



## Statement of Verification

BREG EN EPD No: 000769

Issue: 01

This is to verify that the Environmental Product Declaration provided by:

### Altro Limited

are in accordance with the requirements of:

**EN 15804:2012+A2:2019**

and

BRE Global Scheme Document SD207

This declaration is for: 1m<sup>2</sup> of Altro Whiterock FR™ (average weight 3.60 kg/m<sup>2</sup>) with a thickness of 2.5 mm.

### Company Address

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Signed for BRE Global Limited

Hayley Thomson  
Operator

27 March 2026  
Date of this Issue

27 March 2026  
Date of First Issue

26 March 2031  
Expiry Date



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# Environmental Product Declaration

EPD Number: 000769

## General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE 2025 Product Category Rules (PN 514 Rev 3.2) for Type III environmental product declaration of construction products to EN 15804:2012+A2:2019
Commissioner of LCA study	LCA consultant/Tool
Altro Ltd Works Road Letchworth Garden City Hertfordshire SG6 1NW United Kingdom	Mustafa Ali/BRE LINA A2
Declared/Functional Unit	Applicability/Coverage
1m <sup>2</sup> of Altro Whiterock FR™ (average weight 3.60 kg/m <sup>2</sup> ) with a thickness of 2.5 mm.	Product Specific.
EPD Type	Background database
Cradle to Gate with options	Ecoinvent 3.8

### Demonstration of Verification

CEN standard EN 15804 serves as the core PCR <sup>a</sup>

Independent verification of the declaration and data according to EN ISO 14025:2010

Internal

External

(Where appropriate <sup>b</sup>)Third party verifier:

Kim Allbury

a: Product category rules

b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4)

### Comparability

Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A2:2019 for further guidance



## Information modules covered

Product			Construction		Use stage							End-of-life				Benefits and loads beyond the system boundary
A1	A2	A3	A4	A5	Related to the building fabric					Related to the building		C1	C2	C3	C4	D
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, Recovery and/or Recycling potential
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Note: Ticks indicate the Information Modules declared.

### Manufacturing site(s)

1 manufacturing site in Germany

## Construction Product:

### Product Description

Altro Whiterock FR is u-PVC wall cladding and wall protection solution. It is an extruded semi-rigid PVC sheet with a satin finish. The sheet is available in sizes of 2500 x 1220 mm and 3000 x 1220 mm. It has a weight of 3.6 kg/m<sup>2</sup> and a thickness of 2.5 mm. It can be used in the following applications:

- Bathrooms
- Showers and changing rooms
- Operating theatres and wards
- Splashbacks
- Cooking and food preparation areas
- Serveries
- Kitchens open to public view

This EPD applies to Altro Whiterock FR White™, Altro Whiterock FR Satins™, as they share identical composition and production process.

### Technical Information

The below table covers the basic technical properties of the Altro Whiterock FR product. For further properties, please see the products' pages on Altro's website: [Altro Whiterock White™ FR | Wall Cladding | Kitchen Wall Protection | Altro Australia AU](#).

Property	Value, Unit
Surface finish	Satin



Property	Value, Unit
Thickness, ISO 24346	2.5 mm
Size	2500 x 1220 mm 3000 x 1220 mm
Weight	3.6 kg/m <sup>2</sup>
Density ISO 1183	1.39g/cm <sup>3</sup>
Max Service Temp	60°C
Fire, EN 13501-1	B-s2,d0



### Main Product Contents

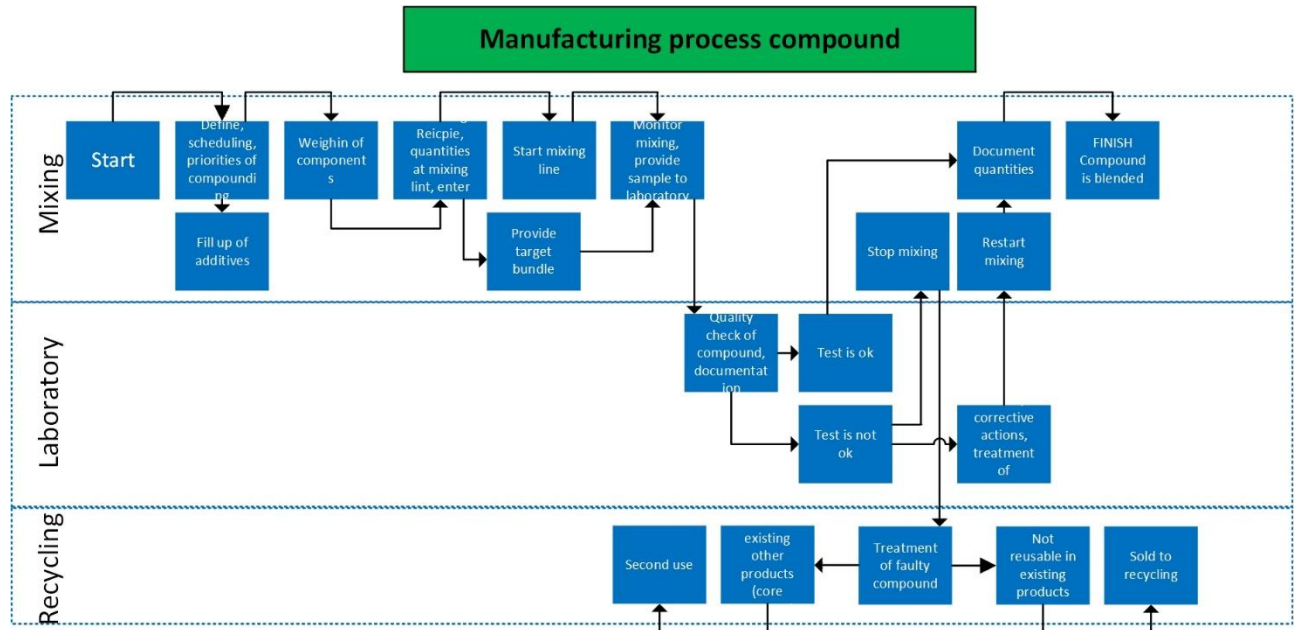
Material/Chemical Input	%
PVC	79.81%
Filler	11.42%
Stabiliser	3.50%
Modifier/Processing aid/lubricant	2.72%
Titanium dioxide	2.56%

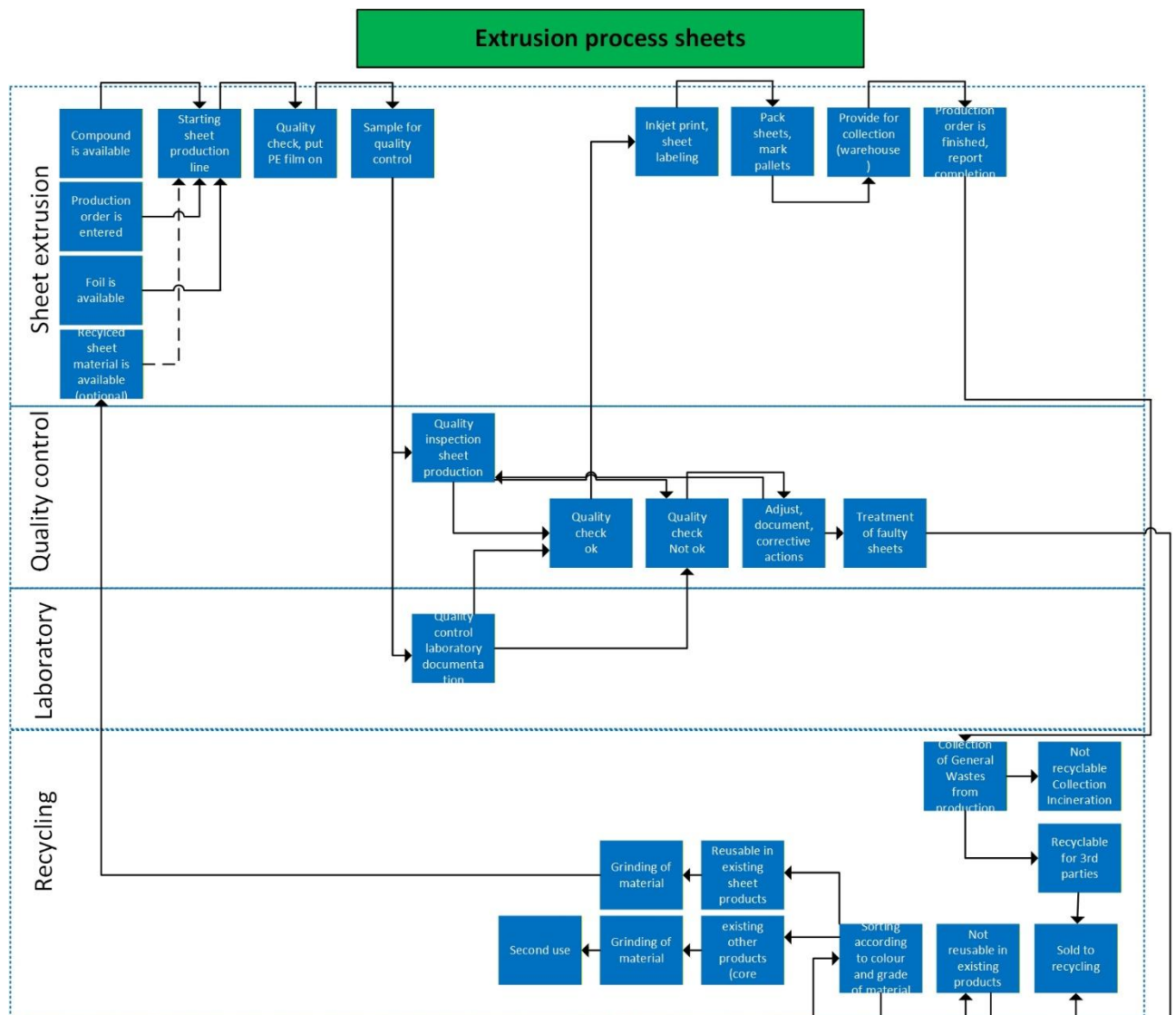
### Manufacturing Process

Altro Whiterock FR sheets are produced using a u-PVC extrusion line with calender rolls and cooled down by ambient air on roller table. Raw materials are mixed on site. **Note:** For manufacturing, the Germany

national grid electricity and the EU natural gas has been used, and any processing waste generated during production will be sent for recycling

### Process flow diagram





### Construction Installation

Altro Whiterock FR sheets are installed using appropriate adhesives and associated accessory products.

### Use Information

Maintenance of the product, is simple visual checks for signs of damage and wear. No specialised care is needed beyond the occasional use of a cleaning solution.

### End of Life

Altro Whiterock FR cannot be recovered at the end of life as it is bonded to the wall with an adhesive. Therefore, according to BRE PCR 3.2, 100% of Altro WhiteRock FR will end up in landfill.



## Life Cycle Assessment Calculation Rules

### Declared / Functional unit description

The declared unit is 1m<sup>2</sup> Altro Whiterock FR wall cladding and wall protection solution, weight 3.60 kg/m<sup>2</sup>, thickness of 2.5 mm.

### System boundary

In accordance with the modular approach as defined in EN15804:2012+A2:2019 and the BRE 2025 Product Category Rules (PN 514 Rev 3.2), this cradle-to-gate LCA with options & modules C and D EPD includes the processes covered during the raw material extraction and manufacturing phase in modules A1 to A3. It also includes transport of the finished product to site in module A4, waste management in A5 and the end-of-life scenario in modules C1, C2, C3, C4 and module D.

### Data sources, quality and allocation

The supporting LCA study was carried out using BRE LINA A2 software using manufacturer-specific data provided by Altro for the production period between December 2023 and December 2024 at the German site. The t site produces other PVC products in addition to the Altro Whiterock FR product, so allocation was applied to site wide values for packaging, energy, water, non-production waste, and wastewater, on kg of production basis. Allocation based on m<sup>2</sup> is not possible due to the wide range of sheet thicknesses (1–30 mm), which makes m<sup>2</sup>-based comparisons inappropriate There are two manufacturing processes carried out (a) PVC manufacturing (mixing) and (b) Sheet extrusion. These processes are carried out in different units. Raw materials, ancillary materials, and packaging quantities are taken from 2024 production data and purchase information. Energy quantities are allocated based on the proportion of Altro product extruded relative to other products, which is 0.80%. Similarly, in mixing plant, electricity, gas, and fuel oil are allocated based on the percentage of Altro material mixed compared to other products, at 0.08%. No water is used for the profile section. Water is only used in the mixing plant and is allocated at 0.08%. All process and non-process wastes are allocated at 0.08%. Wastewater is allocated at 0.08%.

Secondary data has been drawn from ecoinvent v3.8. All ecoinvent datasets are complete within the context used and conform to the system boundary and the criteria for the exclusion of inputs and outputs, according to the requirements specified in EN15804+A2:2019.

Table E.2 from EN 15804+A2, Annex E has been used to assess the data quality of relevant data. The quality level of geography, time and technological representativeness is Very Good as specific European datasets have been selected from the ecoinvent LCI, and the background LCI datasets are from ecoinvent v3.8 which was compiled in 2021. Therefore, the most appropriate LCA data have been used.

ISO14044 guidance. Quality Level	Geographical representativeness	Technical representativeness	Time representativeness
Very Good	Data from area under study.	Data from processes and products under study. Same state of technology applied as defined in goal and scope (i.e., identical technology).	There is approximately 3-4 years between the Ecoinvent LCI reference year, and the time period for which the LCA was undertaken

A location based approach has been used for thee electricity mix. Specific European datasets have been selected from the ecoinvent LCI for this LCA. Manufacturer uses the national grid electricity and natural gas for production, therefore the national grid electricity dataset “Electricity – Germany (kWh)” has been used for the LCA modelling (Ecoinvent 3.8). The GWP carbon footprint for using 1 kWh of electricity, Germany kWh is



0.604 kgCO<sub>2</sub>e/kWh and for the Natural gas, at industrial furnace (kWh, EU) carbon footprint for using 1 kWh is 0.256 kgCO<sub>2</sub>eq. The quality level of time representativeness is also Very Good as the background LCI datasets are based on ecoinvent v3.8 which was compiled in 2021. Therefore, there is less than 5 years between the ecoinvent LCI reference year and the time period for which the LCA was undertaken. Also, Cut-off, EN 15804+A2 was used in this LCA. Finally, all characterisation factors were used as per Annex C of the 15804 A2 standard (Table C.1).

### **Cut-off criteria**

The inventory process in this LCA includes all data related to raw materials, packaging material and consumable items. Process energy, water use and discharge, and waste are also included. No inputs or outputs have been excluded. All raw materials and packaging inputs, plus their transport, process and general energy and water use, production and non-production waste, have been included, except for direct emissions to air, water and soil, which are not measured.



## LCA Results (1m<sup>2</sup> of Altro Whiterock FR™ (average weight 3.60 kg/m<sup>2</sup>) with a thickness of 2.5 mm.)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts			GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP	EP-freshwater
			kg CO <sub>2</sub> eq	kg CO <sub>2</sub> eq	kg CO <sub>2</sub> eq	kg CO <sub>2</sub> eq	kg CFC11 eq	mol H <sup>+</sup> eq	kg (PO <sub>4</sub> ) <sup>3-</sup> eq
Product stage	Raw material supply	A1	7.42E+00	7.29E+00	1.26E-01	5.69E-03	3.53E-06	4.19E-02	2.66E-03
	Transport	A2	1.55E-01	1.55E-01	1.32E-04	6.08E-05	3.58E-08	6.28E-04	9.97E-06
	Manufacturing	A3	9.43E-01	1.33E+00	-3.94E-01	1.96E-03	2.09E-07	4.35E-03	1.30E-03
	Total (Consumption grid)	A1-3	8.52E+00	8.78E+00	-2.68E-01	7.71E-03	3.77E-06	4.69E-02	3.97E-03
Construction process stage	Transport	A4	3.00E-02	2.99E-02	2.55E-05	1.17E-05	6.92E-09	1.21E-04	1.93E-06
	Construction	A5	1.03E+00	4.58E-01	5.76E-01	2.69E-04	1.19E-07	1.70E-03	1.33E-04
<b>100% Landfill Scenario</b>									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.20E-02	1.20E-02	1.02E-05	4.70E-06	2.77E-09	4.86E-05	7.71E-07
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	3.04E-01	3.03E-01	3.81E-04	3.97E-05	1.15E-08	3.31E-04	5.55E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

GWP-total = Global warming potential, total;  
 GWP-fossil = Global warming potential, fossil;  
 GWP-biogenic = Global warming potential, biogenic;  
 GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;  
 AP = Acidification potential, accumulated exceedance; and  
 EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts			EP-marine	EP-terrestrial	POCP	ADP-mineral & metal	ADP-fossil	WDP	PM
			kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ, net calorific value	m <sup>3</sup> world eq deprived	disease incidence
Product stage	Raw material supply	A1	5.93E-03	5.58E-02	2.23E-02	1.18E-04	1.75E+02	5.52E+00	2.63E-07
	Transport	A2	1.89E-04	2.07E-03	6.33E-04	5.38E-07	2.34E+00	1.05E-02	1.34E-08
	Manufacturing	A3	1.12E-03	9.70E-03	3.05E-03	7.92E-06	2.32E+01	6.30E-01	3.85E-08
	Total (Consumption grid)	A1-3	7.24E-03	6.76E-02	2.60E-02	1.26E-04	2.01E+02	6.16E+00	3.15E-07
Construction process stage	Transport	A4	3.66E-05	4.00E-04	1.22E-04	1.04E-07	4.52E-01	2.04E-03	2.58E-09
	Construction	A5	3.49E-04	3.18E-03	1.10E-03	4.06E-06	6.51E+00	4.20E-01	1.25E-08
<b>100% Landfill Scenario</b>									
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.46E-05	1.60E-04	4.90E-05	4.16E-08	1.81E-01	8.14E-04	1.03E-09
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.42E-03	1.21E-03	4.12E-04	1.26E-07	8.98E-01	4.02E-02	6.54E-09
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;  
 EP-terrestrial = Eutrophication potential, accumulated exceedance;  
 POCP = Formation potential of tropospheric ozone;  
 ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;

ADP-fossil = Depletion potential of the stratospheric ozone layer;  
 WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and  
 PM = Particulate matter.



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

			Parameters describing environmental impacts				
			IRP	ETP-fw	HTP-c	HTP-nc	SQP
			kBq U <sup>235</sup> eq	CTUe	CTUh	CTUh	dimensionless
Product stage	Raw material supply	A1	1.01E+00	1.91E+02	6.42E-09	1.64E-07	1.96E+01
	Transport	A2	1.20E-02	1.83E+00	5.91E-11	1.91E-09	1.61E+00
	Manufacturing	A3	2.04E-01	1.63E+01	1.07E-09	1.46E-08	4.50E+01
	Total (Consumption grid)	A1-3	1.23E+00	2.09E+02	7.55E-09	1.81E-07	6.62E+01
Construction process stage	Transport	A4	2.33E-03	3.53E-01	1.14E-11	3.70E-10	3.11E-01
	Construction	A5	4.11E-02	1.32E+01	3.98E-10	7.92E-09	2.30E+00
<b>100% Landfill Scenario</b>							
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	9.30E-04	1.41E-01	4.57E-12	1.48E-10	1.24E-01
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	4.24E-03	1.39E+01	3.07E-11	2.70E-09	2.13E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

IRP = Potential human exposure efficiency relative to U235;  
ETP-fw = Potential comparative toxic unit for ecosystems;  
HTP-c = Potential comparative toxic unit for humans;

HTP-nc = Potential comparative toxic unit for humans; and  
SQP = Potential soil quality index.



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

			Parameters describing resource use, primary energy					
			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	9.07E+00	0.00E+00	9.07E+00	1.02E+02	7.17E+01	1.74E+02
	Transport	A2	3.30E-02	0.00E+00	3.30E-02	2.30E+00	0.00E+00	2.30E+00
	Manufacturing	A3	5.20E+00	4.79E+00	9.99E+00	1.80E+01	2.67E+00	2.07E+01
	Total (Consumption grid)	A1-3	1.43E+01	4.79E+00	1.91E+01	1.22E+02	7.44E+01	1.97E+02
Construction process stage	Transport	A4	6.37E-03	0.00E+00	6.37E-03	4.44E-01	0.00E+00	4.44E-01
	Construction	A5	-4.65E+00	5.25E+00	5.94E-01	-1.38E+00	7.55E+00	6.17E+00
<b>100% Landfill Scenario</b>								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	2.55E-03	0.00E+00	2.55E-03	1.78E-01	0.00E+00	1.78E-01
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.61E-02	0.00E+00	1.61E-02	-7.66E+01	7.74E+01	8.83E-01
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;  
 PERM = Use of renewable primary energy resources used as raw materials;  
 PERT = Total use of renewable primary energy resources;

PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;  
 PENRM = Use of non-renewable primary energy resources used as raw materials;  
 PENRT = Total use of non-renewable primary energy resource



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m <sup>3</sup>
Product stage	Raw material supply	A1	2.63E-02	0.00E+00	0.00E+00	1.29E-01
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	2.61E-04
	Manufacturing	A3	1.82E-02	0.00E+00	0.00E+00	1.53E-02
	Total (Consumption grid)	A1-3	4.45E-02	0.00E+00	0.00E+00	1.45E-01
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	5.04E-05
	Construction	A5	1.38E-03	0.00E+00	0.00E+00	9.85E-03
<b>100% Landfill Scenario</b>						
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	2.02E-05
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	9.45E-04
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00

SM = Use of secondary material;  
RSF = Use of renewable secondary fuels;

NRSF = Use of non-renewable secondary fuels;  
FW = Net use of fresh water



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	6.75E-01	1.30E+01	3.78E-04
	Transport	A2	2.58E-03	4.58E-02	1.58E-05
	Manufacturing	A3	9.52E-02	6.40E+00	6.77E-05
	Total (Consumption grid)	A1-3	7.73E-01	1.94E+01	4.62E-04
Construction process stage	Transport	A4	4.99E-04	8.86E-03	3.06E-06
	Construction	A5	5.67E-02	1.09E+00	1.50E-05
<b>100% Landfill Scenario</b>					
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	1.99E-04	3.54E-03	1.22E-06
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	1.79E-03	3.64E+00	5.33E-06
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00

HWD = Hazardous waste disposed;  
 NHWD = Non-hazardous waste disposed;  
 RWD = Radioactive waste disposed



## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Other environmental information describing output flows – at end of life								
			CRU	MFR	MER	EE	Biogenic carbon (product)	Biogenic carbon (packaging)
			kg	kg	kg	MJ per energy carrier	kg C	kg C
Product stage	Raw material supply	A1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	A2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Manufacturing	A3	0.00E+00	3.02E-02	6.91E-10	0.00E+00	0.00E+00	1.44E-01
	Total (Consumption grid)	A1-3	0.00E+00	3.02E-02	6.91E-10	0.00E+00	0.00E+00	1.44E-01
Construction process stage	Transport	A4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Construction	A5	0.00E+00	5.99E-02	5.52E-02	0.00E+00	0.00E+00	0.00E+00
<b>100% Landfill Scenario</b>								
End of life	Deconstruction, demolition	C1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Transport	C2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Waste processing	C3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Disposal	C4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CRU = Components for reuse;  
MFR = Materials for recycling

MER = Materials for energy recovery;  
EE = Exported Energy



## Scenarios and additional technical information

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
A4	A generic transport to site distance of 50 km has been selected as a reasonable average. End-users of the EPD can use this information to calculate a bespoke transport to site distance if required, i.e. divide the module A4 impacts by 50 and multiply them by a bespoke distance		
	Fuel type / Vehicle type	Litre of fuel type per distance or vehicle type	16-32 tonne lorry
	Distance:	km	50
	Capacity utilisation (incl. empty returns)	%	26
	Weight of the transported products	kg/m <sup>3</sup>	3.60
A5	This scenario has been modelled to account for packaging waste. The wood and cardboard waste has been assumed to be 100% recycled. For plastics, according to Alliance for Sustainable Building Products (ASBP), 44% is sent for recycling; 42% for energy recovery and the remainder to landfill and these figures have been used for modelling A5.		
C1 - Deconstruction	When the product reaches the end of its life, it will be extracted from the building using power tools and sent to landfill. Unfortunately, the waste product cannot be recovered because it is contaminated with other materials such as the substrate and adhesive. Therefore, according to BRE PCR 3.2, 100% of the Altro Whiterock FR walls product will end up in landfill.		
C2 - Transport	A generic transport to site distance of 20 km has been selected as a reasonable average. End-users of the EPD can use this information to calculate a bespoke transport to site distance if required, i.e. divide the module A4 impacts by 20 and multiply them by a bespoke distance		
	Fuel type / Vehicle type	Litre of fuel type per distance or vehicle type	16-32 tonne lorry
	Distance:	km	20
C3 – Waste Processing	There are no pre-processing activities that the product undergoes before being sent to a landfill site.		
C4 – Disposal	According to Altro Ltd, 100% of the product is sent to the landfill at the end of life.		
	PVC Plastic waste to landfill	Kg	3.60
Module D	As 100% of the product is landfilled, there are no environmental benefits.		

## Summary, comments and additional information

The bulk of the environmental impacts are attributed to the manufacturing of Altro Whiterock FR covered by information modules A1-A3 of EN15804:2012+A2:2019. Figure 1 below breaks down the GWP of Altro Whiterock FR into clear categories to understand the modules which cause the largest environmental impact. It's clear that the majority of the environmental impact stems from the product modules (A1 – A3). Stage A1 (raw material) accounts for nearly all emissions, with a minor contribution from A3 (manufacturing). Stage A2 (transport) shows the minimum value. The product is landfilled at the end-of-life stage, leading to GWP emissions in the C4 – Disposal stage.

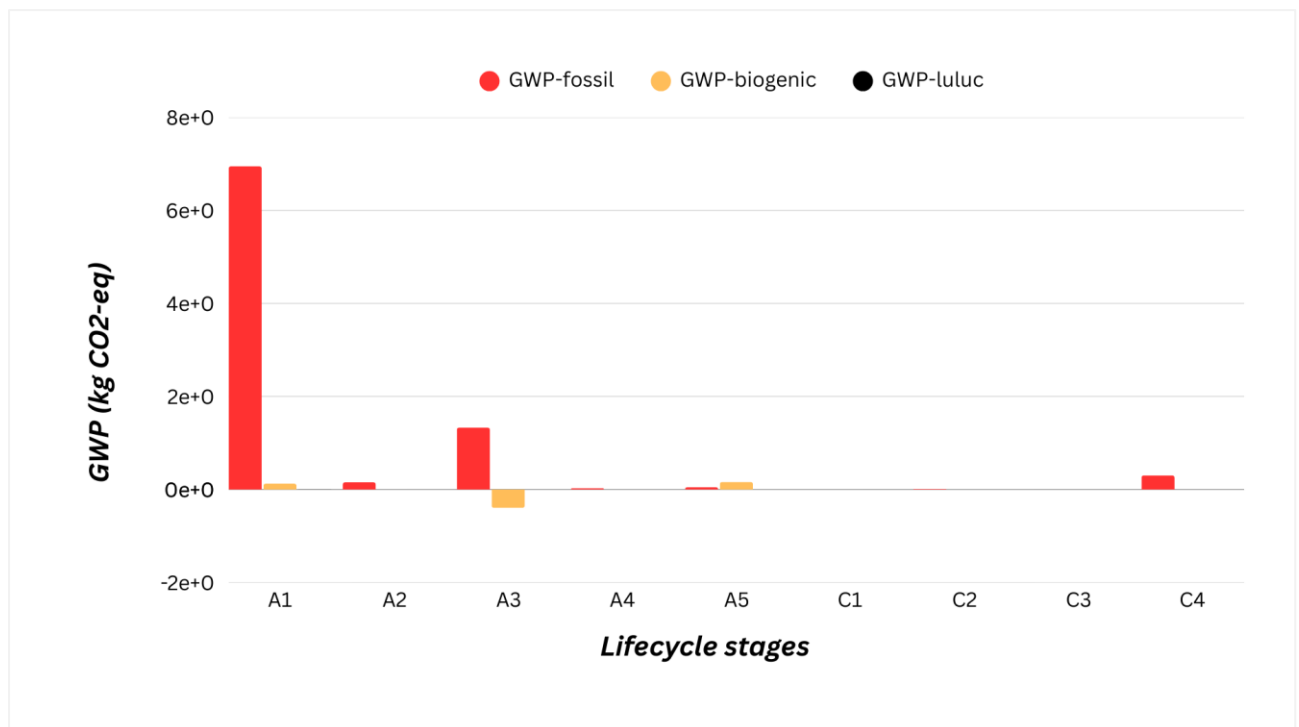


Figure 1



## References

BSI. Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products. BS EN 15804:2012+A2:2019. London, BSI, 2019.

BSI. Environmental labels and declarations – Type III Environmental declarations – Principles and procedures. BS EN ISO 14025:2010 (exactly identical to ISO 14025:2006). London, BSI, 2010.

BSI. Environmental management – Life cycle assessment – Principles and framework. BS EN ISO 14040:2006. London, BSI, 2006.

BSI. Environmental management – Life cycle assessment – requirements and guidelines. BS EN ISO 14044:2006. London, BSI, 2006.

ISO 24346 - Resilient floor coverings — Determination of overall thickness

EN 13501-1 – Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests

ISO 1183 – Plastics — Methods for determining the density of non-cellular plastics

Plastics Europe. An analysis of European plastics production, demand and waste data. 2021. [Plastics - the Facts 2021 • Plastics Europe](#)