

## Tamarack Ecohouse

Portland, Oregon

### PROJECT NAME

Tamarack Ecohouse

### LOCATION

2323 SE Tamarack Avenue, Portland , OR

### BUILDING TYPE

Remodeled (original home built in 1924)

### USE

Single family, detached

### DESIGNER/ARCHITECT

Candace Gossen

### BUILDER

Candace Gossen

### LOCATION & CLIMATE

Site Description: Neighborhood residential

Climate: Pacific Marine

### RATING

• N/A

### AWARDS

• N/A

### DESIGN FEATURES

- Water harvesting system
- 6,000 sq.ft. lot with native plants
- Solar electric and hot water
- Passive solar
- Strawbale accessory structure
- Carbon free house

### Homepage

• [www.solar783.com](http://www.solar783.com)



This building is a remodeled home in the historic neighborhood of Ladd's addition and was cited into the 1982 Ladd's Addition Historical Society. The area is known to have the oldest and biggest trees in Portland. With an 89% walkability score, the home is close to grocery stores, restaurants, entertainment and parks. Located one mile from downtown, surrounded by bicycle lanes, it is suitable for a car free lifestyle.

The owner wanted to remodel the home with a focus on a "carbon free home" with energy efficiency and conservation measures within the envelope, along with the use of alternative energy. She discovered the history of the house when she found three different layers of linoleum on top of hardwood floors. To update the entire home, the attic was turned into a loft providing an extra bedroom, the basement was remodeled to make an extra living space, more egress was added, and the kitchen was updated to code requirements. The home contains a basement, a ground floor, a loft, a straw bale studio, as well as an edible garden decorated with LED lights in 500 wine bottles stuck in a fly ash stucco wall.



## BUILDING DETAILS

Floor Area Heated: 2,974 sq. ft.

Number of Stories: 2 plus loft and studio

New or Remodeled: Remodeled

## INTERIOR ENVIRONMENT

Overview: Indoor air quality in the main house is maintained by the use of hydronic heating in the loft and studio spaces. A thermostat controlled ventilator in the loft ensures air circulation. A 9' wide array of windows allows passive solar gain and ample light in the house.

Strategies: Interior materials include renewable and recycled woods, doors and windows. The porch is made from recycled cedar. Kitchen elements are from IKEA and the stairs have carpet made from pop bottles. Non-VOC paint was used. Other materials include bamboo and concrete flooring, copper railings and strawbale infill walls.

## ENERGY

Overview: The building makes use of a heat pump, a solar water heater, as well as a 1.5 kW photovoltaic electric system. Walls, floor and ceiling joists were insulated with blown-in cellulose. All appliances are energy efficient and the home features a solar hot tub as well as a biodiesel furnace.

## SITE

Overview and Land Use: The site is an urban site in a dense area. The property contains fruit trees, a native berry garden, pines, wisterias and several rhododendrons. The vegetation is carefully placed to provide shading for the home in the summer months.

Site strategies: This building is part of a neighborhood that values community. The homeowner placed priority on maintaining an urban garden.

## WATER

Strategies

- Dual flush toilets
- Eco-roof
- Nine 60 gallon rainbarrels
- 3,026 sq.ft. of pervious surface provides irrigation

## WASTE

- Reclaimed and recycled lumber
- Recycled metal shingle roof for loft
- Portland Recycling & Composting

## PUBLICATIONS

- homepower.com