



Eco-Solar Home Tour 2024

Saturday 1 June, Noon to 5 pm

Queen Alexandra NZR Home

Tour Day: Sat Jun 1
Address:
Hosts: Homeowners
Parking: on street
Energuide: 55 GJ/yr



Why people need to see your home

- Great example of a deep energy retrofit
- An older home upgraded to high efficiency
- Panelized wall retrofit system

What will people see and learn about at your home?

- Panelized retrofit of a 1950's home
- Wall and roof upgrade details
- Exterior retrofit features like heat pumps
- Front yard pet bunnies that act as our lawn mowers
- Fruit orchard under development

Are there main things that they can't see?

- The new walls were built off site
- The insulation of the basement
- Interior equipment





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Why people need to see your home

Inspired by a Netherlands green building technique called EnergieSprong, the retrofit used digital capture technology to develop an exact 3D model of the exterior of the 1,120-square-foot home. The used the 3D model to size the prebuilt, airtight panels for a perfect fit. The panels were manufactured off-site and then installed on the outside of the house, resting on an insulated panel support box designed to take the weight of the panels. After securing the panels to the support box at the bottom and the eaves at the top, crews framed a new roof right over the old one, making the house airtight, super-insulated



and so efficient it can get all of its annual power needs from renewables. The building is an example of a 1950s house built high out of the ground so that the basement would be more useful, a less common feature at the time. The home is now net-zero-ready. In the future, the owners plan to add solar to the house and garage, making the home emissions-free with enough capacity for an electric vehicle.

What features save on energy costs?

- Panelized wall retrofit of a 1950's house
- Wall insulation now R40
- Basement insulation now R33
- Roof insulation now R100
- New windows with R6.7
- Air source heat pumps (disconnected the gas)
- Heat Recovery Ventilators
- Air source heat pump hot water tank

What features save on water costs?

- Rain barrel in front yard
- Air source heat pump hot water tank

Other special features

- Fruit orchard in development
- Front yard bunnies that act as our lawnmowers

