ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Reclaimed Clay Bricks
Reclaimed Brick Company

EPD HUB, HUB-4594
Published on 05.12.2025, last updated on 05.12.2025, valid until 04.12.2030

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	Reclaimed Brick Company
Address	Reclaimed Brick Company, Clifton Works, Hillfoot Road Sheffield, S3 8AA, United Kingdom.
Contact details	luke@reclaimedbrickcompany.co.uk
Website	http://www.reclaimedbrickcompany.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	Dr Aaron Yeardley, Tunley Environmental
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

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	Reclaimed Clay Bricks
Additional labels	-
Product reference	-
Place(s) of raw material origin	United Kingdom
Place of production	Clifton Works, Hillfoot Road, Sheffield, S3 8AA, United Kingdom
Place(s) of installation and use	United Kingdom
Period for data	2024 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 (%)	78.7

ENVIRONMENTAL DATA SUMMARY

Declared unit	One (1) metric tonne (1,000 kg) of reclaimed clay brick product
Declared unit mass	1000 kg
Mass of packaging	14.866 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	20.4
GWP-total, A1-A3 ($kgCO_2e$)	-3.18
Secondary material, inputs (%)	100
Secondary material, outputs (%)	70
Total energy use, A1-A3 (kWh)	138
Net freshwater use, A1-A3 (m^3)	-1

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Reclaimed Brick Company is a leading specialist in the supply of high-quality reclaimed bricks and traditional building materials, serving construction professionals, architects, and private clients across the UK. With a commitment to preserving architectural heritage and reducing environmental impact, the company sources, cleans, and prepares reclaimed bricks for reuse in both restoration and new-build projects. Operating from a dedicated site in Sheffield, Reclaimed Brick Company maintains a robust inventory of characterful handmade, machine-made, and pressed bricks, carefully matched to regional styles and periods.

Central to the company's operations is a commitment to responsible sourcing and processing practices. Every batch of reclaimed material is thoroughly inspected to ensure quality, structural integrity, and suitability for reuse. The company adheres to stringent sorting and grading protocols to deliver consistent product performance and aesthetic value. These standards not only guarantee reliability but also contribute to the reduction of construction waste, landfill use, and embodied carbon in the building process.

PRODUCT DESCRIPTION

A brick is a rectangular block, traditionally crafted from clay and kiln-fired to a warm, earthy hue. It is solid and enduring in form, often showing subtle textures or slight variations in colour, with crisp edges that echo the precision of its manufacture. When held, a brick carries a reassuring weight, promising both stability and shelter once set into a wall. The products offered here are not ordinary, newly formed bricks; rather, they are reclaimed bricks, salvaged from demolition sites.

Physical Characteristics

- Standard Dimensions: 68mm x 228mm x 110mm or 75mm x 228mm x 110mm
- Average Weight: 3.75 kg per brick
- Material Composition: 100% natural clay

Bricks are stacked and packaged on timber pallets, each pallet containing 400 bricks and weighing approximately 1,500 kg. This method ensures stability during transport and storage, maintaining product quality from site to installation.

applications, including:

- Building structural walls
- Facade restoration and enhancement
- Garden and landscape features
- Interior or exterior architectural projects where character and sustainability are valued

With their reliable physical properties, sustainable provenance, and authentic appearance, these reclaimed bricks are an ideal choice for both heritage restoration and contemporary building designs prioritising environmental responsibility. There is no requirement for the reclaimed bricks to be tested to any standards.

Further information can be found at:
http://www.reclaimedbrickcompany.co.uk/

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	100	UK
Fossil materials	0	-
Bio-based materials	0	-

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	0.646

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	One (1) metric tonne (1,000 kg) of reclaimed clay brick product
Mass per declared unit	1000 kg
Functional unit	-
Reference service life	150

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	Recycling

Modules not declared = ND. 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.

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

The environmental impacts considered for the product stage cover the manufacturing of 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 manufacturing processes as well as losses during electricity transmission.

The declared unit is 1,000 kg of reclaimed clay bricks (secondary material). No primary raw materials are used. The only inputs in modules A1–A3 are secondary material (the reclaimed bricks themselves, allocated zero upstream burden), packaging materials, transport of those packaging materials, company-owned transport to deliver the finished reclaimed bricks to customers, and warehouse electricity for storage.

Recovery takes place at demolition sites. Bricks are manually selected, cleaned using hand tools (chisels and brushes), and stacked on pallets. No mechanised cleaning or additional raw materials are involved. Non-reusable bricks are sorted out and treated as waste brick using the process “Treatment of waste brick, sorting plant (Reference product: waste brick)” in module A3. All waste treatment therefore remains within the product system boundary.

Packaging consists of one wooden pallet plus 0.3 kg LDPE shrink wrap per 1.5 tonnes of reclaimed bricks (0.2 kg shrink wrap per 1,000 kg). Packaging materials are assumed to travel 50 km by road freight to the warehouse.

Delivery of the reclaimed bricks to customers is carried out with the company's own HGV fleet. In 2024 the fleet covered 49,362 miles to deliver 5,800 tonnes of reclaimed bricks, equating to 13.7 km per tonne.

Warehouse electricity consumption for the full site in 2024 was 13,651.46 kWh (Scottish Power, UK residual mix). Reclaimed bricks represented 54% of total sales tonnage processed and sold through the facility. Electricity allocated to reclaimed bricks is therefore 13,651.46 × 0.54 / 5,800 = 1.27 kWh per tonne, or 1.27 kWh per 1,000 kg declared unit.

No ancillary materials are used. Apart from the waste-brick sorting plant process noted above, there are no production losses, manufacturing waste sent off-site, or refrigerant losses within the A1–A3 boundary.
A1–A3 therefore includes:
- 1,000 kg secondary material (reclaimed clay bricks, zero upstream burden)
- packaging (0.66 of a pallet + 0.2 kg LDPE shrink wrap per 1,000 kg)
- 50 km road transport of packaging materials
- 13.7 km HGV transport (own fleet) for product delivery
- 1.27 kWh UK residual-mix electricity for storage and handling
- Treatment of waste brick, sorting plant (Reference product: waste brick).

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.

Transportation impacts from delivery of the final product to the construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure and vehicle emissions. The average one-way transport distance is 141 km, based on 2023–2024 delivery records from third-party couriers (lorry >32 t, Euro 6, utilisation ratio 60 %).

Installation into the building (A5) only includes on-site material losses. Following the BRE Green Guide to Specification element 806470537 (reclaimed clay bricks), a 5 % wastage rate is applied.
This wastage covers:
- 50 kg of reclaimed bricks per declared unit (1 tonne net delivered)
- 15.2 kg of timber pallets
- 0.2 kg of plastic shrink wrap

The full environmental impacts of this wasted material (A1–A3 packaging plus A5 waste) are allocated to module A5. No additional ancillary materials or energy use are required for installation.

PRODUCT USE AND MAINTENANCE (B1-B7)

For reclaimed bricks, the use and maintenance phase is generally not relevant (Module Not Relevant, MNR) within this study. According to research by the Engineering and Physical Sciences Research Council (2007), the average UK brick has a minimum service life of 150 years in a half brick thick cavity wall, and at least 600 years in full brick construction.

No maintenance is typically required for at least 60 years, apart from occasional repointing of mortar. As such, ongoing maintenance demands are minimal and do not significantly affect the environmental impact assessment for reclaimed brickwork.

Modules B1-B7 are not considered within this study.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

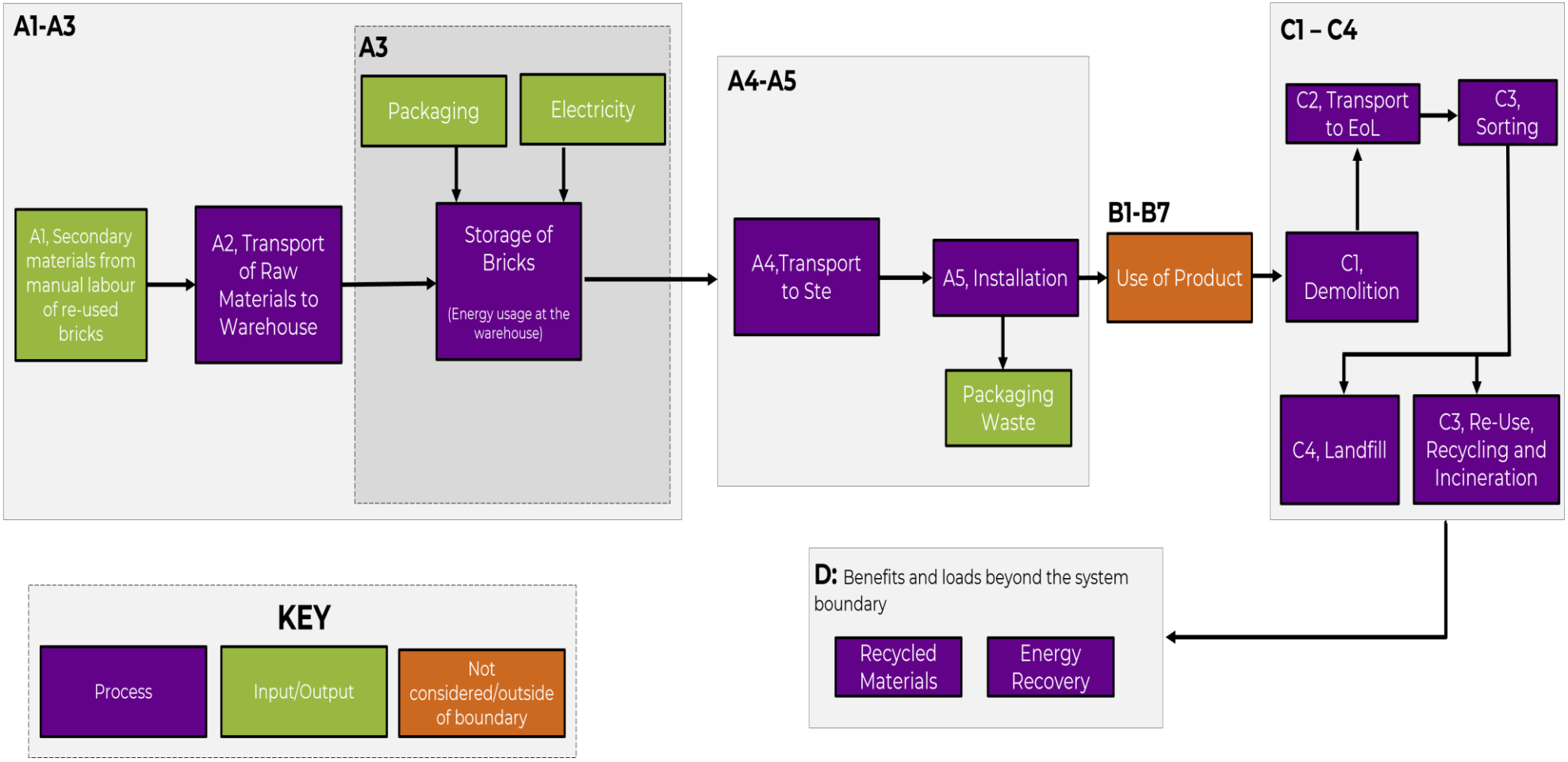
At the end of their life, bricks are managed through several stages. Dismantling or demolition (C1) is the use of 0.88 litres of diesel per tonne of bricks in a machine to crush the bricks into an aggregate.

In Module C2, the crushed bricks are transported from the site. Of the crushed material, 70% is reused on site as recycled aggregate (transport distance 5 km) while the remaining 30% is not suitable for reuse and is sent to landfill (transport distance 150 km). This split is in line with UK statistics and the modelled scenario.

Module D accounts for benefits and loads beyond the system boundary arising from material recovery and energy substitution of the product's packaging materials only, as the bricks themselves are already declared as reused secondary material within modules C3–C4.

For the packaging fractions (timber and plastic), two benefits are credited: (i) recycling to secondary markets (post-consumer wood-chip and recycled plastic), and (ii) incineration with energy recovery, which delivers exported electricity and heat that substitute grid electricity and fossil heat carriers. Biogenic carbon flows are treated in line with the dataset assumptions. These avoided burdens are reported as net substitutions consistent with EN 15804, ensuring that credits from C3 are not double-counted in Module 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.

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	No allocation
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by revenue

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 System Verification 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'.

Ecoinvent database – www.ecoinvent.ch

ISO 14040 (2006): Environmental Management - Life Cycle Assessment - Principles and Framework

ISO 14044 (2006): Environmental Management - Life Cycle Assessment – Requirements and Guidelines

DS/EN 15804:2012 + A2:2019 – Sustainability of construction works- Environmental product declarations – Core rules for the product category of construction products

ISO 14001:2015 - Environmental management systems – Requirements with guidance for use

ISO 14025:2009-11 - Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

BRE Global Ltd. (2013). Green Guide to Specification: Online version 2013. BRE Centre for Sustainable Products, Watford, UK. Element 806470537: Reclaimed clay bricks (loadbearing external walling). Available at: https://www.bregroup.com/products/green-guide (subscription required for full access; free summaries via tools.bregroup.com/greenguide).

CEN/TC 88. (2020). EN 17160:2020 – Construction products: Assessment of release of dangerous substances – Determination of activity concentrations of radionuclides in construction products using gamma-ray spectrometry. Brussels, Belgium: European Committee for Standardization.

European Commission, Eurostat. (2024). Recovery rate of construction and demolition waste (CEI_WM040). Luxembourg: Eurostat. Dataset last updated 2023 (2022 data).

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	0.00E+00	1.49E+00	-4.68E+00	-3.18E+00	1.48E+01	2.64E+01	ND	ND	ND	ND	ND	ND	ND	3.17E+00	5.22E+00	2.53E+00	6.57E+00	-8.89E+00
GWP – fossil	kg CO_2e	0.00E+00	1.49E+00	1.89E+01	2.04E+01	1.48E+01	2.71E+00	ND	ND	ND	ND	ND	ND	ND	3.17E+00	5.22E+00	2.53E+00	6.55E+00	-2.20E+00
GWP – biogenic	kg CO_2e	0.00E+00	3.10E-04	-2.36E+01	-2.36E+01	3.23E-03	2.37E+01	ND	ND	ND	ND	ND	ND	ND	6.04E-04	1.18E-03	4.82E-04	7.54E-03	-6.68E+00
GWP – LULUC	kg CO_2e	0.00E+00	5.80E-04	2.57E-02	2.62E-02	5.76E-03	2.42E-03	ND	ND	ND	ND	ND	ND	ND	3.25E-04	2.34E-03	2.59E-04	1.42E-02	-3.22E-03
Ozone depletion pot.	kg CFC_{-11}e	0.00E+00	3.13E-08	4.98E-07	5.29E-07	3.09E-07	5.33E-08	ND	ND	ND	ND	ND	ND	ND	4.71E-08	7.71E-08	3.75E-08	1.24E-07	-3.34E-08
Acidification potential	mol H^+e	0.00E+00	3.53E-03	1.34E-01	1.38E-01	3.49E-02	1.32E-02	ND	ND	ND	ND	ND	ND	ND	2.83E-02	1.78E-02	2.26E-02	3.94E-02	-1.33E-02
EP-freshwater[2)]	kg Pe	0.00E+00	1.04E-04	9.88E-03	9.99E-03	1.03E-03	6.96E-04	ND	ND	ND	ND	ND	ND	ND	1.02E-04	4.06E-04	8.13E-05	5.97E-04	-1.28E-03
EP-marine	kg Ne	0.00E+00	9.25E-04	4.44E-02	4.53E-02	9.16E-03	6.59E-03	ND	ND	ND	ND	ND	ND	ND	1.32E-02	5.85E-03	1.05E-02	1.58E-02	-2.03E-03
EP-terrestrial	mol Ne	0.00E+00	1.00E-02	4.82E-01	4.92E-01	9.91E-02	4.97E-02	ND	ND	ND	ND	ND	ND	ND	1.44E-01	6.36E-02	1.15E-01	1.71E-01	-2.02E-02
POCP ("smog")[3)]	kg NMVOCe	0.00E+00	6.12E-03	1.68E-01	1.74E-01	6.07E-02	1.81E-02	ND	ND	ND	ND	ND	ND	ND	4.32E-02	2.62E-02	3.45E-02	5.76E-02	-7.20E-03
ADP-minerals & metals[4)]	kg Sbe	0.00E+00	4.28E-06	6.64E-05	7.07E-05	4.23E-05	7.17E-06	ND	ND	ND	ND	ND	ND	ND	1.14E-06	1.46E-05	9.09E-07	1.51E-05	-4.07E-06
ADP-fossil resources	MJ	0.00E+00	2.24E+01	3.32E+02	3.54E+02	2.22E+02	3.87E+01	ND	ND	ND	ND	ND	ND	ND	4.13E+01	7.58E+01	3.29E+01	1.11E+02	-3.91E+01
Water use[5)]	m^3e depr.	0.00E+00	1.16E-01	1.51E+01	1.52E+01	1.14E+00	1.03E+00	ND	ND	ND	ND	ND	ND	ND	1.06E-01	3.74E-01	8.48E-02	2.35E+00	-6.87E-01

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	0.00E+00	1.46E-07	1.00E-05	1.02E-05	1.44E-06	1.05E-06	ND	ND	ND	ND	ND	ND	ND	8.09E-07	5.23E-07	5.85E-06	3.16E-06	-1.12E-07
Ionizing radiation[6)]	kBq U235e	0.00E+00	2.69E-02	1.94E+00	1.97E+00	2.68E-01	1.33E-01	ND	ND	ND	ND	ND	ND	ND	1.76E-02	6.60E-02	1.40E-02	7.72E-02	-6.49E-01
Ecotoxicity (freshwater)	CTUe	0.00E+00	3.47E+00	5.09E+03	5.09E+03	2.62E+01	2.60E+02	ND	ND	ND	ND	ND	ND	ND	2.36E+01	1.07E+01	1.88E+01	9.82E+01	-4.36E+00
Human toxicity, cancer	CTUh	0.00E+00	2.48E-10	2.63E-08	2.66E-08	2.46E-09	1.74E-09	ND	ND	ND	ND	ND	ND	ND	3.23E-10	8.62E-10	2.58E-10	1.32E-09	-4.55E-10
Human tox. non-cancer	CTUh	0.00E+00	1.45E-08	2.22E-07	2.36E-07	1.44E-07	3.36E-08	ND	ND	ND	ND	ND	ND	ND	5.08E-09	4.91E-08	4.05E-09	4.45E-08	-1.85E-08
SQP[7)]	-	0.00E+00	2.26E+01	2.20E+03	2.22E+03	2.24E+02	1.29E+02	ND	ND	ND	ND	ND	ND	ND	2.73E+00	7.63E+01	2.18E+00	1.32E+02	-1.25E+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	0.00E+00	3.64E-01	1.54E+02	1.54E+02	3.62E+00	-2.16E+02	ND	ND	ND	ND	ND	ND	ND	2.59E-01	1.04E+00	2.07E-01	1.28E+00	3.95E+01
Renew. PER as material	MJ	0.00E+00	0.00E+00	2.07E+02	2.07E+02	0.00E+00	-2.07E+02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E+01
Total use of renew. PER	MJ	0.00E+00	3.64E-01	3.61E+02	3.62E+02	3.62E+00	-4.23E+02	ND	ND	ND	ND	ND	ND	ND	2.59E-01	1.04E+00	2.07E-01	1.28E+00	9.79E+01
Non-re. PER as energy	MJ	0.00E+00	2.24E+01	3.13E+02	3.35E+02	2.22E+02	2.96E+01	ND	ND	ND	ND	ND	ND	ND	4.13E+01	7.58E+01	3.29E+01	1.11E+02	-3.91E+01
Non-re. PER as material	MJ	0.00E+00	0.00E+00	2.22E+01	2.22E+01	0.00E+00	-2.22E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E+00
Total use of non-re. PER	MJ	0.00E+00	2.24E+01	3.35E+02	3.58E+02	2.22E+02	7.45E+00	ND	ND	ND	ND	ND	ND	ND	4.13E+01	7.58E+01	3.29E+01	1.11E+02	-3.18E+01
Secondary materials	kg	1.00E+03	9.68E-03	8.67E-01	1.00E+03	9.61E-02	5.01E+01	ND	ND	ND	ND	ND	ND	ND	1.71E-02	3.22E-02	1.36E-02	3.96E-02	7.94E-02
Renew. secondary fuels	MJ	0.00E+00	1.22E-04	7.01E+00	7.01E+00	1.21E-03	3.50E-01	ND	ND	ND	ND	ND	ND	ND	4.48E-05	4.10E-04	3.57E-05	5.42E-04	-3.53E-05
Non-ren. secondary fuels	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	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	0.00E+00	3.29E-03	-1.00E+00	-9.97E-01	3.28E-02	-6.74E-02	ND	ND	ND	ND	ND	ND	ND	2.64E-03	1.12E-02	2.11E-03	5.62E-02	-2.62E-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	0.00E+00	3.24E-02	6.95E-01	7.28E-01	3.22E-01	1.05E-01	ND	ND	ND	ND	ND	ND	ND	4.63E-02	1.28E-01	3.69E-02	1.85E-01	-1.51E-01
Non-hazardous waste	kg	0.00E+00	6.50E-01	1.32E+03	1.32E+03	6.44E+00	1.01E+02	ND	ND	ND	ND	ND	ND	ND	6.74E-01	2.38E+00	5.38E-01	3.65E+00	-7.99E+00
Radioactive waste	kg	0.00E+00	6.66E-06	4.22E-04	4.28E-04	6.63E-05	2.99E-05	ND	ND	ND	ND	ND	ND	ND	4.31E-06	1.62E-05	3.44E-06	1.89E-05	-1.67E-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	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	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	0.00E+00	2.14E-13	2.14E-13	0.00E+00	5.49E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	7.00E+02	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	1.12E-21	1.12E-21	0.00E+00	5.59E-23	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	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	1.07E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	0.00E+00	1.48E+00	1.88E+01	2.03E+01	1.47E+01	3.03E+00	ND	ND	ND	ND	ND	ND	ND	3.15E+00	5.19E+00	2.52E+00	6.52E+00	-2.19E+00
Ozone depletion Pot.	kg $CFC_{-11}e$	0.00E+00	2.49E-08	4.21E-07	4.46E-07	2.46E-07	4.37E-08	ND	ND	ND	ND	ND	ND	ND	3.75E-08	6.15E-08	2.99E-08	9.88E-08	-2.76E-08
Acidification	kg SO_2e	0.00E+00	2.80E-03	1.02E-01	1.05E-01	2.77E-02	9.94E-03	ND	ND	ND	ND	ND	ND	ND	1.99E-02	1.36E-02	1.59E-02	2.89E-02	-1.13E-02
Eutrophication	kg PO_4^3e	0.00E+00	6.99E-04	2.06E-01	2.07E-01	6.92E-03	1.17E-02	ND	ND	ND	ND	ND	ND	ND	4.69E-03	3.31E-03	3.74E-03	8.58E-03	-1.41E-03
POCP (“smog”)	kg C_2H_4e	0.00E+00	2.85E-04	9.06E-03	9.34E-03	2.82E-03	9.41E-04	ND	ND	ND	ND	ND	ND	ND	1.50E-03	1.21E-03	1.19E-03	2.46E-03	-6.78E-04
ADP-elements	kg Sbe	0.00E+00	4.18E-06	6.51E-05	6.93E-05	4.13E-05	7.00E-06	ND	ND	ND	ND	ND	ND	ND	1.11E-06	1.42E-05	8.82E-07	1.47E-05	-4.02E-06
ADP-fossil	MJ	0.00E+00	2.20E+01	3.07E+02	3.29E+02	2.18E+02	3.68E+01	ND	ND	ND	ND	ND	ND	ND	4.10E+01	7.47E+01	3.27E+01	1.10E+02	-2.77E+01

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	0.00E+00	1.49E+00	1.90E+01	2.05E+01	1.48E+01	2.71E+00	ND	ND	ND	ND	ND	ND	ND	3.17E+00	5.22E+00	2.53E+00	6.57E+00	-2.21E+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, United Kingdom, residual mix, 2024, United Kingdom, One Click LCA, 0.61 kgCO2e/kWh
2. Treatment of waste brick, sorting plant, Albania, Ecoinvent, 0.0139 kgCO2e/kg

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry >32 metric ton, EURO6, 141 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	0.00E+00
Volume capacity utilization factor	<1

Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste wood, post-consumer, sorting and shredding, Ecoinvent, Materials for recycling, 4.86 kg
2. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 4.56 kg
3. Exported Energy: Electricity, Ecoinvent, 10.18 MJ
4. Exported Energy: Electricity, Ecoinvent, 0.5 MJ
5. Exported Energy: Thermal, Ecoinvent, 13.98 MJ
6. Exported Energy: Thermal, Ecoinvent, 0.69 MJ
7. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 5.78 kg
8. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.08 kg
9. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 0.074 kg
10. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.046 kg
11. Treatment of waste brick, recycling, Ecoinvent, Materials for recycling, 50.0 kg

End-of-life stages scenario documentation - C1-C4 (Data source)

1. Treatment of waste brick, recycling, Ecoinvent, Materials for recycling, 700.0 kg
2. Treatment of waste brick, collection for final disposal, Ecoinvent, 300.0 kg
3. Diesel, burned in building machine, Ecoinvent, 31.504 MJ

Scenario information	Value
Scenario assumptions e.g. transportation	5 km transportation for reused aggregate on site and 150 km for the 30% of bricks that are landfilled.

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

05.12.2025