

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Thermalite Shield
Forterra Building Products



EPD HUB, HUB-5483
Published on 20.02.2026, last updated on 10.10.2026, valid until 19.02.2031

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	Forterra Building Products
Address	5 Grange Court, , NN4 5EA, Northampton, , GB
Contact details	asktechnical@forterra.co.uk
Website	https://www.forterra.co.uk/

This EPD is intended for business-to-business 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.

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 EN 16757 Product Category Rules for concrete and concrete elements
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-B1, and modules C1-C4, D
EPD author	Joe Gosling, Forterra Building Products
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Vera Durão, as an authorised verifier acting for EPD Hub Limited

PRODUCT

Product name	Thermalite Shield
Additional labels	-
Product reference	-
Place(s) of raw material origin	United Kingdom, Spain, Sweden
Place of production	Newbury, Berkshire, United Kingdom
Place(s) of installation and use	United Kingdom
Period for data	2022 calendar year
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	93.4

ENVIRONMENTAL DATA SUMMARY

Declared unit	1m3 of 600kg/m3 density aerated concrete block
Declared unit mass	600 kg
Mass of packaging	0.701 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	168
GWP-total, A1-A3 ($kgCO_2e$)	167
Secondary material, inputs (%)	1.18
Total energy use, A1-A3 (kWh)	523
Net freshwater use, A1-A3 (m^3)	0.51

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Forterra is a leading UK manufacturer of essential clay and concrete building products, with a unique combination of strong marker positions in clay bricks, concrete blocks and precast concrete flooring.

Sustainability is a fundamental part of Forterra's strategy, aiming to leave the lightest possible touch on the world we live in. The business has ambitious targets across multiple aspects of sustainability including carbon and packaging reductions, increase in on site renewable power and zero harm in the workforce.

PRODUCT DESCRIPTION

Aircrete blocks (also known as autoclaved aerated concrete blocks) are made of a very fine-grained mixture of cement, quicklime, pulverised fly ash (PFA), anhydrite and water along with finely powdered aluminium. This mix produces hydrogen gas which results in the concrete mix's aeration to form cakes. The cakes are then cut and then loaded into autoclaves for high pressure steam curing before being packaged ready for delivery.

Aircrete blocks are used in loadbearing and non-loadbearing wall applications, mainly in the housing sector. The compressive strength for Thermalite Shield is 3.6 B/mm2. The thermal conductivity for this product is 0.13 W/mK. The declared unit in this EPD is $1m^3$.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	>99	UK & EU
Fossil materials	-	-
Bio-based materials	-	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

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

1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	$1m^3$ of $600kg/m^3$ density aerated concrete block
Mass per declared unit	600 kg
Functional unit	-
Reference service life	100 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	x	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	Recycling

Not declared = ND

**A5 is not fully declared. Waste processing (from collection through to end-of-waste or final disposal) and full energy and biogenic carbon balancing are accounted for. Storage, product wastage, and installation into the building are excluded.*

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. The transport distances for the raw materials are estimated based on location of the source or manufacturer. Lorries are assumed to be EURO5 >32t. Market values are applied for sea freight. Once at the factory, the raw materials are stockpiled and siloed.

The raw materials are mixed together before being poured into moulds. The aluminium powder create a chemical reaction that produces hydrogen gas which gives the product it light and porous characteristics. The mix in the moulds are known as cakes and after they are set, they are cut into the desired block sizes. The blocks are then placed into autoclaves where they undergo high pressure steam curing before being prepared for packaging, storage and delivery.

The energy required to power the processes to produce the blocks include natural gas at around 81% of the total energy demand, electricity at 15% and gas oil at 5%. Polyethylene plastic wrap is used to secure the packs with some packs using wooden pallets. Production losses amount to approximately 9% and any manufacturing waste is assumed to travel 50km for processing.

The use of renewable 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.

A4
The Forterra delivery fleet are Euro6 compliant and the distance to the site is an approximate average of Forterra's Thermalite customers base which is 60km. The transported mass is 600kg plus the associated packaging.

A5
Aircrete blocks are generally laid by hand and any packaging removed on the construction site. Packaging waste has been included in this section. 40% of the plastic is assumed to be recycled, 37% is incinerated and 23% landfilled. Material loss during installation is 4%, these blocks will be sent for landfilling and the distance to the waste processing facility is assumed to be 50km.

PRODUCT USE AND MAINTENANCE (B1-B7)

With the exception of carbonation of the concrete block in Module B1, other B modules are not relevant to concrete blocks. Typically, concrete blocks with a compressive strength of <13N/mm2 will have carbonated through their full depth by the end of the RSL. However with indoor use, the degree of carbonation is only 40%. Air, soil, and water impacts during the use phase have not been studied.

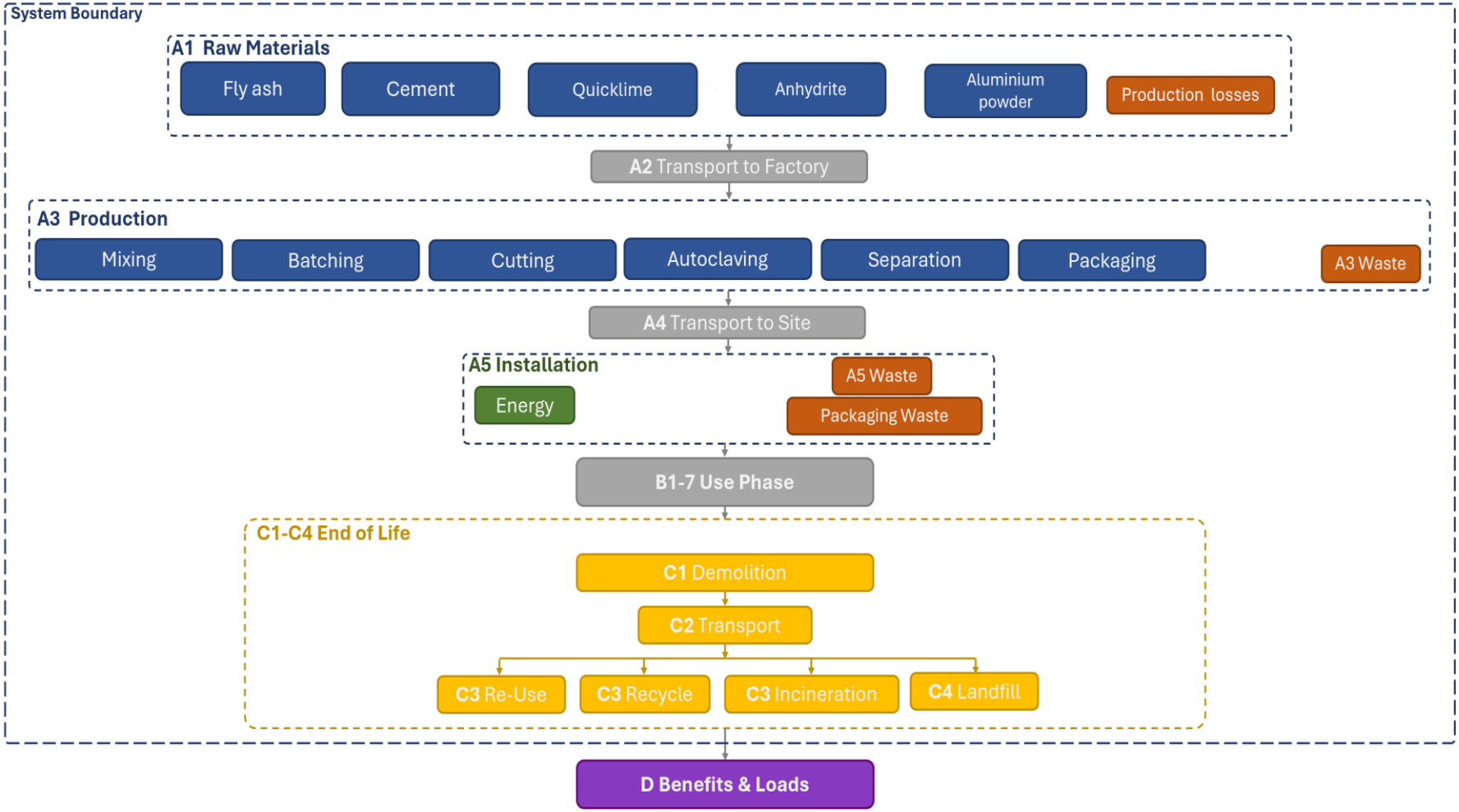
PRODUCT END OF LIFE (C1-C4, D)

End of life scenarios are based on BRE Global Product Category Rules (PCR) For Type III EPD of Construction Products to EN 15804+A2. It is assumed that 95% of the product will be recycled and 5% will be landfilled. It is assumed that 10kWh/tonne diesel is required to process the waste. The waste is assumed to travel 15km.

For carbonation, calculations and methodology from the MPA have been used for 1m3 of Aircrete. for module C1 0.96kg CO2e /m3 carbonates and module C3 6.6kg CO2e/m3 carbonates.

Assumed substituted processes in Module D, in accordance with the PCR or representative actual processes. Substitution of virgin materials is based on the 95% of the total mass of the product.

LIFE CYCLE FLOW DIAGRAM



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	Physical Properties
Ancillary materials	Physical Properties
Manufacturing energy and waste	Physical Properties

PRODUCT & MANUFACTURING SITES GROUPING

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

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 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

BRE Global Product Category Rules (PCR) For Type II EPD of Construction Products to EN 15804+A2
MPA Aircrete EPD Background Report Carbonation

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_2e	1.26E+02	1.79E+01	2.35E+01	1.67E+02	3.88E+00	8.05E+00	-4.63E+01	ND	ND	ND	ND	ND	ND	-5.40E+00	9.69E-01	2.49E+00	3.00E-01	-6.66E+00
GWP – fossil	kg CO_2e	1.26E+02	1.79E+01	2.35E+01	1.68E+02	3.88E+00	8.01E+00	-4.63E+01	ND	ND	ND	ND	ND	ND	-5.40E+00	9.69E-01	2.49E+00	3.00E-01	-6.65E+00
GWP – biogenic	kg CO_2e	-2.46E-01	3.84E-03	-3.17E-02	-2.74E-01	8.79E-04	3.59E-02	0.00E+00	ND	ND	ND	ND	ND	ND	2.21E-04	2.19E-04	-2.54E-04	-4.96E-04	-5.44E-03
GWP – LULUC	kg CO_2e	6.12E-02	7.07E-03	4.36E-03	7.26E-02	1.74E-03	3.07E-03	0.00E+00	ND	ND	ND	ND	ND	ND	2.22E-04	4.33E-04	2.56E-04	8.27E-05	-5.93E-03
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	2.74E-06	3.33E-07	9.02E-07	3.97E-06	5.73E-08	1.65E-07	0.00E+00	ND	ND	ND	ND	ND	ND	3.31E-08	1.43E-08	3.82E-08	9.41E-09	-7.78E-08
Acidification potential	mol H^+e	2.67E-01	6.03E-02	4.03E-02	3.68E-01	1.32E-02	1.69E-02	0.00E+00	ND	ND	ND	ND	ND	ND	1.95E-02	3.30E-03	2.25E-02	3.31E-03	-3.87E-02
EP-freshwater[2)]	kg Pe	-1.26E+00	1.30E-03	1.12E-03	-1.25E+00	3.02E-04	-5.01E-02	0.00E+00	ND	ND	ND	ND	ND	ND	6.24E-05	7.54E-05	7.20E-05	5.04E-04	-2.03E-03
EP-marine	kg Ne	2.84E-02	2.01E-02	1.46E-02	6.32E-02	4.35E-03	3.44E-03	0.00E+00	ND	ND	ND	ND	ND	ND	9.06E-03	1.09E-03	1.04E-02	8.26E-04	-8.91E-03
EP-terrestrial	mol Ne	7.86E-01	2.19E-01	1.56E-01	1.16E+00	4.73E-02	5.56E-02	0.00E+00	ND	ND	ND	ND	ND	ND	9.92E-02	1.18E-02	1.14E-01	8.87E-03	-1.07E-01
POCP ("smog")[3)]	kg NMVOCe	2.01E-01	9.39E-02	7.28E-02	3.68E-01	1.95E-02	1.78E-02	0.00E+00	ND	ND	ND	ND	ND	ND	2.96E-02	4.87E-03	3.41E-02	3.25E-03	-3.21E-02
ADP-minerals & metals[4)]	kg Sbe	1.09E-04	4.95E-05	3.01E-05	1.88E-04	1.08E-05	8.59E-06	0.00E+00	ND	ND	ND	ND	ND	ND	7.76E-07	2.70E-06	8.94E-07	5.89E-07	-3.61E-05
ADP-fossil resources	MJ	1.04E+03	2.58E+02	3.92E+02	1.69E+03	5.63E+01	7.34E+01	0.00E+00	ND	ND	ND	ND	ND	ND	2.83E+01	1.41E+01	3.26E+01	6.98E+00	-9.39E+01
Water use[5)]	m^3e depr.	7.99E+00	1.33E+00	9.68E+00	1.90E+01	2.78E-01	8.11E-01	0.00E+00	ND	ND	ND	ND	ND	ND	7.07E-02	6.94E-02	8.15E-02	4.23E-02	-8.80E+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	1.49E-06	1.77E-06	1.03E-06	4.29E-06	3.88E-07	4.08E-07	0.00E+00	ND	ND	ND	ND	ND	ND	5.55E-07	9.70E-08	4.88E-06	5.04E-08	-5.60E-07
Ionizing radiation[6)]	kBq U235e	6.40E-01	2.87E-01	3.49E-01	1.28E+00	4.90E-02	5.68E-02	0.00E+00	ND	ND	ND	ND	ND	ND	1.25E-02	1.22E-02	1.45E-02	9.32E-03	-6.13E-01
Ecotoxicity (freshwater)	CTUe	1.14E+03	3.36E+01	2.46E+01	1.20E+03	7.96E+00	4.90E+01	0.00E+00	ND	ND	ND	ND	ND	ND	1.56E+00	1.99E+00	1.80E+00	4.67E+00	-1.83E+01
Human toxicity, cancer	CTUh	1.19E-07	2.93E-09	2.65E-09	1.24E-07	6.40E-10	5.07E-09	0.00E+00	ND	ND	ND	ND	ND	ND	2.22E-10	1.60E-10	2.56E-10	1.29E-10	-1.71E-09
Human tox. non-cancer	CTUh	2.23E-06	1.67E-07	5.04E-08	2.45E-06	3.65E-08	1.03E-07	0.00E+00	ND	ND	ND	ND	ND	ND	3.52E-09	9.10E-09	4.06E-09	8.33E-09	-5.20E-08
SQP[7)]	-	7.32E+02	2.59E+02	2.36E+01	1.01E+03	5.67E+01	4.53E+01	0.00E+00	ND	ND	ND	ND	ND	ND	1.98E+00	1.42E+01	2.29E+00	1.71E+01	-6.74E+01

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	9.90E+01	4.03E+00	5.16E+01	1.55E+02	7.72E-01	6.26E+00	0.00E+00	ND	ND	ND	ND	ND	ND	1.79E-01	1.93E-01	2.07E-01	1.47E-01	-7.67E+00
Renew. PER as material	MJ	0.00E+00	0.00E+00	3.14E-01	3.14E-01	0.00E+00	-3.14E-01	0.00E+00	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renew. PER	MJ	9.90E+01	4.03E+00	5.19E+01	1.55E+02	7.72E-01	5.95E+00	0.00E+00	ND	ND	ND	ND	ND	ND	1.79E-01	1.93E-01	2.07E-01	1.47E-01	-7.67E+00
Non-re. PER as energy	MJ	1.04E+03	2.58E+02	3.62E+02	1.66E+03	5.63E+01	4.27E+01	0.00E+00	ND	ND	ND	ND	ND	ND	2.83E+01	1.41E+01	3.26E+01	6.98E+00	-9.39E+01
Non-re. PER as material	MJ	0.00E+00	0.00E+00	2.98E+01	2.98E+01	0.00E+00	-2.98E+01	0.00E+00	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+01
Total use of non-re. PER	MJ	1.04E+03	2.58E+02	3.92E+02	1.69E+03	5.63E+01	1.29E+01	0.00E+00	ND	ND	ND	ND	ND	ND	2.83E+01	1.41E+01	3.26E+01	6.98E+00	-8.20E+01
Secondary materials	kg	7.09E+00	1.11E-01	8.05E-02	7.28E+00	2.40E-02	2.95E-01	0.00E+00	ND	ND	ND	ND	ND	ND	1.18E-02	5.98E-03	1.36E-02	2.32E-03	2.16E-01
Renew. secondary fuels	MJ	2.70E+01	1.40E-03	3.57E-02	2.70E+01	3.04E-04	1.08E+00	0.00E+00	ND	ND	ND	ND	ND	ND	3.07E-05	7.60E-05	3.54E-05	4.20E-05	-5.52E-04
Non-ren. secondary fuels	MJ	4.05E+01	0.00E+00	0.00E+00	4.05E+01	0.00E+00	1.62E+00	0.00E+00	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	4.22E-01	3.80E-02	5.47E-02	5.14E-01	8.32E-03	2.09E-02	0.00E+00	ND	ND	ND	ND	ND	ND	1.87E-03	2.08E-03	2.16E-03	-8.44E-02	-2.11E-01

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	8.49E+00	5.03E-01	3.46E-01	9.34E+00	9.54E-02	3.92E-01	0.00E+00	ND	ND	ND	ND	ND	ND	3.15E-02	2.38E-02	3.63E-02	1.18E-02	-5.80E-01
Non-hazardous waste	kg	1.59E+02	9.91E+00	1.89E+01	1.88E+02	1.77E+00	8.89E+00	0.00E+00	ND	ND	ND	ND	ND	ND	4.29E-01	4.41E-01	4.95E-01	1.07E+02	-1.63E+01
Radioactive waste	kg	4.97E-04	7.07E-05	8.70E-05	6.55E-04	1.20E-05	2.76E-05	0.00E+00	ND	ND	ND	ND	ND	ND	3.07E-06	3.00E-06	3.55E-06	2.28E-06	-1.50E-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	1.31E-06	0.00E+00	0.00E+00	1.31E-06	0.00E+00	5.22E-08	0.00E+00	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	1.58E-01	0.00E+00	0.00E+00	1.58E-01	0.00E+00	2.43E+01	0.00E+00	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	5.70E+02	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E+00	0.00E+00	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.59E-03
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+00	0.00E+00	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-6.70E-04
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E+00	0.00E+00	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.20E-04

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_2e	1.26E+02	1.79E+01	2.35E+01	1.68E+02	3.88E+00	8.01E+00	-4.63E+01	ND	ND	ND	ND	ND	ND	-5.40E+00	9.69E-01	2.49E+00	3.00E-01	-6.66E+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. Electricity production, wind, 1-3MW turbine, onshore, United Kingdom, Ecoinvent, 0.0144 kgCO2e/kWh
2. Diesel, burned in building machine, World, Ecoinvent, 0.10 kgCO2e/MJ
3. Market for heat, district or industrial, natural gas, Europe, Ecoinvent, 0.0564 kgCO2e/MJ

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 60 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	601
Volume capacity utilization factor	<1

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	-
Water use (m^3)	-
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	Polyethylene – 0.73kg Minerals – 24 kg Wood – 0.001 kg
Waste materials: output routes	Polyethylene, for recycling, 0.29 kg Polyethylene, municipal incineration, 0.27 kg Polyethylene, sanitary landfill, 0.17 kg Waste concrete, recycling, 24.0 kg 9. Wood, sorting and shredding, 3.2E-4 kg Wood, municipal incineration, 3.0E-4 kg Wood, sanitary landfill, 3.8E-4 kg
Direct emissions (kg)	-

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	600
Collection process: Mixed waste (kg)	0
Recovery: re-use (kg)	0
Recovery: recycling (kg)	570
Recovery: energy recovery (kg)	0
Disposal (kg)	30
Scenario assumptions e.g. transportation (mode, km) & other	-

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 15804+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

Vera Durão, as an authorised verifier acting for EPD Hub Limited

10.10.2026

