55E-01	0.00E+00	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-02	8.98E+00	1.11E-01	- 7.64E+00
GWP – fossil	kg CO₂e	1.11E+01	6.19E-01	6.58E-01	1.24E+01	1.09E-01	5.69E+00	0.00E+00	2.55E-01	0.00E+00	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-02	7.69E-02	7.83E-02	- 7.60E+00
GWP – biogenic	kg CO₂e	-9.20E+00	0.00E+00	-4.48E-01	- 9.65E+00	4.23E-05	7.19E-01	0.00E+00	0.00E+00	0.00E+00	1.73E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E+00	3.28E-02	-1.22E-03
GWP – LULUC	kg CO₂e	2.68E-02	3.11E-04	3.29E-03	3.04E-02	4.56E-05	2.44E-03	0.00E+00	2.19E-04	0.00E+00	3.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-05	1.71E-04	8.38E-06	-3.49E-02
Ozone depletion pot.	kg CFC-11e	1.37E-06	1.31E-07	6.69E-08	1.57E-06	2.35E-08	1.34E-07	0.00E+00	2.62E-08	0.00E+00	2.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-08	4.16E-09	2.18E-09	-9.30E-07
Acidification potential	mol H†e	7.62E-02	6.71E-03	2.89E-03	8.58E-02	3.21E-04	4.26E-02	0.00E+00	1.86E-03	0.00E+00	1.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	4.40E-04	6.63E-05	-3.79E-02
EP-freshwater ²⁾	kg Pe	0.00E+00	4.44E-06	3.60E-05	4.05E-05	9.24E-07	2.37E-04	0.00E+00	1.40E-05	0.00E+00	4.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.31E-07	7.72E-06	1.42E-07	-2.69E-04
EP-marine	kg Ne	2.08E-02	1.59E-03	1.35E-03	2.38E-02	6.40E-05	5.73E-03	0.00E+00	4.21E-04	0.00E+00	2.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E-05	6.52E-05	1.02E-04	-9.00E-03
EP-terrestrial	mol Ne	2.08E-01	1.77E-02	8.61E-03	2.34E-01	7.11E-04	6.34E-02	0.00E+00	3.03E-03	0.00E+00	2.91E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E-04	7.40E-04	2.38E-04	-1.04E-01
POCP ("smog") ³⁾	kg NMVOCe	7.62E-01	4.92E-03	1.84E-03	7.69E-01	2.67E-04	1.95E-02	0.00E+00	1.10E-03	0.00E+00	9.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04	2.07E-04	8.46E-05	-3.05E-02
ADP-minerals & metals ⁴⁾	kg Sbe	1.01E-04	1.84E-06	3.22E-06	1.06E-04	3.85E-07	4.08E-05	0.00E+00	4.10E-06	0.00E+00	1.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-07	7.03E-07	2.63E-08	-4.22E-05
ADP-fossil resources	MJ	1.97E+02	8.66E+00	1.26E+01	2.18E+02	1.58E+00	7.18E+01	0.00E+00	7.90E+00	0.00E+00	2.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+00	1.57E+00	1.72E-01	- 1.40E+02
Water use ⁵⁾	m³e depr.	5.24E+00	3.52E-02	3.11E-01	5.59E+00	6.98E-03	9.68E-01	0.00E+00	1.65E-01	0.00E+00	6.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-03	4.19E-02	1.12E-03	- 7.06E+00

¹⁾ GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS - EN 15804+A2, PEF

Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	С3	C4	D
Particulate matter	Incidence	7.95E-01	4.13E-08	3.74E-08	7.95E-01	8.67E-09	2.20E-07	0.00E+00	2.07E-08	0.00E+00	9.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.47E-09	2.10E-09	1.24E-09	-5.72E-07
Ionizing radiation ⁶⁾	kBq U235e	2.83E-01	4.03E-02	2.83E-01	6.07E-01	7.39E-03	2.34E-01	0.00E+00	9.88E-03	0.00E+00	6.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.59E-03	4.11E-02	8.59E-04	- 1.47E+00
Ecotoxicity (freshwater)	CTUe	4.33E+02	7.35E+00	1.17E+01	4.52E+02	1.45E+00	7.10E+01	0.00E+00	8.58E+00	0.00E+00	5.68E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+00	1.15E+00	5.90E+00	- 1.46E+02
Human toxicity, cancer	CTUh	1.06E-05	2.69E-10	2.78E-10	1.06E-05	4.08E-11	3.92E-09	0.00E+00	5.32E-10	0.00E+00	1.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-11	5.21E-11	6.04E-12	-2.88E-08
Human tox. non-cancer	CTUh	1.08E-06	6.32E-09	7.32E-09	1.09E-06	1.31E-09	7.96E-08	0.00E+00	1.07E-08	0.00E+00	1.33E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E-10	1.23E-09	1.61E-10	-1.12E-07
SQP ⁷⁾	-	9.53E+02	4.90E+00	2.30E+01	9.80E+02	1.11E+00	7.91E+00	0.00E+00	9.54E-01	0.00E+00	1.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E+00	3.37E-01	4.02E-01	- 3.84E+02





6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	С3	C4	D
Renew. PER as energy ⁸⁾	MJ	1.75E+02	9.24E-02	5.57E+00	1.81E+02	1.88E-02	1.33E+01	0.00E+00	1.79E-01	0.00E+00	2.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-02	2.73E-01	3.81E-03	- 7.16E+01
Renew. PER as material	MJ	5.01E+01	0.00E+00	4.79E+00	5.49E+01	0.00E+00	- 6.06E+00	0.00E+00	- 4.83E+01	-4.97E-01	0.00E+00								
Total use of renew. PER	MJ	2.25E+02	9.24E-02	1.04E+01	2.36E+02	1.88E-02	7.27E+00	0.00E+00	1.79E-01	0.00E+00	2.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-02	- 4.81E+01	-4.93E-01	- 7.16E+01
Non-re. PER as energy	MJ	1.84E+02	8.66E+00	1.26E+01	2.06E+02	1.58E+00	6.62E+01	0.00E+00	3.57E+00	0.00E+00	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+00	1.57E+00	1.72E-01	- 1.31E+02
Non-re. PER as material	MJ	1.95E+01	0.00E+00	-4.04E-01	1.91E+01	0.00E+00	5.59E+00	0.00E+00	- 1.40E+01	- 1.07E+01	0.00E+00								
Total use of non-re. PER	MJ	2.04E+02	8.66E+00	1.22E+01	2.25E+02	1.58E+00	7.17E+01	0.00E+00	3.57E+00	0.00E+00	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+00	- 1.25E+01	- 1.05E+01	- 1.31E+02
Secondary materials	kg	4.86E-02	3.15E-03	4.91E-01	5.43E-01	5.27E-04	4.58E-03	0.00E+00	1.28E-03	0.00E+00	7.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-04	6.30E-04	6.00E-05	2.15E-01
Renew. secondary fuels	MJ	0.00E+00	3.10E-05	3.53E-02	3.53E-02	6.83E-06	7.61E-05	0.00E+00	3.35E-05	0.00E+00	2.36E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-06	3.84E-06	2.33E-06	- 5.05E+00
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m³	1.48E-01	9.16E-04	7.38E-03	1.56E-01	1.88E-04	2.60E-02	0.00E+00	3.82E-03	0.00E+00	1.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-04	1.31E-03	1.81E-04	-1.77E-01

⁸⁾ PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	С3	C4	D
Hazardous waste	kg	1.51E-02	1.24E-02	3.43E-02	6.17E-02	2.28E-03	6.29E-01	0.00E+00	1.74E-02	0.00E+00	1.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03	6.60E-03	0.00E+00	-5.32E-01
Non-hazardous waste	kg	2.25E+00	1.75E-01	8.32E-01	3.25E+00	3.65E-02	1.08E+01	0.00E+00	3.06E-01	0.00E+00	4.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-02	3.52E-01	6.75E-01	- 5.86E+00
Radioactive waste	kg	1.15E-03	5.85E-05	7.74E-05	1.28E-03	1.05E-05	1.43E-03	0.00E+00	5.10E-06	0.00E+00	1.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-06	1.12E-05	0.00E+00	-4.76E-04





END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	С3	C4	D
Components for re-use	kg	0.00E+00																	
Materials for recycling	kg	9.62E-03	0.00E+00	2.89E-01	2.98E-01	0.00E+00	4.99E-01	0.00E+00	0.00E+00	0.00E+00	5.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E+00	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	3.99E-02	0.00E+00															
Exported energy	MJ	3.63E+00	0.00E+00	0.00E+00	3.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-02	0.00E+00							





VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

15.12.2023

