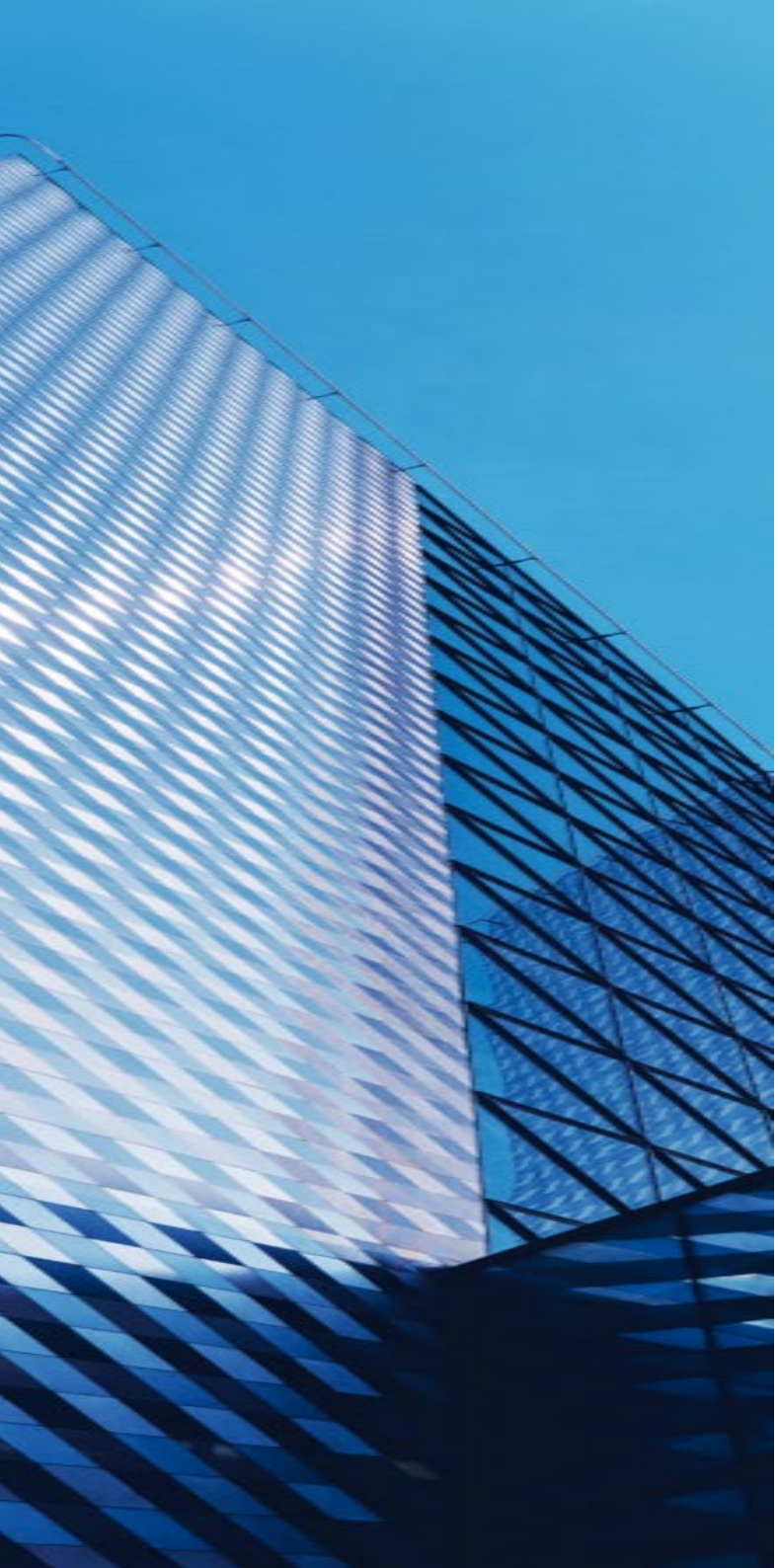
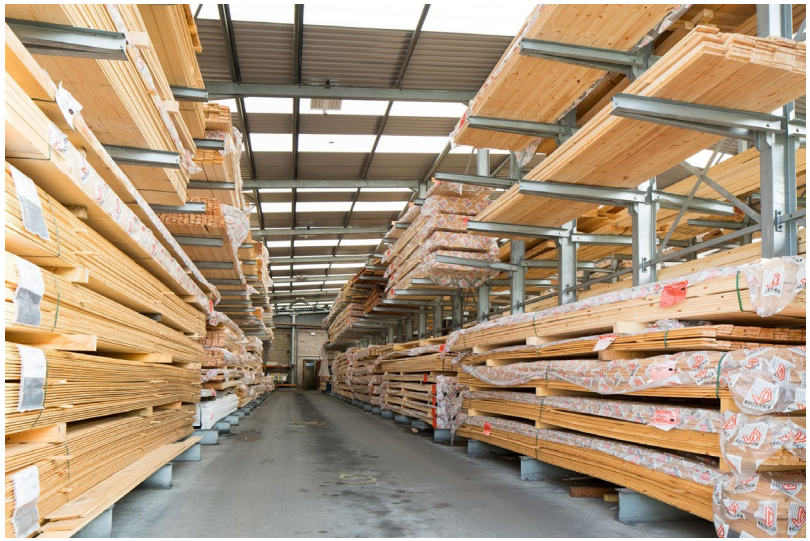


ENVIRONMENTAL PRODUCT DECLARATION

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

Planed Redwood
James Donaldson Timber



EPD HUB, HUB-1796
Publishing on 19.07.2024, last updated on 19.07.2024, valid until 19.07.2029

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	James Donaldson Timber
Address	Donaldson House, Saltire Centre, Glenrothes
Contact details	contact@jamesdonaldsontimber.co.uk
Website	https://www.jamesdonaldsontimber.co.uk/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4, and modules C1-C4, D
EPD author	Mark Murphy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited

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	Planed Redwood
Additional labels	
Product reference	
Place of production	Leven, Chorley
Period for data	October 2022 - September 2023
Averaging in EPD	Multiple factories
Variation in GWP-fossil for A1-A3	0 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m3 of planed redwood
Declared unit mass	557 kg
GWP-fossil, A1-A3 (kgCO2e)	8.74E+01
GWP-total, A1-A3 (kgCO2e)	-6.98E+02
Secondary material, inputs (%)	0
Secondary material, outputs (%)	99
Total energy use, A1-A3 (kWh)	7310
Net fresh water use, A1-A3 (m3)	0.43

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

James Donaldson Timber are one of the UK's largest timber importers and distributors, we handle approximately 200,000m3 of timber per annum and focus primarily on the sawmilling, processing, and distribution of timber. We only source quality timber from long established, quality suppliers with exemplary environmental credentials which ensures we can build and maintain excellent relationships with both our suppliers and customers.

James Donaldson Timber is continually striving to improve its processes and products to give our customers the best, in the safest and most sustainable way. To ensure the quality of our products we are certified to ISO 9001 standards and operate an on-going, in-house quality programme; throughout the life cycle of the manufacture of our products they are regularly checked for quality control.

For many year, wood and wood products used in the construction industry in the UK have been covered by a range of British and European Standards. These provide designers, specifiers, buyers and users with assurance of fitness for purpose and performance.

Providing exceptional customer service is at the heart of everything we do. By delivering a fully tailored service to our customers, such as offering mixed product loads, a bespoke machining service and unrivalled delivery services, we reinforce our commitment to our customer service, all while guaranteeing high service and quality standards through our sales, manufacturing and distribution processes, which are closely monitored by our management system.

We pride ourselves on our integrity, our people, delivering sustainable financial and environmental performance, and embracing the future through our proud family heritage of over 160 years.

Being part of a family business, we hold ourselves to these values to behave ethically, morally and responsibly at all times. Our people, customers and suppliers recognise this, understanding the value this adds to their business and therefore, differentiates us from our competitors.

PRODUCT DESCRIPTION

All of our machined softwood is sourced from the very best Scandinavian sawmills and we offer a full range of products which are slow grown to provide extra strength, a longer life and a superior finish.

Our machined redwood is available in a wide range of sizes, with the majority of sections available from stock.

Our mouldings include a variety of profiles including facings, skirting, decorative items and window boards. We can machine hundreds of different profiles and if we don't have the cutters to match the exact profile you need, then we can get them made for you.

All our softwood is FSC®/PEFC certified (FSC® Licence No FSC®-C015696/PEFC Licence No 16-37-112) and are available in full and split pack quantities depending on our customers requirements.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

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

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	214.36
Biogenic carbon content in packaging, kg C	

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m3 of planed redwood
Mass per declared unit	557 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	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.

As a company we maintain efficient relationships with our suppliers to ensure we have leading edge production technology and the right quality of raw materials which allows us to deliver consistent high quality, cost-effective products targeted to meet our customers needs.

We recognise that timber, as a building material, is a truly renewable resource when properly managed. All of machined redwood are sourced from legal and sustainable in accordance with the FSC ® & PEFC management systems from Finland and Sweden.

A2, Transport to the manufacturer

Our raw materials are transported to the manufacturing sites across the UK. The manufacturing sites are located in Leven, Fife, and Chorley, Lancashire.

A3, Manufacturing

The attached pictorial representation of our process is shown below. Raw materials are delivered in, then picked, cut and moulded to shape, before being packed and delivered to the customer specification. We achieved ISO 50001(Energy Management) certification in 2019 as saw us invest in energy saving initiatives. These initiatives reduce the energy being wasted whilst having little impact on production.

Our Continuous Improvement campaign has seen us develop our colleagues so that everyone is involved and as a result we have generated over 3400 continuous improvement ideas groupwide. We constantly challenge ourselves to improve through 5S, Gemba and waste walks.

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 Transportation to the customers premises

In order to meet customer demand, we have established a dedicated delivery service where we deliver into certain areas on the same day every week. This gives our customers confidence that they know when their materials will arrive, while at the same time reducing vehicle emissions from unwanted journeys or delivering under capacity frequently in the same area.

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)

C1-C4: End of Life Stage

We have taken into account the life cycle of the product is a minimum 60 years, so our end of life scenario is based on information from government UK statistics on waste and the Royal Institute of Chartered Surveyors Whole life carbon assessment for the built environment

C1, Deconstruction and demolition
We have assumed that redwood finishings will be deconstructed/dismantled at the same time as the rest of the building.

C2, Transport
We have assumed that waste materials will be transported 50km.

C3, Waste processing
We have used the Royal Institute of Chartered Surveyors Whole life carbon assessment for the built environment to estimate that 30% of timber will be recycled. 69% of timber will be incinerated with fuel efficiency of the power plant currently estimated at 80% which will improve over the next 60 years. All of the timber incinerated means that we are avoiding the extra energy and heat production from the average grid-mix of Europe, and recycled timber avoids the extraction and beneficiation of virgin wood.

C4, Disposal
1% of timber will be landfilled. which will improve over the next 60 years.

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.

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

AVERAGES AND VARIABILITY

Type of average	Multiple factories
Averaging method	Averaged by shares of total volume
Variation in GWP-fossil for A1-A3	0 %

All purchases, sales, packaging, energy, and transportation are the combined total from both factories

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

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 – total[1)]	kg CO_2e	-1.02E+03	2.02E+01	3.03E+02	-6.98E+02	1.24E+00	5.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E+00	7.83E+02	7.91E+00	-5.69E+02
GWP – fossil	kg CO_2e	4.63E+01	2.02E+01	2.09E+01	8.74E+01	1.24E+00	5.43E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.73E+00	4.91E+00	4.53E-02	-5.69E+02
GWP – biogenic	kg CO_2e	-1.07E+03	0.00E+00	2.82E+02	-7.86E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E+02	7.86E+00	0.00E+00
GWP – LULUC	kg CO_2e	7.19E-01	1.21E-02	2.19E-02	7.53E-01	4.08E-04	3.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-03	4.36E-03	1.18E-05	-2.60E-01
Ozone depletion pot.	kg CFC_{-11}e	5.25E-06	4.26E-06	2.46E-06	1.20E-05	2.11E-06	1.67E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-06	4.79E-07	1.73E-08	-1.46E-05
Acidification potential	mol H^+e	2.54E-01	4.21E-01	7.39E-02	7.49E-01	1.53E-02	9.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-02	1.26E-01	4.06E-04	-3.04E+00
EP-freshwater[2)]	kg Pe	5.84E-03	1.00E-04	5.74E-04	6.52E-03	1.15E-05	6.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-05	2.04E-04	5.87E-07	-3.59E-02
EP-marine	kg Ne	1.07E-01	1.02E-01	1.40E-02	2.23E-01	1.93E-03	2.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-03	5.69E-02	3.15E-04	-5.42E-01
EP-terrestrial	mol Ne	1.14E+00	1.14E+00	1.60E-01	2.44E+00	2.12E-02	2.95E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.09E-02	6.51E-01	1.67E-03	-6.12E+00
POCP ("smog")[3)]	kg NMVOCe	5.16E-01	3.01E-01	5.66E-02	8.74E-01	8.63E-03	8.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-02	1.71E-01	6.08E-04	-1.64E+00
ADP-minerals & metals[4)]	kg Sbe	6.79E-05	4.55E-05	8.82E-05	2.02E-04	1.66E-06	3.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-05	1.95E-05	1.63E-07	-5.42E-04
ADP-fossil resources	MJ	7.01E+02	2.71E+02	5.58E+02	1.53E+03	1.25E+02	1.94E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E+01	6.45E+01	1.23E+00	-7.11E+03
Water use[5)]	m^3e depr.	5.27E+00	1.01E+00	8.87E+00	1.52E+01	1.69E-01	6.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-01	8.53E+00	1.14E-02	-7.78E+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, PEF

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	2.57E-06	1.02E-06	6.12E-07	4.20E-06	8.03E-08	2.54E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-07	9.85E-07	9.00E-09	-4.00E-05
Ionizing radiation[6]	kBq U235e	2.32E+00	1.32E+00	1.05E+01	1.42E+01	5.71E-01	1.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-01	8.99E-01	7.61E-03	-9.39E+01
Ecotoxicity (freshwater)	CTUe	5.29E+02	1.96E+02	2.23E+02	9.47E+02	6.75E+01	4.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E+01	1.01E+02	1.02E+00	-1.34E+04
Human toxicity, cancer	CTUh	3.17E-08	1.04E-08	7.41E-09	4.94E-08	5.49E-10	7.05E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-09	1.15E-07	3.60E-11	-1.72E-07
Human tox. non-cancer	CTUh	7.86E-07	1.58E-07	1.76E-07	1.12E-06	1.51E-08	5.97E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-08	3.51E-07	1.16E-09	-5.18E-06
SQP[7]	-	1.55E+05	1.05E+02	1.43E+02	1.55E+05	1.57E+01	3.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E+01	1.53E+01	3.25E+00	-2.43E+03

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	2.49E+04	2.77E+00	6.06E+01	2.49E+04	3.51E-01	1.88E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-01	6.58E+00	5.55E-02	-3.81E+02
Renew. PER as material	MJ	1.11E+04	0.00E+00	-2.93E+03	8.15E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.07E+03	-8.15E+01	0.00E+00
Total use of renew. PER	MJ	3.59E+04	2.77E+00	-2.87E+03	3.31E+04	3.51E-01	1.88E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-01	-8.06E+03	-8.14E+01	-3.81E+02
Non-re. PER as energy	MJ	7.01E+02	2.71E+02	4.19E+02	1.39E+03	1.66E+01	1.94E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E+01	6.45E+01	1.23E+00	-7.11E+03
Non-re. PER as material	MJ	3.21E+01	0.00E+00	1.23E+02	1.56E+02	0.00E+00	-1.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.34E+01	-2.36E-01	0.00E+00
Total use of non-re. PER	MJ	7.33E+02	2.71E+02	5.42E+02	1.55E+03	1.66E+01	-1.30E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E+01	4.11E+01	9.90E-01	-7.11E+03
Secondary materials	kg	0.00E+00	1.10E-01	8.34E-02	1.94E-01	5.65E-03	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-02	1.31E-01	4.66E-04	-4.35E-01
Renew. secondary fuels	MJ	0.00E+00	6.29E-04	1.07E-01	1.08E-01	6.44E-05	8.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-04	1.70E-04	2.13E-05	-1.74E-01
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	1.75E-01	2.48E-02	2.27E-01	4.27E-01	3.54E-03	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.18E-03	2.11E-01	1.59E-03	-1.93E+00

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	4.93E-09	3.44E-01	1.08E+00	1.43E+00	3.21E-02	3.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.94E-02	1.18E-01	0.00E+00	-5.10E+01
Non-hazardous waste	kg	6.51E-01	4.08E+00	2.42E+01	2.89E+01	4.43E-01	5.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+00	3.91E+02	5.57E+00	-1.45E+03
Radioactive waste	kg	4.53E-03	1.90E-03	2.90E-03	9.32E-03	9.04E-04	9.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-04	2.06E-04	0.00E+00	-2.72E-02

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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	2.07E-04	0.00E+00	2.00E+02	2.00E+02	0.00E+00	3.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+02	0.00E+00	0.00E+00
Materials for energy rec	kg	5.15E-02	0.00E+00	0.00E+00	5.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E+02	0.00E+00	0.00E+00
Exported energy	MJ	8.26E-01	0.00E+00	0.00E+00	8.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E+03	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

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	1.45E+02	9.53E-03	2.05E+01	1.66E+02	1.20E+00	5.35E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E+00	4.83E+00	4.05E-01	-5.60E+02
Ozone depletion Pot.	kg CFC_{-11}e	3.42E-09	1.77E-09	1.90E-06	1.91E-06	1.67E-06	1.40E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E-07	4.30E-07	1.37E-08	-1.19E-05
Acidification	kg SO_2e	8.75E-01	2.24E-05	6.04E-02	9.36E-01	1.32E-02	7.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-02	8.64E-02	3.01E-04	-2.52E+00
Eutrophication	kg PO_4^3e	1.71E-01	4.84E-06	2.38E-02	1.95E-01	1.64E-03	1.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-03	1.18E-01	1.60E-02	-1.17E+00
POCP (“smog”)	kg C_2H_4e	6.16E-02	1.13E-06	3.88E-03	6.54E-02	5.28E-04	5.64E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.68E-04	3.52E-03	8.81E-05	-1.07E-01
ADP-elements	kg Sbe	6.97E-06	3.40E-08	8.80E-05	9.50E-05	1.62E-06	3.10E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-05	1.62E-05	1.57E-07	-5.42E-04
ADP-fossil	MJ	1.93E+03	1.43E-01	5.58E+02	2.49E+03	1.25E+02	1.94E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E+01	6.45E+01	1.23E+00	-7.11E+03

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited

19.07.2024