

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN
15804+A2 & ISO 14025

Keystone Retaining Walls (Flint, Yorkstone, Sandstone, Pewter)

Anderton Concrete Products Ltd a trading entity within the
Ibstock Plc Group

EPD HUB, EPD number HUB-2349

Published on 24.07.2026, last updated on 03.08.2026, valid until
23.07.2031

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.



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Anderton Concrete Products Ltd a trading entity within the Ibstock Plc Group
Address	Leicester Road, Ibstock, Leicestershire, LE67 6HS, UK
Contact details	epds@ibstock.co.uk
Website	https://www.ibstock.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 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-A5, and modules C1-C4, D
EPD author	Jack Topliss
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	Edis Glogic as an authorized verifier for EPD Hub

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	Keystone (Flint, Yorkstone, Sandstone, Pewter)
Additional labels	See www.ibstock.co.uk/EPD for all products covered by this EPD
Product reference	NA
Place(s) of raw material origin	United Kingdom, Ireland
Place of production	Bootle, Merseyside, UK
Place(s) of installation and use	United Kingdom
Period for data	01.01.2025 - 31.12.2025
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 (%)	79.1

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of Concrete
Declared unit mass	1 kg
Mass of packaging	0.058831 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	0.10
GWP-total, A1-A3 (kgCO ₂ e)	0.02
Secondary material, inputs (%)	0.32
Secondary material, outputs (%)	92.6
Total energy use, A1-A3 (kWh)	0.44
Net freshwater use, A1-A3 (m ³)	0

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Ibstock Plc is a leading UK manufacturer of a diverse range of building products and solutions. The Group concentrates on eight core product categories, each backed up by design and technical services capabilities:

Bricks and Masonry, Facade Systems, Roofing, Flooring and Lintels, Staircase and Lift Shafts, Fencing and Landscaping, Retaining Walls and Rail and Infrastructure.

Ibstock is headquartered in the village of Ibstock, Leicestershire, with 36 active manufacturing sites across the UK.

As a leading building products manufacturer, the Group is committed to the highest levels of corporate responsibility. The ESG 2030 Strategy sets out a clear path to address climate change, improve lives and manufacture materials for life, with an ambitious commitment to reduce carbon emissions by 40% by 2030 and become a net zero operation by 2040.

PRODUCT DESCRIPTION

The products within this range are a concrete blocks to be used in constructing a retaining wall. This product comes in a range of sizes, styles and colours. These products are made at Ibstock's Bootle Factory in Merseyside.

Keystone is a system of modular retaining wall units that are manufactured from high strength, durable concrete which are laid dry and can be used in conjunction with a geogrid to provide tall walls or to accommodate high surcharges. Alternatively, it can be used with or without a concrete backing to create a gravity wall.

A combination of Keystone modular units, positive pin connections and soil reinforcing geogrids delivers 'rock solid' stability and performance its enhanced connection between grid and block is critical to ensure economic designs.

Keystone's ability to connect positively with proprietary geogrid systems has enabled it to be built to heights over 15 metres worldwide.

Ideal for railway tunnels and bridges – Keystone's simple, dry build construction enables it to handle the most challenging site design and allows railways to remain open while a structure is being built, minimising delay time.

The Life Cycle Assessment for this product has been carried out to represent 1kg of this product. A scaling table will be included in order to convert the results to other formats.

Further information can be found at: <https://www.ibstock.co.uk/>

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	100	UK/Europe
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	0.022813

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	-
Reference service life	-

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	Recycling

Not declared = ND.

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.

This EPD covers a range of products that are manufactured at Ibstock's Bootle factory in Merseyside.

A1: The raw materials used in this factory are sourced from suppliers.

A2: Once raw materials are extracted or produced, they are transported by road or ship to the factory.

A3: Inside the factory, most processes are powered by electricity. The raw materials are mixed together. Water is added to the raw materials and combined together. This mix is transferred to a hopper. The concrete mix is pressed into the mould and is vibrated to remove air pockets and increase the strength of the concrete. The products are then removed from the moulds so they can be reused. The concrete products are moved onto pallets to undergo a curing process. Once cured, the finished products are stacked and packaged using wooden pallets and plastic packaging. The products are placed onto the yard ready to be distributed to customers. Manufacturing waste is 1% based on the factories performance. Any waste is assumed to travel 50km in order to be processed and recycled. 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.

A4: The units are transported from the factories to customers by lorries; assumed to be EURO 5 classification. A weighted average of the journey undertaken by these products to customers and construction sites was calculated to be 172km.

A5: The units are generally laid by hand. Any packaging is removed on the construction site. Sorting and treatment of packaging waste has been included in this section. It is assumed that 44.2% of plastic packaging waste will be recycled. It is assumed that 44.1% of wood packaging waste will be recycled. According to UK Government Data. <https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste>.

It is assumed that 55.8% of plastic packaging waste will be landfilled. It is assumed that 55.9% of wood packaging waste will be landfilled. According to UK Government Data. <https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste>

Material wasted during construction was assumed to be 5% based on industry standard data. The relevant modules were uplifted to accommodate this.

PRODUCT USE AND MAINTENANCE (B1-B7)

B1-7: The Use phase has not been included as the modules are not relevant to this product.

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

PRODUCT END OF LIFE (C1-C4, D)

The end of life of this product accounts for the energy consumed to extract the waste products and the treatment of the waste products afterwards.

C1: Energy consumption in the demolition process comes in the form of diesel used by machinery. This is taken as 0.01kWh per 1kg of material, according to (O. Bozdag and M. Secer, "Energy Consumption of RC Buildings during Their Life Cycle, Sustainable Construction, Materials and Practices: Challenge of the Industry for the New Millennium, Minho, 12-14 September 2007, pp. 480-487.)

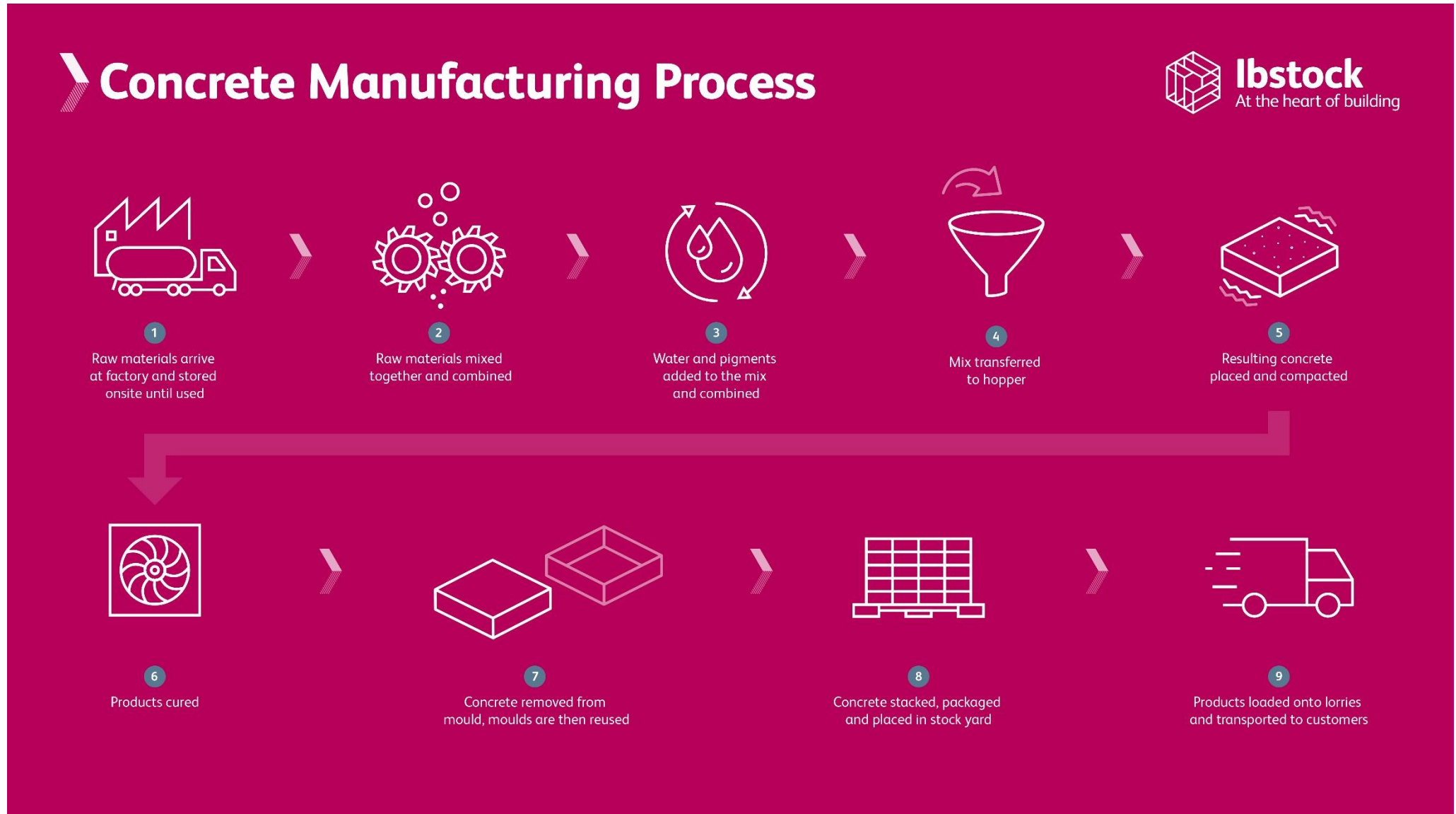
C2: It is assumed that any waste material travels 50km by road to be processed.

C3: It is assumed that 92.6% of concrete waste will be recycled. According to UK Government Data. <https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste>

C4: It is assumed that 7.4% of concrete waste will be landfilled. According to UK Government Data. <https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste>

D: The waste packaging recycled will be re-used to make new packaging products, avoiding the use of virgin raw materials for these products. The waste concrete recycled will be re-used to make gravel aggregate on building sites, avoiding the use of virgin raw materials.

MANUFACTURING PROCESS (A1-A4)



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.

A1 : Additive, Pigment. Products excluded as they represent less than 1% each of the total mass.

A3 : All ancillary products excluded as they represent less than 1% each of the total mass.

All excluded products represent in total less than 5% of the mass of the product.

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. A technical inconsistency between PENRT and ADP-fossil results has been identified. A contribution analysis shows that the discrepancy originates from the specific characterization factors in the background environmental profiles of the primary raw materials. These inconsistencies are inherent to the third-party verified EPDs and background databases used and cannot be adjusted by the practitioner."

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	Physical Properties
Packaging material	Physical Properties
Ancillary materials	Not applicable
Manufacturing energy and waste	Physical Properties

The split in electricity generation based on REGO documentation was based on a 2021-2022 split and 2022-2023 of electricity provided by Totalenergies. The certificate guarantees electricity supplied to the company came from 100% renewable sources; and based on this was assumed to be 100% wind.

In the A4 section, a transportation distance is calculated using a weighted average of the transportation distances of every tile that leaves the factory.

The data from the factory reports a 1% production loss. All inputs were uplifted in order to produce this waste figure as an output.

PRODUCT & MANUFACTURING SITES GROUPING

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

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.4. 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'.

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	6.79E-02	1.09E-02	-6.07E-02	1.81E-02	1.96E-02	9.15E-02	ND	ND	ND	ND	ND	ND	ND	3.61E-03	5.38E-03	1.08E-02	4.62E-04	-8.18E-03
GWP – fossil	kg CO ₂ e	6.78E-02	1.09E-02	2.29E-02	1.02E-01	1.96E-02	7.87E-03	ND	ND	ND	ND	ND	ND	ND	3.60E-03	5.38E-03	1.08E-02	4.62E-04	-8.15E-03
GWP – biogenic	kg CO ₂ e	0.00E+00	0.00E+00	-8.37E-02	-8.37E-02	0.00E+00	8.37E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP – LULUC	kg CO ₂ e	7.61E-05	5.21E-06	6.95E-05	1.51E-04	8.77E-06	9.35E-06	ND	ND	ND	ND	ND	ND	ND	3.69E-07	2.41E-06	5.89E-06	2.64E-07	-2.87E-05
Ozone depletion pot.	kg CFC-11e	4.56E-10	1.61E-10	9.86E-09	1.05E-08	2.89E-10	5.71E-10	ND	ND	ND	ND	ND	ND	ND	5.52E-11	7.95E-11	2.17E-10	1.34E-11	-1.56E-10
Acidification potential	mol H ⁺ e	8.11E-05	7.04E-05	1.02E-04	2.53E-04	6.68E-05	2.58E-05	ND	ND	ND	ND	ND	ND	ND	3.25E-05	1.84E-05	7.75E-05	3.27E-06	-5.03E-05
EP-freshwater ²⁾	kg Pe	2.47E-06	7.93E-07	5.68E-06	8.94E-06	1.53E-06	1.24E-06	ND	ND	ND	ND	ND	ND	ND	1.04E-07	4.19E-07	4.17E-06	3.80E-08	-2.62E-06
EP-marine	kg Ne	4.40E-05	1.93E-05	2.91E-05	9.25E-05	2.20E-05	2.02E-05	ND	ND	ND	ND	ND	ND	ND	1.51E-05	6.03E-06	2.86E-05	1.25E-06	-1.53E-05
EP-terrestrial	mol Ne	2.29E-04	2.12E-04	3.23E-04	7.64E-04	2.39E-04	8.66E-05	ND	ND	ND	ND	ND	ND	ND	1.65E-04	6.56E-05	3.10E-04	1.36E-05	-1.74E-04
POCP (“smog”) ³⁾	kg NMVOCe	1.56E-04	7.45E-05	1.47E-04	3.78E-04	9.85E-05	3.72E-05	ND	ND	ND	ND	ND	ND	ND	4.93E-05	2.70E-05	1.01E-04	4.88E-06	-6.56E-05
ADP-minerals & metals ⁴⁾	kg Sbe	2.21E-08	2.82E-08	1.05E-07	1.56E-07	5.47E-08	1.54E-08	ND	ND	ND	ND	ND	ND	ND	1.29E-09	1.50E-08	3.41E-08	7.34E-10	-4.80E-08
ADP-fossil resources	MJ	3.15E-01	1.55E-01	4.36E-01	9.07E-01	2.84E-01	9.00E-02	ND	ND	ND	ND	ND	ND	ND	4.72E-02	7.81E-02	1.75E-01	1.13E-02	-1.25E-01
Water use ⁵⁾	m ³ e depr.	5.88E-03	7.38E-04	9.72E-03	1.63E-02	1.41E-03	1.16E-03	ND	ND	ND	ND	ND	ND	ND	1.18E-04	3.86E-04	1.39E-03	3.27E-05	-4.05E-03

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	1.04E-09	9.93E-10	1.67E-09	3.70E-09	1.96E-09	8.73E-10	ND	ND	ND	ND	ND	ND	ND	9.25E-10	5.39E-10	8.55E-09	7.45E-11	-9.64E-10
Ionizing radiation ⁶⁾	kBq 11235e	5.10E-04	1.29E-04	1.70E-03	2.34E-03	2.48E-04	3.04E-04	ND	ND	ND	ND	ND	ND	ND	2.09E-05	6.80E-05	8.77E-04	7.13E-06	-6.42E-04
Ecotoxicity (freshwater)	CTUe	2.02E-01	2.09E-02	8.27E-02	3.06E-01	4.02E-02	2.53E-02	ND	ND	ND	ND	ND	ND	ND	2.60E-03	1.10E-02	4.00E-02	9.51E-04	-2.97E-02
Human toxicity, cancer	CTUh	1.86E-12	1.89E-12	8.14E-11	8.51E-11	3.24E-12	4.84E-12	ND	ND	ND	ND	ND	ND	ND	3.71E-13	8.88E-13	2.64E-12	8.52E-14	-3.57E-11
Human tox. non-cancer	CTUh	8.05E-11	9.37E-11	2.07E-10	3.82E-10	1.84E-10	5.11E-11	ND	ND	ND	ND	ND	ND	ND	5.87E-12	5.06E-11	1.15E-10	1.96E-12	-8.10E-11
SQP ⁷⁾	-	1.29E-01	1.40E-01	6.72E+00	6.99E+00	2.86E-01	4.01E-01	ND	ND	ND	ND	ND	ND	ND	3.30E-03	7.87E-02	1.62E-01	2.23E-02	-3.01E+00

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	8.12E-02	2.05E-03	5.27E-01	6.10E-01	3.90E-03	-5.20E-01	ND	ND	ND	ND	ND	ND	ND	2.99E-04	1.07E-03	9.39E-03	1.09E-04	-4.81E-01
Renew. PER as material	MJ	0.00E+00	0.00E+00	7.32E-01	7.32E-01	0.00E+00	-7.32E-01	ND	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	8.12E-02	2.05E-03	1.26E+00	1.34E+00	3.90E-03	-1.25E+00	ND	ND	ND	ND	ND	ND	ND	2.99E-04	1.07E-03	9.39E-03	1.09E-04	-4.81E-01
Non-re. PER as energy	MJ	3.59E-01	1.55E-01	3.22E-01	8.37E-01	2.84E-01	6.29E-02	ND	ND	ND	ND	ND	ND	ND	4.72E-02	7.81E-02	1.75E-01	1.13E-02	-1.04E-01
Non-re. PER as material	MJ	0.00E+00	0.00E+00	5.94E-02	5.94E-02	0.00E+00	-5.94E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-re. PER	MJ	3.59E-01	1.55E-01	3.81E-01	8.96E-01	2.84E-01	3.50E-03	ND	ND	ND	ND	ND	ND	ND	4.72E-02	7.81E-02	1.75E-01	1.13E-02	-1.04E-01
Secondary materials	kg	3.22E-03	6.87E-05	2.77E-03	6.06E-03	1.21E-04	3.22E-04	ND	ND	ND	ND	ND	ND	ND	1.96E-05	3.32E-05	6.91E-05	2.85E-06	-1.24E-03
Renew. secondary fuels	MJ	9.71E-03	7.66E-07	2.47E-02	3.44E-02	1.54E-06	1.72E-03	ND	ND	ND	ND	ND	ND	ND	5.12E-08	4.22E-07	6.62E-07	5.90E-08	-1.09E-02
Non-ren. secondary fuels	MJ	9.70E-02	0.00E+00	0.00E+00	9.70E-02	0.00E+00	4.85E-03	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	1.30E-03	2.17E-05	2.28E-04	1.55E-03	4.21E-05	-6.04E-05	ND	ND	ND	ND	ND	ND	ND	3.12E-06	1.15E-05	-4.19E-04	1.18E-05	-1.38E-03

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	2.57E-03	2.61E-04	1.27E-03	4.11E-03	4.82E-04	2.88E-04	ND	ND	ND	ND	ND	ND	ND	5.25E-05	1.32E-04	2.84E-04	1.25E-05	-6.52E-04
Non-hazardous waste	kg	7.09E-03	4.69E-03	3.99E-02	5.17E-02	8.92E-03	2.00E-01	ND	ND	ND	ND	ND	ND	ND	7.15E-04	2.45E-03	5.84E-01	2.86E-04	-1.42E-02
Radioactive waste	kg	1.39E-05	3.17E-08	4.63E-07	1.44E-05	6.06E-08	7.67E-07	ND	ND	ND	ND	ND	ND	ND	5.12E-09	1.67E-08	2.24E-07	1.74E-09	-1.64E-07

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	7.98E-05	0.00E+00	0.00E+00	7.98E-05	0.00E+00	3.99E-06	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	6.80E-04	0.00E+00	0.00E+00	6.80E-04	0.00E+00	2.60E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	9.26E-01	0.00E+00	0.00E+00
Materials for energy rec	kg	9.65E-06	0.00E+00	0.00E+00	9.65E-06	0.00E+00	4.82E-07	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	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 – 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	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	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

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	6.79E-02	1.09E-02	2.29E-02	1.02E-01	1.96E-02	7.88E-03	ND	ND	ND	ND	ND	ND	ND	3.61E-03	5.38E-03	1.08E-02	4.62E-04	-8.18E-03

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. DEFRA (Combustion & Well to Trough) Natural Gas - UK - Used in Kilns , United Kingdom, Ecoinvent, 0.21 kgCO₂e/kWh
2. Electricity production, wind, 1-3MW turbine, offshore, United Kingdom, Ecoinvent, 0.0168 kgCO₂e/kWh
3. Market for diesel, Albania, Ecoinvent, 0.93 kgCO₂e/kg
4. Liquefied petroleum gas (LPG), Germany, GaBi, 0.83 kgCO₂e/kg

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry >32 metric ton, EURO5, 172 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	
Bulk density of transported products	38.8
Volume capacity utilization factor	

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)	
Waste materials: output routes	
Direct emissions (kg)	

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	
Collection process: Mixed waste (kg)	
Recovery: re-use (kg)	0
Recovery: recycling (kg)	0.93
Recovery: energy recovery (kg)	0
Disposal (kg)	0
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

Edis Glogic as an authorized verifier for EPD Hub Limited 24.07.2026



APPENDIX 1

The figures in the Environmental Impact Data are given per kg of retaining wall produced. A conversion table has been provided below to scale any Environmental Impact Data figures into different metrics and for different products.

Product Name	Product Weight (kg)	A1-A3 GWP - fossil (kgCO ₂ /product)	Total GWP - fossil (kgCO ₂ /product)
Keystone Block	39.5	4.03	5.89
Keystone Smooth Block	39.5	4.03	5.89
100mm Cap	25.9	2.64	3.86
100mm Smooth Cap	25.9	2.64	3.86
200mm Cap	43.5	4.44	6.48
200mm Smooth Cap	43.5	4.44	6.48
Keystone Corner Block	43.6	4.45	6.50
Keystone Smooth Corner	43.6	4.45	6.50
Keystone Slips	17.5	1.79	2.61