### **USE OF LOW CARBON & RENEWABLE MATERIALS** in LEED Projects

# CASE STUDY



#### Overview

The new building at École Mer et Montagne in Campbell River opened in 2012 and replaced an existing elementary school building, while retaining and seismically upgrading an existing gymnasium. The École provides classrooms for 100 children ranging from Kindergarten to Grade 8.

Reclaimed Douglas Fir 3x12 joists were salvaged from the existing building and repurposed throughout the new school for large portions of the roof and corridors. Left exposed to view from below, the reclaimed timbers add warmth and contribute toward reducing the environmental impact of the building.

Timber features heavily in the finishes as well, in bookcases and a trio of rotating display cases in the middle of the school, reclaimed timber benches, and through timber acoustic ceiling panels along the corridors and a Media and Technology space.

#### How low carbon materials were used in the project

The building structure uses light-frame timber joists supported primarily on stud shearwalls. The existing gym structure was reinforced with post-tensioned steel rods and reinforced with additional nailing in the existing timber shearwalls and diaphragm, allowing for their re-use in the new building.

The project has received particular attention for the use of reclaimed Douglas Fir joists from the previous school building. The combination of new and reclaimed timber materials for both structure and finishes contributed toward sequestering or avoiding an estimated 198 tonnes of carbon dioxide equivalent.

## L'École Mer et Montagne

Campbell River, B.C.

#### **CLIENT**

Conseil Scolaire Francophone de la Colombie-Britannique

#### **ARCHITECT**

McFarland Marceau Architects Ltd.

#### STRUCTURAL ENGINEER

Equilibrium Consulting Inc.

#### **MECHANICAL ENGINEER**

Bycar Engineering

#### CONTRACTOR

Newhaven Construction

#### **NUMBER OF STOREYS**

1 storey + mezzanine

#### GROSS FLOOR AREA

1,500m<sup>2</sup>



# CASE STUDY: L'École Mer et Montagne









#### **Awards**

- 2012 Woodworks BC Award Small Institutional
- 2012 VIREB Commercial Building Awards - Merit
- 2012 Canadian Wood Council -Green Building Award
- 2011 Wood Design Award Citation

#### References

McFarland Marceau Architects (2014). Vancouver, B.C.. Accessed Feb 2017. URL: <a href="http://www.mmal.ca/campbell/description.html">http://www.mmal.ca/campbell/description.html</a>

McFarland, L. (2013). Presentation at WoodWorks! Alberta Winter Wood Design Seminar, March 19-20, 2013.