



W1 : Poured Concrete

W2 : Rotary cut oak veneer

W3 : Translucent alveolar polycarbonate panel

W4 : Toughened laminated glass

C1 : Small water ripple 304 stainless steel

F1 : Shard red honed terrazzo resin Floor

F2 : Poured Concrete











T1 : Concrete-effect tile

P1 : Tundra honed Marble

Ca1 : Rotary cut gemini teak veneer

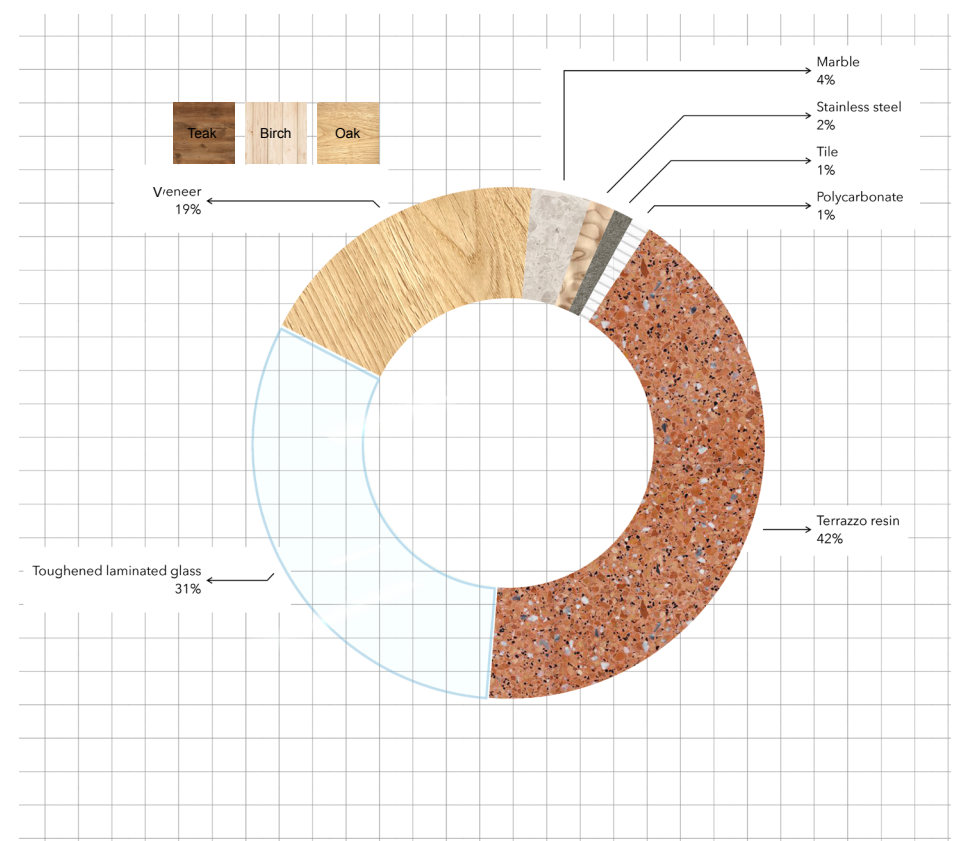
Ca2 : Rotary cut birch veneer

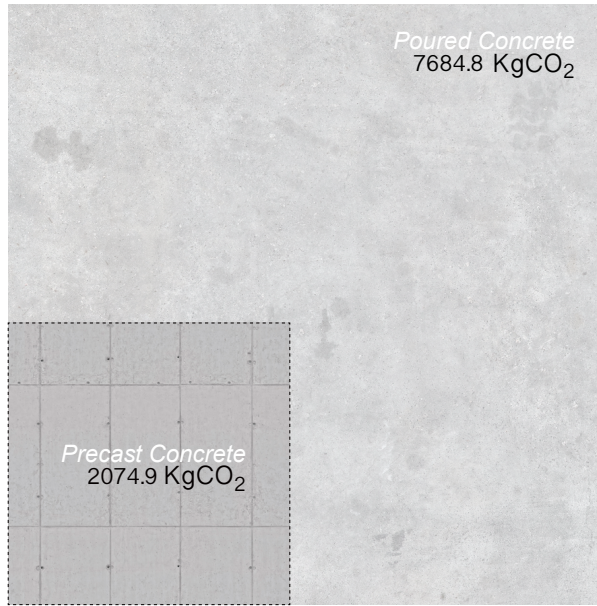
Embodied Carbon Caculation

	Material	AREA(sqm)	THICKNESS(m)	VOLUME(m ³)	DENSITY (kg/m ³)	WEIGHT	EMBODIED CARBON (kgCO ₂)
W1	 Poured Concrete	133.4	0.24	32.02	2400	76848	$0.1 \times 76848 = 7684.8$
W2	 Rotary cut oak veneer	84.27	0.05	4.213	720	3033.36	$(0.33_{fos} + 0.32_{bio} \times 3033.36) = 971$
W3	 Translucent alveolar polycarbonate panel	8.25	0.02	0.165	1200	198	$6.03 \times 198 = 1193.94$
W4	 Toughened laminated glass	20.48	0.1	2.048	2520	5160.96	$1.27 \times 5160.96 = 6554.42$
C1	 Small water ripple 304 stainless steel	11.13	0.003	0.033	8000	264	$6.15 \times 264 = 1623.6$
F1	 Shard red honed terrazzo resin Floor	32.91	0.1	3.291	2100	6911.1	$0.12 \times 6911.1 = 829.33$
T1	 Concrete-effect tile	0.78	0.27	0.211	100	211	
P1	 Tundra honed Marble	1.9	0.12	0.228	2689	613.09	$0.116 \times 613.09 = 71.12$
Ca1	 Rotary cut gemini teak veneer	8.33	0.049	0.408	980	39.98	$(0.33_{fos} + 0.32_{bio} \times 39.98) = 13.12$
Ca2	 Rotary cut birch veneer	2.2	0.015	0.033	670	22.11	$(0.33_{fos} + 0.32_{bio} \times 22.11) = 7.41$

Total: 18957.74 kgCO₂

Percentage of material Embodied Carbon



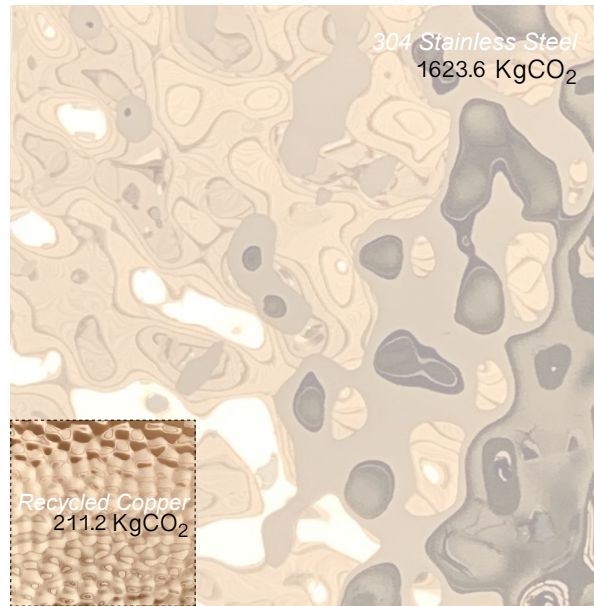
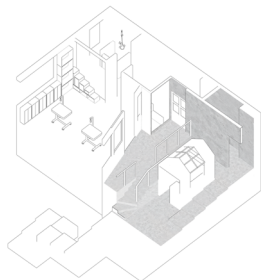


0.1KgCO₂/kg **Poured Concrete** - 5609.9 KgCO₂ 0.027KgCO₂/kg **Precast Concrete**

The construction industry consumes a great deal of energy, and precast concrete products are and will continue to be more energy-efficient than their alternatives. The variety of styles, colors, and structural possibilities available with these goods further contribute to their popularity among customers. In addition to their energy efficiency and aesthetic versatility, they offer excellent noise reduction properties, outstanding durability, and fast construction.

Decarbonising Precast Concrete

The recently produced Decarbonising Precast Concrete Report shows that the project developed an optimised structural design and concrete mix technical specification for offsite construction that delivers a net reduction of 40% in the structural precast concrete's embodied carbon emissions, when benchmarked against the ICE database.

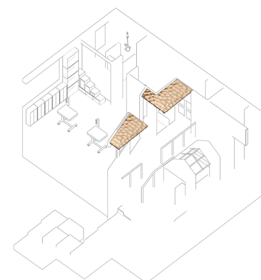


6.15KgCO₂/kg **304 Stainless Steel** - 1412.4KgCO₂ 0.8KgCO₂/kg **Recycle Copper**

Copper is one of the few materials that can be recycled several times without losing its function. Recycled copper (secondary production) and mined copper (primary production) are both of the same grade, thus they may be used interchangeably.



Hammered Mirror Copper Sheet is a completely copper decorative material, which can be a good alternative to corrugated 304 stainless steel sheet by whacking it out to resemble a water ripple.

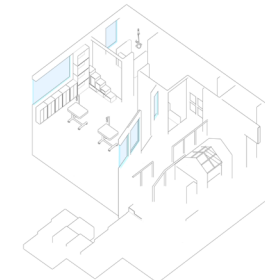


1.27KgCO₂/kg **Toughened Glass** - 5071.04KgCO₂ 6.03KgCO₂/kg **Polycarbonates**

1. The majority of polycarbonates are lightweight. They are often ten to twenty times lighter than regular glass.
2. Polycarbonate materials are extremely affordable in comparison to glass.
3. Polycarbonate is extremely resistant to impact. The resistance increases by a factor of 200 and is about 30 times that of acrylic materials.
4. Polycarbonate is a very recyclable material. This is why they are referred to as eco-friendly.
5. In the majority of circumstances, glass is not thermally efficient. As a result, polycarbonates are the most effective material for achieving thermal effectiveness.



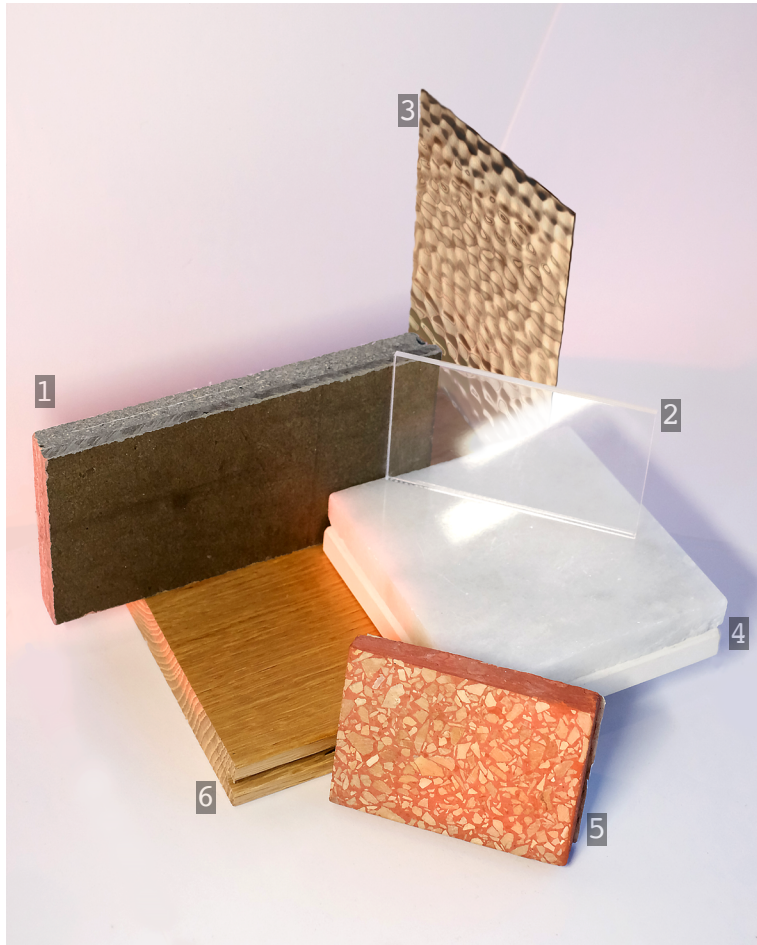
Our range of 10mm Palsun™ Polycarbonate Sheets is a virtually unbreakable plastic sheet which is used in a wide range of applications. The sheets are lightweight and have excellent high impact strength and superior thermal insulation properties. The 10mm Polycarbonate Sheets are UV Resistant so they will not go yellow over a period of time and they also block harmful UV radiation. The Clear 10mm Polycarbonate Sheets are optically clear like glass and are easy to handle and install.



MATERIAL STORIES



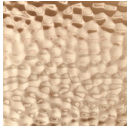

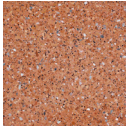
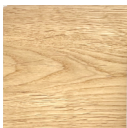


Embodied Carbon Before reduced: 18957.74 kgCO₂

Embodied Carbon After reduced: 6864.4 kgCO₂



LAYOUT AFTER REDUCED



- 1  Precast concrete
- 2  polycarbonate glass
- 3  Hammered recycled copper
- 4  Tundra honed Marble
- 5  Shard red honed terrazzo resin
- 6  Rotary cut oak veneer
-  Translucent alveolar polycarbonate panel
-  Concrete-effect tile

