

# Property Information

35B KOTARE STREET  
WAIKANAE

## General Specifications

### UPGRADES - SINCE LATE 2021

---

- FIBRE | Connected to the house in December 2021. New cabling for fibre to the TV and audio cabinet (access is in the study). WiFi access points to boost the signal across the house and garden can be found in the wardrobe of bedroom 3.
- EV CHARGER | An EVNEX 7kW charger was installed in March 2022
- KITCHEN | New induction hob, new range hood, new double drawer dishwasher installed in July 2023. New cabinets above the sink bench and new tiling around the bench
- LIGHTING\_| New LED recessed down lights and art lights installed throughout the house in June 2023
- CARPET | New carpet and underlay in all the bedrooms installed in July 2023
- CURTAINS | New bedroom curtains were installed in July 2023
- SMOKE DETECTORS | New Cavius smoke detectors installed in 2023 (10 year battery life).

### FOUNDATION

---

- The foundation and floor slab is laid on 200mm of polystyrene (Ribraft floor design).
- The outside of the foundation is insulated 250mm below ground level all around with 70mm of polystyrene.
- The floor slab is 125mm thick to act as a heat sink for the hydronic (water) underfloor heating.

### FLOOR

---

- The total floor area is 180 sq m including a single garage. The garage floor is not heated.
- The northwest facing front of the house where the solar tubes are situated/face 15 degrees off true north to the west. We did this to gain more afternoon sun in winter.
- Concrete floors throughout are tiled except for bedrooms and garage.
- Bedrooms are carpeted and garage floor smooth finish concrete. To aid heat transfer to and from the concrete floor, slab tiles are laid with cement based mortar not tiles adhesive.

## WINDOWS

---

- Aluminium joinery is 'All Seasons suite' by Nulook.
- All windows are double glazed with 15mm gap argon filled and low e glass.
- All aluminium joinery in windows and doors are thermally broken to stop transfer of cold through the frames.
- Floor to ceiling windows in all north and west facing walls aid passive solar heating of the tiled floors.

## WHEELCHAIR

---

- All doors provide for wheelchair access and have no greater than 20mm step to outside. Light switches, electricity plugs, and door handles are fitted at wheelchair friendly heights.

## SOLAR UNDER FLOOR HEATING

---

- Two heat sink concrete walls 1.4m wide x 2.4m high with charcoal plaster coating are built just inside the floor to ceiling windows in the front of the house to soak up low angle winter sun and transfer heat into the floor slab.
- There are 72 evacuated solar tubes (supplied and installed by Azzuro) mounted on the roof at 50 degrees facing north-west.
- Azzuro advises that these tubes supply 7.2kw/h on a sunny winter's day.
- Back-up heat source on a cloudy day is a heat pump and a (Attack FD 32) solid fuel (wood burning) water heater boiler installed in the garage.
- Heat to the floor slab is supplied through 670 m of under floor heating pipe laid 30mm below the concrete floor surface generally at 17 to 20cm centres. Hot water is pumped through the under floor heating system at 40 to 45 degrees and recycles the water throughout the entire floor area about 10 times per hour. This enables the inside temperature of the house to be maintained between 17 and 24 degrees all year round.
- Surplus summer heated hot water is dumped underground through two circuits of heating pipes located 50cm beneath the drive at the east end of the house. There is 250m of heat dump piping. The first heat dump circuit heats the 10 sq m woodshed floor slab to dry boiler fuel for next year.
- If additional heat is required in the winter, the water to be circulated in the floor can be heated in the boiler. This uses about 2 cords of firewood per year. The woodshed holds more than 2 years supply of fire wood. Alternatively the heat pump in the living room can be used to lift the temperature especially in the morning

Note: There are 3 thermostats connected to the underfloor heating system one each in the sitting room area, master bedroom, and ensuite. The main control thermostat is the one in the master bedroom. The other two have been bypassed as we found there was no advantage in having different heat settings throughout the house. Turning the main thermostat down or off will stop the underfloor heat pumps

## DOMESTIC HOT WATER HEATING.

---

- Heat from solar tubes on the roof is stored in a 500 ltr buffer tank which supplies both domestic hot water and heat for the under floor heating system.
- The system has an electric heating element installed in the buffer tank – the top half of the tank. We seldom turn the electric element on preferring to use the wood burner for additional heating

## EXTERNAL WALLS

---

- All external walls are 215 mm thick consisting of 140mm timber framed wall filed with fiberglass batts, a 20mm cavity, and then 50mm of external polystyrene plastered with 'Rockcote' system and Resene X-200 Weathertight membrane.
- The wall between the garage and the rest of the house is built as an external wall and insulated with fiberglass batts.
- To reduce heat loss the outside of the floor slab/ foundation is insulated with 70mm of polystyrene to 30cm below the top of the slab.

## INSULATION IN EXTERNAL WALLS

---

- R2.6 ULTRA wall` (900mm x 580mm batts) combined with `R1 Masonary batt` (400mm x 580mm batts) total R3.6. The same in the wall between the garage and rest of the house.

## INSULATION IN ROOF

---

- For 600 structural spacings: 2 x `R2.6 ULTRA wall` (2x 90mm x 580mm batts)
- For 900 structural spacings 1 x `R5 ULTRA ceiling` (200mm x 432mm batts) plus in both scenarios one layer of `R1 x Masonary batts (40mm x 580mm) to the underside of all batts.
- Total R6.2 for 600 spacings and R6 for 900 spacings.
- Exception Garage roof; one layer of `R2.6 ULTRA wall. The garage door is insulated inside with 50mm thick fibreglass blanket and is fitted with double weather seals.

## VENTILATION

---

- High speed extractor fans in the bathroom, ensuite and kitchen remove damp air

## WEATHERTIGHT MEMBRANE

---

- The house was recoated with Resene X-200 weathertight membrane in December 2024.
- Colour is Quarter Friars Greystone Cool Colour formulation.
- The masonry walls have the same coating system.

## RAINWATER RETENTION.

---

- Rain water is collected from the house. Two 10,000 litre concrete tanks are situated underground by the common drive, below the house. A pump supplies this water to toilets and garden taps.
- Use of town supply water is for all other uses within the house

## HEATING SYSTEM OPERATION AND SERVICING

---

- Our experience with the heating system is that it works very well at a comfortable temperature range with minimal management.
- Our electricity bills for the past winter (2025) are May \$155.25; June \$192.07; July 188.96, and August \$213.60. This includes the cost of charging the EV and supplying all electricity to the building site at 35F next door.
- The heating system was serviced by SolarWorks of Paraparaumu (Greg Winter, who did the original installation) in 2023 and again this year (2025). The system control panel was replaced in 2025 by Scott Murphy of Control Box Ltd based in Petone.

## SECTION AND SHARED DRIVEWAY

---

- The shared driveway from Kotare Street services 7 properties and is covered by the title of 35F (new section and house next door).
- All properties have equal rights of access.
- Maintenance costs of the drive are shared equally with all neighbours (now 7 properties) including any new seal - but there has been no requirement for this over the last 4 years.
- Some damage caused by construction of 35F will be rectified at 35F's expense.
- Street lights were replaced with LEDs 2021 and are paid for by the owners of 35D.
- The driveway was widened with a passing bay as a condition of the subdivision consent for 35F and mirrors installed on the corners halfway up the drive.
- With the recent subdivision and creation of the new house at 35F, 35B has right of way access on the top part of the driveway going past 35F.
- A sensor is being installed at the base of the entry post that will activate lights on 35F driveway to enable safe driving at night.

## WATER STOPCOCKS - PHONE, BROADBAND - FIBRE & POWER

---

- The town supply water toby is situated at the side of the drive 5m south of the power connection box.
- Tank water supply to the garden has a stopcock beneath a round aluminium tread plate cover in the pathway from house to water storage tanks. To turn off the tank supply to toilets only, use the stopcock in the concrete path beneath garden tap on south – west corner of the house.
- Fibre connection is close to the power connection box.

## OTHER MATTERS

---

- 1) Small wall access doors inside next to the back door cover the heat dump circuit which is part of the solar heating system.

A blue piece of hose pipe fixed to the front west corner of the woodshed is attached to a round metal container 7cm high x 4cm dia with a small screw down cap. This is the 'air bleed point' for the heat dump circuit in the wood shed floor. In summer months surplus heat from the solar system is dumped underground (50cm below the drive concrete) between the house and the woodshed after it passes through the woodshed floor to dry boiler fuel for next winter.

- 2) Round aluminium tread plate in path uphill from underground water tanks below the house site.

This covers the stop cock to turn off garden water supply from the tanks. Note: this does not turn off toilet flushing water.

- 3) Green plastic cover plate in concrete path at hose tap, south west corner of the house.

Stopcock to turn off tank water to toilet cisterns. Does not turn off garden taps water supply.

- 4) Lawn area from house to north/south boundary.

There is an easement in favour of the KCDC for local storm water and sewer mains which travel down the path in front of house to manholes before going down to the common drive. Both 35F and 27A have similar easements for the same pipelines.

The notes about the original construction and heating system were compiled by Tony Ward the previous owner in October 2021. Tony designed the house and the components of the solar heating system. Tony (and Lorna) lived at 35D Kotare Street (across the driveway) for around 20 years before building this house.

The notes on recent upgrades have been prepared by Geoff Dangerfield and Claire Douglas, current owners of 35B (and 35F)

Sharalyn Fraser  
*Agency*

sfagency.nz