



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

i-FAST External Wall
Innovare Offsite Limited



EPD HUB, HUB-4420

Published on 13.11.2025, last updated on 13.11.2025, valid until 12.11.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.



Created with One Click LCA



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Innovare Offsite Limited
Address	Unit 3, Siskin Parkway West, Coventry CV3 4PW
Contact details	enquiries@innovareoffsite.co.uk
Website	www.innovareoffsite.co.uk

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Sam Dawe, Innovare Offsite Limited
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	Yazan Badour, as an authorised verifier acting for EPD Hub Limited

This EPD is intended for business-to-business and/or business-to-consumer communication. 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	i-FAST External Wall
Additional labels	i-FAST variants
Product reference	FW_384_147_1i4
Place(s) of raw material origin	Various
Place of production	United Kingdom
Place(s) of installation and use	United Kingdom
Period for data	Calendar Year 2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	0
GTIN (Global Trade Item Number)	94061000001011
NOBB (Norwegian Building Product Database)	n/a
A1-A3 Specific data (%)	94.4

ENVIRONMENTAL DATA SUMMARY

Declared unit	1m ² installed i-FAST external wall
Declared unit mass	84.039 kg
Mass of packaging	0.167 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	74.5
GWP-total, A1-A3 (kgCO ₂ e)	14.1
Secondary material, inputs (%)	9.21
Secondary material, outputs (%)	12.6
Total energy use, A1-A3 (kWh)	327
Net freshwater use, A1-A3 (m ³)	3.35

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Innovare Offsite produce a variety of building elements for use in education, commercial, residential and government projects. The single factory in Coventry produces i-FAST panels as well as other products without EPD.

PRODUCT DESCRIPTION

i-FAST is an offsite manufactured external wall element with inherent fire-resistant, acoustic, structural and thermal performance. The panel is 384mm thick, with maximum length of 7200mm and height 3600mm. The panel is built from sustainable sourced structural timber, non-combustible sheathing and is full-filled with non-combustible mineral wool insulation. It has tested fire resistance between 60 and 120 minutes for load bearing capacity, integrity and insulation and U-value of 0.12W/m²K. When installed, the panel supports external cladding and has pre-cut apertures for window installation according the architect's design. Alternatively, the windows and cladding can be factory fitted (outside the scope of this LCA).

Further information can be found at:

www.innovareoffsite.co.uk

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	2.2	UK
Minerals	63.7	UK, Asia
Fossil materials	0.4	UK
Bio-based materials	33.7	EU

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	19.26
Biogenic carbon content in packaging, kg C	0

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1m ² installed i-FAST external wall
Mass per declared unit	84.039 kg
Functional unit	thermal transmittance 0.12 W/m ² K
Reference service life	60 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.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
x	x	x	x	x	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x	
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery

Modules not declared = ND. Modules not relevant = NR

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.

A market-based approach is used in modelling the electricity mix utilized in the factory.

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We develop relationships with our supply chain to ensure we have effective production technology and machinery, as well as sustainable supply of high-quality input materials with quantity to maintain an efficient manufacturing process.

Timber is a renewable, sustainable, lightweight, strong and thermally efficient building material. Our timber input materials are from sustainable sources as part of a PEFC accredited management system. Our structural timber is sourced from Scandinavia, with other timber sheathing materials sourced from the UK.

Raw materials are transported by ship into ports in the east of the UK from Scandinavia and Malaysia, and then by road to our manufacturing site in Coventry.

The panel is manufactured from component products which are delivered to the factory by lorry, cut to size according to the design and assembled on a production line before being delivered by lorry. Main constituent products are sheathing board, PEFC certified structural framing timber, FSC certified oriented strand board, mineral wool insulation, steel fixings and building membranes. Softwood timber studs are cut to length on a computer controlled saw and assembled into a carcass frame which using steel nails and steel nail plates. The outer sheathing board is nailed to the face of the

framing. The frame is flipped over and filled to full depth with mineral wool insulation which is hand cut from slabs. Internal sheathing boards are nailed on to the frame to fully enclose the insulation. Finally, vapour tight and vapour open membranes are applied to the internal and external board respectively. The panel is oriented vertically for delivery.

The loss of material at manufacturing phase is considered within this EPD. Scrap materials are segregated and collected by a local waste removal contractor. Clean, segregated waste timber is used for energy recovery, although no data for this is included in the EPD. The finished product is stored at the manufacturing site before being shipped to the customer at their building site.

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The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

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.

The finished panel product is delivered to building sites via EURO6 lorry transport held vertically in a steel stillage. This allows quick and selective

lifting of the panel from the lorry trailer directly into its finished location without unloading the stillage itself. Products are delivered to various building sites according to demand. An average delivery distance was calculated as 180km. Empty stillages are returned to the factory for re-use. Installation uses a mobile crane to lift panels from the lorry trailer into position on the external wall of the building. Installation teams use access equipment such as mobile elevated working platforms (MEWPs) to work on the internal and external face of the panel. Teams use nail and screw fixings applied with hand tools or portable cordless power tools.

PRODUCT USE AND MAINTENANCE (B1-B7)

Module Not Declared

Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

At the end of the product's life cycle, it is assumed that the panels are dismantled using electric tools, with an energy consumption of 0.89 MWh per square meter of panel removed (based on data from similar assessments). All generated waste is collected and transported to waste treatment facilities, with an assumed transport distance of 50-250 km by lorry. For timber and OSB components, approximately 26% is assumed to be recycled, 50% is incinerated while the remaining 24% is sent to landfill for final disposal. The recycling rates for steel are based on data from the World Steel Association with 85% recycled and 15% to landfill. Plastic building membranes are assumed to be recycled at a rate of 23% with 50% incinerated and the rest assumed to be disposed at landfill. Mineral wool and cement fibre board do not have prescribed recycling routes and cannot be incinerated so are assumed to both be sent to inert landfill with the mineral wool impacts used as a proxy by weight for the cement fibre board.

MANUFACTURING PROCESS



1 - Delivery of raw materials



2 - Quality check



3 - Machining



4 - Assembly



5 - Finished Products



6 - Loading for Delivery



7 - Delivery to Site



8 - Installation

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.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

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 material	Allocated by mass or volume
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	0

This EPD is product and factory specific

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 v3.2.3. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

ENVIRONMENTAL IMPACT DATA

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	-1.17E+01	1.19E+01	1.38E+01	1.41E+01	2.10E+00	1.87E+00	ND	ND	ND	ND	ND	ND	ND	3.17E-01	1.38E+00	4.50E+01	1.77E+01	-5.87E+00
GWP – fossil	kg CO ₂ e	5.88E+01	1.19E+01	3.82E+00	7.45E+01	2.10E+00	1.87E+00	ND	ND	ND	ND	ND	ND	ND	3.17E-01	1.38E+00	9.61E-01	4.03E-01	-5.85E+00
GWP – biogenic	kg CO ₂ e	-7.06E+01	8.21E-05	1.00E+01	-6.06E+01	4.59E-04	2.54E-03	ND	ND	ND	ND	ND	ND	ND	3.86E-05	1.87E-04	4.40E+01	1.73E+01	-1.00E-02
GWP – LULUC	kg CO ₂ e	1.85E-01	6.09E-03	4.02E-03	1.95E-01	8.19E-04	2.08E-04	ND	ND	ND	ND	ND	ND	ND	4.73E-05	6.30E-04	3.11E-04	2.29E-04	-1.36E-02
Ozone depletion pot.	kg CFC-11e	5.81E-07	1.86E-07	1.64E-07	9.30E-07	4.39E-08	2.90E-08	ND	ND	ND	ND	ND	ND	ND	5.32E-09	2.13E-08	4.67E-09	1.10E-08	-1.30E-07
Acidification potential	mol H ⁺ e	2.94E-01	2.88E-01	1.03E-02	5.92E-01	4.96E-03	1.68E-02	ND	ND	ND	ND	ND	ND	ND	2.79E-03	4.07E-03	3.63E-03	2.75E-03	-3.14E-02
EP-freshwater ²⁾	kg Pe	4.43E-03	4.61E-04	5.02E-04	5.40E-03	1.47E-04	5.70E-05	ND	ND	ND	ND	ND	ND	ND	1.11E-05	1.09E-04	1.95E-04	9.80E-05	-3.97E-03
EP-marine	kg Ne	7.94E-02	7.17E-02	4.25E-03	1.55E-01	1.30E-03	7.77E-03	ND	ND	ND	ND	ND	ND	ND	1.28E-03	1.20E-03	1.71E-03	3.95E-03	-7.30E-03
EP-terrestrial	mol Ne	1.03E+00	7.96E-01	3.41E-02	1.86E+00	1.41E-02	8.51E-02	ND	ND	ND	ND	ND	ND	ND	1.41E-02	1.30E-02	1.64E-02	1.14E-02	-7.39E-02
POCP (“smog”) ³⁾	kg NMVOCe	2.01E-01	2.21E-01	1.05E-02	4.32E-01	8.63E-03	2.54E-02	ND	ND	ND	ND	ND	ND	ND	4.19E-03	6.05E-03	4.21E-03	4.23E-03	-2.48E-02
ADP-minerals & metals ⁴⁾	kg Sbe	1.04E-04	1.59E-05	9.40E-06	1.29E-04	6.02E-06	9.33E-07	ND	ND	ND	ND	ND	ND	ND	3.29E-07	3.95E-06	2.85E-06	6.81E-07	-2.96E-05
ADP-fossil resources	MJ	6.78E+02	1.52E+02	9.12E+01	9.21E+02	3.16E+01	2.46E+01	ND	ND	ND	ND	ND	ND	ND	4.33E+00	2.03E+01	4.39E+00	9.31E+00	-1.15E+02
Water use ⁵⁾	m ³ e depr.	3.69E+01	5.04E-01	8.82E-01	3.83E+01	1.62E-01	6.47E-02	ND	ND	ND	ND	ND	ND	ND	1.34E-02	1.00E-01	6.41E-01	3.09E-02	-2.64E+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, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	2.12E-06	5.07E-07	1.68E-07	2.79E-06	2.05E-07	4.76E-07	ND	ND	ND	ND	ND	ND	ND	7.83E-08	1.35E-07	3.90E-08	6.27E-08	-6.76E-07
Ionizing radiation ⁶⁾	kBq	1.39E+00	9.43E-02	2.82E+00	4.31E+00	3.81E-02	2.26E-02	ND	ND	ND	ND	ND	ND	ND	1.42E-02	1.76E-02	4.62E-02	6.60E-03	-2.24E+00
Ecotoxicity (freshwater)	CTUe	2.50E+02	1.27E+01	6.20E+00	2.69E+02	3.72E+00	1.41E+00	ND	ND	ND	ND	ND	ND	ND	2.55E-01	2.88E+00	2.43E+00	1.66E+00	-1.53E+01
Human toxicity, cancer	CTUh	7.78E-09	2.42E-09	1.16E-09	1.14E-08	3.50E-10	1.99E-10	ND	ND	ND	ND	ND	ND	ND	3.59E-11	2.29E-10	5.82E-10	8.35E-11	-1.62E-09
Human tox. non-cancer	CTUh	4.10E-07	5.08E-08	2.66E-08	4.87E-07	2.04E-08	3.33E-09	ND	ND	ND	ND	ND	ND	ND	7.15E-10	1.31E-08	3.79E-08	3.64E-09	-6.48E-08
SQP ⁷⁾	-	5.20E+03	4.37E+01	4.58E+01	5.29E+03	3.18E+01	2.05E+00	ND	ND	ND	ND	ND	ND	ND	4.93E-01	2.01E+01	1.81E+00	1.91E+01	-1.04E+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	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	2.83E+02	1.46E+00	- 2.65E+01	2.58E+02	5.14E-01	2.68E-01	ND	ND	ND	ND	ND	ND	ND	1.43E-01	2.79E-01	- 3.00E+02	- 1.44E+02	2.92E+01
Renew. PER as material	MJ	6.48E+02	0.00E+00	- 6.26E+01	5.86E+02	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	- 4.14E+02	- 1.71E+02	2.31E+01
Total use of renew. PER	MJ	9.32E+02	1.46E+00	- 8.91E+01	8.44E+02	5.14E-01	2.68E-01	ND	ND	ND	ND	ND	ND	ND	1.43E-01	2.79E-01	- 7.15E+02	- 3.16E+02	5.23E+01
Non-re. PER as energy	MJ	6.58E+02	1.52E+02	8.96E+01	8.99E+02	3.16E+01	2.46E+01	ND	ND	ND	ND	ND	ND	ND	4.33E+00	2.03E+01	- 8.38E+00	4.61E+00	-1.17E+02
Non-re. PER as material	MJ	1.89E+01	0.00E+00	- 1.79E+00	1.71E+01	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	- 1.19E+01	- 5.15E+00	1.17E+01
Total use of non-re. PER	MJ	6.77E+02	1.52E+02	8.78E+01	9.16E+02	3.16E+01	2.46E+01	ND	ND	ND	ND	ND	ND	ND	4.33E+00	2.03E+01	- 2.03E+01	-5.41E-01	-1.06E+02
Secondary materials	kg	7.74E+00	7.09E-02	5.42E-02	7.86E+00	1.37E-02	1.02E-02	ND	ND	ND	ND	ND	ND	ND	1.72E-03	8.68E-03	7.26E-03	2.58E-03	1.17E+00
Renew. secondary fuels	MJ	1.89E+01	3.09E-04	8.20E-05	1.89E+01	1.72E-04	3.04E-05	ND	ND	ND	ND	ND	ND	ND	4.77E-06	1.10E-04	3.96E-05	5.19E-05	-2.34E-04
Non-ren. secondary fuels	MJ	1.44E-05	0.00E+00	0.00E+00	1.44E-05	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m ³	3.32E+00	1.31E-02	2.03E-02	3.35E+00	4.66E-03	1.70E-03	ND	ND	ND	ND	ND	ND	ND	3.46E-04	3.02E-03	5.12E-03	-2.45E-02	-7.51E-02

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	6.32E-02	2.05E-01	1.91E-01	4.59E-01	4.57E-02	2.79E-02	ND	ND	ND	ND	ND	ND	ND	4.97E-03	3.44E-02	1.28E-01	1.16E-02	-7.86E-01
Non-hazardous waste	kg	1.41E+01	3.09E+00	1.67E+01	3.39E+01	9.15E-01	3.99E-01	ND	ND	ND	ND	ND	ND	ND	7.25E-02	6.37E-01	1.89E+01	4.32E+01	-2.44E+01
Radioactive waste	kg	2.21E-02	2.31E-05	6.15E-04	2.27E-02	9.42E-06	5.22E-06	ND	ND	ND	ND	ND	ND	ND	3.13E-06	4.32E-06	1.18E-05	1.61E-06	-5.74E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	1.87E-04	0.00E+00	0.00E+00	1.87E-04	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.32E-01	0.00E+00	0.00E+00	1.32E-01	0.00E+00	1.42E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	1.06E+01	0.00E+00	0.00E+00
Materials for energy rec	kg	1.26E-02	0.00E+00	0.00E+00	1.26E-02	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	4.96E-01	0.00E+00	0.00E+00	4.96E-01	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	8.62E+01	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	3.63E+01	0.00E+00	0.00E+00
Exported energy –	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	4.99E+01	0.00E+00	0.00E+00

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	5.90E+01	1.19E+01	3.82E+00	7.47E+01	2.10E+00	1.87E+00	ND	ND	ND	ND	ND	ND	ND	3.17E-01	1.38E+00	9.62E-01	4.03E-01	-5.86E+00

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH₄ fossil, CH₄ biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO₂ is set to zero.

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Market for electricity, medium voltage, United Kingdom, Ecoinvent, 0.25 kgCO₂e/kWh
2. Market for heat, district or industrial, natural gas, Albania, Ecoinvent, 0.0564 kgCO₂e/MJ
3. Liquefied petroleum gas (LPG), United Kingdom, One Click LCA

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry >32 metric ton, EURO6, 180 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	60
Bulk density of transported products	0.00E+00
Volume capacity utilization factor	<1

Installation scenario documentation - A5 (Installation resources)

1. Market for electricity, low voltage, Ecoinvent, 0.00108 kWh
2. Market for electricity, low voltage, Ecoinvent, 0.045 kWh
3. Diesel, burned in building machine, Ecoinvent, 5.136 kWh

Installation scenario documentation - A5 (Installation waste)

1. Treatment of metal scrap, mixed, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.142 kg
2. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.025 kg

EOL scenario documentation - C1-C4 (Data source)

1. Market for electricity, low voltage, Ecoinvent, 0.05 kWh
2. Diesel, burned in building machine, Ecoinvent, 0.844 kWh
3. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 1.28 kg
4. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.22 kg
5. Wood chipping, industrial residual wood, stationary electric chipper, Ecoinvent, Materials for recycling, 1.17 kg
6. Wood chipping, industrial residual wood, stationary electric chipper, Ecoinvent, Materials for recycling, 8.07 kg
7. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 2.25 kg
8. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 15.5195 kg
9. Exported Energy: Electricity, Ecoinvent, 5.507 MJ
10. Exported Energy: Electricity, Ecoinvent, 30.773 MJ
11. Exported Energy: Electricity, Ecoinvent, 1.14752 MJ
12. Exported Energy: Thermal, Ecoinvent, 7.572 MJ
13. Exported Energy: Thermal, Ecoinvent, 42.31 MJ
14. Exported Energy: Thermal, Ecoinvent, 1.5778 MJ
15. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 1.08 kg
16. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 7.449 kg
17. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.1 kg
18. Treatment of waste polypropylene, municipal incineration, Ecoinvent, 0.22 kg
19. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.12 kg
20. Treatment of waste mineral wool, inert material landfill, Ecoinvent, 12.96 kg
21. Treatment of waste mineral wool, inert material landfill, Ecoinvent, 33.6 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Disposal and waste processing facilities are assumed to be between 50 and 250 km from the site. The transportation vehicle is assumed to be market average diesel lorry.

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15802+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Yazan Badour, as an authorised verifier acting for EPD Hub Limited

13.11.2025

