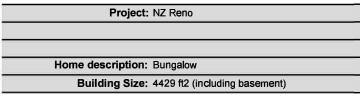
# Material Carbon Emissions Estimator (MCE2)

**Project Carbon Emissions Estimates** 

## **PROJECT SUMMARY**

Save This Scenario



**Material Emissions** tonnes CO2e kg CO2e / m2 12.8 31.1

**Operational Emissions** tonnes CO₂e / yr t CO<sub>2</sub>e / 30 yrs 0.7 20.5

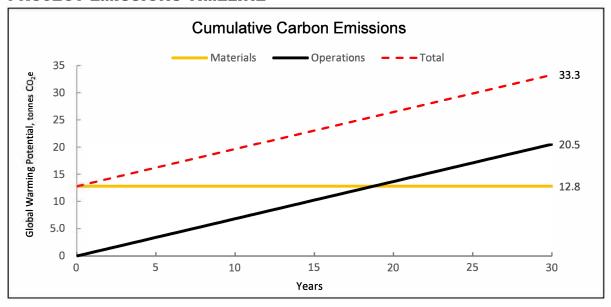
### **Project Notes**

This home achieved NZ Reno ready.

31

## **PROJECT EMISSIONS TIMELINE**

100 Material Carbon Intensity, kg CO2/m2



### **Chart information**

Note: In grids with low carbon intensities, MCE2 users should consider energy efficiency measures to reduce overall loads on local and regional grids.

The Cumulative Carbon Emissions chart offers a simplified view of the climate impact of materials manufacturing and building operations for the initial 30 years. This chart should be used as a directional guidepost for where to focus carbon reduction efforts, rather than as a predictive model for future emissions. There are several unknowns which may cause deviations from this model, some of which are described below.

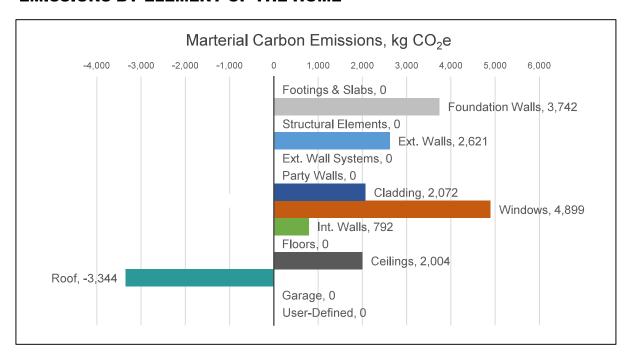
#### Notes on simplifying assumptions

- Only the cradle-to-gate new construction material carbon emissions are modeled. Realistically, there would be some fluctuations in material carbon due to renovations, maintenance, material decomposition, etc.
- The operational carbon emissions, the grey line, is shown to increase at the same annual rate. This too, in reality, will vary from year to year and especially as the building ages.
- GHG emissions associated with fuels and electricity generation (by province or territory) are unchanging values. These values should be reasonably expected to change over time.



## **Project Carbon Emissions Results**

## **EMISSIONS BY ELEMENT OF THE HOME**



## **TOP 10 MOST IMPACTFUL MATERIALS**

Rank	kg CO₂e	Section	Material
1	4,899	Windows	Window - triple pane / Vinyl frame
2	<b>2</b> ,173	Ext. Walls	XPS foam board / Owens Corning
3	2,004	Ceilings	Drywall 1/2" - Ceilings - AVERAGE
4	1,912	Foundation Walls	Spray polyurethane foam - Closed
5	1,824	Cladding	Fiber Cement siding - AVERAGE
6	1,274	Foundation Walls	Spray polyurethane foam - Closed
7	652	Int. Walls	Drywall 1/2" Typical - Interior Walls
8	353	Foundation Walls	Drywall 1/2" - AVERAGE
9	248	Cladding	Drywall 1/2" Typical - Interior Clado
10	240	Ext. Walls	Spray polyurethane foam - Open C

## **RECOMMENDATIONS**

User or embodied carbon advisor to provide recommendations here...