ABSTRACT

ENERGY CONSUMPTION AND EMISSIONS DURING THE MANUFACTURING OF A LOG WALL

Includes the results of the study
"Calculation of environmental effects of a log wall based on a life-cycle analysis"
as diagrams

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Oulu 11 February 2009
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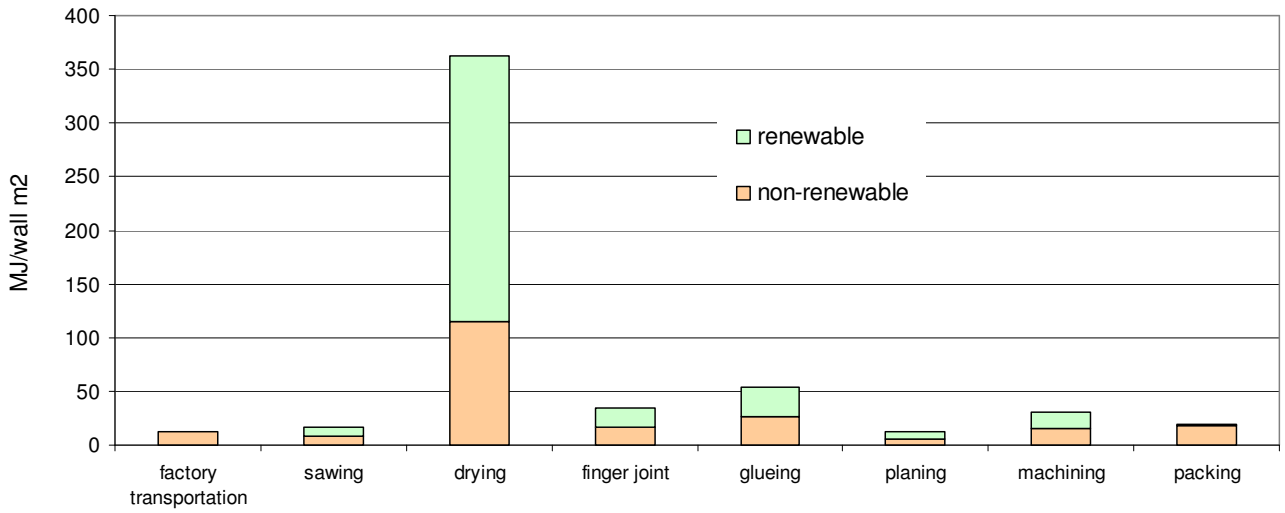
Architects' office Inspis Oy

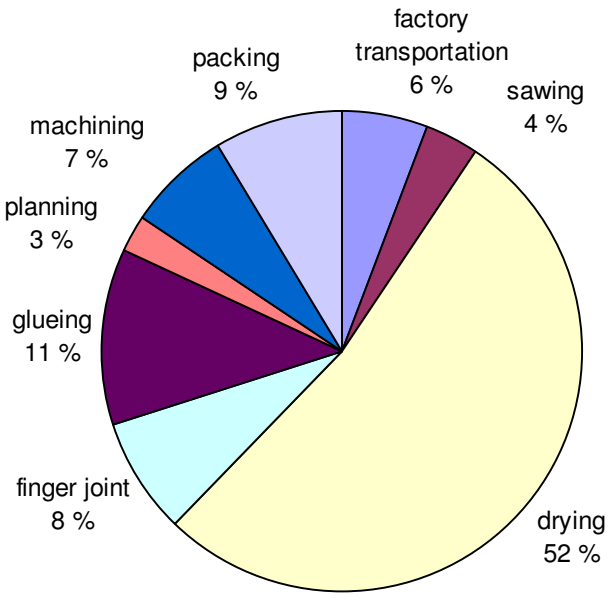
PRIMARY ENERGY CONSUMPTION DURING LOG MANUFACTURING

Total energy consumption 542 MJ/wall m^2

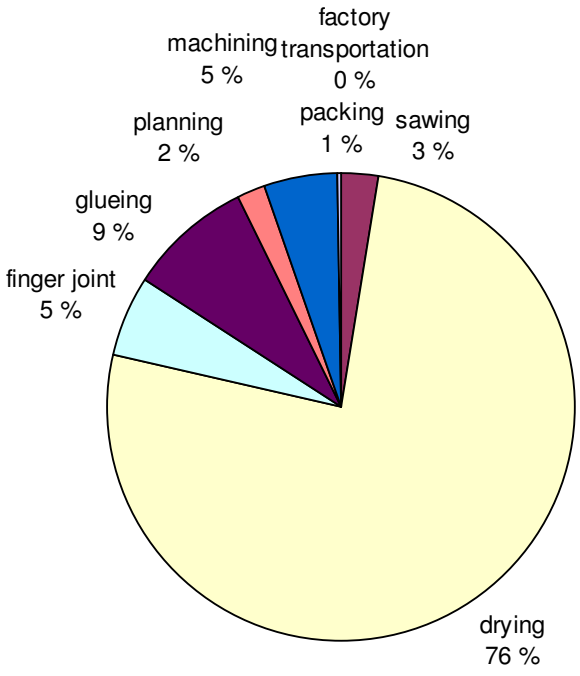


DISTRIBUTION OF ENERGY CONSUMPTION BETWEEN DIFFERENT STAGES

Use of non-renewable energy
217 MJ/m²

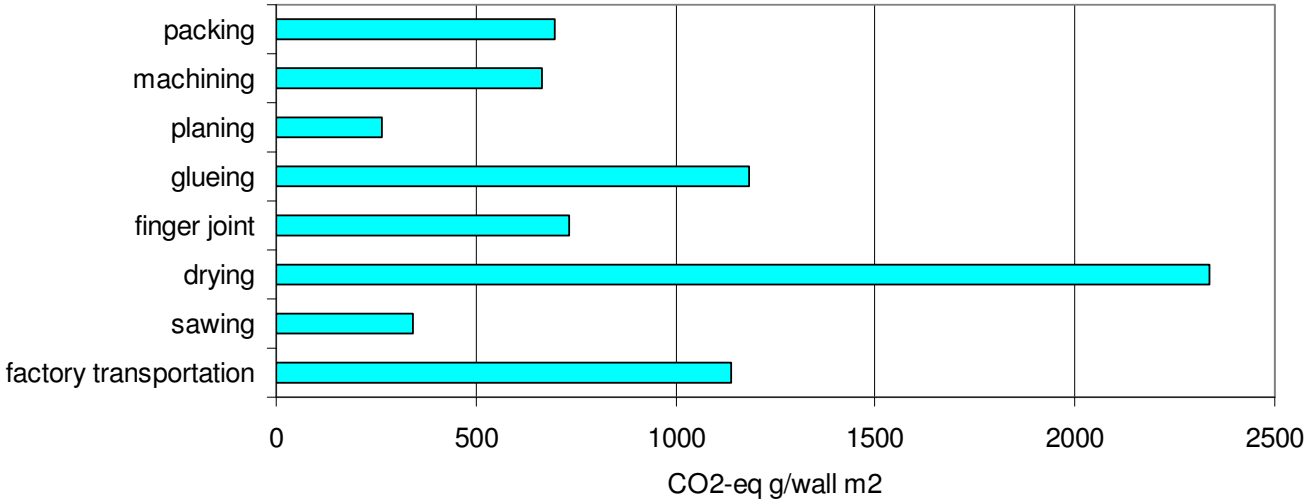


Use of renewable energy
325 MJ/m²

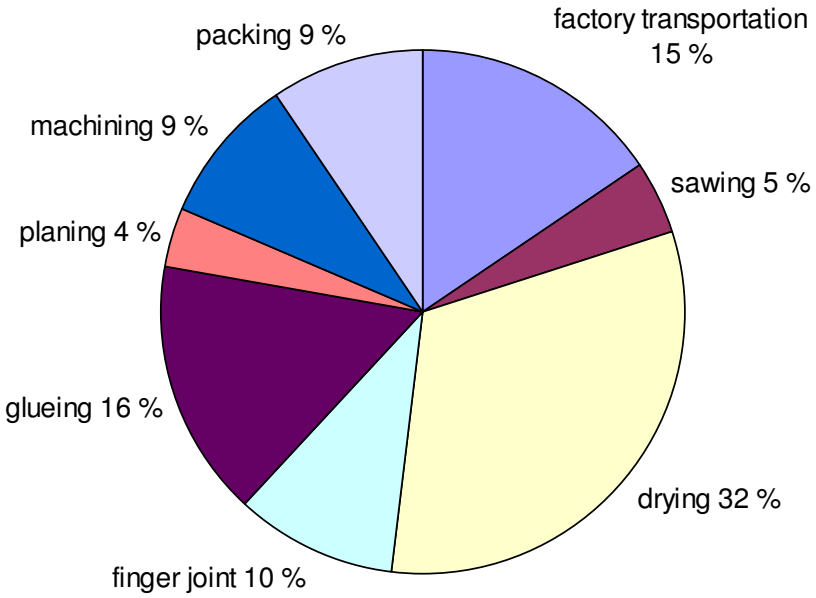


GREENHOUSE GAS EMISSIONS DURING LOG MANUFACTURING

Greenhouse gases CO2-eq in all 7360 g/wall m²
The same amount of greenhouse gas emissions is generated by driving a car for 50 kilometres.

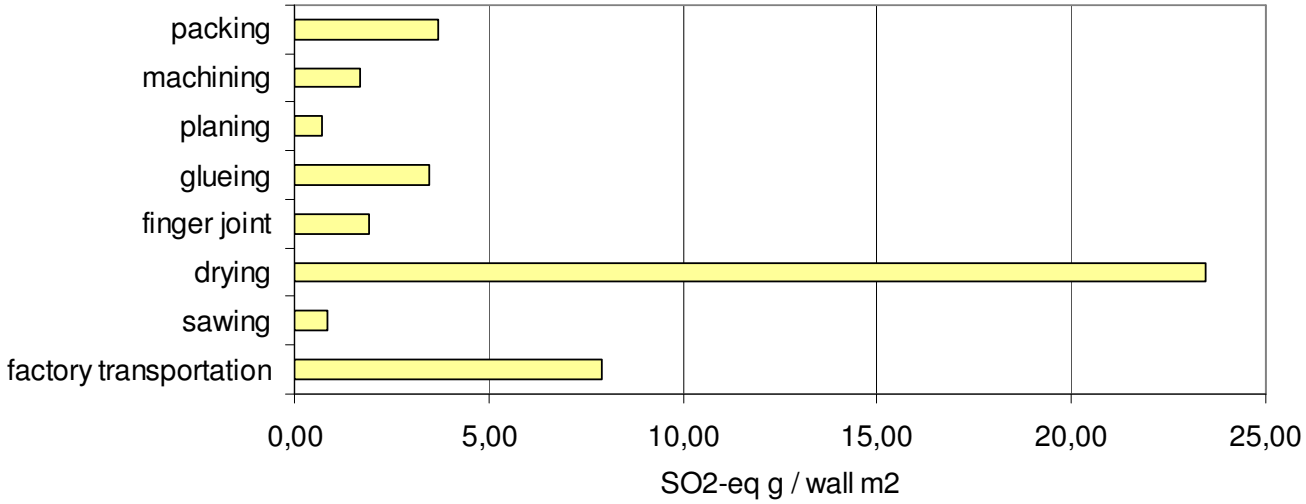


RELATIVE SHARE OF GREENHOUSE GAS EMISSIONS AT DIFFERENT STAGES OF PRODUCTION

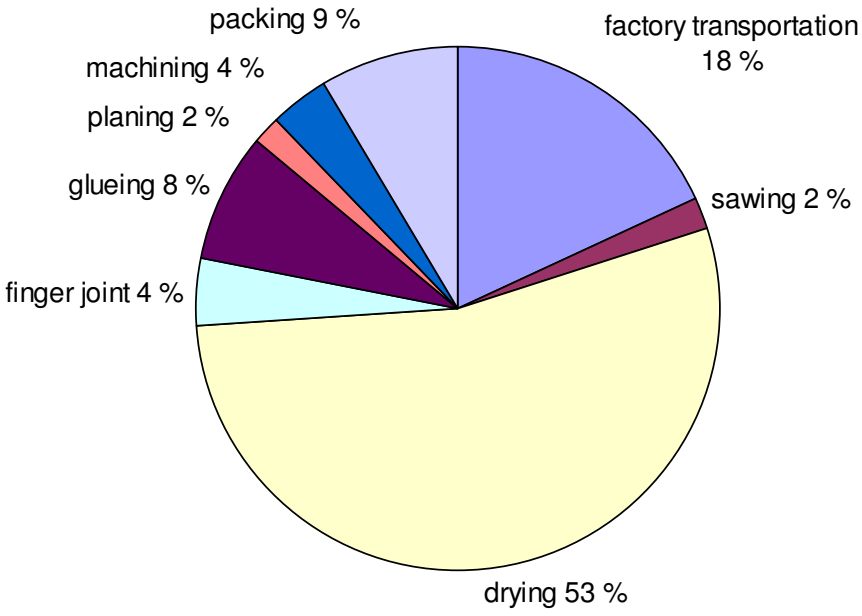


ACIDIFYING EMISSIONS DURING LOG MANUFACTURING

Acidifying emissions SO2-eq in all 44 g/wall m²
Corresponds to the emission generated by a passenger car over a distance of circa 50 kilometres

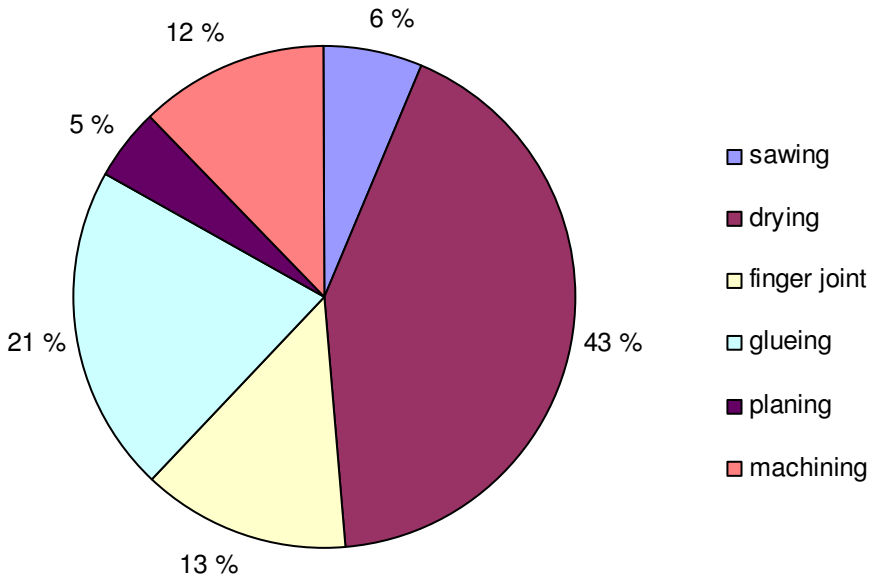


RELATIVE SHARE OF ACIDIFYING EMISSIONS AT DIFFERENT STAGES OF PRODUCTION

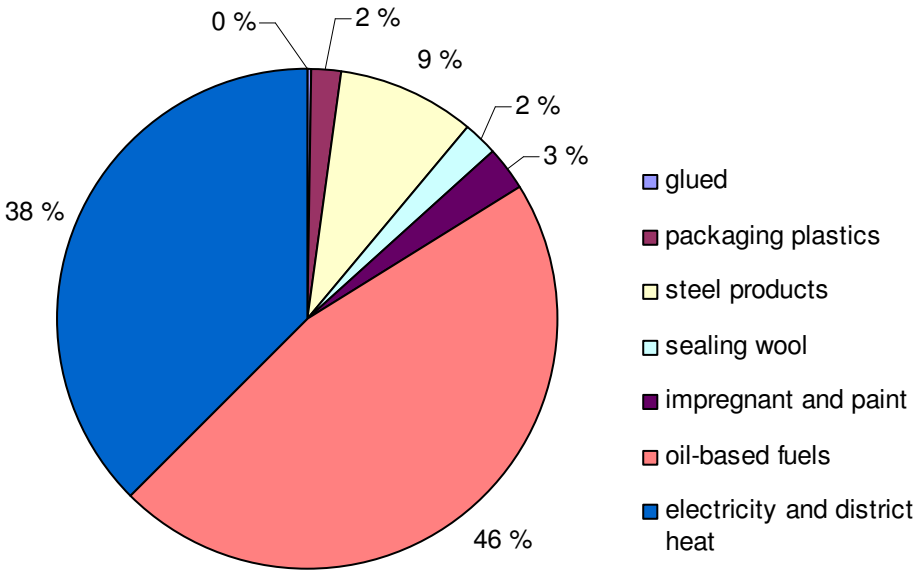


ELECTRICITY CONSUMPTION AT DIFFERENT STAGES OF LOG MANUFACTURING

Total consumption 35 kWh/wall m²

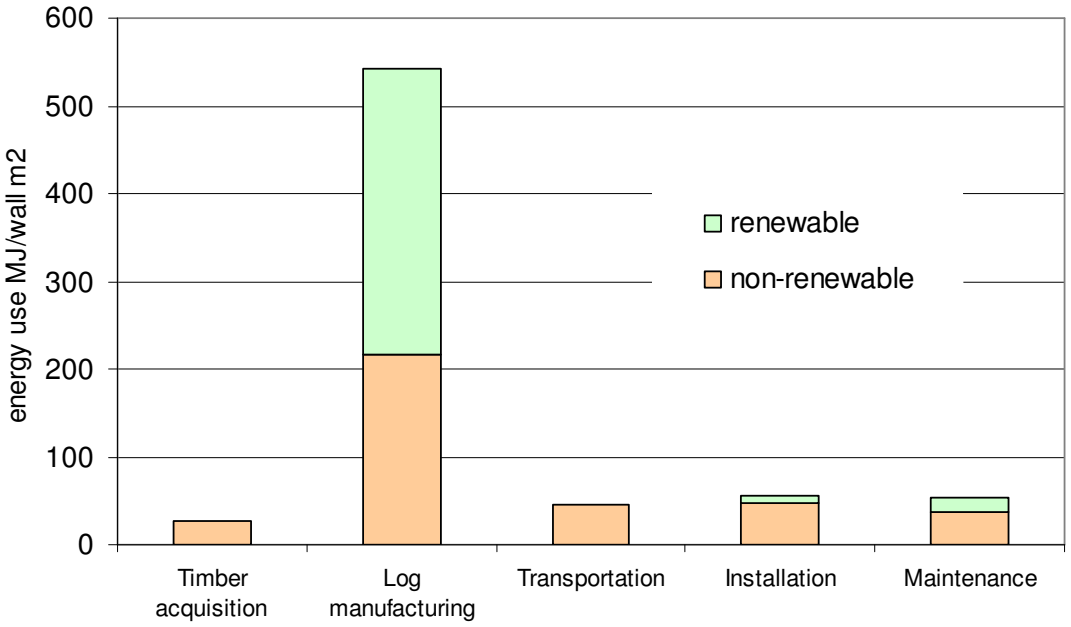


IMPACT OF INPUTS ON GREENHOUSE GAS EMISSIONS DURING LOG MANUFACTURING



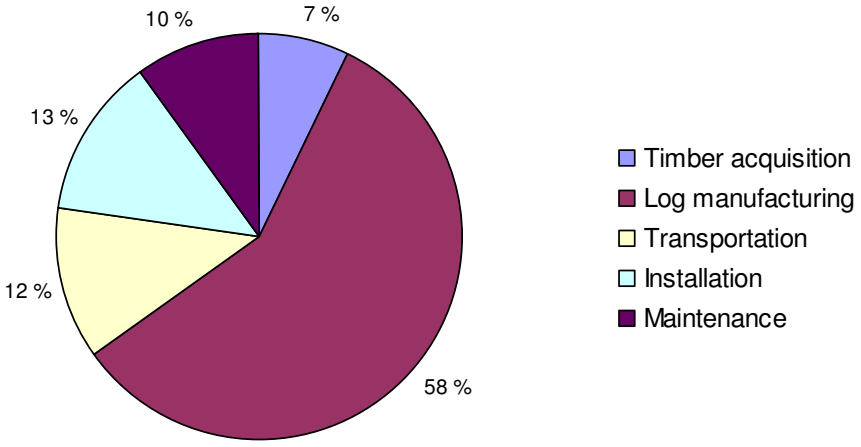
PRIMARY ENERGY CONSUMPTION OVER THE LIFECYCLE OF A LOG WALL

Total energy consumption over the life-cycle 724 MJ/wall m^2

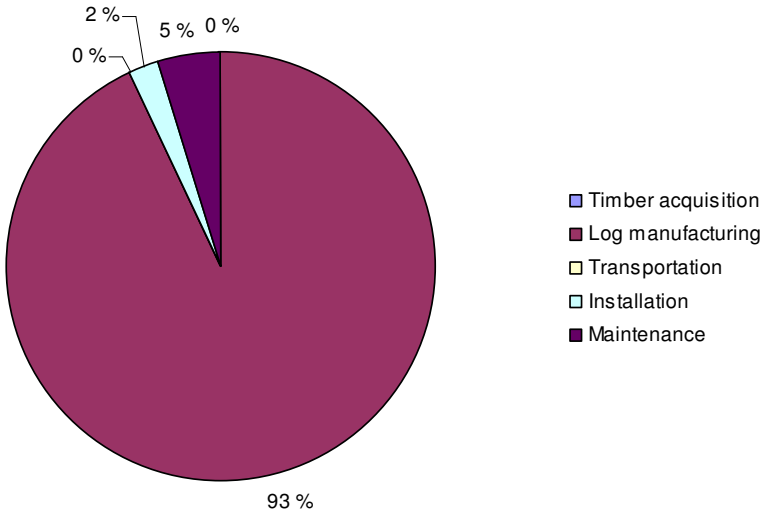


DISTRIBUTION OF ENERGY CONSUMPTION DURING THE LIFE-CYCLE OF A LOG WALL

Total consumption of non-renewable energy 375 MJ/wall m²

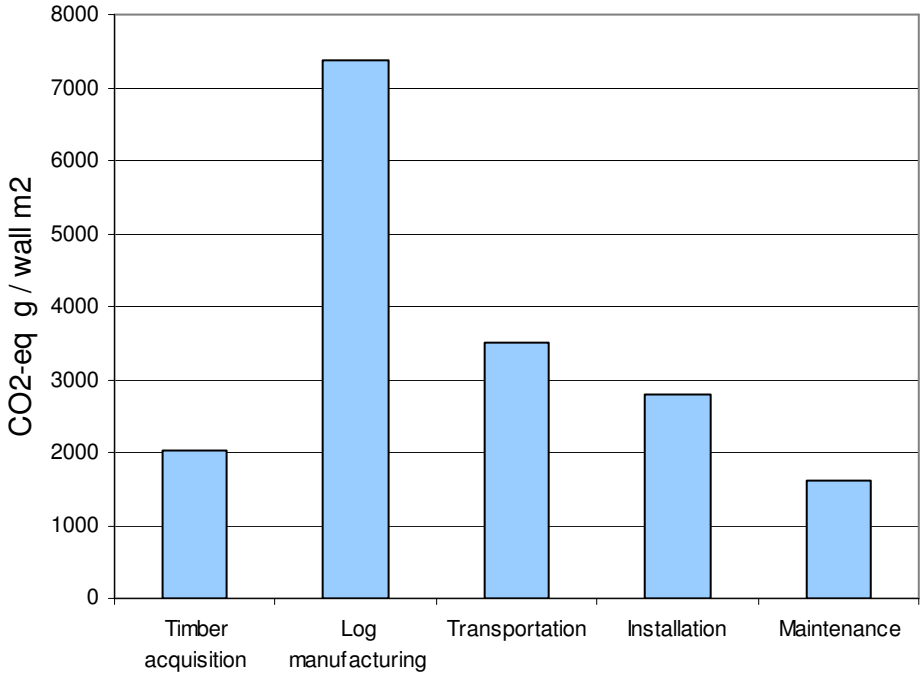


Total consumption of renewable energy 349 MJ/wall m²

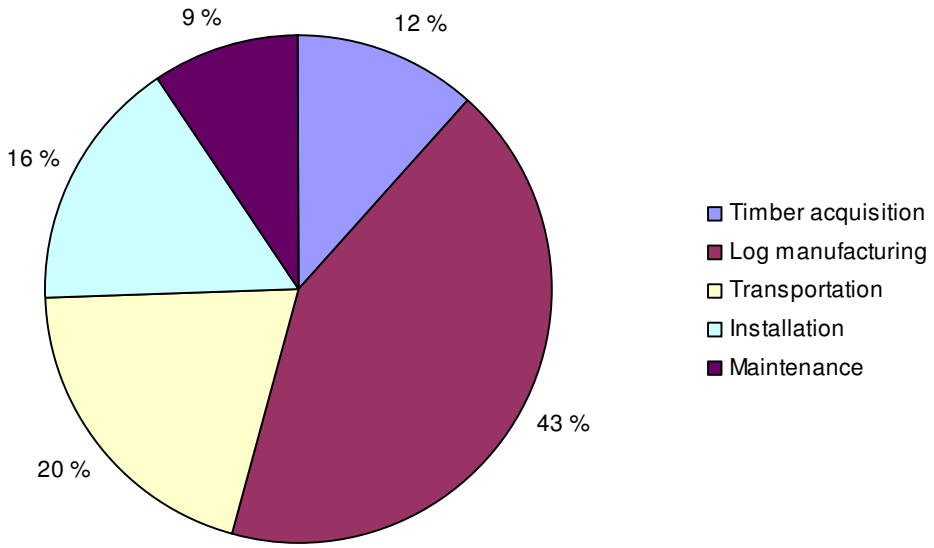


GREENHOUSE GAS EMISSIONS DURING THE LIFE-CYCLE OF A LOG WALL

Greenhouse gases CO2-eq in all 17,300 g/wall m²
The same amount of greenhouse gas emissions is generated by driving a passenger car for circa 110 kilometres.

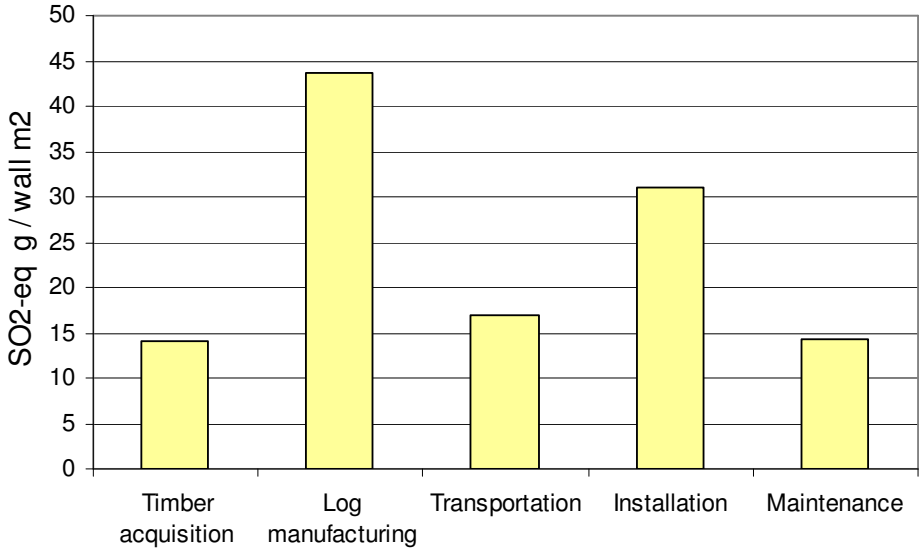


RELATIVE SHARE OF GREENHOUSE GAS EMISSIONS AT DIFFERENT STAGES OF THE LIFE-CYCLE



ACIDIFYING EMISSIONS DURING THE LIFE-CYCLE OF A LOG WALL

Emissions SO2-eq in all 120 g/wall m²
The same amount of greenhouse gas emissions is generated by driving a passenger car for circa 110 kilometres.



RELATIVE SHARE OF ACIDIFYING EMISSIONS AT DIFFERENT STAGES OF LIFE-CYCLE