

# THE GARDENS

## PROJECT OVERVIEW

The Gardens demonstrates that wood can be used to build attractive, affordable, high-quality housing from sustainable materials more quickly and efficiently than with other building materials. The project included eight factory-built, wood-framed units (four duplexes), which provide attractively-priced housing in Gibsons, where the cost of accommodation has been outpacing income growth by a rate of nearly three to one. Popularity of the design and the need for affordable housing were both proven by the fact that The Gardens sold out almost immediately; the developer is now working on Phase II. The development, which was Click Modular's first, has attracted a full range of owner types, including families with children, couples and singles—all people who live and work in Gibsons, accessible from Vancouver only by ferry or boat.

**LOCATION**  
Gibsons, British Columbia

**SIZE**  
8 units, 73 m<sup>2</sup> each

**COMPLETION**  
2016

**ARCHITECTS**  
Click Modular Homes

**STRUCTURAL ENGINEER**  
Suncoast Engineering

**GENERAL CONTRACTOR**  
Click Modular Homes

**PROJECT DEVELOPER**  
Click Modular Homes

The two-bedroom homes were assembled at Click Modular Home's factory in Port Mellon, 16 kilometres away from the site. Skilled framers had each of the units fully assembled in about four weeks; actual framing took just three days for each modular unit. Units for The Gardens were then transported to Gibsons in two pieces and connected on-site, ensuring the building envelope was watertight almost instantly. Using wood allows units to be easily modified if a customer wants some level of customization in the future.

The Gardens shows that attractive, livable homes can be built quickly, cost-effectively and efficiently with wood, providing maximum value to homeowners and much-needed affordable housing for the community.



Photo courtesy of Click Modular Homes

*“It is a delight to live in our beautiful community here at The Gardens. We followed our house as it moved through the factory-build process and were amazed at the speed and efficiency of the prefabricated modular wood assembly system and the quality of the home.”*

**Laura Smit, Phase I Resident, The Gardens**

## WOOD USE

Homes in The Gardens were framed using all-wood construction, with each half of the home engineered as a structural member so it could be easily transported and lifted into place with a crane on-site. Dimension lumber was used to frame the walls, with 2x6 spruce-pine-fir (SPF) studs for the exterior walls and 2x4 studs for the interior walls; the walls were sheathed with plywood for shear. Plywood was also used as the vapour barrier inside the house, with drywall fixed directly to the plywood to minimize cracking during transport and installation.

The main wall of each unit was supported by a parallel

strand lumber engineered wood beam. The load-bearing beam in the floor of the one-storey units was comprised of a ring joist of four SPF 2x10s nailed together along with 2x10 wood joists topped by tongue-and-groove plywood. The underside of the floor was sealed with pressure-treated plywood for durability. Engineered wood I-joists and 3x12 rough-cut solid Douglas fir timbers were used to frame the roof, which was covered in plywood sheathing. Some of the units in The Gardens featured exposed birch plywood for the interior ceiling. Outside, cedar was used for the siding and decks.

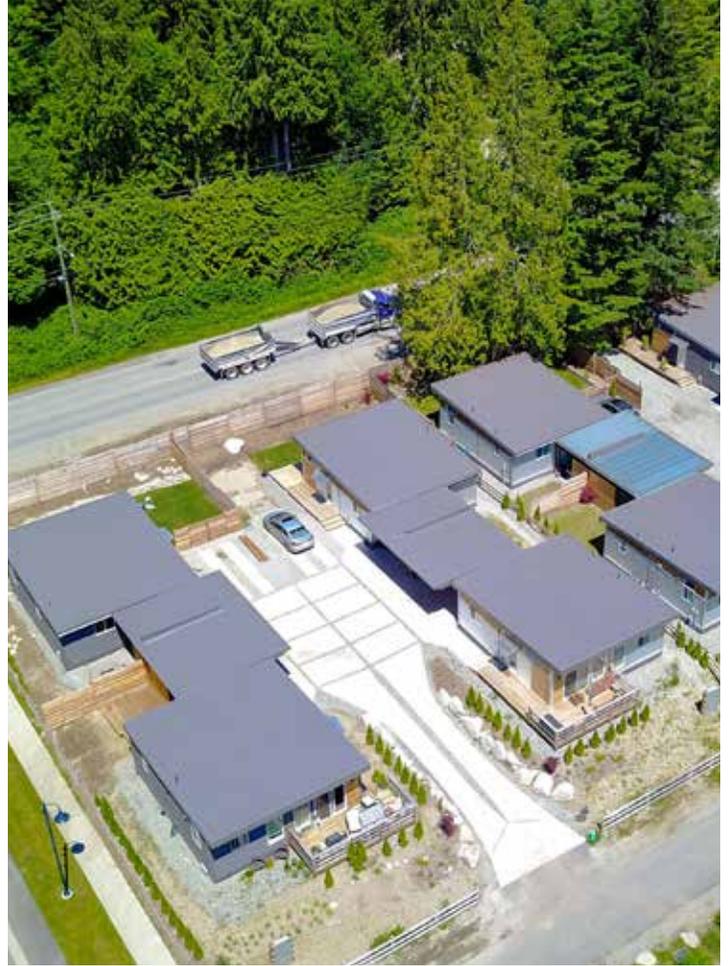


Photo courtesy of Click Modular Homes

## ESTIMATED ENVIRONMENTAL IMPACT OF WOOD USE

<p><b>V</b> Volume of wood products used: 124 cubic meters</p>	<p><b>GHG EMISSIONS ARE EQUIVALENT TO:</b></p>
<p><b>T</b> U.S. and Canadian forests grow this much wood in: <b>20 seconds</b></p>	<p><b>69 cars off the road for a year</b></p>
<p><b>C</b> Carbon stored in the wood: 109 metric tons of CO<sub>2</sub></p>	<p><b>Energy to operate 35 homes for a year</b></p>
<p><b>CO<sub>2</sub></b> Avoided greenhouse gas emissions: 219 metric tons of CO<sub>2</sub></p>	<p><small>*Estimated by the Wood Carbon Calculator for Buildings, cwc.ca/carboncalculator. *CO<sub>2</sub> refers to CO<sub>2</sub> equivalent.</small></p>
<p><b>✓</b> Total potential carbon benefit: 327 metric tons of CO<sub>2</sub></p>	

## FOR MORE INFORMATION

This profile is published by Forestry Innovation Investment, the Government of British Columbia's market development agency for forest products.

For more examples of innovative wood building projects throughout British Columbia, visit:

[naturallywood.com](http://naturallywood.com)

The wood grain featured in this profile is Douglas fir.