

Closing the Loop on Aluminium Recycling: Case Study **Lambs Passage**

Hydro 4.0 Compared to **Std Europe produced** **Std Europe consumed** **Ind World Average**

IN Aluminium Installed - based on Low Carbon Recycled Aluminium 4.0				
Code	Description	Quantity	Unit (kg)	Total (kg)
130170	EVT II L Bracket Thermal AL - 80 x 40mm	725.00	0.07	50.75
130171	EVT II L Bracket Thermal AL - 80 x 60mm	42.00	0.09	3.78
130172	EVT II L Bracket Thermal AL - 80 x 80mm	355.00	0.11	39.05
130173	EVT II L Bracket Thermal AL - 80 x 100mm	430.00	0.12	51.60
130174	EVT II L Bracket Thermal AL - 80 x 120mm	1,145.00	0.13	148.85
130176	EVT II L Bracket Thermal AL - 80 x 160mm	82.00	0.16	13.12
130177	EVT II L Bracket Thermal AL - 80 x 180mm	265.00	0.17	45.05
130178	EVT II L Bracket Thermal AL - 80 x 200mm	78.00	0.19	14.82
130179	EVT II L Bracket Thermal AL - 80 x 220mm	520.00	0.22	114.40
130180	EVT II L Bracket Thermal AL - 80 x 240mm	255.00	0.23	58.65
130181	EVT II L Bracket Thermal AL - 80 x 260mm	85.00	0.25	21.25
130185	EVT II L Bracket Thermal AL - 160 x 40mm	240.00	0.13	31.20
130186	EVT II L Bracket Thermal AL - 160 x 60mm	14.00	0.17	2.38
130187	EVT II L Bracket Thermal AL - 160 x 80mm	105.00	0.22	23.10
130188	EVT II L Bracket Thermal AL - 160 x 100mm	145.00	0.24	34.80
130189	EVT II L Bracket Thermal AL - 160 x 120mm	385.00	0.27	103.95
130191	EVT II L Bracket Thermal AL - 160 x 160mm	29.00	0.32	9.28
130192	EVT II L Bracket Thermal AL - 160 x 180mm	90.00	0.35	31.50
130193	EVT II L Bracket Thermal AL - 160 x 200mm	26.00	0.37	9.62
130194	EVT II L Bracket Thermal AL - 160 x 220mm	50.00	0.44	22.00
130195	EVT II L Bracket Thermal AL - 160 x 240mm	85.00	0.47	39.95
130196	EVT II L Bracket Thermal AL - 160 x 260mm	70.00	0.50	35.00
553902	G-Profile FPH - 176 x 27 x 2/3mm (3m)	49.00	4.50	220.50
553703	G-Profile SPH - 100 x 27 x 2/3mm (3m)	147.00	3.05	447.62
553703	G-Profile SPH - 100 x 27 x 2/3mm (3m)	35.00	3.05	106.58
553902	G-Profile FPH - 176 x 27 x 2/3mm (3m)	12.00	4.50	54.00
553167	L-Profile - 60 x 40 x 2mm (3m)	875.00	1.56	1,362.38
553169	T-Profile - 80 x 60 x 2mm (3m)	190.00	2.20	417.24
553167	L-Profile - 60 x 40 x 2mm (3m)	100.00	1.56	155.70
Total Weight			kg	3,668.11

Aluminium Installed - Emissions Hydro Low-Carbon Recycled Aluminium 4.0

CO2 per kg AL (kg)	kg	4.0
CO2 Total	kg	14,672

6.7	8.6	16.7
24,576	31,546	61,257
168%	215%	418%

OUT Aluminium Recycled - Post Consumer Scrap

Lambs Passage Carbon Footprint based on:		
Alu Sheet: Flashings & Copings	kg	2,000
Alu 6000 Extrusions	kg	1,490
	Total Weight	kg
		3,490
3.75 kgCO2/kg AL (energy used to produce the lowest carbon aluminium ingot)	kgCO2/kgAl	3.75
	Total Emissions	kg/CO2
		13,088

Only the 6000 grade aluminium is used in the aluminium ingot for Hydro 4.0 aluminium used in RJ Facades Products
By 'closed loop recycling' the project will reduce the CO2 for future aluminium ingot production

BALANCE NET Carbon Emissions

NET Carbon Impact (Subgrid) kg CO2 Total		1,585		
Lambs Passage Subgrid Total (VitraDual 683m2 + Aerolite 314.25m2)	m2	997.25		
Emissions kgCO2/m2: 4.0 Grade Alu with Recycling (tonnes)	kgCO2/m2	1.59	24.64	31.63
Emissions SAVING kgCO2/m2 Hydro 4.0 LEC alu & 'closed loop' recycling	kgCO2/m2	23.05	30.04	59.84
Emissions SAVING kgCO2 total Hydro 4.0 LEC alu & 'closed loop' recycling	kgCO2	22,991	29,961	59,672
Carbon Reduction		94%	95%	97%