



# Eco-Solar Home Tour 2022

Saturday 25 June, Noon to 5 pm

## Fairholme Laneway Home

**Tour Day:** Saturday 25 June

**Hosts:** HSS Design Build

**Parking:** on street

**Energuide:** GJ/year



### Why people need to see your home

- Increasing housing density without using more land
- Spacious living space in a small footprint
- Showing Passive House principles
- Interesting wood fibre insulation

### What will people see and learn about at your home?

- Passive House design principles
- Large windows facing south and optimized for solar panels
- Wood fiber insulation in the building envelope
- Mechanical system

### What are the main things people will see at your home?

- Thickened building envelope with wood fiber insulation
- Building orientation and natural ventilation
- Energy efficient windows
- Concrete slab on grade with radiant in floor heating





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## Fairholme Laneway Home

### Why is this home on the tour?

This 600 Square Foot accessory dwelling unit (or laneway house) has been designed with Passive House principles in mind. There is a double car garage with a concrete slab on grade on the main level and the living space of the dwelling unit on the second level. We think this would be a great opportunity to educate the public on how it is possible to create a spacious living area on a relatively small footprint, with tailored design and southern exposure. Increasing density is key to address the housing shortage and it can be done in a sensitive and sustainable way.



### What features save on energy costs?

- The building is oriented south and strategically designed form and window orientation has been considered to optimise solar gain. This unit features exterior wrap insulation in form of wood fiber boards to reduce thermal bridging and increase airtightness whilst providing a breathable building envelope. Energy efficient windows.
- High efficiency gas on demand heater provides hot water as well as space heating via radiant in-floor heating in the slab on grade as well as on the upper floor. High efficiency HRV with additional in line electrical duct heater for the upstairs living space. The design layout also harnesses the use of natural ventilation with operable energy efficient windows.
- This structure is built solar ready. The orientation of the building and angle of the main roof face have been optimized for solar exposure. Due to a relatively small area available for solar PV, the plan is to install solar PV on the main residence of this property first and then install solar PV on this unit later.
- All lighting is to be LED lighting, condensing dryer

### What features save on water costs?

- High efficiency toilets, fixtures, appliances
- rain barrels

### Other special features

- There will be a uniquely designed planting box attached to the exterior as well as space for the planter box in the garden adjacent to the building and more planters in the garden
- Electrical rough-in for a future EV charger.

