

DeepRetr0fit Assessment and interventions on a typical 1970's weatherboard home



Home Owner:

V Huang

Solutions

DeepRetr0fit Consultation

SupaWall External Wall Insulation

Replacement LED lighting

New Hot Water Cylinder

Replacement Double Glazing

Draught Stopping Measures

Date

June 2022

"We bought our first home, a typical 1970's property in West Auckland, knowing work would be needed to modernise and improve its energy efficiency.

"We got the team at Enstall to provide us with a DeepRetr0fit® assessment. Through their friendly consultative process we now have a clear plan to renovate and upgrade our home's performance."
- V Huang



OVERVIEW

After purchasing their first home in West Auckland, these homeowners were well aware that their home was old, cold, and leaking energy. Some of the issues were immediately obvious (large gaps around the old aluminium framing and old light fittings), but others required some further delving.

An unexpected discovery for the homeowners was the lack of wall insulation. The age of the house meant SupaWall™ blow-in external wall insulation was an easy and obvious solution.

The assessment also identified that the home's ceiling and underfloor insulation could be improved. The insulation was installed to meet Government standards for existing homes (such as for rental properties or EECA's Warmer Kiwi Homes programme), but would fall short of meeting the 2021 update of the New Zealand Building Code.

Typical 70's Home

- Ceiling & Underfloor insulation to rental requirements
- No wall Insulation
- Old light fittings
- Old aluminium joinery, with single glaze windows
- Draughty windows & doors

From Enstall

"This home is a fantastic example of how New Zealand can improve our existing housing stock to meet or even exceed the NZ Building Code. It is fantastic that energy efficiency requirements for new construction is improving, but this shows that with some simple interventions we can greatly improve existing homes as well!"

- Nick Hall

Owner's comment

"Without Enstall's DeepRetr0fit consultation and action plan, we would have been completely lost as to where to start.

"Since having wall insulation installed, we can already feel huge improvements!"

- V Huang

The DeepRetr0fit® Report

To begin the process, Enstall conducted a DeepRetr0fit™ assessment of the property. The DeepRetr0fit™ process consists of an hour and a half assessment looking at three key areas;

- *Thermal Envelope*
- *Heating & Ventilation*
- *Energy Efficiency*

The resulting report provided an Action Plan to help the customer achieve their goals.

The Action! (so far)

Light Fittings

- ✓ The owner has had the recessed light fittings replaced with energy saving LED fittings
- ✓ New fittings are rated IC, meaning they can be covered with insulation - less gaps!
- ✓ Owner progressively replacing other inefficient bulbs throughout the house with LED bulbs

Linings-on Wall Insulation:

- ✓ The SupaWall blow-in insulation system provides a convenient, keyhole solution
- ✓ Insulation installation was completed in a day, with the remedial work completed immediately
- ✓ Less waste and cost when compared to removing the plasterboard linings
- ✓ High performance R2.8 solution which meets or exceeds the recent Building Code insulation update

Ceiling:

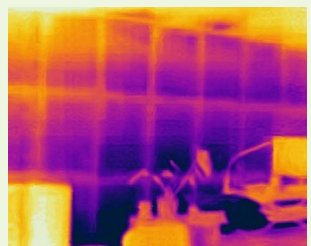
- ✓ Insulation installed around and over the new recessed LED light fittings
- ✓ Internal dropdown ceiling walls insulated

Next Steps

- ✓ Double glazing
- ✓ Draught stopping interventions
- ✓ Insulation improvements to ceiling & underfloor
- ✓ Whole of house heating & ventilation



Before: Gaps in insulation around lights (dark colour = heat loss)



Before: No wall insulation (dark colour = heat loss)