CASTING A SUSTAINABLE FUTURE IN CONCRETE

ENVIRONMENTAL
PRODUCT DECLARATION

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

- Brickfaced Single Skin Panel

CREAGH
INNOVATION IN CONCRETE

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GENERAL INFORMATION

MANUFACTURER	
Manufacturer	Creagh Concrete Products Ltd
Address	38 Blackpark Road, Toome, Co Antrim, N Ireland
Contact Details	info@creaghconcrete.com
Website	www. creaghconcrete.com

EPD STANDARDS, SCOPE

EPD STANDARDS, SCOPE	
Program Operator	OneClickLCA
Reference Standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022 EN 16757 Product Category Rules for concrete and concrete elements
Sector	Construction product
Category of EPD	Self Declared
Scope of EPD	Cradle to gate and modules C1-C4, D
EPD Author	J. Kennedy

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.

PRODUCT	
Product Name	Brickfaced Single Skin Panel
Additional labels	-
Product reference	-
Place(s) of raw material origin	United Kingdom
Place of production	United Kingdom
Place(s) of installation and use	United Kingdom & Ireland
Period for data	2025
Averaging in EPD	No averaging

ENVIRONMENTAL DATA SUMMARY	
Declared unit	M2
Declared unit mass	347 kg
GWP-fossil, A1-A3 (kgCO2e)	77.6 kgCo2e/ M2
GWP-total, A1-A3 (kgCO2e)	73.4 KgCo2e/ M2
Secondary material, inputs (%)	1.19
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	189
Net fresh water use, A1-A3 (m3)	0.47

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Creagh Concrete is one of the leading producers of concrete products for the civil engineering, residential, education, commercial, custodial, and agricultural sectors. The company offers a diverse portfolio of products that showcase the limitless possibilities and potential of precast concrete. Its flooring range includes prestressed hollowcore flooring, Spantherm Insulated flooring system, prestressed t-beam flooring, plate flooring and Spantherm insulated flooring. Other products include ready mixed concrete, bricks and blocks, sand and gravel, agricultural precast products, general precast for home and garden, structural precast such as precast stairs, landings, terrace units and frames. Creagh design, manufactures and supplies an extensive range of concrete products. The company operates from its head office in Toomebridge, Northern Ireland with bases in Ardboe, Dunloy, Draperstown and Magheraglass and at Nottingham, England and Edinburgh, Scotland.

PRODUCT DESCRIPTION

Single Skin Concrete Panel faced with Brick Slips.

Further information can be found at **www.creaghconcrete.com**

PRODUCT RAW MATERIAL MAIN COMPOSITION		
Raw material category	Amount, mass-%	Material origin
Metals	5%	UK
Minerals	95%	UK
Fossil materials	NA	NA
Bio-based materials	NA	NA

FUNCTIONAL UNIT AND SERVICE LIFE	
Declared unit VP-011	M2
Mass per declared unit VP-012	347 kg
Functional unit	Structural Unit
Reference service life	100 years

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

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	MND	MND	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

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

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 that occurred from final product delivery to the construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions The panel is transported to customer site, fitted into position and repeated until these elements are complete.

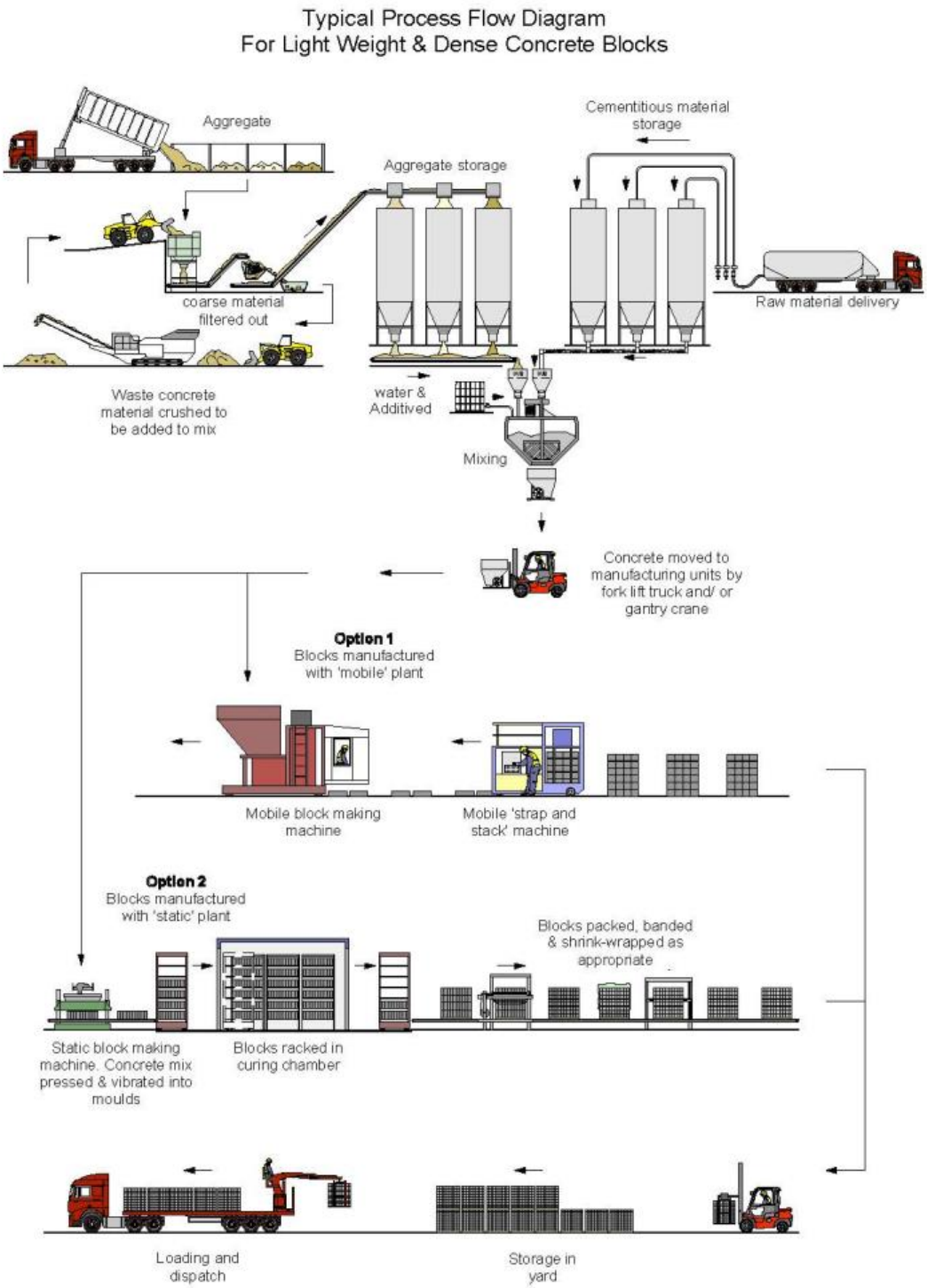
PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

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.

VALIDATION OF DATAVP

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/ AC2021 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	95%
Packaging materials	0
Ancillary materials	5%

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable

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

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total1)	kg CO_2e	7,10E+01	2,56E+00	2,42E+01	9,76E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	-1,13E+01
GWP – fossil	kg CO_2e	7,09E+01	2,56E+00	2,85E+01	102E+02	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	**-1,14E+01**
Water use5)	m^3e depr.	4,01E+01	1,72E-01	1,88E+01	5,90E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	-8,85E+00