

Insulation in older Lockwood Homes

Insulation plays a major role in the comfort of your home — helping keep it warm in winter and cooler in summer. Many New Zealand homes, particularly those built before 1979 when ceiling insulation became compulsory, have little or no insulation.

Older Lockwood homes have the benefit of solid timber construction, which provides better natural thermal performance than many uninsulated conventional homes. However, unless your home was built after 2013, retrofitting insulation where possible is recommended.

Insulation performance is measured in “R-values” — the higher the R-value, the better the thermal resistance. New homes are required to meet minimum R-values across floors, walls and ceilings, with double glazing also contributing to overall performance. When retrofitting, it’s important to consider balanced insulation throughout the home rather than upgrading one area in isolation.

Ceiling insulation is the most important upgrade. As warm air rises, improving ceiling insulation is the most effective way to reduce heat loss and lower heating costs. Many older Lockwood homes with high, sarked ceilings have limited roof space, meaning additional building work may be required to meet current standards. Coordinating insulation upgrades with a re-roof is typically the most cost-effective approach.

Lockwood homes have always been built to meet the Building Code requirements at the time of construction. The table below outlines the ceiling insulation installed, depending on the age of your home.

Ceiling Insulation Table for older Lockwood Homes

Year	Under purlin size	Dummy rafter size	Roof purlin size	R value achieved
Up to 1979	10mm	n.a	45mm	R 0.3 – Sarking only
1980 - 1982	45mm	n.a	45mm	R1.5 – 50mm Glass wool blanket
1983 - 2001	70mm	n.a	45mm	R2.5 – 100mm Glass wool blanket
2002 - 2008	n.a	90mm	45mm	R2.93 – 110mm glass wool blanket
2009 -----	n.a	140mm	45mm	R3.5

Lockwood Group Ltd

📍 7 Russell Road, Rotorua

✉ Private Bag 3034, Rotorua 3046

☎ 0508 562 596 | +64 7 347 7691

www.lockwood.co.nz

Retrofitting Ceiling Insulation in Older Lockwood Homes

Most Lockwood homes built before the 1980s were constructed with little or no ceiling insulation. If you're planning to upgrade, the most cost-effective time to do this is when you are replacing the roof. Upgrading insulation during a re-roof allows you to create enough space for higher R-value insulation and improve moisture control. It also allows to to upgrade older roofing components at the same time, avoiding reopening the roof later.

What's Required

To install high-performance insulation, structural upgrades are usually needed to create adequate depth and ventilation space.

You will likely need to replace or install:

- Rafters and purlins
- Roofing battens
- Fascia and barge boards
- Roofing underlay (self-supporting building paper)
- Roof cladding, flashings and spouting
- A 25mm ventilation gap must be maintained between the insulation and the roofing to comply with Clause H1 of the New Zealand Building Code.

Installing an intelligent air barrier at the time of re-roofing is also recommended. This helps manage moisture, reduce condensation risk, and improve overall thermal performance.

Recommended Insulation

- 190mm thick glass wool insulation
- Minimum R5.0 rating
- Installed with correct clearance and ventilation

Important Considerations

- This work is classed as Restricted Building Work and must be carried out by licensed building professionals.
- Because roof fixings and structural elements are being altered, a building consent may be required. Check with your builder and local authority.
- Poor installation can lead to moisture issues, so correct detailing is critical.

Lockwood can provide technical support and detailing directly to your builder or roofing contractor if required.

Lockwood Group Ltd

 7 Russell Road, Rotorua

 Private Bag 3034, Rotorua 3046

 0508 562 596 | +64 7 347 7691

www.lockwood.co.nz

Underfloor Insulation

The second most important place to install insulation is under the floor. Uninsulated timber floors can be a major source of heat loss. If the space under the floor is large enough to access, it is easy and cost-effective to retrofit under-floor insulation. Bulk fibre (such as Pink Bats) or polystyrene insulation can be installed between the joists.

Many old houses had previously been insulated with aluminium foil. Although it had no R value, it would trap the air and reflect back escaping radiant heat. Retrofitting or repairing foil insulation in houses is now banned in New Zealand due to safety concerns. If you have foil insulation with rips or holes, it should be replaced with bulk fibre or polystyrene.

It also pays to install a layer of polythene ground sheet under the house to reduce moisture entry and help the insulation work better.

Requirements under the Residential Tenancies Act

The Healthy Homes Guarantee Act has recently been passed into New Zealand law to ensure that every rental home in New Zealand meets minimum standards of heating and insulation. If you are renting out a Lockwood home you will need to state the R Values of the walls, floor and ceiling in any tenancy agreements. Lockwood homes have always been built to meet building code at the time of construction and the age of the home will determine what insulation was installed in the ceiling and underfloor. If you are unsure, your local council should have this information. The table below gives insulation values of the walls in Lockwood home based on its age.

Year	Wall Construction	R value achieved
Up to 1999	62mm solid timber	0.64
1999 to 2013	97mm with foam insulation	1.36
From 2013	107mm with foam insulation	2.1

By July 2019, the Residential Tenancies Act also requires all rental properties to have ceiling and underfloor insulation installed. However, exemptions to the law apply if installing ceiling and/or underfloor insulation is not 'reasonably practicable'. If major building work is required, such as replacing the roof to add ceiling insulation, the home will likely be exempt.

If you're unsure if your home qualifies for an exemption, or requires an assessment by a professional, visit www.tenancy.govt.nz/maintenance-and-inspections/insulation/compulsory-insulation/

Further information

For more information on the importance of insulation and the different types of insulation available visit Energy efficiency and Conservation Authority (EECA) – www.eeca.govt.nz
 Energy Wise News on Line – www.energywise.co.nz

Lockwood Group Ltd

 7 Russell Road, Rotorua

 Private Bag 3034, Rotorua 3046

 0508 562 596 | +64 7 347 7691

www.lockwood.co.nz