Whole Building Life Cycle Assessment of a mass timber industrial building
including & excluding biogenic carbon

Excluding biogenic carbon

Embodied Carbon

building size 1,500 m² (16,146 ft²)

initial GWP 195 kg CO₂eq per m²

global warming potential kg CO₂eq per m²

total GWP 260 kg CO₂eq

Embodied Carbon

building size 1,500 m² (16,146 ft²)

initial GWP -80 kg CO₂eq per m²

global warming potential kg CO₂eq per m²

total GWP 114 kg CO₂eq

GWP per material

CLT, Glulam, and Wood 36%

Concrete 36%

Metals 6%

Thermal & Moisture Protection 6%

Openings and Glazing 4%

Finishes 4%

C2-C4 shows emissions from a disposal site, C3 shows emissions from waste processing, and C4 shows emissions from final disposal. Tally averages these three categories. It is assumed that 64% of glues used in B.C. are formaldehyde-based (MBE), 28% are synthetic, 8% are water-based, and 2% are non-formaldehyde.