



COMPREHENSIVE PROPERTY REPORTS

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RESIDENTIAL PROPERTY REPORT

1234 Main St. Paraparaumu Wellington 5032

Buyer Name

09/08/2021 9:00AM



Inspector

Travis Mackay

A handwritten signature in black ink, appearing to read 'Travis Mackay'.

Trade Qualified Building Inspector.
Structural Engineer. Master Carpenter.
Level 3 Certified Thermographer. Property
Investor. Renovation Specialist. Mediation
Resolution Expert. 25+ Years Industry
Experience.

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Agent

Agent Name

555-555-5555

agent@spectora.com

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1: PROPERTY DETAILS & SUMMARY

Information

PROPERTY & CLIENT INFORMATION

PROPERTY & CLIENT INFORMATION

ADDRESS:

CLIENT:

DATE:

PROPERTY DETAILS

YEAR OF CONSTRUCTION:

1970

LEVELS:

Single

CLADDING SYSTEMS:

Hardies Type Board

ROOF COVERINGS:

Corrugated Iron

FOUNDATION SYSTEM:

Concrete Ring and Pile

WEATHER CONDITIONS:

Raining,Cold

FOR OBSERVATIONS/DEFECTS ONLY VIEW

THIS BAR IS LOCATED AT THE TOP OF YOUR REPORT
UNDER THE MAIN PHOTO

DIGITAL Summary (LEFT BUTTON) PDF Summary (RIGHT BUTTON)

Full Report

Summary

Immediate Attention

PDF

GLOSSARY**HOW TO READ OUR OBSERVATION RATINGS****GOOD CONDITION****Qualifying reasons for a GREEN Rating:**

The room/area/item was in a good condition overall. It is as expected for the age and style of the property. No moisture detected at the time of inspection.

GENERALLY GOOD CONDITION**Qualifying reasons for a BLUE Rating:**

The room/area/item was in a generally good overall condition. The observation shows wear and tear that we consider to be what is expected from a property of this age and construction era, However there may be some minor maintenance issues that require attention. The observation may require a person of a competent skill level and general handyman knowledge to improve it to a good condition. The observation may have a low to moderate estimated repair and/or replacement cost. Low level moisture readings within the NZ Standards were detected at the time of inspection. This is not uncommon in dwellings of this age and construction era. If multiple low moisture levels are found in a close proximity to each other, it can be an early warning that the area has a developing issue.

AVERAGE CONDITION**Qualifying reasons for an ORANGE Rating:**

The overall room/area/item is deemed below the standard that is expected for the age and style of this property. The observation is in a semi-functional condition and requires skilled handyman or trade level work to improve it to a good functional level. On-going maintenance may be required. There may be a moderate repair and/or replacement cost. **MOISTURE DETECTED (HIGH LEVELS) 17.0 - 30.0** Moderate to High level moisture readings were found in one or more areas at the time of inspection. Readings at this level are often an early warning sign that warrants further investigation to find the cause and prevent more damaging effects. The external cladding, joinery, flashing and/or general weather seal in this area may need attention.

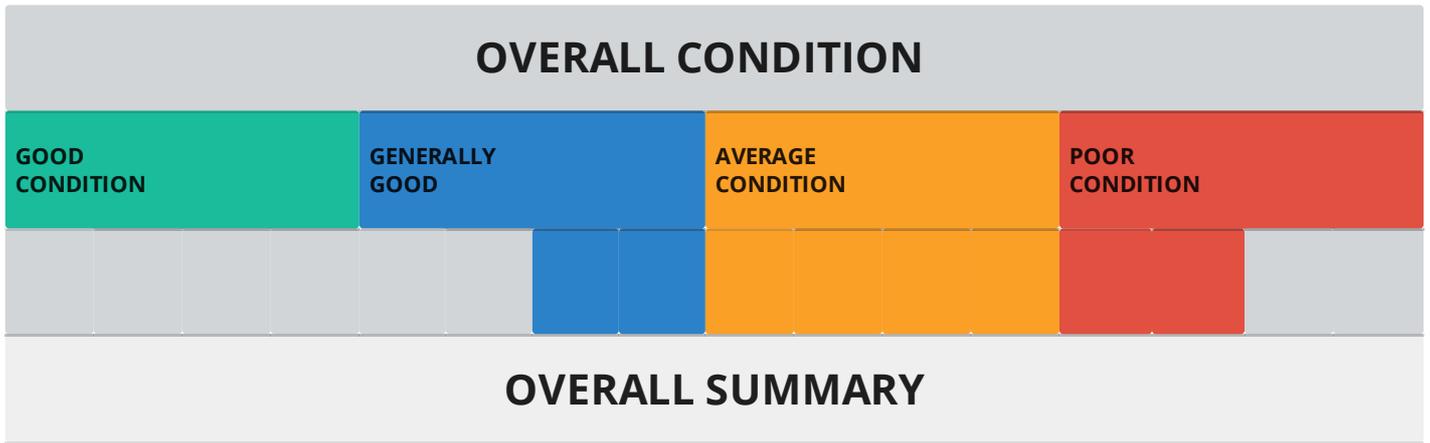
POOR CONDITION**Qualifying reasons for a RED Rating:**

The overall room/area/item is deemed well below the standard that is expected for the age and style of this property. The observation may require consulting a specialist in a particular area of construction to assess, quote, repair and/or replace. The trade level requirements plus, the high estimated cost to repair defines it as a red indicator item. The observation may also be a direct safety issue and/or the observation may have the potential to become a safety issue in the future. **MOISTURE DETECTED (VERY HIGH LEVELS) 30.0 - 100.0** Very high level moisture readings were found in one or more areas at the time of inspection. Readings at this level are a definitive sign that strongly warrants further investigation to find the cause and possibly prevent any more damaging effect. We may recommend having an invasive inspection done sooner rather than later. By either CPRNZ or another independent inspector. There could be a sizable cost involved to complete the work needed to correct this issue.

We understand that not every home buyer or seller speaks "house"

We want to give our customers a better understanding of the inner workings beneath the surface of each property. You will find detailed drawings in each section that show, where and what the items and areas are that we've inspected and/or written about.

OVERALL SUMMARY



OVERALL SUMMARY

The building overall is in a below average condition relative to its age, location and era of construction. This particular property has not been well maintained. The property is due a lot of moderate maintenance work in all areas. Multiple areas will require trade contractors.

With all buildings and cladding types, the key to protecting your property investment is keeping up a strict maintenance schedule. By scheduling ahead of time, any weather sealing and painting requirements, you can save a considerable amount of extra costs over time and guarantee the longevity of your investment.

2: 1/3

Information

SECTION 1/3 DOCUMENTATION

SECTION 1/3 DOCUMENTATION

NOTE: There are 3 main sections to this report:

- **1/3:** Overall Summary & Documentation, plus information about the type of building systems at the property.
- **2/3:** Observations that were identified during the inspection.
- **3/3:** General information, Recommended contractors & Maintenance tips

THE BLANK PAGES BETWEEN SECTIONS ARE FOR YOU TOO WRITE ANY QUESTIONS YOU MAY HAVE ON THE DIFFERENT COMPONENTS WITHIN THIS REPORT

3: CLADDING

		IN	NI	NP	O
3.1	CLADDING SYSTEM/S	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

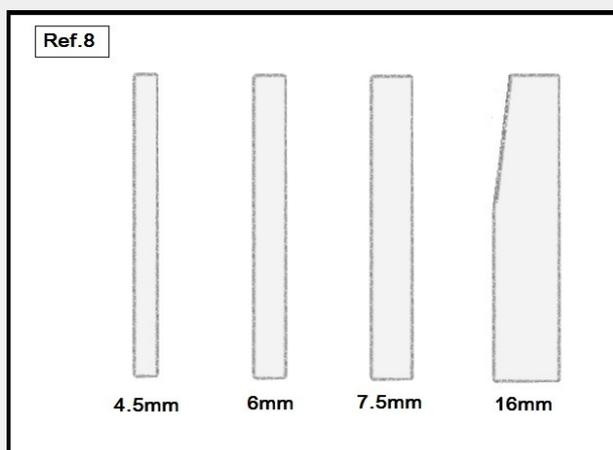
CLADDING SYSTEM/S: JAMES HARDIE CLADDING

JAMES HARDIE CLADDING

In March 1987 James Hardie ceased all asbestos manufacturing activities. As concern grew about the serious adverse health effects of asbestos, in the mid-1980s James Hardie developed an asbestos-free fibre cement technology, without the dangers associated with asbestos. As far a durability goes this cladding performs well with even with little maintenance as moisture penetration is less of an issue than say timber if left exposed to the elements. The main issue is brittleness especially with older houses. As far as repairs go, it can be challenging to patch and generally needs a new sheet or weatherboard. A lot of investors own/buy houses with type of cladding, as they are often in higher yielding areas and find them perfectly satisfactory.

Fibro Sheeting

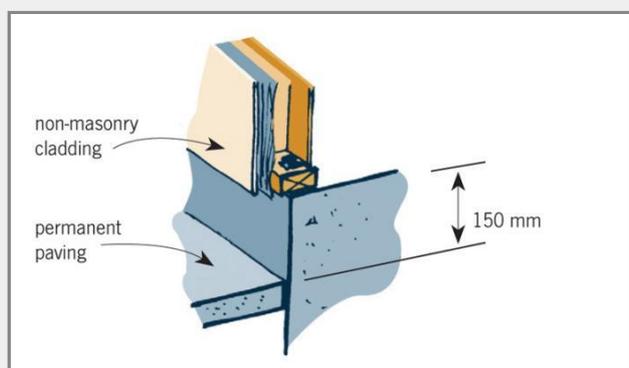
Sizes



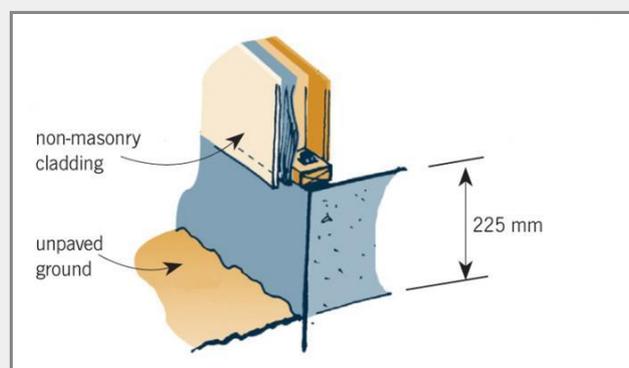
- 4.5mm is used to line the eaves.
- 6mm is used for patios ceilings.
- 7.5mm is used to line exterior walls.
- 16mm weatherboard cladding.

Fibro is short for fibrous, Fibro sheets were made from cement with asbestos fibrous making the sheets ridged and stronger, throughout New Zealand it was a very popular product, used for roof claddings , wall claddings, sheeting eaves, garden sheds this was due to its durability. James Hardie & Co. manufactured and sold the product till the mid-1980s, before the product asbestos was removed. The product without asbestos is still very popular and used today.

AREAS SHOWING CORRECT GROUND CLEARANCE



Non-masonry cladding with permanent paving



Non-masonry cladding with unpaved ground



4: JOINERY

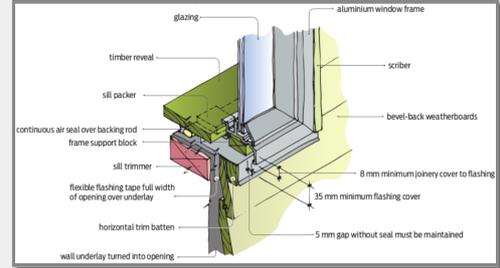
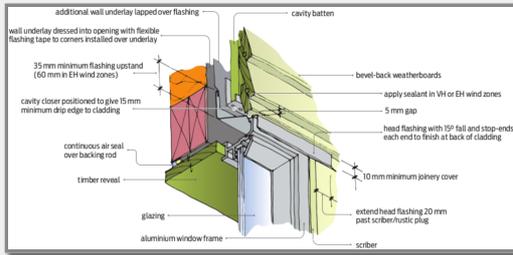
		IN	NI	NP	O
4.1	JOINERY	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

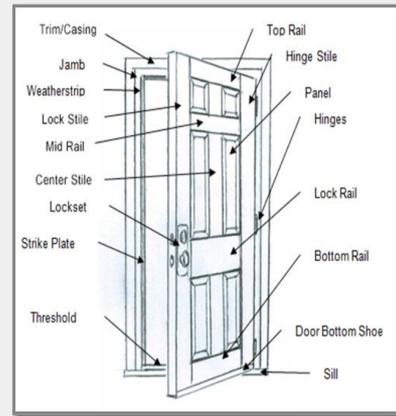
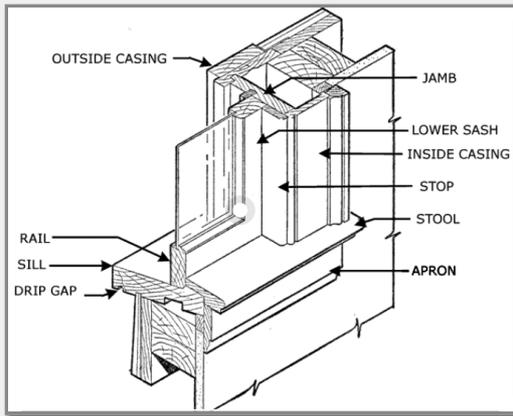
JOINERY : WEATHERBOARD | JOINERY & FLASHINGS

ALUMINIUM AND/OR TIMBER JOINERY IN WEATHERBOARD CLADDING



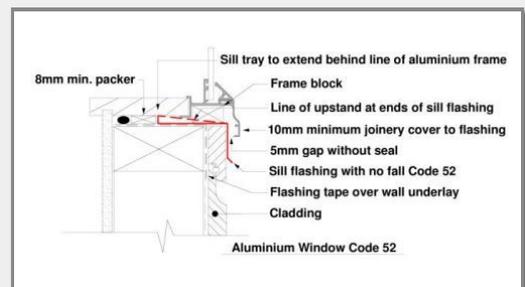
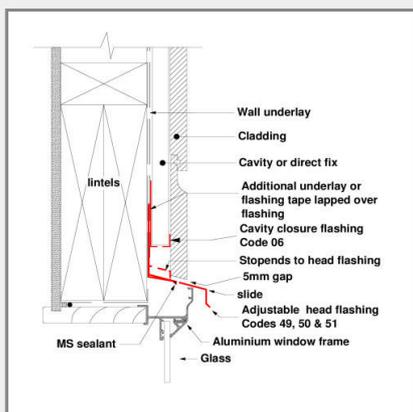
Doors and windows need regular cleaning and maintenance to keep them weatherproof and in good working order. If they're not maintained, problems can occur such as sticking, rot or corrosion. Some maintenance tasks are common to all windows and doors. Others depend on the material the window is made from.

TIMBER JOINERY DETAIL & DESCRIPTIONS

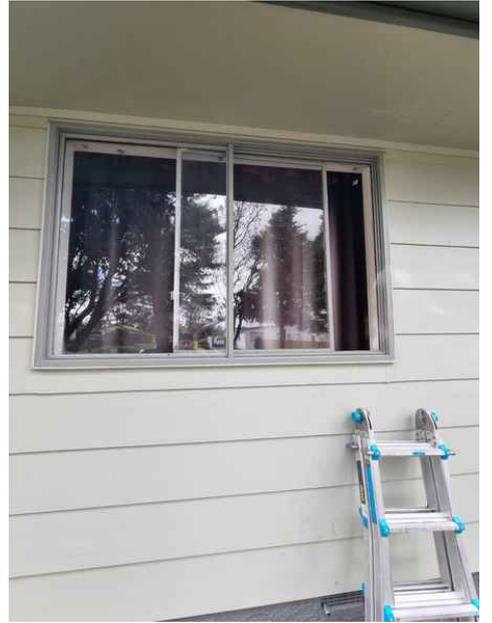


Cleaning and general maintenance. Frequent washing will extend the life of your windows and doors. Follow the manufacturer's instructions for cleaning if you have them. Regular cleaning also gives you chance to inspect the windows. Signs that you need to increase the frequency of cleaning are chalking surface, condensation, mould growth, corroded fixings and blocked drain outlets.

HEAD & SILL FLASHING DETAIL



Flashings are a thin continuous piece of material that is installed to prevent water from getting into a structure from an angle or joint. It is key to preventing water intrusion. Flashings are arranged in a manner that directs water down and away from the structure.





5: DECKING

		IN	NI	NP	O
5.1	DECKING ELEMENTS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

6: ROOFING

		IN	NI	NP	O
6.1	ROOF COVERINGS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

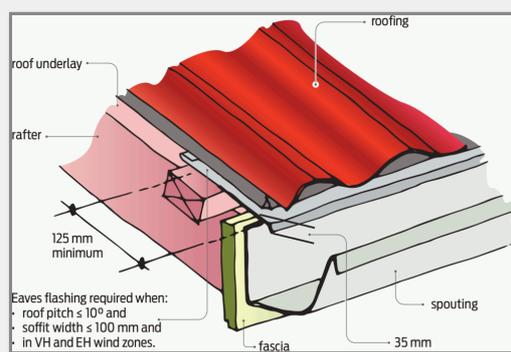
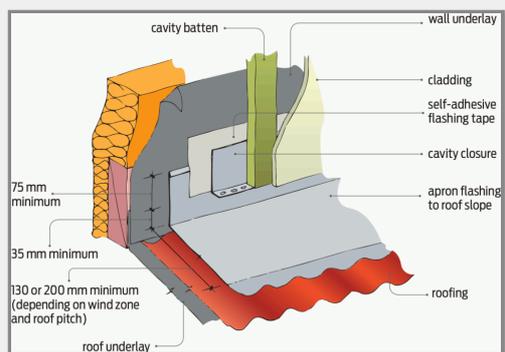
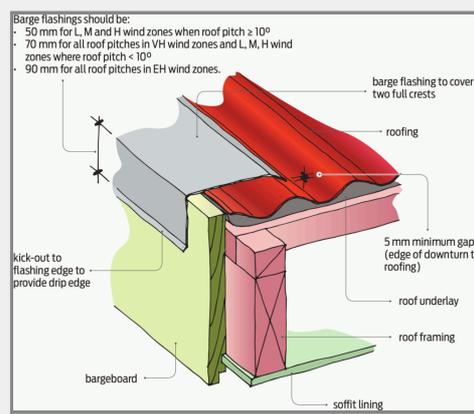
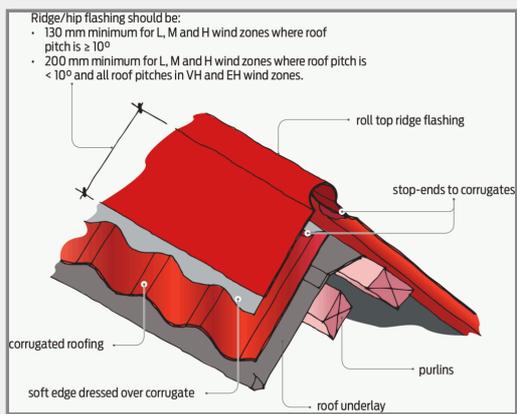
Information

ROOF COVERINGS : CONVENTIONAL METAL ROOF COVERINGS

CONVENTIONAL "METAL" ROOF COVERINGS

Metal roofing comes in long run and short run vertical panels, pressed metal tile detail or shingles resembling slate, tile and shake – and lasts about 60 years. Metal excels at sloughing off heavy snow and rain, won't burn and resists high winds. It is lightweight and can be installed over existing roofs. However, metal can be noisy during rainstorms, and may dent from hail. Average cost can range between suppliers, depending on type and style of metal, Corrosion also varies by material.

ALWAYS MONITOR THE CONDITION OF YOUR ROOF FLASHINGS



Flashings play a vital role in keeping water out of buildings. The type of roof flashings depends on what part of the roof is being flashed and what the roofing material is. Flashings are designed to stop water entering the building and should be designed to deflect water away. **Images provided are examples only**

UTILITIES PENETRATIONS

We recommend inspecting any roofing penetrations every six months or more. Moisture ingress around roofing penetrations can go unnoticed for some time, by the time you realize there is a problem the damage has already been done and the cost to repair has already gone through the roof. (Pun intended)

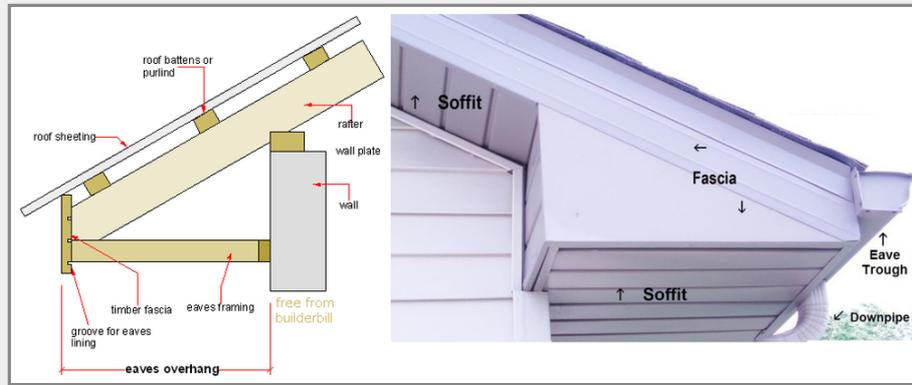
BOOT & CHIMNEY FLASHINGS

A boot flashing is a proprietary EPDM flashing designed to weatherproof cylindrical penetrations protruding from a roof or wall. The top is trimmed to form a tight weatherproof collar around the penetration, and the base is formed with a series of concentric rings to the underside and a malleable stiffener of aluminum which is dressed to conform to the shape of the roofing profile. It is generally top-fixed to the roof surface with screws or rivets, and sealant.



ROOF COVERINGS : SOFFITS | FASCIAS | EAVES

SOFFITS | FASCIAS | EAVES TERMINOLOGY



Different Types of Eaves: These are several different sorts of eaves. A closed eave doesn't have much of an overhang, while an open eave stands proud well beyond the roof. Craftsman, an style of architecture often used on bungalows within the early 20th century, featured long open eaves. A good overhang design allows more winter sun to come in than summer sun— giving you more solar heat during the cooler months and more shading in hotter months. This can save energy and utility costs.

ROOF COVERINGS : ROOF DRAINAGE**ROOF DRAINAGE**

The roof's purpose is to protect the structure, the people, and the things below. This means keeping your home sheltered from weather elements like wind, sun, and rain. Your roof's drainage system is an integral part of keeping your home protected since it controls the flow of water to prevent it from causing damage.



7: STRUCTURE

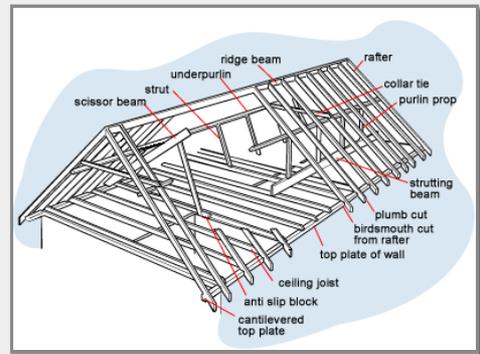
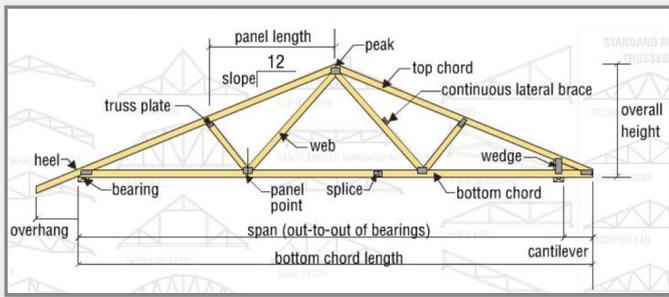
		IN	NI	NP	O
7.1	ROOFING STRUCTURE	X			X
7.2	FOUNDATION STRUCTURE	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

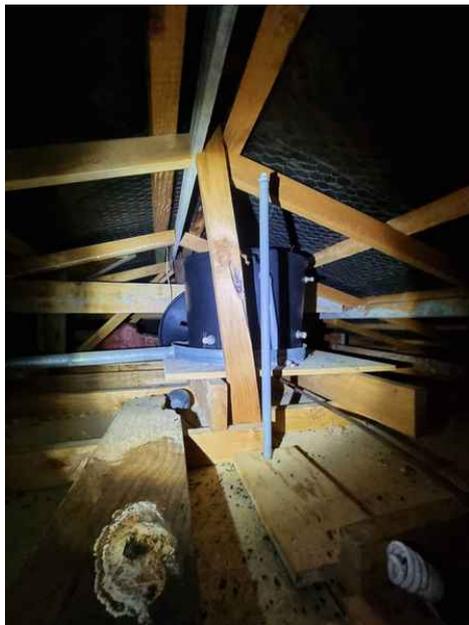
Information

ROOFING STRUCTURE: STRUCTURE

EXAMPLES OF ROOFING STRUCTURES

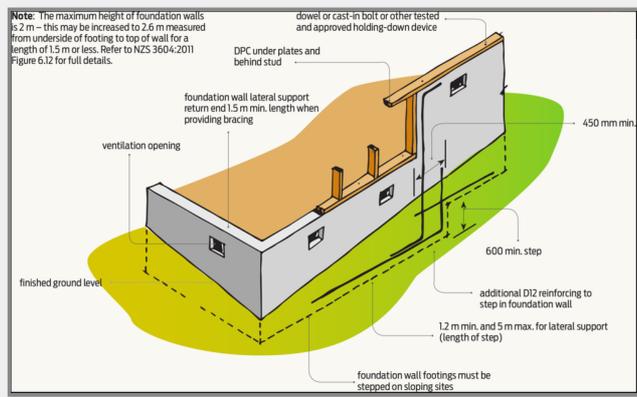


See **ROOFING INFORMATION** section for more information on roofing structures.



FOUNDATION STRUCTURE : RING FOUNDATION

EXAMPLE OF A RING FOUNDATION

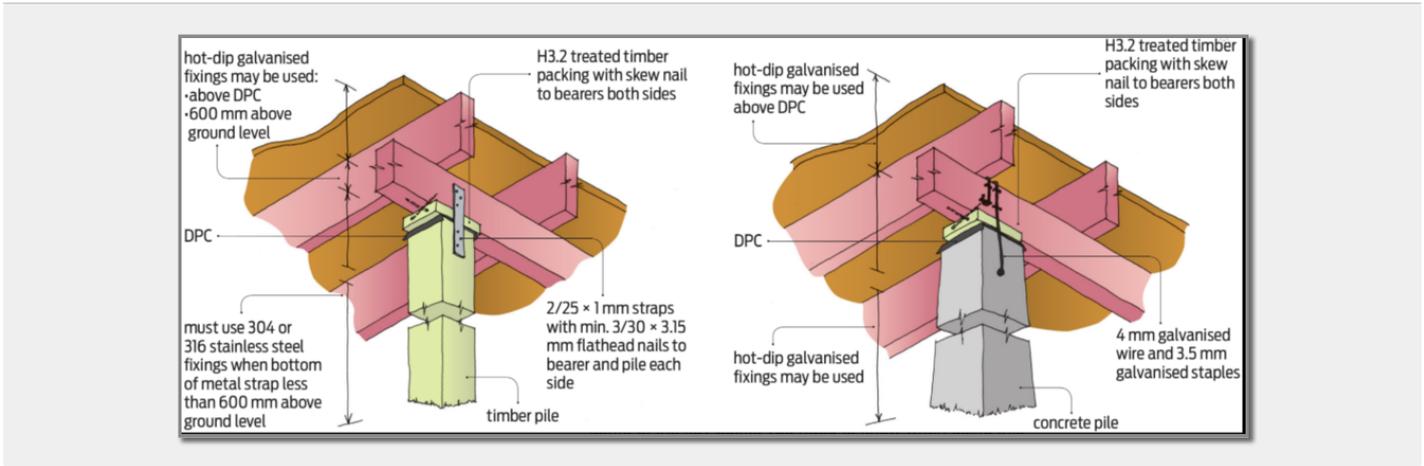


THIS SYSTEM MAY NOT APPLY. EXAMPLE ONLY



FOUNDATION STRUCTURE : PILES & SUBFLOOR

PILES AND STRUCTURAL CONNECTION POINTS



THIS SYSTEM MAY NOT APPLY EXAMPLE ONLY



8: GROUNDS

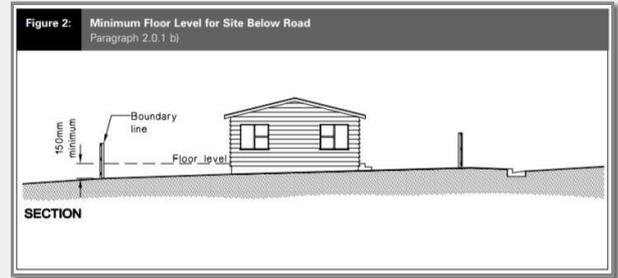
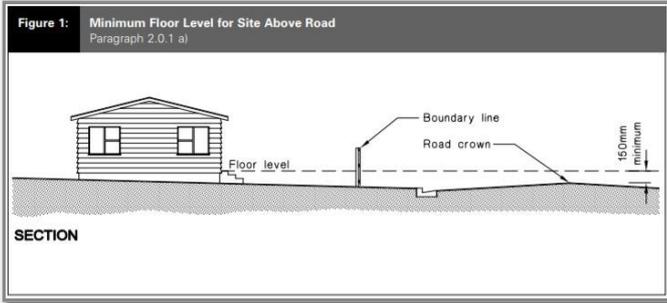
		IN	NI	NP	O
8.1	DRIVEWAY & YARD	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

DRIVEWAY & YARD: DRIVEWAY/PAVING & YARD/SITE GRADIENTS

SITE GRADIENTS & GROUND DRAINAGE



Having the floor level wrong can lead to on-going moisture problems. It could also bring serious Building Code compliance problems and potential drainage problems due to insufficient heights of flooring above ground and/or lack of fall to the drains. The Building Code states that houses must be built so that a 50-year flood will not enter the building. Acceptable Solution E2/AS1 says that, on near-level sites, the floor level must be no less than 150 mm above the crown of the road or the lowest point of the boundary. For steep sites, specific design and consent as an Alternative Solution is required. E2/AS1 gives minimum heights of finished floor levels above ground for concrete slab floors and suspended timber floors, the measurements depending on whether there is grass or paving outside. NZS 3604 sets a minimum height above ground for wood-based products used for flooring. E2/AS1 also gives a minimum threshold height of 100 mm at an opening onto a waterproof deck.





9: UTILITIES & INSULATION

		IN	NI	NP	O
9.1	UNDERFLOOR UTILITIES & INSULATION	X			X
9.2	CEILING CAVITY UTILITIES & INSULATION	X			
9.3	EXTERIOR UTILITIES & SWITCHBOARD	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

UNDERFLOOR | UTILITIES & INSULATION : ELECTRICAL | PLUMBING | UNDERFLOOR GROUND DRAINAGE

ELECTRICAL

Wiring: Any homes containing the old wiring should be rewired with TPS (Tough Plastic Sheath) as soon as possible and have their fuses replaced with circuit breakers and residual current devices.

PLUMBING

Plumbing: Every effort was made but It is not possible for our inspectors to 100% definitively say there was no polybutylene pipe at the property. For example if the original shower lining is still intact, chances are there will be Dux Quest in the wall cavity behind it. Also there may be polybutylene pipes hidden beneath insulation in the attic or underfloor area.

UNDERFLOOR DRAINAGE SYSTEMS

The underfloor area was inspected for: Correct ground gradients, Areas of standing water, Areas for water to potentially pool and/or How rain water could enter the underfloor area, What erosion paths it may be making and is there sufficient drainage outlets for it to exit the areas.



CEILING CAVITY | UTILITIES & INSULATION : ELECTRICAL | PLUMBING | UTILITY ROOF PENETRATIONS**ELECTRICAL**

WIRING: All live wires sighted were TPS and showed no major defect. The property appears to have been rewired to a good standard.

Any homes containing the old wiring should be rewired with TPS (Tough Plastic Sheath) as soon as possible and have their fuses replaced with circuit breakers and residual current devices.

PLUMBING

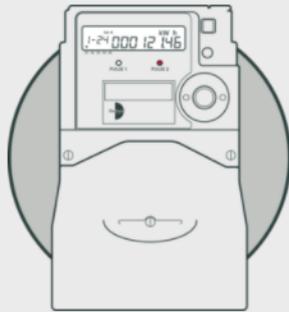
PLUMBING: Every effort was made but It is not possible for our inspectors to 100% definitively say there was no polybutylene pipe at the property. For example if the original shower lining is still intact, chances are there will be Dux Quest in the wall cavity behind it. Also there may be polybutylene pipes hidden beneath insulation in the attic or underfloor area. We have provided you information to be able to identify polybutylene pipe yourself, if you happen across it during any renovations of the property.

UTILITY ROOF PENETRATIONS

ROOF PENETRATIONS: All accessible roofing penetrations were inspected from within the ceiling cavity, plus all penetration flashings, boots and/or general weather sealing around penetrations was inspected from the exterior.

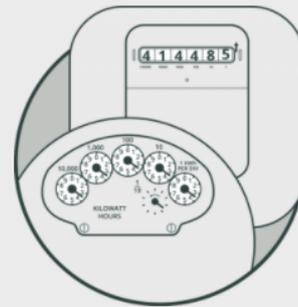
EXTERIOR | UTILITIES & SWITCHBOARD: METER | CIRCUIT BREAKERS | FUSES

WIRING & FUSES

**SMART METERS**

Most of our customers now have smart meters. They record the amount of electricity you're using at half hourly intervals.

Smart meters are fitted with a wireless communication device and if the meter can communicate, i.e. there's mobile phone coverage, that information is sent each night. No need for anyone to visit your property, be at home or disturb your pets.

**ANALOGUE METERS**

This type requires a meter reader to visit your property and physically record the amount of electricity you've used since the last time it was read.

Energy retailers will often 'estimate' your consumption, i.e. the units used, every second month to reduce meter reading costs.

Analogue meters can't record how much electricity you've used at different pricing times. This means you won't be able to take advantage of our peak, shoulder and off-peak pricing. Instead, you'll pay the same amount throughout the day regardless of when your electricity is used.

YOUR METER INFORMATION

When we visually inspect your power meter, we look for any potential problems with your property's electrical facilities. We don't complete a full electrical inspection of the electrical systems, but we'll let you know if we see a problem and if repairs are needed. Inspections may identify damage or exposure of electrical service wires, meter base, meter socket, or electric service grounds. We might also find electrical service tampering.

*Any homes containing the old wiring should be rewired with TPS (Tough Plastic Sheath) as soon as possible and have their fuses replaced with circuit breakers and residual current devices.



EXTERIOR | UTILITIES & SWITCHBOARD: PLUMBING**MAINS WATER PLUMBING**

Property owners are responsible for the remainder of the water system to their residence and inside the building. The best defense against a water emergency is knowing where the main water shut off valve is located inside your structure and ensuring that it is functional. A toby is the water shut-off valve, generally located at the boundary of your property, that sits between the council water main and your private water pipe. The toby allows the water to your house to be shut off - handy if you're having some plumbing work done or if your hot water cylinder springs a leak. Simply lift the cover and turn the handle of the toby until the water is turned off. A toby may also be known as a stopcock or isolated valve. The toby is usually under a black or blue plastic cover or under a metal cover

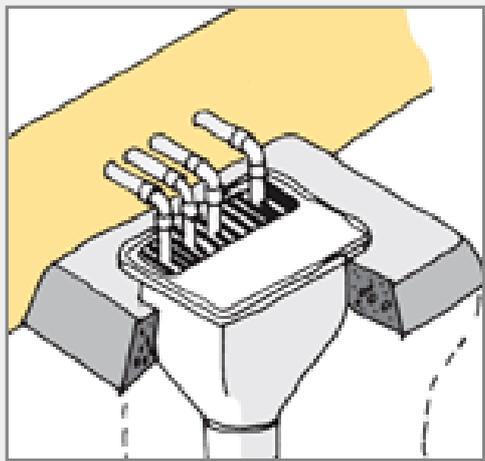
TYPES OF FIXINGS

Wastewater fixtures are all sanitary fixtures or appliances that receive wastewater and are not soil fixtures. Wastewater fixtures include hand basins, showers, baths, sinks and tubs. Soil fixtures collect solid and liquid excreted human waste and include toilets, urinals, slop sinks and so on. Soil fixtures must discharge directly into a drain or to a discharge stack.

GULLY TRAPS & GREY WATER PLUMBING

Gully traps receive discharge from wastewater fixtures. One gully trap may receive discharge pipes from several outlets. Each residential building must have at least one gully trap. If a drainage system becomes blocked, the gully trap provides the point where sewage can overflow outside the building, instead of building up inside the pipe and overflowing inside the building.

Gully traps must: have an overflow rim at least 150 mm below the overflow level of the lowest fixture served by the system, be located within the legal boundary of the land on which the building stands, prevent surface water from entering the trap, be constructed so the grate will lift to allow surcharge, have at least one discharge pipe feeding into it to maintain the water seal.

GREY WATER PLUMBING**GULLY TRAPS**



EXTERIOR | UTILITIES & SWITCHBOARD: ELECTRICAL

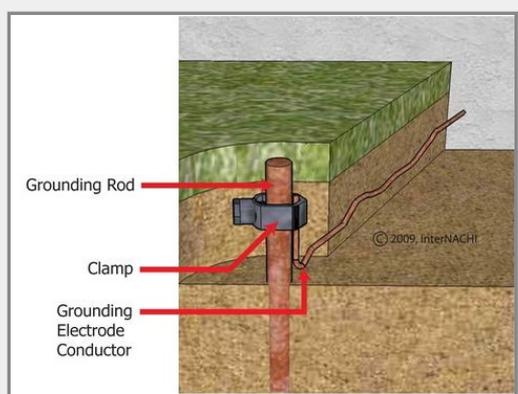
MAINS POWER ENTRY | OTHER ELECTRICAL ITEMS

Many home owners do not realise they are responsible for power lines and poles which supply electricity to their property. Inside private property boundaries, owners are legally responsible for the safety and maintenance of their electrical installation.

GROUNDING ROD/SPIKE

Electrical grounding systems divert potentially dangerous electrical currents by providing a path between a building's service box and the earth. Lightning and static electricity are the most common sources of dangerous or damaging charges that can be dissipated through a grounding system. Grounding electrodes are connected to the building's electrical system through grounding electrode conductors, also known as ground wires.

EXAMPLE ONLY



EARTH SPIKE





EXTERIOR | UTILITIES & SWITCHBOARD: VENTS

EXTRACTION VENTS

NZ Healthy Homes Standards require extractor and exhaust fans to be vented to the outside of the building with an vent cap. If not installed and/or installed incorrectly, the excessive moisture will cause condensation and moisture damage on ceilings and walls. This can cause mould and moisture damage inside the walls and/or ceiling cavity.



10: HOT WATER SYSTEM

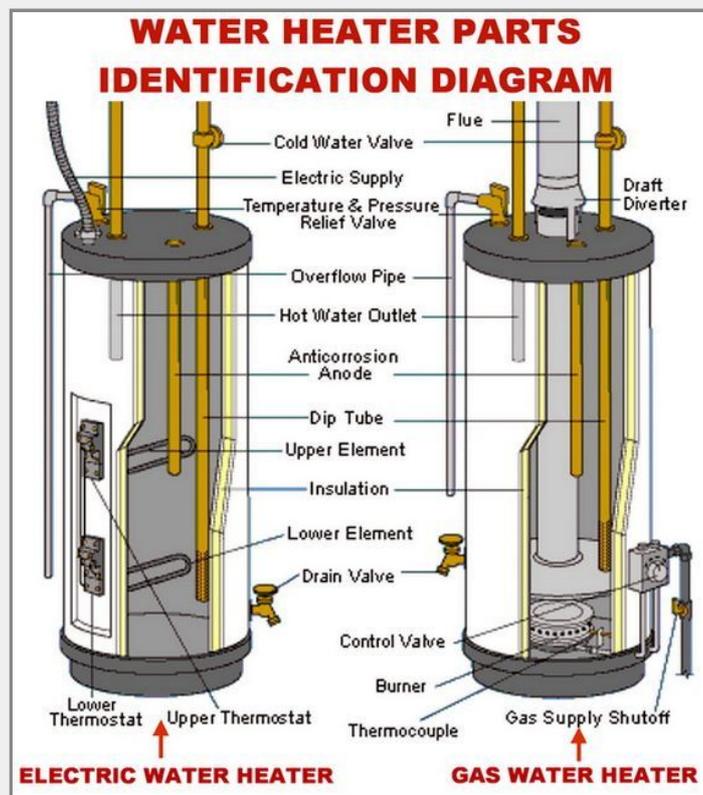
		IN	NI	NP	O
10.1	HOT WATER CYLINDER	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

HOT WATER CYLINDER: CYLINDER DOCUMENTATION

HOT WATER CYLINDER



Hot water cylinders are widely used in this country, especially in residential areas. The system is usually comprised of water pipes connected to a broiler. Heated water travels out from the tank to the kitchen tap, bathroom shower, or any other parts of the house that require water use. Then, as the hot water exits, the tank draws in cold water and heats it again. The cycle repeats every time you use up water.

Life expectancy of modern copper or stainless steel cylinders is 20–40 years, but mains pressure glass-lined steel is shorter at 12–20 years.

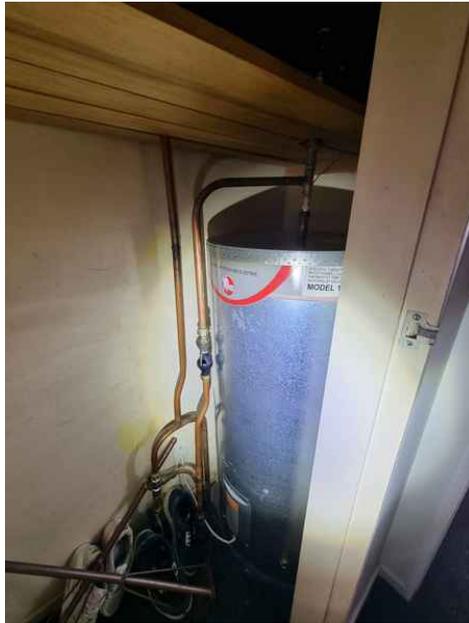
General cost range to replace a hot water cylinder:

Rinnai Smart Cylinder 180L Mains Pressure. \$2,222.00

Rinnai Smart Cylinder 135L Mains Pressure. \$1,919.00

180L Rinnai Duplex Stainless Steel 2kW MP Hot Water Cylinder Rinnai \$1,399.00

Hot water cylinder maintenance is most likely the last thing you think of when you list your usual home maintenance tasks. If you want to ensure your cylinder's optimum condition, be sure to schedule regular check-ups and maintenance. [HOT WATER SPECIALISTS](#)



11: HEATING SYSTEMS

		IN	NI	NP	O
11.1	HEATING SYSTEMS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

HEATING SYSTEMS: HEAT PUMP**GENERAL HEAT PUMP INFORMATION**

Heat pumps are the most efficient way of using electricity to heat your home, says the ECCA. This is because they transfer heat from outside air and in this way produce three to four times more warmth (300-400 per cent efficiency).

This means for every 5kW of heating you pay for around 1.5kW of electric energy. Heat-pump heating is roughly one quarter the cost of electric heating and about one third the cost of gas heating.

In a decent-sized lounge, with insulation and good curtains, heating a winter temperature eight to 21 degrees with an oil column heater might run up \$4.30 per day in electricity costs (\$30c/kwh) for a total cost per winter month of \$129.

A heat pump like the Daikin FTXM50 with 4.5 energy stars and COP [coefficient of performance, or ratio of heat out vs electricity in] of 4.55 would produce the same amount of heat for under a dollar a day (95c in fact), so a saving of roughly \$100 a month



HEATING SYSTEMS: FUEL BURNING FIRE

These photos represent areas that were inspected for defects.
Any issues with these areas will be located in the observation section.



12: INTERIOR INSPECTION

		IN	NI	NP	O
12.1	HALLWAY COMMON AREAS BEDROOMS	X			X
12.2	KITCHEN LAUNDRY BATHROOM AREAS	X			X

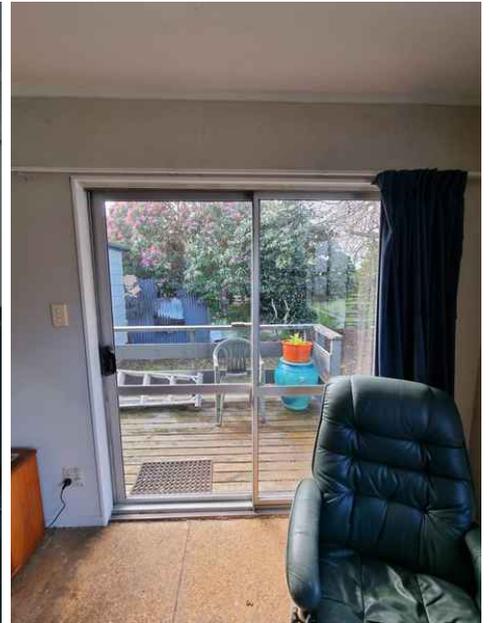
IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

HALLWAY | COMMON AREAS | BEDROOMS: COMMON AREAS**COMMON AREAS****Inspected items:**

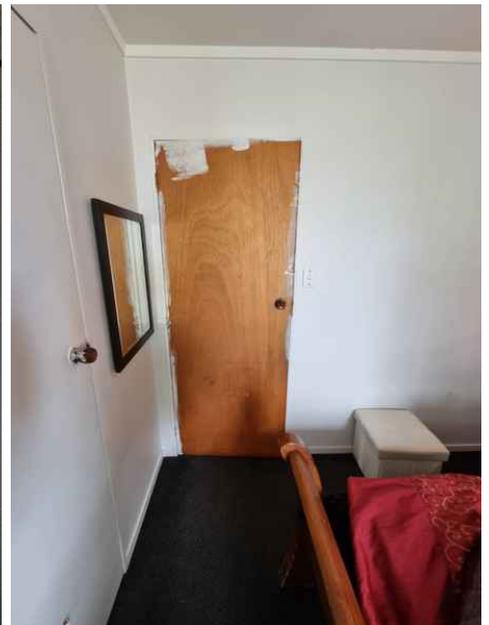
- Overall condition of Ceilings, Floor coverings, Wall linings.
- Above areas were also inspected for moisture ingress and/or moisture damage.
- Internal doors, Overall condition, Operation of units and hardware.
- Windows and/or Doors to the exterior, Overall condition, Operation of units and hardware.
- Operation and Overall condition of Switches, Switch sockets, RCD's. Earth at wall unit and Phantom power at wall unit when the units switch is in the off position.
- Lighting function and Room illumination.





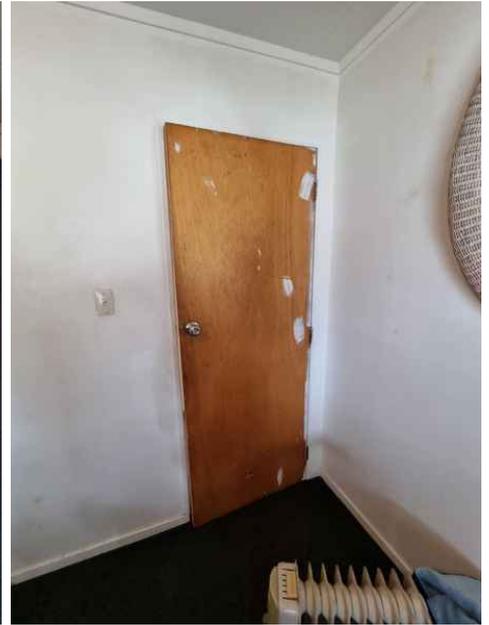
HALLWAY | COMMON AREAS | BEDROOMS: BEDROOM 1**BEDROOM 1****Inspected items:**

- Overall condition of Ceilings, Floor coverings, Wall linings.
- Above areas were also inspected for moisture ingress and/or moisture damage.
- Internal doors, Overall condition, Operation of units and hardware.
- Windows and/or Doors to the exterior, Overall condition, Operation of units and hardware.
- Operation and Overall condition of Switches, Switch sockets, RCD's. Earth at wall unit and Phantom power at wall unit when the units switch is in the off position.
- Lighting function and Room illumination.



HALLWAY | COMMON AREAS | BEDROOMS: BEDROOM 2**BEDROOM 2****Inspected items:**

- Overall condition of Ceilings, Floor coverings, Wall linings.
- Above areas were also inspected for moisture ingress and/or moisture damage.
- Internal doors, Overall condition, Operation of units and hardware.
- Windows and/or Doors to the exterior, Overall condition, Operation of units and hardware.
- Operation and Overall condition of Switches, Switch sockets, RCD's. Earth at wall unit and Phantom power at wall unit when the units switch is in the off position.
- Lighting function and Room illumination.



HALLWAY | COMMON AREAS | BEDROOMS: BEDROOM 3**BEDROOM 3****Inspected items:**

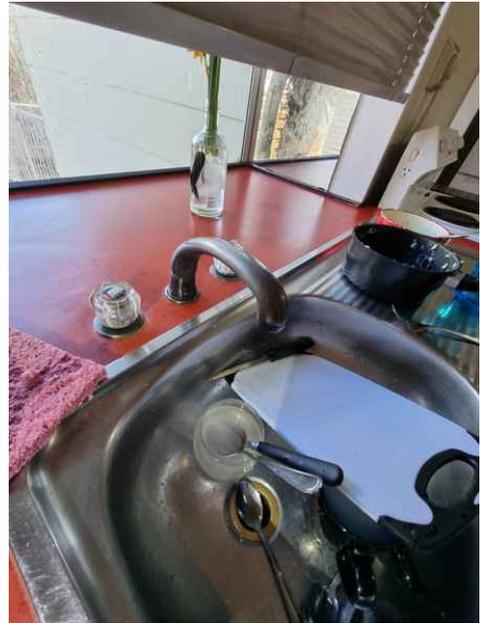
- Overall condition of Ceilings, Floor coverings, Wall linings.
- Above areas were also inspected for moisture ingress and/or moisture damage.
- Internal doors, Overall condition, Operation of units and hardware.
- Windows and/or Doors to the exterior, Overall condition, Operation of units and hardware.
- Operation and Overall condition of Switches, Switch sockets, RCD's. Earth at wall unit and Phantom power at wall unit when the units switch is in the off position.
- Lighting function and Room illumination.



KITCHEN | LAUNDRY | BATHROOM AREAS: KITCHEN**KITCHEN****Inspected items:**

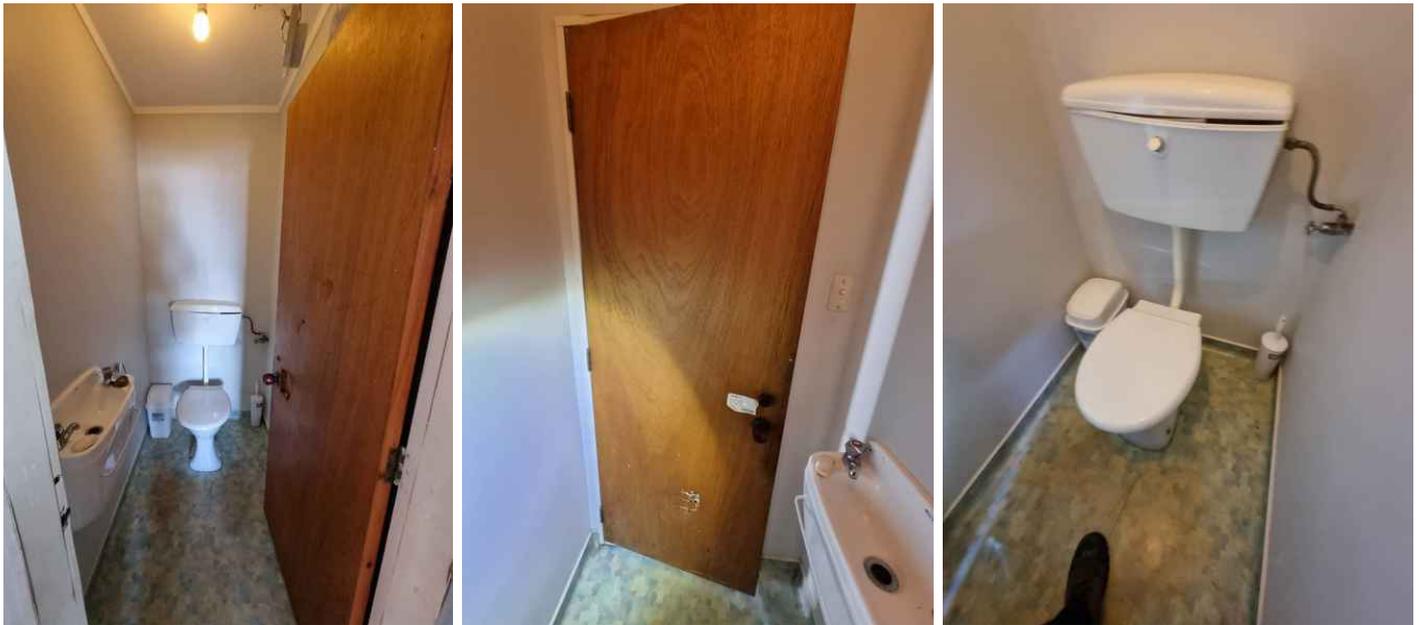
- Overall condition of Ceilings, Floor coverings, Wall linings.
- Above areas were also inspected for moisture ingress and/or moisture damage.
- Internal doors, Overall condition, Operation of units and hardware.
- Windows and/or Doors to the exterior, Overall condition, Operation of units and hardware.
- Overall condition of Cabinetry hardware and Benchtop. Operation of Cabinetry doors and/or drawers, Mounting of Sink/bench and/or Silicone seal walls and/or cabinetry.
- Operation and Overall condition of Switches, Switch sockets, RCD's. Earth at wall unit and Phantom power at wall unit when the units switch is in the off position.
- Lighting function and Room illumination.
- Operation and Overall condition of Oven, Stovetop & Rangehood.
- Rangehood operability and rate of extraction,.
- Operation and Overall condition of Faucets, Mixers, Shower heads,Taps. Etc
- Drainage rates, Visible restrictions, Common areas for Leaks, Installation quality and Pressure of Supply plumbing at supply unit.

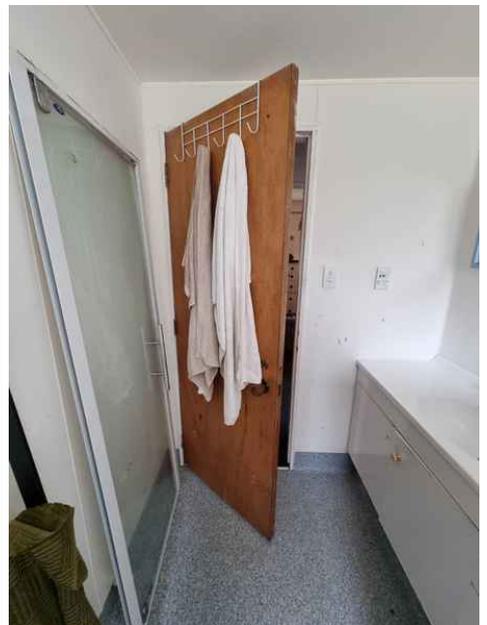




KITCHEN | LAUNDRY | BATHROOM AREAS: BATHROOM AREAS**BATHROOM AREAS****Inspected items:**

- Overall condition of Ceilings, Floor coverings, Wall linings.
- Above areas were also inspected for moisture ingress and/or moisture damage.
- Internal doors, Overall condition, Operation of units and hardware.
- Windows and/or Doors to the exterior, Overall condition, Operation of units and hardware.
- Overall condition of Cabinetry hardware and Vanity unit. Operation of Cabinetry doors and/or drawers, Mounting of Sink/vanity unit and/or Silicone seal walls and/or cabinetry.
- Operation and Overall condition of Switches, Switch sockets, RCD's. Earth at wall unit and Phantom power at wall unit when the units switch is in the off position.
- Lighting function and Room illumination.
- Bathroom room heating, Underfloor heating (Operation of control unit), Mounting of Heated towel rail.
- Bathroom extraction units and Rate of extraction.
- Operation and Overall condition of Extraction fans.
- Operation, Overall condition and Mounting of Faucets, Mixers, Shower heads, Taps.
- Operation, Overall condition and Mounting of Toilets, Baths, Showers, Shower liner adhesion to wall linings and Common areas for moisture damage around these units.
- Drainage rates, Visible restrictions, Common areas for Leaks, Installation quality and Pressure of Supply plumbing at supply unit.







KITCHEN | LAUNDRY | BATHROOM AREAS: LAUNDRY AREA**LAUNDRY AREA****Inspected items:**

- Overall condition of Ceilings, Floor coverings, Wall linings.
- Above areas were also inspected for moisture ingress and/or moisture damage.
- Internal doors, Overall condition, Operation of units and hardware.
- Windows and/or Doors to the exterior, Overall condition, Operation of units and hardware.
- Overall condition of Cabinetry hardware and Benchtop. Operation of Cabinetry doors and/or drawers, Mounting of Sink/bench and/or Silicone seal walls and/or cabinetry.
- Operation and Overall condition of Switches, Switch sockets, RCD's. Earth at wall unit and Phantom power at wall unit when the units switch is in the off position.
- Lighting function and Room illumination.
- Ventilation for clothes dryer.
- Operation and Overall condition of Faucets,Taps. Etc
- Drainage rates, Visible restrictions, Common areas for Leaks, Installation quality and Pressure of Supply plumbing at supply unit.



13: 2/3

Information

|: SECTION 2/3 OBSERVATIONS

SECTION 2/3 OBSERVATIONS

- **2/3: Observations that were identified during the inspection**

THE BLANK PAGES BETWEEN SECTIONS ARE FOR YOU TOO WRITE ANY QUESTIONS YOU MAY HAVE ON THE DIFFERENT COMPONENTS WITHIN THIS REPORT

14: OBSERVATIONS | INTERIOR

		IN	NI	NP	O
14.1	INTERIOR OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

14.1.1 INTERIOR OBSERVATIONS

 Trade Work Required

POOR FINISHING | POOR TRADE WORK

POOR FINISHING | POOR TRADE WORK



HALF DONE DIY WALL



HALF DONE DIY WALL





14.1.2 INTERIOR OBSERVATIONS

SETTLEMENT CRACKS

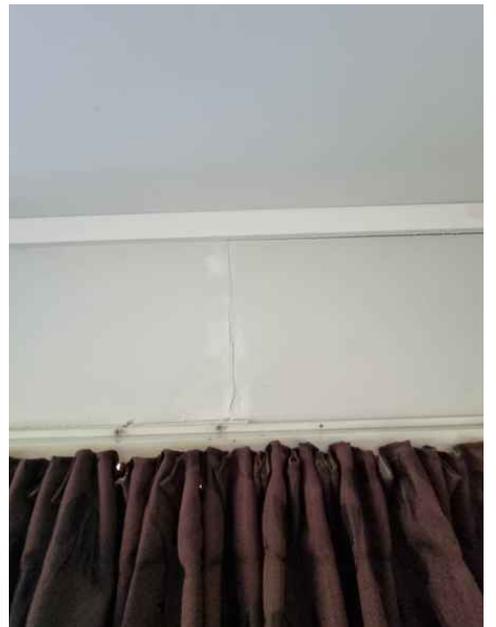
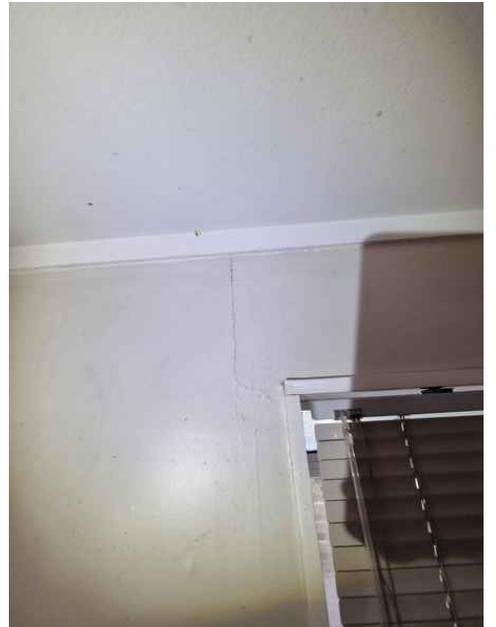
 Trade Work Required

WHAT IS A SETTLEMENT CRACK?

As a building settles in on its foundations - a process known as settlement - small cracks may develop in or immediately alongside the expansion joints. These cracks are small and narrow. They are perfectly normal in a newly-built structure and do not necessarily indicate anything structurally wrong with the home. Most homes are purpose-built with the expansion joints to ensure that these settlement cracks only occur inside or along the expansion joint.

- Settlement cracking in interior walls is also very common in older buildings due to the wall lining techniques used then. The new technique of wall lining is to finish the taper end Gib joints in the centre of joinery cut-outs not at either end. This has gone a long way to reducing the amount of interior wall lining cracks in each dwelling as it ages.
- Exterior cracks and or open joints in non-monolithic cladding systems are usually quite easily be addressed with a cosmetic touch up of the cracked and/or open area using a Builders bog and paintable filler type product and then sealed with a coat of weather sealant paint. However cracks in any monolithic cladding systems must be repaired by a qualified monolithic contractor.

NOTE: If the reader of this report has any questions regarding one of these observations and/or any others, please don't hesitate to ring or txt through your questions to the inspector Travis Mackay directly on:
027 548 5573





14.1.3 INTERIOR OBSERVATIONS

INSUFFICIENT NUMBER OF SMOKE ALARMS THROUGHOUT THE DWELLING

14.1.4 INTERIOR OBSERVATIONS

MOULD SIGHTED**MOULD SIGHTED**

Mould is common when moisture is present, and can be harmful to health.

Presence of mould

Where moisture levels have been high or there has been a leak, mould may initially be seen on painted and papered walls and ceilings, and on fabrics. Mould may also be found when structural elements are exposed during demolition and renovation work, inside walls, under the floor or behind linings.

Moulds are fungi and require moisture and a food source to grow. They reproduce by releasing vast numbers of tiny spores. There is no effective way of eliminating mould, but it can be controlled by controlling indoor moisture levels.

If inhaled in large quantities, some mould spores may cause health problems such as allergic reactions, breathing difficulties, eye irritation, skin rashes and, occasionally, more serious symptoms.

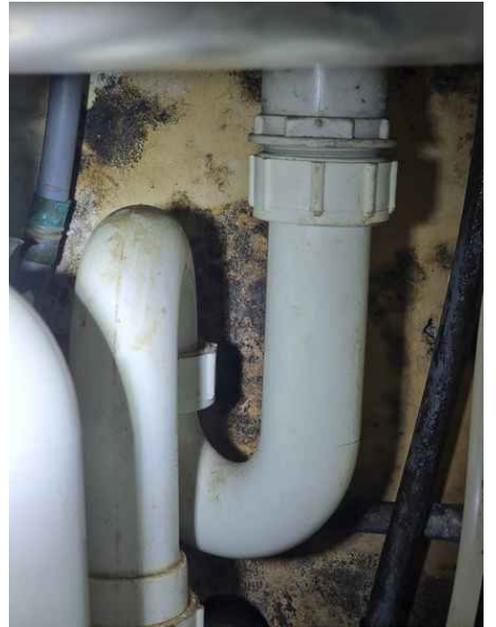
Appropriate precautions must be taken to ensure that building occupants and anyone working on the building are not exposed to health hazards from mould during renovation or repair work.

MOULD

Removal and clean-up for non-toxic moulds The moulds most commonly seen on surfaces around the house are generally not toxic. To remove them, wash the surface with warm water and household detergent, using a cloth or scrubbing brush depending on the surface. Rinse with clean water and allow the surface to dry thoroughly. If you wish you can then disinfect or sanitise the surface by repeated treatments with methylated spirits, but ensure the area is well ventilated. Mould may be removed from fabrics by washing. *Stachybotrys chartarum* Some types of moulds produce toxic compounds. *Stachybotrys chartarum* is a toxic mould that is associated with the leaking building problems that New Zealand has experienced in recent years. Leaks originating from outside the building and from wet areas in the building provide the environment suitable for *Stachybotrys* to grow. *Stachybotrys* is a greenish-black mould that grows on materials containing cellulose such as wood fibreboard, fibre-cement, the lining paper of gypsum board, kraft paper wall and roof underlays, wallpaper and timber when it is subject to repeated wetting. It is almost always within the wall cavity, not within the rooms. Finding *Stachybotrys* in a building does not immediately mean that the building occupants have been exposed to allergens or toxins. While it is growing, a wet slime covers the *Stachybotrys* spores, preventing them from becoming airborne. Exposure only occurs when the mould has died and dried up. Testing for *Stachybotrys* If *Stachybotrys* is suspected, investigate from outside if possible, by carefully removing a small portion of cladding (or lining, if access is easier from the inside) so a sample of the mould can be taken for testing. Wear a mask or breathing filter and disposable gloves and ensure that no skin is exposed.

Follow the procedure described below to take a sample:

- Take a strip of clear adhesive tape about 100 mm long, place it over the mould and press firmly.
- Remove the tape and place onto non-stick baking paper. Fold the paper around the tape and place in a plastic bag.
- Securely seal the bag.
- Send the sample to a testing laboratory such as Biodet Services Ltd (www.biodet.co.nz), Airlab Ltd (www.airlab.co.nz) or Plant Diagnostics (www.plantdiagnosticslimited.co.nz). Removal and clean-up procedures for toxic moulds If toxic mould is found in a building, a specialist contractor should be employed to carry out the removal



15: OBSERVATIONS | CLADDING

		IN	NI	NP	O
15.1	CLADDING OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

15.1.1 CLADDING OBSERVATIONS

OBSERVATION | HARDIES SHEET CLADDING & TIMBER BATTENS

 Trade Work Required

OBSERVATION | CLADDING

One or more of the following may apply:

- Siding too close to and/or in contact with the ground.
- Cracks and/or splits in cladding.
- Failed weatherproofing.
- Rotten and/or waterlogged cladding.
- Timber battens are coming away from the siding and require reattaching and resealing.

POSSIBLE ASBESTOS CLADDING MATERIALS

- This cladding material may contain asbestos.
- We did **not** perform any definitive testing for asbestos.
- **We do not recommend you carry out any repair work yourself without having the cladding materials tested.**

SOLUTION:

Most asbestos cladding products are very low risk so long as they are kept in good condition and well sealed by a weather sealing paint type product.

The following link contains all relative information for private asbestos removal and disposal: [WORK SAFE NZ](#) If you still choose to work with this material the following is the MINIMUM PPE that must be worn when asbestos is or may be present.

If asbestos is or may be present, PPE must include:

- respiratory protective equipment (RPE) – to avoid inhaling asbestos fibres (see our fact sheet on health risks from asbestos)
- overalls which are impervious to asbestos dust (either disposable or able to be washed*) – to avoid the risk of carrying asbestos fibres away from the worksite on clothing
- footwear – appropriate for the work being undertaken (footwear should be non-laced as laced footwear is difficult to clean – alternatively wear disposable boot covers).

* Washing must only be done in laundries specifically set up for handling asbestos- contaminated clothing. It must not be done at home or a public laundromat

CONTRACTOR COSTS TO REMOVE ASBESTOS: EXAMLPE ONLY

Asbestos Textured Ceilings are one of the higher costing removals, so you could be looking at \$90 per sqm and up.

ASBESTOS REMOVAL CONTRACTOR:

[ASBESTOS REMOVAL CONTRACT](#)





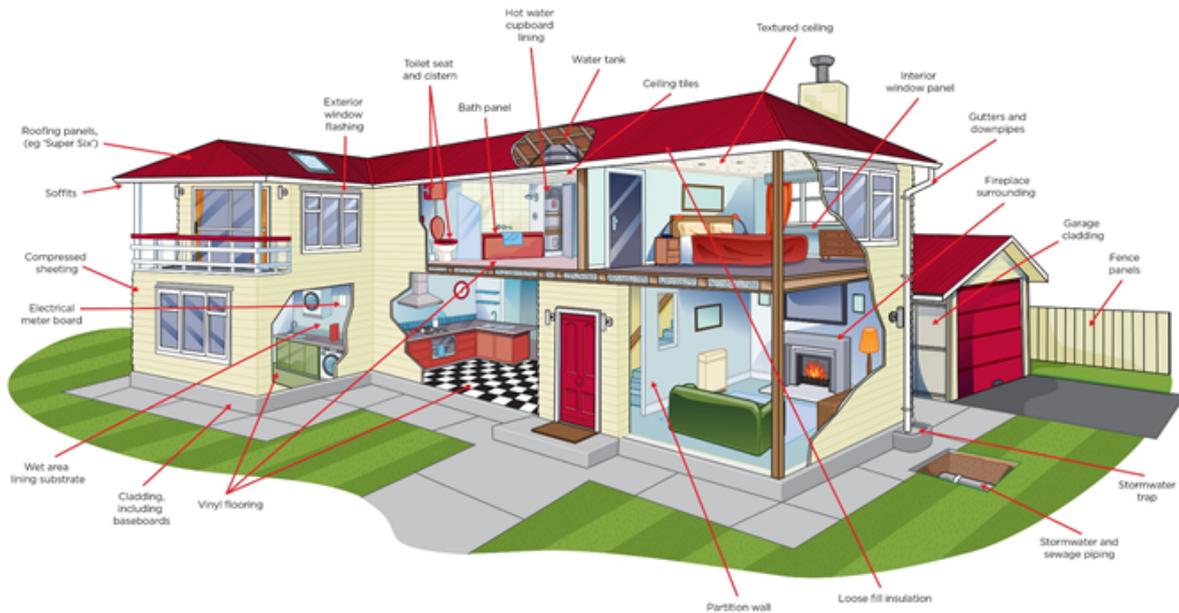
ASBESTOS MAY BE PRESENT IN BUILDING MATERIALS**ASBESTOS RESIDENTIAL HOUSES**

Buildings constructed or renovated before 2000 are likely to contain asbestos materials. The diagrams show areas where materials containing asbestos were commonly used during construction and renovation. These materials are not dangerous if they are in a good condition and remain undisturbed.

Residential house list

- Vinyl flooring
 - Cladding, including baseboards
 - Wet area lining substrate
 - Electrical meter board
 - Compressed sheeting
 - Soffits
 - Roofing panels, eg 'Super Six'
 - Exterior window flashing
 - Toilet seat and cistern
 - Bath panel
 - Hotwater cupboard lining
 - Water tank
 - Ceiling tiles
 - Textured ceiling
 - Interior window panel
 - Gutters and downpipes
 - Fireplace surrounding
 - Garage cladding
 - Fence panels
 - Stormwater trap
 - Stormwater and sewage piping
 - Loose fill insulation
-

worksafe.govt.nz



Buildings constructed before 2000 may have asbestos or asbestos-containing material (ACM). The diagram shows areas where asbestos or ACM were commonly used.

The risk to health is low if the asbestos or ACM is in good condition and undisturbed. It is unlikely that airborne asbestos fibres will be released. It is usually safer to leave the asbestos or ACM where it is and review its condition over time.

If the asbestos or ACM deteriorates or is disturbed (eg during renovations or repairs) it is more likely that asbestos fibres will be released. Breathing in airborne asbestos fibres is a serious risk to health.

What are the dangers of asbestos?

Asbestos isn't actually dangerous until it's broken up or disturbed.

The asbestos fibres then become airborne and can be inhaled which is when it's most hazardous.

These fibres are extremely fine and travel easily into the lungs, but then stay there - creating micro scars and damaging lung tissue.

Asbestosis, and lung cancer are common occurrences with people who have been exposed to asbestos, especially those who are in the construction and building industry.

It is currently the number one killer in the New Zealand workplace - on average 170 people die from asbestos-related diseases.

ASBESTOS HEALTH RISKS

Asbestos-related diseases can take up to 20 years before their symptoms start to show.

Even people with low exposure can develop serious health issues.



All types of asbestos can cause asbestos-related disease.

Asbestos fibres can cause cancer to develop anywhere in the body, depending on the amount and where the particles invade.

PLEURAL PLAQUES

Pleural plaques are fibrous thickenings on the lung lining. Plaques might harden over time, causing pain or discomfort when breathing.



PLEURAL THICKENING

Asbestos fibres scar and irritate the pleura. This scar tissue can cover the lungs and close off the space between the lungs and pleura causing difficulty in breathing and chest pain.



ASBESTOSIS

Asbestos fibres scar the lung tissue and limit expansion which causes pain and trouble breathing. Eventually, damage can be fatal.

MESOTHELIOMA

Malignant mesothelioma is a fatal asbestos-related cancer. It affects the thin membranes around the lungs, abdominal cavities, heart and abdominal organs.



The risks of cancer increases with the duration of the patient's asbestos exposure and the amount of asbestos fibres inhaled.

LUNG CANCER

Asbestos-related lung cancer is a fatal disease. It takes many years to develop, but only months to spread to other organs.



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chemcare.co.nz
BE SAFE, BE SURE.

17: OBSERVATIONS | JOINERY

		IN	NI	NP	O
17.1	JOINERY OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

17.1.1 JOINERY OBSERVATIONS

 Trade Work Required

OBSERVATION | JOINERY

OBSERVATION | JOINERY

One or more of the following may apply:

- Substandard weatherproof paint seal at joinery.
- Gaps at joinery to cladding junctions .
- Cracks and/or splits in joinery timber.
- Moisture damage.
- Rot in timber joinery and/or surrounding timber material.
- Missing head flashings.





17.1.2 JOINERY OBSERVATIONS

Trade Work Required

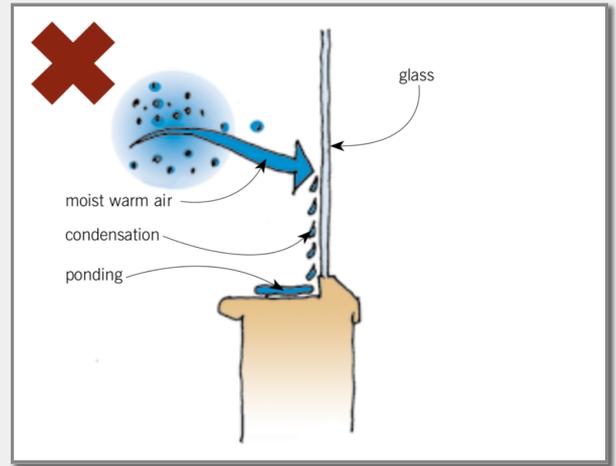
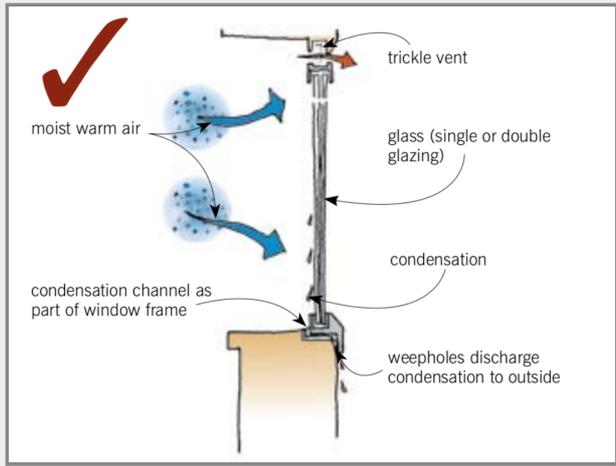
DAMAGE AT OR IN JOINERY

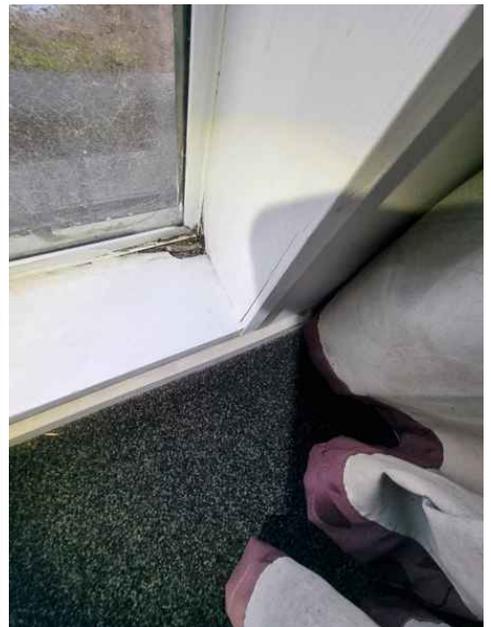
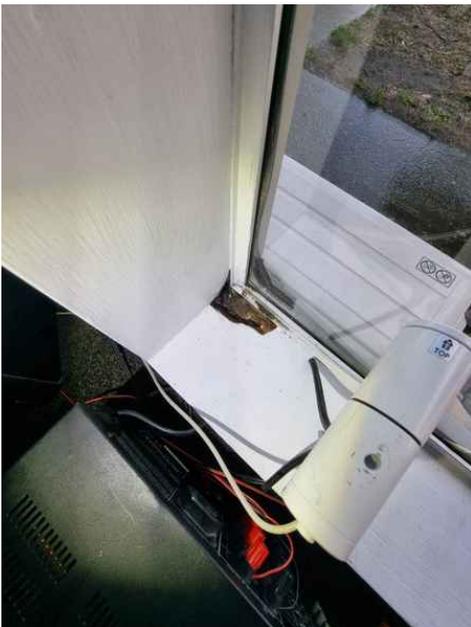
DAMAGE AT OR IN JOINERY

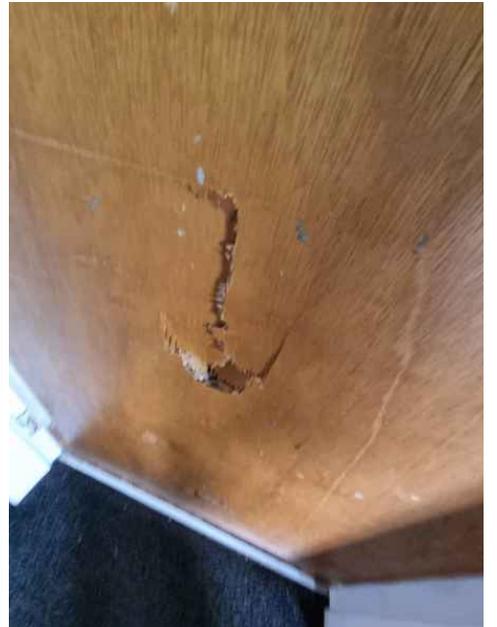
Hardware operation, joinery damage and/or draught seal observations noted.

Water damage: around windows can be caused by condensation or leaks. Try to reduce the amount of condensation in your home.

CONDENSATION DAMAGE AT JOINERY







18: OBSERVATIONS | DECKING

		IN	NI	NP	O
18.1	DECKING OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

18.1.1 DECKING OBSERVATIONS

Trade Work Required

TIMBER DECKING AND/OR STAIRS NEEDS ATTENTION

DETERIORATION OF TIMBER ELEMENTS

- Decking and/or stairs shows deterioration of the timber elements.

SOLUTION:

- Remove any rotten timber.
- Recommend replacing with treated timber.

See **INFORMATION & MAINTENANCE** for more details on how to stop rot.





19: OBSERVATIONS | ROOFING

		IN	NI	NP	O
19.1	EXTERIOR ROOFING OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

19.1.1 EXTERIOR ROOFING OBSERVATIONS



IRON | EDGES LIFTING

EDGES OF METAL ROOF LIFTING

- This is common for aging roofing systems. We recommend adding a visual inspection of these areas to the owners maintenance schedule.

19.1.2 EXTERIOR ROOFING OBSERVATIONS



LICHEN | ALGAE | MOSS

LICHEN, ALGAE AND/OR MOSS SIGHTED

- Lichen, Algae and/or moss sighted in one or more areas.

Lichen causes damage and is extremely difficult to remove with pressure cleaning or scrubbing alone. The lichen will begin to regrow immediately after pressure cleaning from the residue left behind.

SOLUTION: LICHEN REMOVAL

The following spray product only applies to areas safely accessible.

- **Bio-Shield** is a very good product for stopping the regrowth of lichen.

The key to successfully cleaning and removing lichen is to apply the Bio-Shield solution to saturate the lichen through to the base of the growths, and ensuring it does not dry out too quickly. Aim to allow drying over 10 to 15 minutes to ensure the Bio-Shield gives a good kill. Application on a cloudy day or early morning will assist. You will notice a slight colour change in most lichens once Bio-Shield is applied as it penetrates and kills the lichen. A surface treated with Bio-Shield will stay clean for up to 3 years. Re-apply the Bio-Shield at the first sign of regrowth for a fast clean up and to keep the treated surface clean.

BIO-SHIELD



[BIO-SHIELD LINK](#)

A 5 litre of Bio-Shield costs NZD\$99 and makes 105 litres
\$99 divided by 105 litres gives a cost of 94 cents per litre.



19.1.3 EXTERIOR ROOFING OBSERVATIONS

SUB-STANDARD SILICONE SEALING**SUBSTANDARD SILICONE SEALING**

- Not a common area to see silicone, further investigation may be needed.

SOLUTION: RE-SEALING REQUIRED

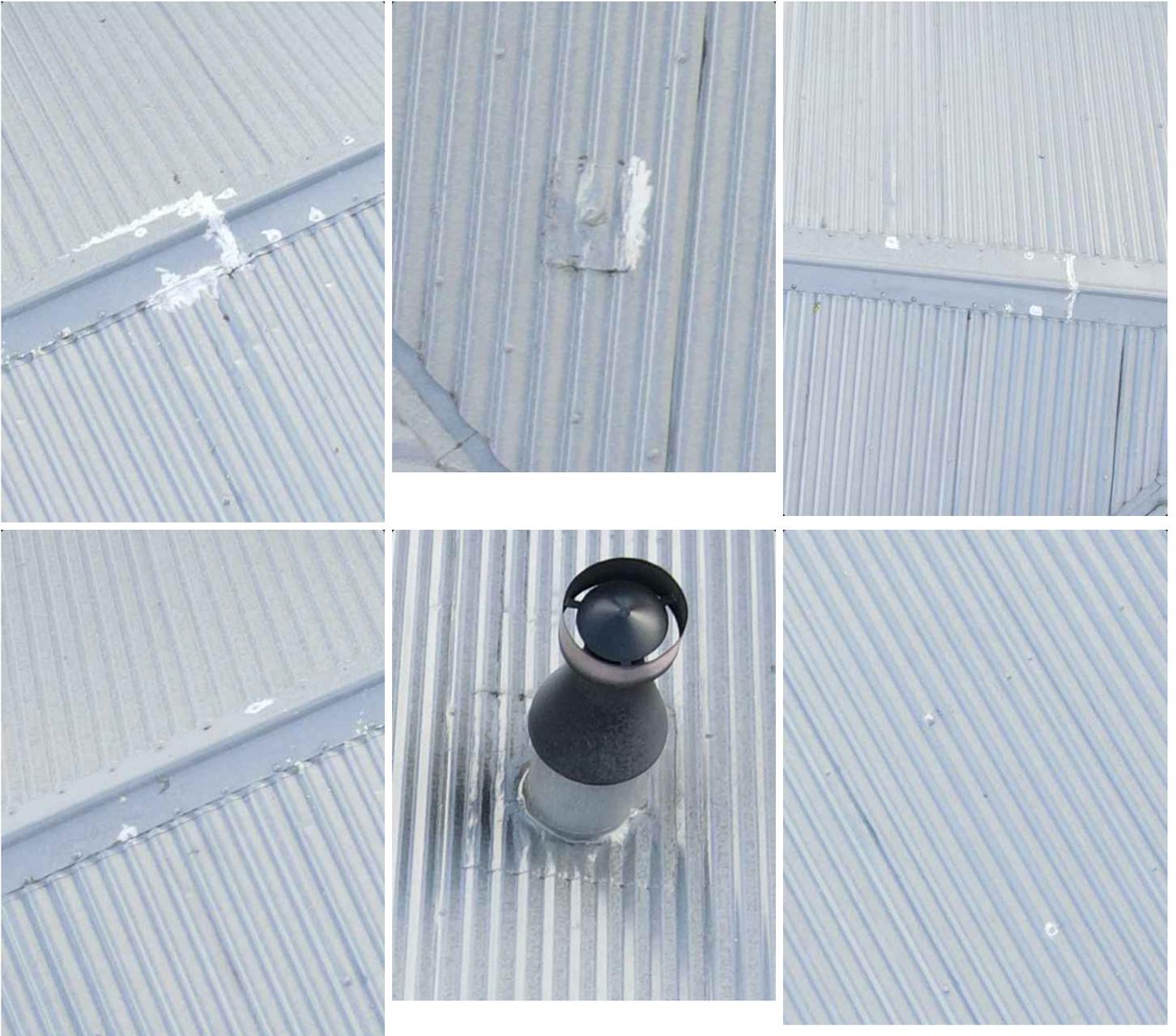
- Contact a qualified roofing company if the area is not easily and safely accessible. However, if you decide to look into this observation yourself. The area must be very well prepped before application. We recommend Sikasil sealant products. You will require a corking gun with this particular product.

SIKASIL SEALANT

Sikasil AP Multipurpose Roof & Gutter Silicone Sealant

\$11.99 From Placemakers.

We do not recommend you do any work that is beyond your capabilities.



19.1.4 EXTERIOR ROOFING OBSERVATIONS

DEBRIS HAS ACCUMULATED IN THE DRAINAGE SYSTEM



DEBRIS

- Debris has started to accumulate in the gutters.
- Recommend keeping all gutters clear to facilitate water flow.

The basic way to clean a gutter is to remove large debris like leaves and twigs is with a trowel or scoop made out of an old milk jug, and then clean out smaller debris by flushing the gutter lengths with a hose. You should begin cleaning the gutter near a downspout and flush the gutter with the hose starting at the end opposite the downspout.

19.1.5 EXTERIOR ROOFING OBSERVATIONS

DAMAGED AREAS OF GUTTERING AND/OR DOWNPIPES**DAMAGED AREAS OF GUTTERING AND/OR DOWNPIPES****One of the following may apply:**

- One or more downpipe attachments require re-attaching or replacement.
- Roofing drainage system showed damage in one or more areas.
- Recommend a qualified professional evaluate and repair.

DOWNPIPE DISCHARGING TOO CLOSE TO FOUNDATION AND/OR FLASHING**One of the following may apply:**

- Downpipes need to be extended away from the flashing and/or plumbed into guttering to prevent deterioration of the roof coverings, building materials and moisture damage. There could damage to the building materials beneath the area.
- Downpipes need to be either plumbed into the storm water system correctly or extended away from the home by a minimum of four feet, with six feet being preferred.

Put simply, when the ground becomes oversaturated and waterlogged, the soil is weakened and loses strength, which can result in structural issues. The best way to avoid the costs of repairing foundation issues and/or framing rot is to regularly check around your home for damp, waterlogged or subsided areas and act immediately if there is a suspected leaking pipe or drainage issue. It's also recommended that you look out for the warning signs of foundation issues, such as internal and external wall cracks, uneven floors and misaligned doors or windows.





19.1.6 EXTERIOR ROOFING OBSERVATIONS

FASCIA BOARDS AND/OR SOFFITS SHOW MOISTURE DAMAGE AND/OR ROT IN MULTIPLE AREAS

 Trade Work Required

FASCIA BOARDS AND/OR SOFFITS SHOW MOISTURE DAMAGE AND/OR ROT IN MULTIPLE AREAS

- This is common observation for this age of fascia board edging.
- The moisture damage sighted in the soffits is also common.
- These issues should be addressed sooner rather than later.



20: OBSERVATIONS | STRUCTURE

		IN	NI	NP	O
20.1	ROOF STRUCTURE OBSERVATIONS	X			X
20.2	FOUNDATION OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

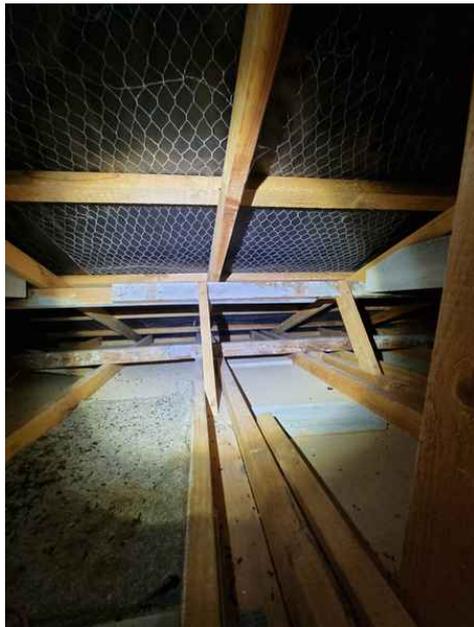
20.1.1 ROOF STRUCTURE OBSERVATIONS

 Trade Work Required

IMPROPER CONSTRUCTION PRACTICES

SUB-STANDARD CONSTRUCTION PRACTICES NOTED

- This is a common observation for this era of construction, however common it is a poor construction practice.



20.1.2 ROOF STRUCTURE OBSERVATIONS

 Trade Work Required

MOISTURE DAMAGE

MOISTURE DAMAGE | STAINING ON TIMBER

- Moisture damage and/or staining noted in one or more areas of the ceiling cavity.

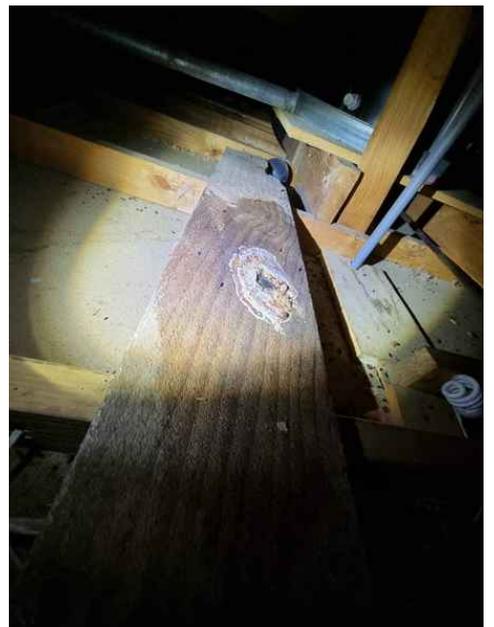


20.1.3 ROOF STRUCTURE OBSERVATIONS SIGNS OF TIMBER ROT

Trade Work Required

ROT NOTED

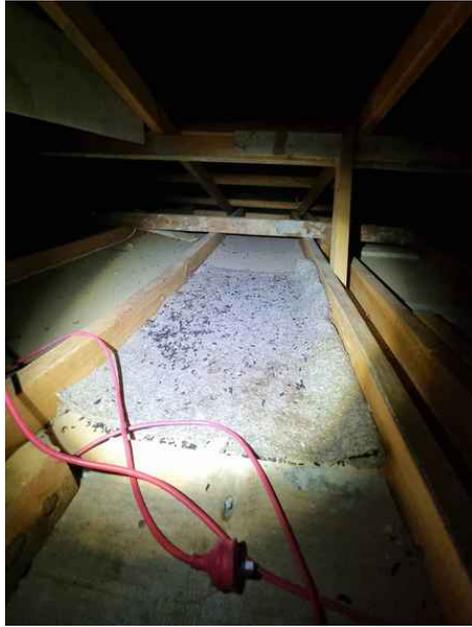
- The roof structure shows rot in some areas.
- This is relatively common and somewhat expected in older homes, however it should be removed where possible and the rot treated in any areas not able to be removed.



20.1.4 ROOF STRUCTURE OBSERVATIONS

PEST ISSUES NOTED

 Maintenance Item



20.2.1 FOUNDATION OBSERVATIONS

SETTLEMENT AND/OR SETTLEMENT DEFECTS

 Trade Work Required

DEFECTS NOTED IN STRUCTURAL AND/OR NON-STRUCTURAL ELEMENTS

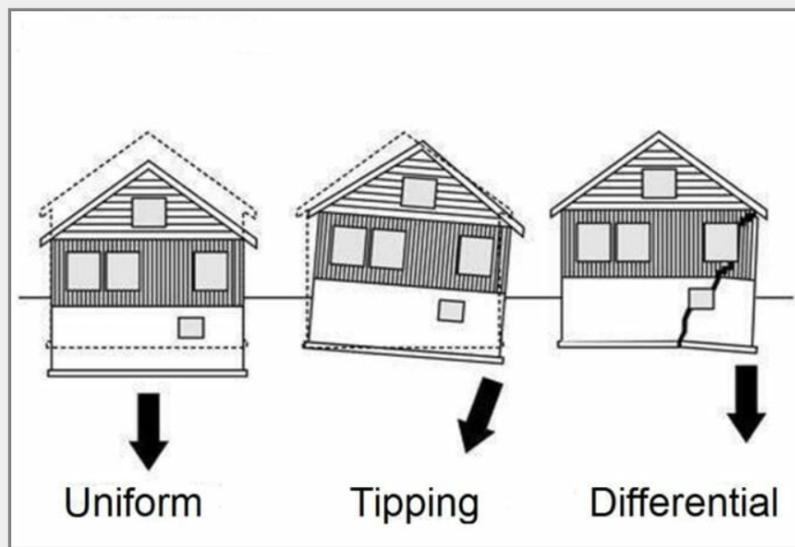
Cracking, settlement and/or defects sighted in one or more of the concrete foundational elements. This is a relatively common observation, however any defects in any foundational elements should be monitored for further deterioration every 6 weeks or so.

These areas require monitoring. (Refer to images provided) If the settlement cracking worsens we recommend you seek the advise of a qualified builder and/or structural engineer that can provide a quote to remedy the observation.

NOT ALL INFORMATION WITHIN THIS OBSERVATION WILL DIRECTLY APPLY TO THE AREAS IDENTIFIED. BUT AS A HOMEOWNER IT'S INFORMATION YOU SHOULD KNOW.

3 TYPES OF SETTLEMENT CRACKING: When the weight of a home causes the soil particles to consolidate tighter, then the home drops down or settles. There are 3 basic types of settlement and one type usually causes more damage to the home, than the other two types. **Uniform settlement** is when the home settles evenly at all four corners. It sinks down without tilting or where one section settles more than another. **Tipping settlement** is basically where one end or side of the homes foundation stays in place and the opposite side or end drops down but the foundation stays intact. You could say the house tilts and/or leans. **Differential settlement** is basically where one portion of the foundation stays in place and one part of the foundation drops down or shifts. This means that the foundation and home will probably suffer more damage than will occur with uniform or tipping settlement. Engineers often considers this to be the worst type of settlement.

SETTLEMENT CRACKS & THE 3 TYPES OF SETTLEMENT



What Causes Foundation Settlement?

Drought: During prolonged dry periods, the soil around your home may begin to dry out. As clay soil dry out, they will shrink considerably. When this happens under a foundation, it's the same as the soil settling. Your foundation will settle downwards as it does so, possibly leading to structural damage.

Maturing Trees: A mature tree's root system can be up to twice the size of its visible part. If the trees extend over your home, that's a good sign that they're under your house as well. As they draw up hundreds of gallons of water each day, the soil will shrink significantly.

Wetting & Softening Of Soil: Heavy Rain & Flooding: When clay soil contact water, they hold on to it and become very soft. This soft soil is not good load-bearing soil, and heavy objects will sink down into it.

Poor Drainage: If water is allowed to "pond" next to the home due to poor soil grading, clogged gutters, or some other factor, the soil will absorb the water. If you have clay soil around the home, then the soil will soften and the home may sink.

Plumbing Leaks & Broken Water Lines: Plumbing leaks under or around a home can also saturate the soil around a home, and potentially weaken their load-bearing capacity.

Poorly Compacted Fill Soil: To make a level surface where your foundation can be built, builders will sometimes bring in loose soil from another location, using it to fill in hollow or depressed areas. This

recently excavated "fill" soil is fluffed, and will be much looser and lighter than the dense, hard-packed virgin soil already present. To compensate, the builder will need to compact the fill soil thoroughly before placing a foundation on top. If this compaction is not done, or is improperly done, then the weight of your home may cause the soil to compress, leading to foundation settlement issues.

Poor construction practices: Subfloor may have in-line bearer joints at one or more rows of piles. This is a common observation for this era of construction, however common it is a poor construction practice. The bearers will need to be reinforced by adding strong backs. (Strong backs are a second full length bearer or similar strength material that spans across the joints and allows any load to be evenly dispersed)

CRACKS NOTED IN CONCRETE WORK

- Cracking due to ground shift/settlement or displacement was noted in the foundation work, masonry walls and/or connecting concrete areas.
- Surface cracking and/or edges cracking of slab corners is relatively normal in concrete construction of this type.
- Cracking in concrete plaster rendering is also a common observation.

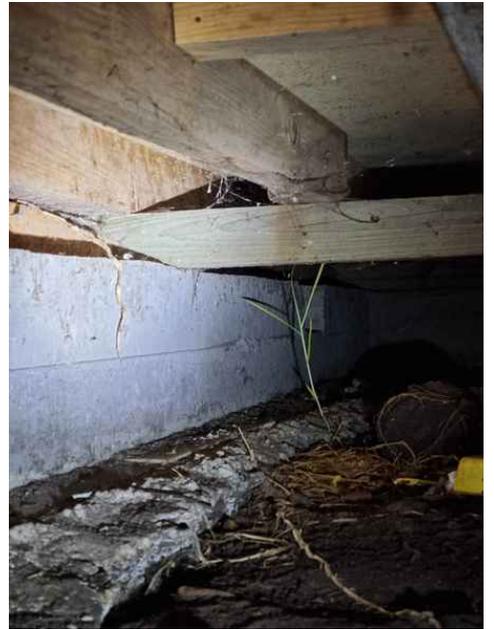
SOLUTIONS

- Monitor the width of cracks for a period of time (approximately every six months):
- If they do not change, seal with a flexible exterior grade sealant. (*You must still monitor these areas after sealing them*)



Sikaflex 11FC Concrete Joint Sealant and Adhesive.
Approximately \$32.68 From Placemakers.

- If they continue to get wider, obtain a chartered engineer's advice on repair options.



20.2.2 FOUNDATION OBSERVATIONS
EFFLORESCENCE NOTED

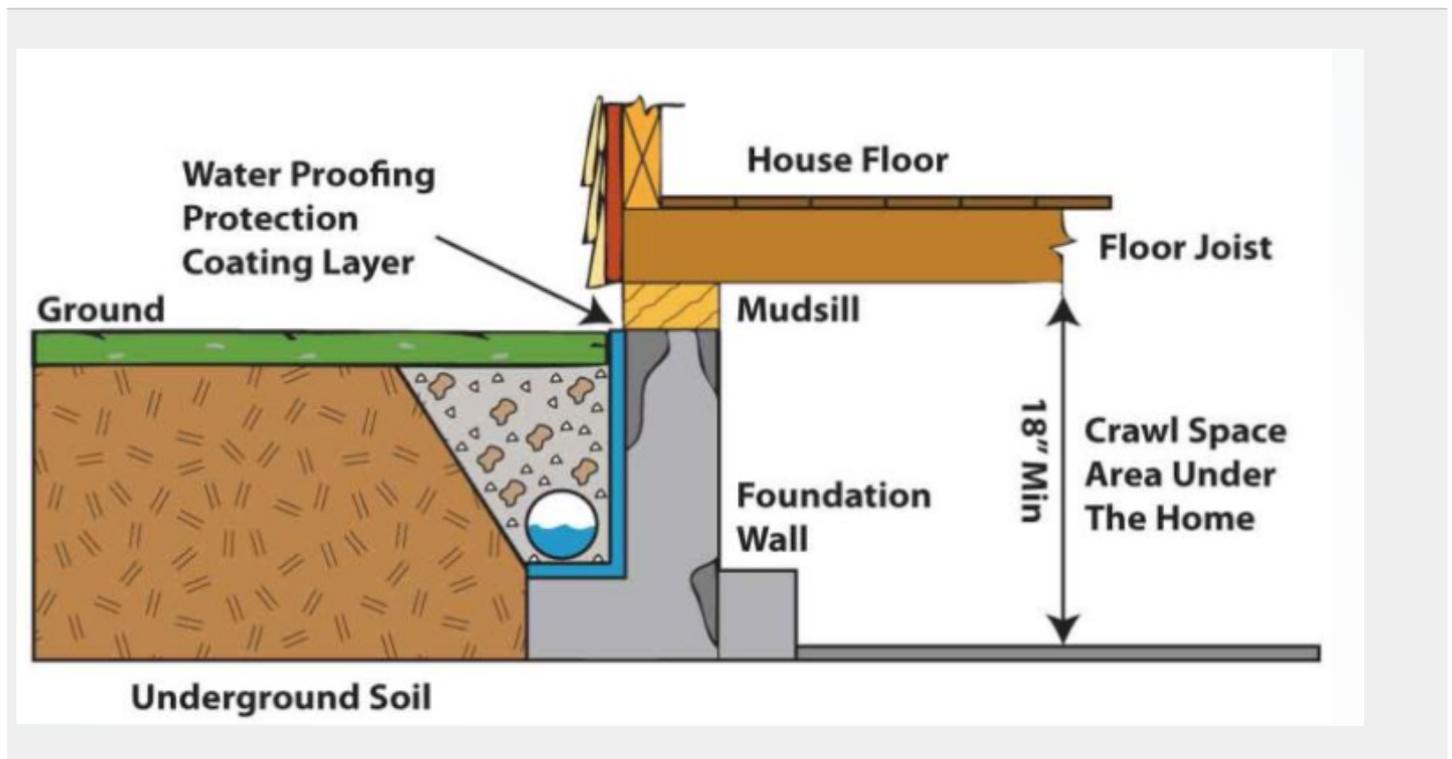
 Trade Work Required

EFFLORESCENCE ON SURFACE OF CONCRETE

Efflorescence is usually caused by a combination of the following factors:

- One or more of the constituents of concrete may contain salts
- A high water-cement ratio resulting in a more porous concrete that allows movement of water and salt solutions
- Inadequate curing which may leave un-hydrated products near the surface of the concrete
- Exposure to rain or other water sources (moisture allows salts to be transported to the surface where they accumulate as the water evaporates)
- Slow rate of evaporation of water allowing time for salts to permeate to the surface (this is why efflorescence tends to be more of a problem during the winter months; in summer, high temperatures may cause evaporation and hence depositing of salts within the concrete rather than on the surface)
- Variability of concrete (e.g. from compaction or curing) can result in localised problems where water can permeate more easily through the concrete.

THE CORRECT SOLUTION



This solution is how the drainage should have been done. It may or may not be possible in this case but the general principle remains the same.

Please contact CPRNZ if you wish to discuss all the possible options for your particular situation.



20.2.3 FOUNDATION OBSERVATIONS

UNDERMINING NOTED

 Trade Work Required

UNDERMINING NOTED BENEATH THE STRUCTURE

One or more sections beneath the structure show:

- Undermined piles/foundations
- Piles close to the edge of an unsupported bank
- The pile footings may have been exposed

SOLUTION

Shovelling soil back around the footings or base of the piles is not a solution. It will not provide the strength needed in the foundations

In some cases, repiling or the installation of new members to support the floor may be required. This falls into the category of 'restricted building work'. When done by a contractor, it must be carried out or supervised by a licensed building practitioner with a Foundations license

If undermining/excavation affects one or two piles, replacing these in the same location will not require a building consent (but still needs to comply with the Building Act). Repiling all of a house or a substantial area will require building consent.



21: OBSERVATIONS | GROUNDS

		IN	NI	NP	O
21.1	DRIVEWAY & YARD OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

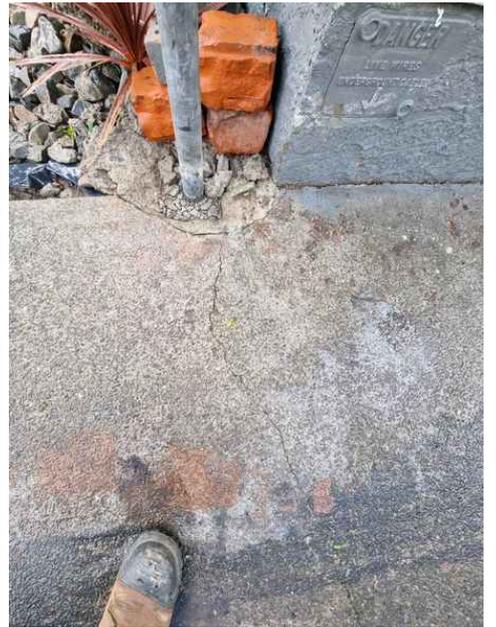
21.1.1 DRIVEWAY & YARD OBSERVATIONS

 Trade Work Required

SETTLEMENT AND/OR FLAT CONCRETE CRACKS NOTED

SETTLEMENT AND/OR FLAT CONCRETE CRACKS NOTED

Minor to moderate cracking observed in driveway and/or pathway concrete and/or masonry areas. These are a common observation and generally expected at most properties, However if we have documented multiple areas of settlement cracking and/or if this observation is indicated in orange, there may be a more serious issues that needs investigating.





21.1.2 DRIVEWAY & YARD OBSERVATIONS
FENCE NEEDS ATTENTION

 Maintenance Item



21.1.3 DRIVEWAY & YARD OBSERVATIONS
AREAS OF STANDING WATER

 Trade Work Required

AREAS OF STANDING WATER



21.1.4 DRIVEWAY & YARD OBSERVATIONS

RUBBISH | WASTE BUILD UP

 Maintenance Item

RUBBISH | WASTE BUILD UP



22: OBSERVATIONS | UTILITIES

		IN	NI	NP	O
22.1	UTILITIES OBSERVATIONS	X			X
22.2	HOT WATER SYSTEM OBSERVATIONS	X			X
22.3	INSULATION & VENTILATION OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

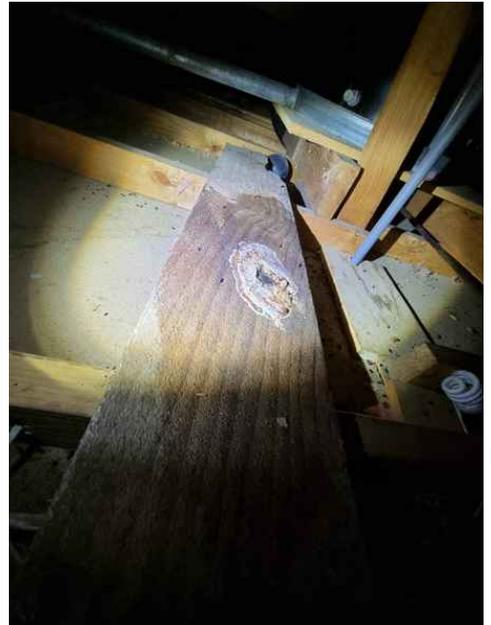
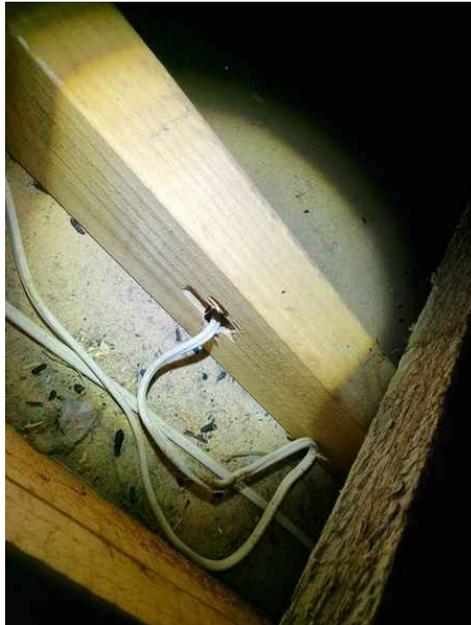
22.1.1 UTILITIES OBSERVATIONS

 Immediate Attention

UNSATISFACTORY ELECTRICAL ITEM

UNSATISFACTORY ELECTRICAL ITEM

- **The hallway light is flickering because a roof leak has created a puddle and is arcing across the terminals. This has the potential to cause serious injury, death and/or fire.**
- **There is also exposed wires from two different switches, one of which is the 6mm TC+E cable (High current/very dangerous)**
- **Bathroom RCD doesn't trip.**
- **There is a PDL-651 open faced/uncapped at ground height next to the shower.**
- **There is an unterminated 1.5mm 2C+E cable in the ceiling cavity.**
- **Multiple lights hanging from the ceiling with naked terminals exposed.**
- **Fan hanging from the ceiling with naked terminals exposed. (Inside shower unit) !!!!!**
- **The multiple other item/s in this section that require repair/replacement.**



The hallway light is flickering because a roof leak has created a puddle and is arcing across the terminals. This has the potential to cause serious injury, death and/or fire.

The hallway light is flickering because a roof leak has created a puddle and is arcing across the terminals. This has the potential to cause serious injury, death and/or fire.

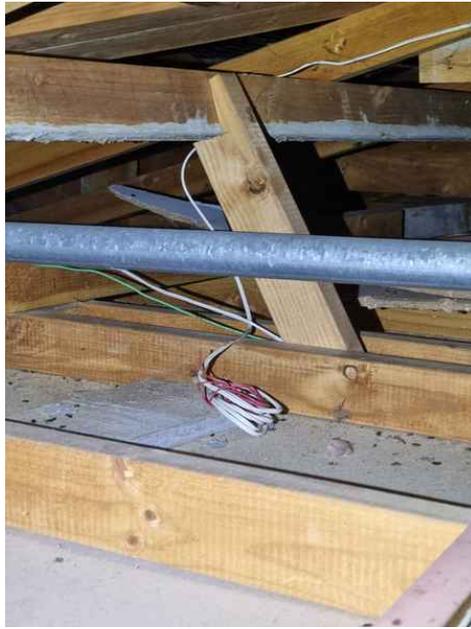


exposed 6mm TC+E cable (High current/very dangerous)

Bathroom RCD doesn't trip.



PDL-651 open faced/uncapped at ground height next to the shower.



Unterminated 1.5mm 2C+E cable in the ceiling cavity



Multiple lights hanging from the ceiling with naked terminals exposed.

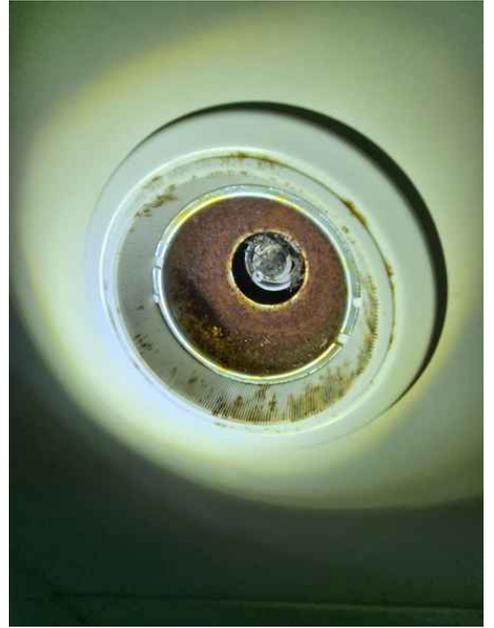
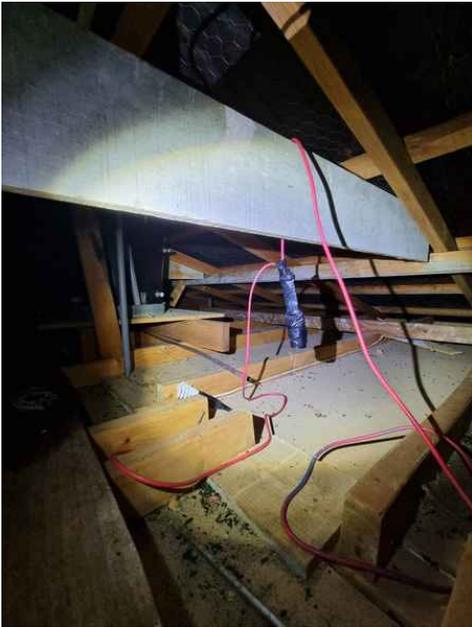


Multiple lights hanging from the ceiling with naked terminals exposed.



Fan hanging from the ceiling with naked terminals exposed. (Inside shower unit)







22.1.2 UTILITIES OBSERVATIONS

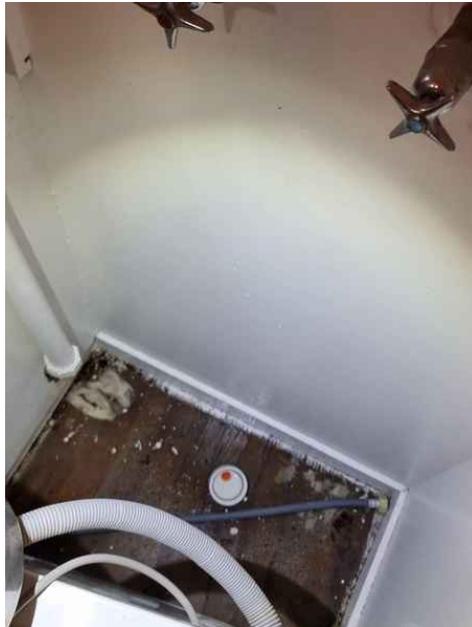
UNSATISFACTORY PLUMBING ITEM

 Trade Work Required

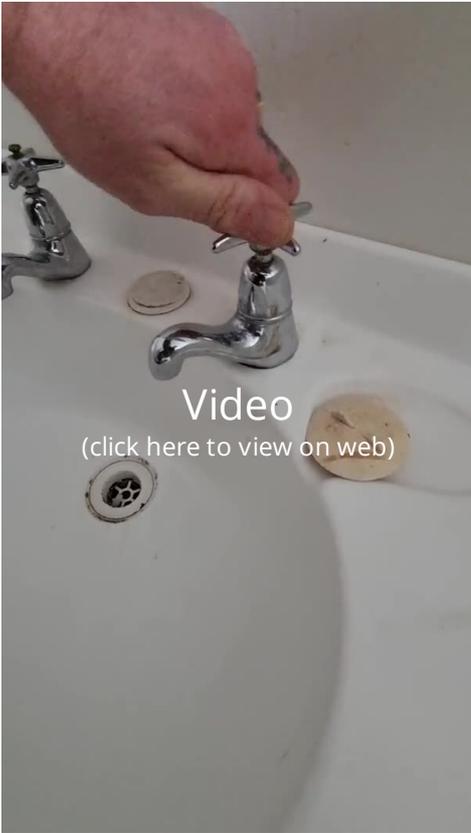
UNSATISFACTORY PLUMBING ITEM

The item/s in this section require repair/replacement.









Video
(click here to view on web)

22.1.3 UTILITIES OBSERVATIONS

POLYBUTYLENE PIPES | DUX QUEST

 Trade Work Required

POLYBUTYLENE | PEX | PVC | DUXQUEST

Polybutylene (PB) was a plastic manufactured between 1978 and mid-1995 for use as piping in home plumbing systems. It was inexpensive and offered plenty of advantages over other materials, such as flexibility, ease of installation, resistance to freezing. Despite its strengths, production was ceased in mid-1996 after scores of allegations surfaced claiming that polybutylene pipes were rupturing and causing property damage.

How Does Polybutylene Fail?

Certain disinfectants can react with the polybutylene and cause it to flake apart at any location within the PB piping system. Small fractures can deepen over time and eventually work their way to the pipe's exterior, allowing water to escape. Some leaks do however occur at joints and unions, which is where a leak would likely appear if a pipe were improperly installed.

Identifying Polybutylene

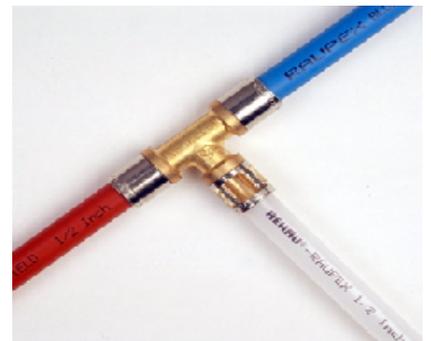
Polybutylene pipes are:

- usually stamped with the code "PB2110";
- ½" to 1" in diameter.
- flexible and sometimes curved, unlike rigid piping materials such as copper;
- not used for waste, drain or vent piping;
- most commonly grey in color, but they can also be white, silver, black or blue. Blue PB is used primarily outdoors and should only be used to carry cold water.
- Be aware that black or white pipes might not be polybutylene (they might be polyethylene or PVC, respectively).

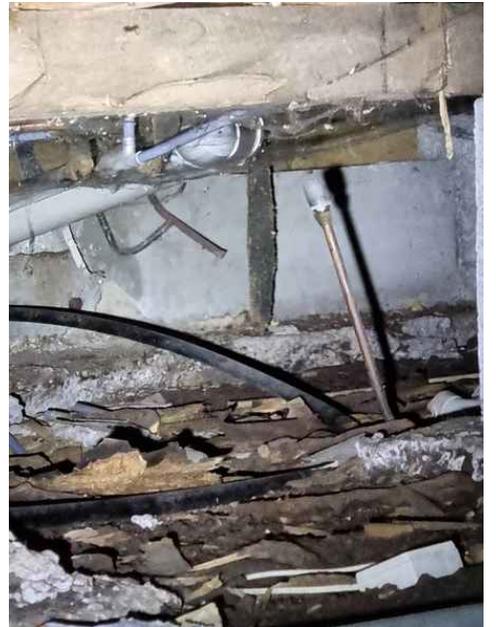


Other piping materials not to be confused with PB:

- PEX (pictured at right): Common in radiant-heating systems, this cross-linked polyethylene can be black, blue or red. It is more easily coiled and more flexible than PB. It can withstand higher temperatures than polyethylene.
- PVC: A popular building material commonly used in residential plumbing. CPVC is derived from PVC and is also used in plumbing. Both appear white or off-white and can be flexible or rigid.
- Polyethylene DuxQuest is flexible and black.



If in doubt, a licensed plumber can be contacted to determine



22.2.1 HOT WATER SYSTEM OBSERVATIONS

HWC SHOULD BE MOUNTED ON A SECURE PLATFORM

 Trade Work Required

HWC SHOULD BE MOUNTED ON A SECURE PLATFORM

This is a common observation, However the mounting of the HWS on a platform is quite important for a few reasons.

The main reason cylinders are placed on platforms is to ventilate the underside of the cylinder. Water can condense underneath it due to the inside temp being hotter than the outside of the cylinder. This can cause the cylinder and floor to rot a lot quicker underneath if you do not allow for ventilation.

22.3.1 INSULATION & VENTILATION OBSERVATIONS

BATHROOM VENTS INTO ATTIC

 Trade Work Required

BATHROOM VENTS INTO ATTIC

- Bathroom fan vents into the attic, which can cause moisture and mold.
 - Recommend a qualified contractor property install exhaust fan to terminate to the exterior.
-

22.3.2 INSULATION & VENTILATION OBSERVATIONS

NO UNDERFLOOR INSULATION & ALMOST NO CEILING INSULATION

NO UNDERFLOOR INSULATION, ALMOST NO CEILING INSULATION & NO UNDERFLOOR VAPOUR BARRIERS

Due to the design or construction of "some" properties, it may not be reasonably practicable to insulate.

For a suspended timber floor where the subfloor space cannot be 'adequately ventilated' then the ground is required to be entirely covered with a vapour barrier (see E2/AS1 Clause 10.2.7 and NZS 3604: 1999 Section 6.14).

This method can also be used as a retrofit solution to lower the relative humidity of the subfloor floor air in existing houses after ensuring adequate subfloor ventilation is also provided (see Build, October/November 2006, pages 34–36 or BRANZ Bulletin 457 Ventilation of enclosed subfloor spaces). Installation is described in section

This information relates to the current insulation requirements.

Examples of types of properties that would meet exception criteria for the current insulation requirements are:

- apartments where there is a habitable space above and below the apartment
- houses built on concrete slabs
- houses with skillion roofs where there is no ceiling space to install insulation.

Access exceptions

In many properties the most common way to access the ceiling space or underfloor to retrofit insulation would be through an existing trapdoor to the ceiling or an external door to crawl under the house.

Installing insulation is not considered 'reasonably practicable' when an experienced professional installer:

- can't access the ceiling or underfloor space without removing any cladding or lining, carrying out other substantial building work or causing substantial damage to the property.
- can't install insulation without creating greater health or safety risks to people than is normally acceptable.

Access to the ceiling or underfloor can often be achieved by carrying out minor work. For example, by temporarily removing base boards from the outside of the property to access the underfloor. In this situation the landlord is expected to carry out the work.

Landlords must install insulation in properties where an exception applies if they are carrying out work that would allow insulation to be installed (eg, if the property is re-roofed).

Written confirmation of exception

There is no requirement for landlords to consult a professional. However, if a landlord has doubts about whether insulation can be installed, they should consult an experienced professional insulation installer and, if needed, a builder.

The experienced professional may advise that it is not reasonably practicable to install insulation. If that happens, the landlord should ask for written confirmation of the reasons to include in tenancy agreements.

It is not enough for a landlord to simply claim that 'insulation is not reasonably practicable'.

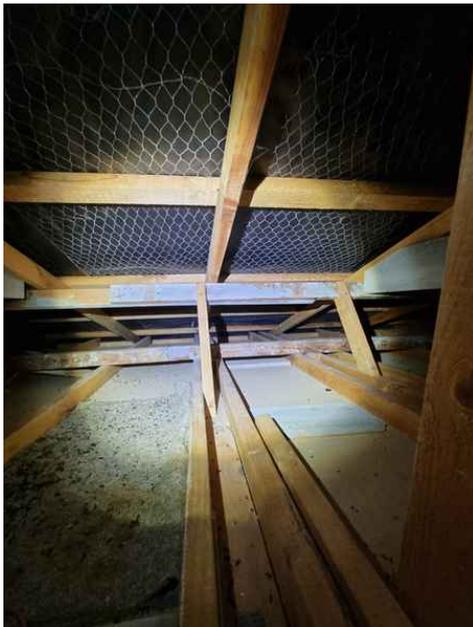
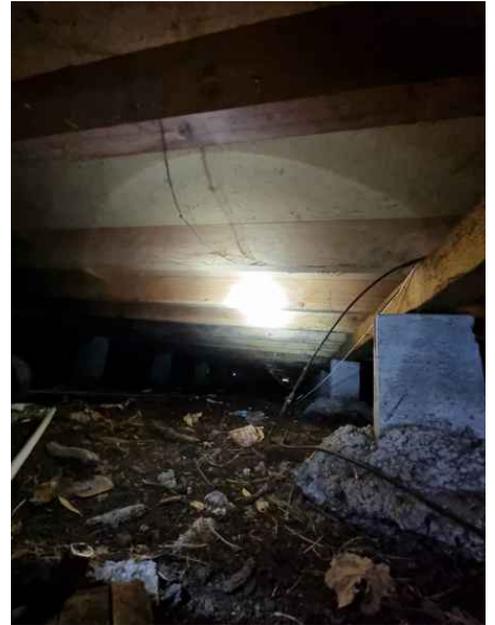
Required statements in tenancy agreements

Other exceptions to current insulation requirements

There are other situations in which rental properties may not need to meet the current insulation requirements.

1. Where the landlord intends to demolish or substantially rebuild all or part of the property within 12 months of the start of a tenancy. If requested, the landlord must provide evidence that they have applied for the necessary resource consent and/or building consent.
2. Where a property is purchased from and immediately rented back to the former owner-occupier. In this case a 12 month exception will apply from the date of purchase.

3. Where the landlord can provide evidence that the insulation is still in reasonable condition and that the insulation complied with particular insulation requirements when it was installed. These may be specifications in the building consent or an Acceptable Solution or Verification Method under the Building Code.9 of NZS 4246: 2006 Energy efficiency – Installing insulation in residential buildings.



23: OBSERVATIONS | MOISTURE

		IN	NI	NP	O
23.1	THERMAL & MOISTURE TESTING OBSERVATIONS	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

THERMAL & MOISTURE TESTING OBSERVATIONS: THERMAL IMAGING & MOISTURE METERING

THERMAL IMAGING & MOISTURE METERING

Thermal imaging does not provide our inspectors with X-ray vision. It is a tool used to indicate areas that require further investigation with other moisture detecting equipment, Thermal Imaging does not detect moisture. Put simply, it is used to identify areas that show "Heat Differentials". Not so simply put: Thermal imaging does not directly measure temperature, it measures radiated thermal energy. Temperature is then derived from the amount of energy detected. For example, moist areas of a wall will show greater temperature loss because water is a better conductor of heat. The thermal camera can also "indicate" what lies behind walls. Often the studs can be seen because the wood, which has a lower R-value than the insulated walls, serves as a "thermal bridge" for heat flow. The images provided below in the gallery sections were taken as part of our process when inspecting each property. Once we have assessed all the information collected, any observations can be found in the observations sections and/or summary sections.

MOISTURE TESTING

CPRNZ does not relay a single piece of testing equipment. All walls are checked with both thermal imaging and moisture meters completely independent of each other by way of CPRNZ using two different inspectors at every property if one tool indicates areas that require further investigation with different type of moisture detecting equipment, our inspectors will flag the area, thus notifying the other inspector to double check the area directly and also to check the opposite side of the observation. Every effort is made to provide you with the most comprehensive property report possible, especially so when it comes to moisture ingress.

LIMITATIONS

- **Please note** that dry weather can affect a moisture inspection as less moisture will remain in the structure. A wet season or after rain will produce a more accurate result. A non-invasive inspection has the limitation of only being able to read into any timber framed wall to the depth of **5-40 mm** depending on the density of the material being tested, construction and the type of meter used (**FLIR MR60 | PINLESS MODE up to 19mm; FLIR MR176 | PIN PROBE MODE up to 40mm*** as per Specifications) This does mean that if there is some dampness on the outside of the wall framing and it has not leaked into the wall far enough towards the above dimension then it may not be discovered.
- The **FLIR MR277** Thermal Imaging Camera has far greater moisture indication capabilities, providing there are optimum weather and temperature conditions on the day of inspection.
- The non-invasive moisture meters will not detect or measure moisture through any electrically conductive materials including but not limited by metal sheeting or cladding, black EPDM roofing, butyl roofing, some rubberised waterproofing, aluminum siding or wet surfaces, aluminium foil.
- Decayed timber (dry) is not detected by non-invasive moisture meter, visual inspection with timber strength testing, collecting "shavings" and further investigation is recommended.
- In some cases a vendor may disguise a problem by drying affected areas prior the inspection, installing new lining, painting surfaces over or placing the furniture in front of problematic areas.
- As our inspection is non-invasive and is of a visual nature, we can not move the vendor's furniture or belongings there are some limitations in inspections and we can't be held liable for concealed or disguised problems. Obtaining a vendor statement about the house's moisture condition and a final re-inspection before settlement when the house is empty is highly recommended. Immediate notification about any problems to your solicitor and inspector is strongly advised.

(Full list of limitations at the end of the report)

THERMAL & MOISTURE TESTING OBSERVATIONS: THERMAL % GLOSSARY**HOW TO READ OUR OBSERVATION RATINGS****THERMAL % GLOSSARY**

THE MOISTURE % READINGS GUIDE IS EXACTLY THAT. IT IS A GUIDE ONLY. DIFFERENT MATERIALS CAN GIVE A DIFFERENT % READING FOR NUMEROUS REASONS. WE WILL ADVISE YOU IF THE TREATED AREAS ARE MOIST, DAMP AND/OR WET. A BASE % OR TARE % WILL BE SET FOR EACH DIFFERENT MATERIAL TESTED.

0-17%

Low level moisture readings within the NZ Standards were detected at the time of inspection. This is not uncommon in dwellings of this age and construction era. If multiple low moisture levels are found in a close proximity to each other, it can be an early warning that the area has a developing issue.

17-30%

MOISTURE DETECTED (HIGH LEVELS) 17.0 - 30.0 Moderate to High level moisture readings were found in one or more areas at the time of inspection. Readings at this level are often an early warning sign that warrants further investigation to find the cause and prevent more damaging effects. The external cladding, joinery, flashing and/or general weather seal in this area may need attention.

30-100%

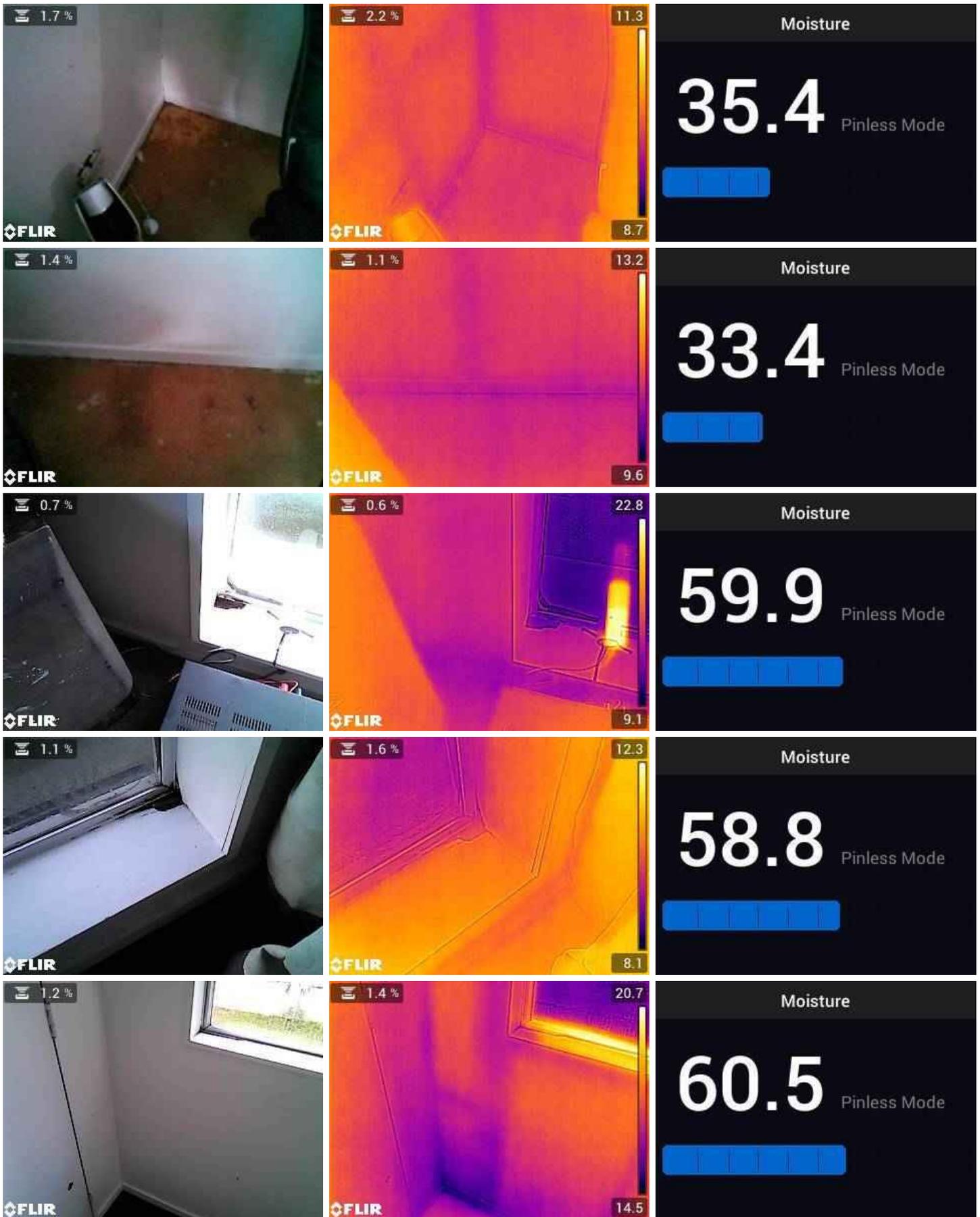
MOISTURE DETECTED (VERY HIGH LEVELS) 30.0 - 100.0 Very high level moisture readings were found in one or more areas at the time of inspection. Readings at this level are a definitive sign that strongly warrants further investigation to find the cause and possibly prevent any more damaging effect. We may recommend having an invasive inspection done sooner rather than later. By either CPRNZ or another independent inspector. There could be a sizable cost involved to complete the work needed to correct this issue.

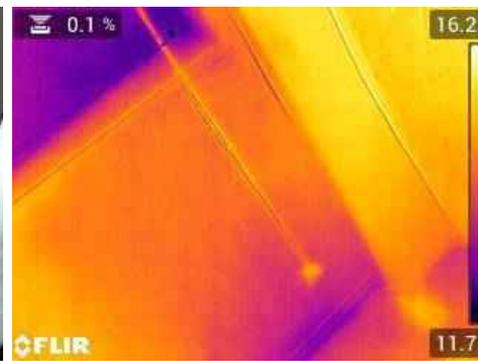
Observations

23.1.1 THERMAL & MOISTURE TESTING OBSERVATIONS

ELEVATED MOISTURE LEVELS**ELEVATED MOISTURE LEVELS**

Areas indicating an elevated moisture level with the FLIR MR277 and/or visual signs of moisture ingress.





24: 3/3

Information

SECTION 3/3 INFORMATION

SECTION 3/3 INFORMATION

**END OF REPORT
DOCUMENTATION & OBSERVATIONS**

**THE FOLLOWING CONTAINS GENERAL INFORMATION
& MAINTENANCE TIPS**

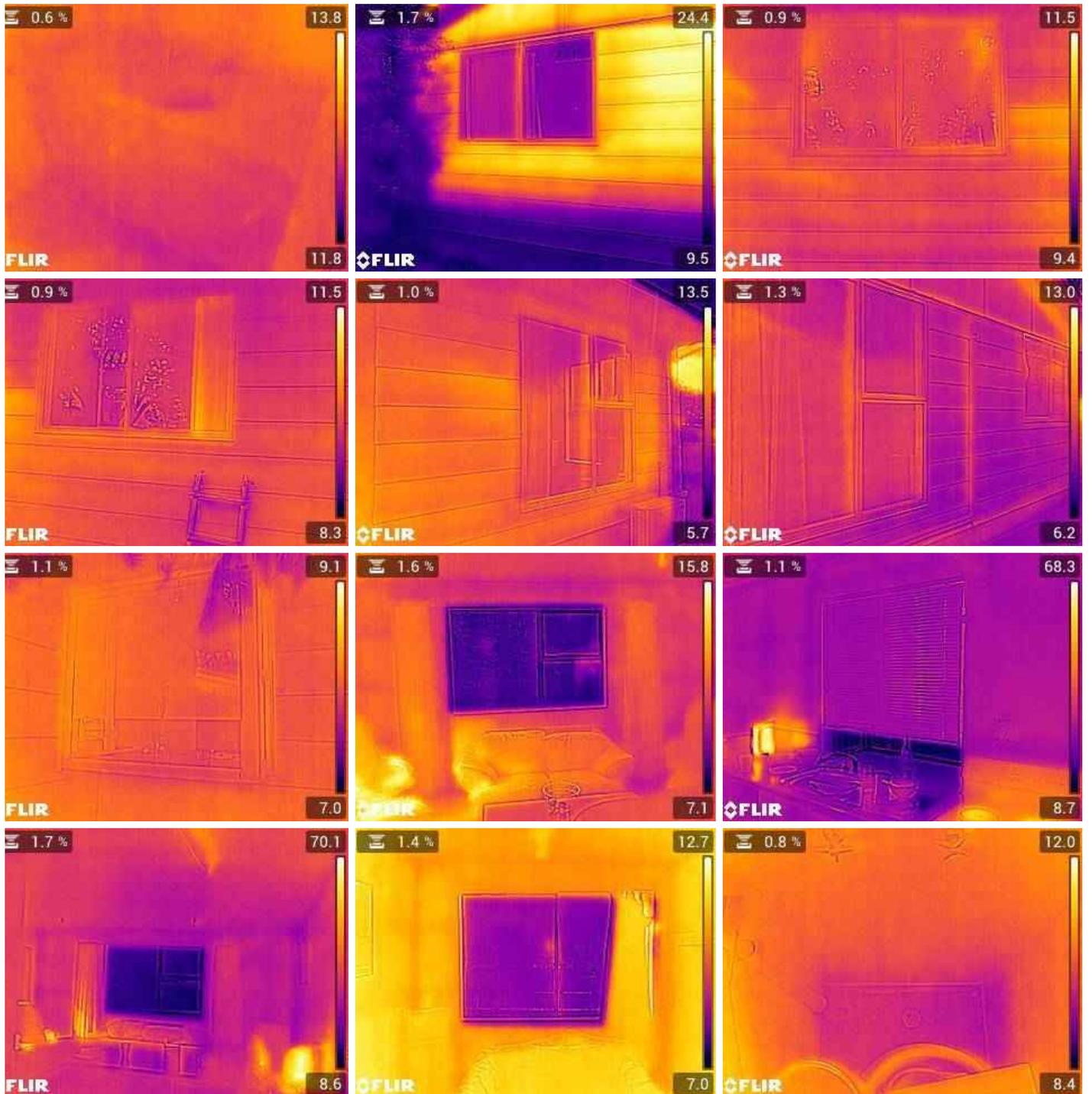
IF YOU ARE PRINTING A PDF COPY OF THIS REPORT YOU MAY WITH TO ONLY SELECT THE DOCUMENTATION ABOVE THIS SECTION.

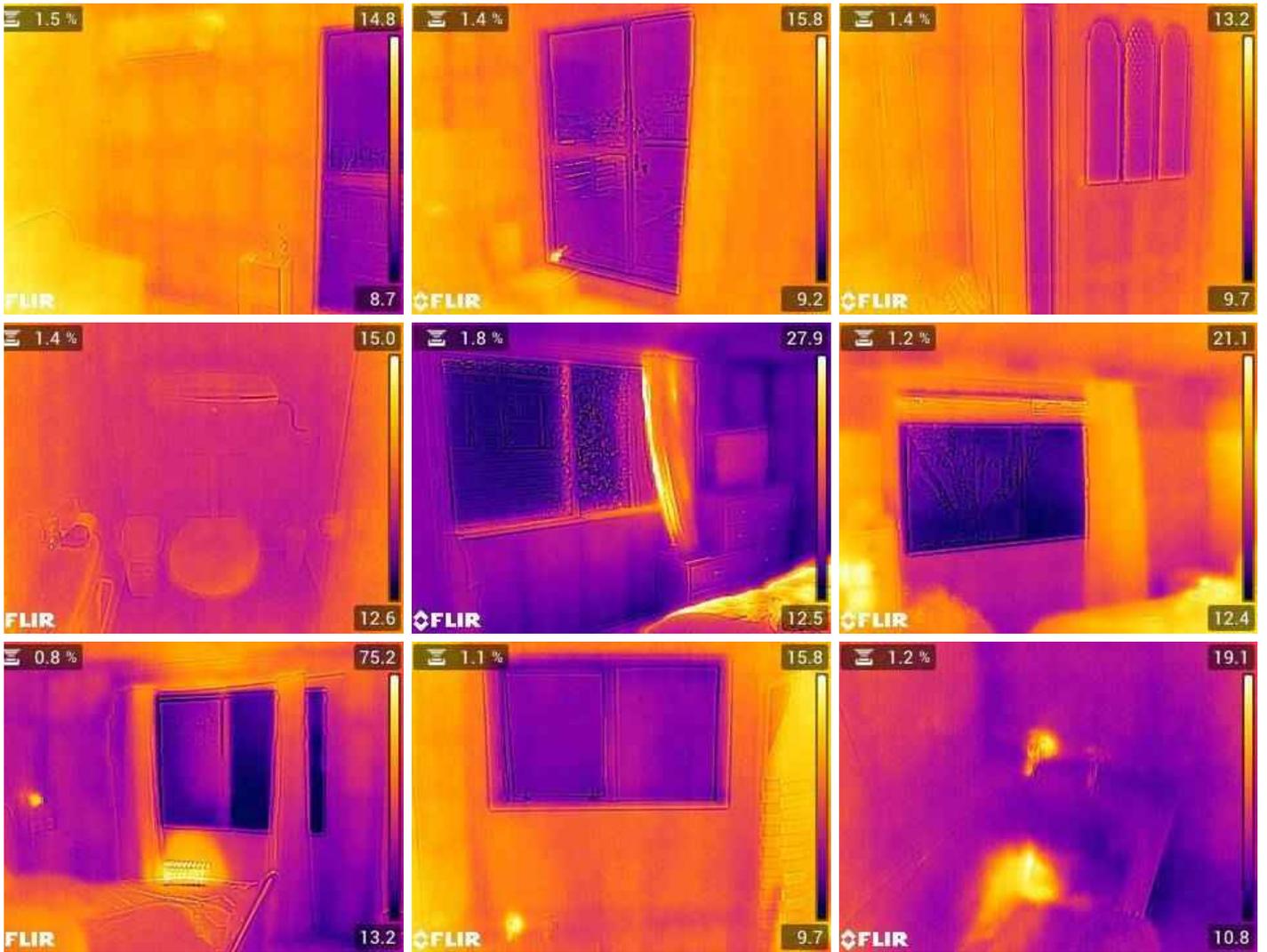
GALLERY

THERMAL IMAGING GALLERY ONLY

THESE IMAGES MAY SHOW AREAS INSPECTED FOR MOISTURE, MOISTURE INGRESS AND/OR DAMAGE.

**This does not mean there was no moisture in any of the areas documented. There may be areas deemed inaccessible and/or areas that where it was not possible to view by eye and/or the thermal imaging camera was not able to detect thermal differences due to relative humidity at the time. This is a gallery only and therefore may contain images that we used to locate moisture.*





26: INFORMATION | MAINTENANCE

Information

GENERAL INFORMATION

MOISTURE DETECTION INFORMATION

With limited time at each inspection, there could be areas of moisture not detected at the time of inspection. Any moisture readings and/or absence of elevated moisture levels, found at the time of inspection only apply to the date and time they were inspected. The opposite side of any moisture detection is also checked to identify possible causes and/or damage. Areas indicated to show moisture/thermal differences are usually first found with the FLIR Thermal Imaging Camera and where possible they are double checked and confirmed with a FLIR Pin Probe and/or FLIR Moisture Meter. The photos provided are to show the areas of concern, and not the definitive example of moisture. It is not possible to fully document our inspection process as it would take time and distract from the inspection system itself.

Thermal imaging: Thermal imaging does not show "moisture" As the name states, it identifies different temperatures. Thermal imaging is used to locate areas of concern that we can then investigate further. It is also used to track moisture through thermal patterns to its point of origin.

GENERAL INFORMATION

There could be areas with excessive wear and tear not visible at the time of inspection. Some individual items featured in an observation, may only be noted with a photo. This is because we deem the photo in itself explanation enough. If you decide to have the work quoted by the appropriate trades person/s. We have provided a list of contractors that we consider to be reliable, honest trades people. However we can not be held responsible for any quotes and/or work carried out by these trades people. You will find a list of generic and custom limitations that may have restricted or otherwise inhibited the inspection, located at the end of this report.

NOTE: Any and all observations noted within this report apply to the time and date the of inspection only.

24/7

24 HOUR AFTER REPORT ASSISTANCE



0800 677 388
027 548 5573

CPRNZ@OUTLOOK.COM

WWW.CPRNZ.COM

RECOMMENDED CONTRACTORS LIST**RETAINING, FOUNDATION & BUILDING CONTRACTORS:**

[CLARK CONSTRUCTION](#) Phone: 0800 425 275

BUILDING CONTRACTORS:

[WELLINGTON BUILDING SERVICES](#) Phone: 04 472 4443

CLADDING & MONOLITHIC CLADDING CONTRACTORS:

[TEXTURITE CLADDING](#) Phone: 027 341 3454 Phone: 027 444 5720

ROOFING CONTRACTORS:

[ELEMENT ROOFING](#) Phone: 022 652 2022 Freephone: 0508 7663 7663

JOINERY CONTRACTORS:

[WESTVIEW ALUMINIUM JOINERY](#) Phone: 04 526 4400

[THERMALFRAME WINDOWS AND DOORS](#) Phone: (04) 589 3030 Freephone: 0800 50 51 51

ASBESTOS REMOVAL CONTRACTOR:

[HAZMAT ASBESTOS REMOVAL](#) Phone: 0508 429 628

PEST CONTROL SERVICES:

[PEST CONTROL SERVICES WELLINGTON](#) Phone: 0800 997 378

GROUND MOISTURE BARRIERS

[MOISTURE BARRIERS WELLINGTON](#) Phone: 021657387

ROTTEN TIMBER

ROT

Dry rot is caused when humidity (between 18 - 30%) and poor ventilation combine to provide the perfect habitat for fungal growth. As such, dry rot can attack any type of property from the very old to the newly built if **dry rot spores** are present or if the dwelling has **poor ventilation**.

Any affected timbers should be removed and replaced with pre-treated timber. Any remaining timbers at risk of being affected by the dry rot should be treated with an effective fungicide. Where the dry rot has passed through the masonry, it should be isolated using physical containment and / or masonry sterilisation.

THREE BROAD TYPES OF ROT

Brown rot

Brown rot, which can be dry or wet rot, tends to make the timber look darker. It is more common on soft woods and rare in hardwoods.

Timber affected by brown rot can easily be penetrated with a knife, and when the timber is dry, the affected area appears dark and has cross-grain cracks.

Once started, wet rot can continue to grow at lower moisture levels than other rots and will decay timber rapidly. Dry rot can transport the moisture it needs, allowing it to attack even dry timber. It is extremely destructive, so all timber affected by dry rot must be removed completely.

White rot

White rot, which is a wet rot only, gives timber a yellowish-white fibrous appearance. It prefers hardwoods and requires moderate to higher moisture levels to grow.

Soft rot

Soft rot may cause timber to darken or appear greyish but cannot always be seen from the outward appearance of the timber. In advanced stages of decay, the timber can easily be penetrated with a sharp knife. Soft rot requires high moisture levels to grow and is more commonly found on timber in contact with the ground.

Location of rot

Rot in timber is most likely to be found around brick chimneys, around windows, on weatherboards on the side of the house most exposed to the weather and in framing or weatherboards close to the ground.

One problem with stucco houses is where water has drained down the back of the stucco but become trapped around the bottom plate, leading to rot of that member, the bottoms of studs and sometimes even the bearer.

Dealing with rotted timber

When dealing with rotted timber:

- check that the source of the moisture has been identified and remedied
- remove all visible rot
- remove at least one metre of timber past the last visible sign of rot damage as the root system of the rot may be present in apparently sound timber – in some cases, it may prove easier to replace the entire piece of affected timber rather than trying to replace and strengthen a portion
- treat cut timber with a proprietary paint-on preservative.

MOULD**MOULD INFORMATION****Removal and clean-up for non-toxic moulds**

The moulds most commonly seen on surfaces around the house are generally not toxic. To remove them, wash the surface with warm water and household detergent, using a cloth or scrubbing brush depending on the surface. Rinse with clean water and allow the surface to dry thoroughly. If you wish you can then disinfect or sanitise the surface by repeated treatments with methylated spirits, but ensure the area is well ventilated. Mould may be removed from fabrics by washing.

Stachybotrys chartarum

Some types of moulds produce toxic compounds. *Stachybotrys chartarum* is a toxic mould that is associated with the leaking building problems that New Zealand has experienced in recent years. Leaks originating from outside the building and from wet areas in the building provide the environment suitable for *Stachybotrys* to grow.

Stachybotrys is a greenish-black mould that grows on materials containing cellulose such as wood fibreboard, fibre-cement, the lining paper of gypsum board, kraft paper wall and roof underlays, wallpaper and timber when it is subject to repeated wetting. It is almost always within the wall cavity, not within the rooms.

Finding *Stachybotrys* in a building does not immediately mean that the building occupants have been exposed to allergens or toxins. While it is growing, a wet slime covers the *Stachybotrys* spores, preventing them from becoming airborne. Exposure only occurs when the mould has died and dried up.

Testing for Stachybotrys

If *Stachybotrys* is suspected, investigate from outside if possible, by carefully removing a small portion of cladding (or lining, if access is easier from the inside) so a sample of the mould can be taken for testing. Wear a mask or breathing filter and disposable gloves and ensure that no skin is exposed.

Follow the procedure described below to take a sample:

- Take a strip of clear adhesive tape about 100 mm long, place it over the mould and press firmly.
- Remove the tape and place onto non-stick baking paper. Fold the paper around the tape and place in a plastic bag.
- Securely seal the bag.
- Send the sample to a testing laboratory such as Biodet Services Ltd (www.biodet.co.nz), Airlab Ltd (www.airlab.co.nz) or Plant Diagnostics (www.plantdiagnosticslimited.co.nz).

Removal and clean-up procedures for toxic moulds

If toxic mould is found in a building, a specialist contractor should be employed to carry out the removal.

COST OF PAINTING EXTERIOR CLADDING SYSTEMS

PAINTING | REPAINTING

Repainting your home exterior is a great way to refresh your home and improve its street appeal - however for a long-lasting result, it needs to be done right. To find out what costs are involved in a high-quality exterior paint job, keep reading.

What costs are involved?

Experienced professional painters usually charge upwards of \$30 p/h. With that in mind, the timeline of your painting project will vary depending on the state of the exterior of your house. Cleaning and preparing your home exterior usually takes around two days - longer if repairs are required, if you live in a large house or if certain areas are difficult to access. From there, the painting will take at least three days, depending on the size of your home, and the weather.

On top of labour costs, you will need to factor in the cost of the primer and paint you select, the costs of any required repairs and potentially the equipment required to clean the house exterior in the first place.

Typically, the cost of hiring a professional to paint the exterior of a home will start from around \$120 per m2. This price includes a few minor repairs which are typical when painting house exteriors; such as replacing a few weatherboards, rotten fascias and updating the colour scheme.

When painting a house exterior, there are a few safety and cost considerations to be mindful of.

"Caution should always be given to the presence of asbestos in the eaves, if replacing rotten fascias as part of the work, as this can be an added expense. Similarly, some houses have the power supply to the house through the fascia. Replacing that fascia, if rotten, requires the disconnection and reconnection of the power which can result in significant additional charges."

The cost that always shocks people is scaffolding, scaffolding for multi level properties can be very expensive, and if for some reason the job gets extended the cost for extended scaffolding hire can drain away any profits you might have made by painting the house before putting it on the market.

Plan ahead to avoid this extra cost.

All costs included, a full exterior paint, carried out by a professional, might fall within the range of ***\$15,000 - \$30,000+**
This does not include scaffolding costs.

***Please note: these costs are rough estimates only and are subject to change.**

What should I look for in a good painter?

When seeking out a painter, opt for experience and quality over a low price - a painter who knows what he/she is doing will ensure your surface is properly prepared and that the final result is of a high quality. Depending on the state you live in, you should check that your painter is licensed and insured to work on your property. Check their references so you have an idea of their quality of service, and request a fixed-quote before any work begins.

What steps should be taken in preparing for exterior painting?

Before any painting work begins, your home exterior will need to be prepped. This will likely include water blasting your house and then scraping off the original paint - as some paints may be lead-based, it's best to consult a professional who understands how to remove this safely. Next, the surface will need to be sanded down before primer is applied. Before moving on to painting, it's important to fill in any gaps or holes that might create an uneven finish. Keep in mind that every house is different, and yours may require more or less prep work than another.

High pressure water blasting can do serious damage to you cladding, if not used correctly.

The finish is largely determined by the preparation. This might include: replacing all damaged/rotten timber as well as sanding and preparing the surfaces to a high standard. A high-quality paint will also help with a long-lasting quality finish.

How often should you be re-painting my house exterior?

The frequency in which you will need to re-paint your home will depend on the climate and environment your home is located in, the cladding and the quality of its last paint job. If the paint will be under harsh summer, winter or coastal conditions, chances are it will need to be re-done around every 7 years or less. However, if you live in a more mild climate, you might not need to re-paint for another 15-20 years. If you own a monolithic clad property, you will need it painted every 2-3 years to maintain the weatherproof seal.

Will painting your home add to its value?

Your home exterior is the first thing that potential buyers will see, so it's important to make it presentable. A refreshed home exterior can make all the difference between a viewer being interested or looking elsewhere.

INSULATING EXISTING HOMES

INSULATING EXISTING HOMES

Many houses built before 1978 Building Code regulations took effect have no insulation. Even post-1978 houses may lack sufficient insulation. We look at how to insulate the roof space, walls, floors and windows of existing homes.

Insulation is most effective when it achieves unbroken coverage around the building. If there are any breaks in the insulating material, heat can escape.

If you are putting in insulation in an existing house, for example when you are renovating, be conscious that any gaps or interruptions in the insulating material will significantly reduce its insulating qualities.

ROOF

For older homes with a space under the roof, concentrate on ceiling insulation first. It's usually easiest and where you lose most heat.

If you're doing the installation yourself, your choices are blanket segments or a blanket roll of insulation. Loose or blown products require specialist equipment. Any of the glass fibre, wool or polyester products will do the job.

If you use your roof space for storage, be careful of damaging or disturbing the insulation. Glass fibre insulation is more easily damaged than wool or polyester. Loose fill is easily disturbed.

Check the access into your roof space. If it's too small to let you get a bulky roll of insulation through the access hole, you may need insulation that is cut into segments. Or you may need to install a larger access door. Access hatches should be insulated too.

Ensure insulation fits snugly between joists. Even small air gaps will significantly reduce effectiveness. With bulk materials, fit 1 layer between the joists and another over the top. If you use a blanket-type insulation to cover the ceiling joists and prevent thermal bridging you need an insulation thickness of at least 150mm, preferably 200mm (about R2.4 to R3.2). However, covering the ceiling joists could make moving safely around the ceiling space difficult. It can be a good idea to use a plank to span several joists to make moving around safer.

Insulate out to the edges of the ceiling, but not over the top plate. Gaps will either allow heat to escape or cold air to blow under the insulation.

In areas prone to frost, insulate cold water pipes separately with special pipe insulation. They will no longer be warmed by heat from the house if they are above the insulation. Always insulate hot water pipes in this way to avoid wasting heat.

Try to get the insulation under electrical wiring. Wires may overheat if they are covered by thick insulation and a large current is flowing through them.

Recessed light fittings can compromise the effectiveness of ceiling insulation. If you can afford it, we recommend any recessed lighting that is not rated CA (closed abutted) be removed. Such downlights need air holes to be cut in the surrounding insulation to avoid overheating and risking fire. These holes reduce the effectiveness of your insulation. CA-rated recessed light fittings are now available that allow insulation to touch them.

Some kitchen and bathroom vents may also allow warm air to escape.

Leave a clearance around any heating appliance flue that penetrates the insulation. The manufacturers of the appliance will have specified the size of the clearance.

Loose fill insulation products are worth considering if cost is a concern, if you have a low-pitched roof that makes it difficult to access the ceiling space, and/or if you don't need to get into your roof space very often. The insulation can be built up to give total coverage over the joists, reducing heat loss through the timber. It can also be blown into the inaccessible corners and edges of low-pitched roofs. Loose fill insulation is prone to moving around if draughts blow through your roof space. It will also settle over time and become less effective.

FLOOR

They may look nice, but bare tongue-and-groove floorboards can let a lot of cold air through the joints, especially when it's windy. Bulk insulation can be fitted flush up against the underside of the floor between the joists. Bulk insulation products made from polyester, polystyrene, wool or glass-fibre are more commonly used.

Traditionally, foil was stapled under the floor joist to create a still-air gap. Where existing foil is in good condition with no gaps, rips or tears, it will offer some insulation benefit and can be left in place. The Building Code now bans the installation and repair of foil insulation, because of the risk of electrocution from accidentally piercing a live cable with staples or nails when installing foil. Since 2005, five people have died after being electrocuted when foil insulation they were installing came into contact with electrical wiring.

Other types of products will have their own specific installation requirements. Check with the supplier before starting the installation.

A layer of polythene sheet laid on the ground will be useful in reducing underfloor damp air. Use sheeting that is 250 microns thick and ensure that the joints are taped down and there are not gaps, rips or tears. A well ventilated underfloor space also helps keep the air dry.

Like your roof space, if you're in an area prone to frost then insulate your cold water pipes with special pipe insulation to reduce the risk of the pipes freezing. Likewise insulating hot water pipes will help avoid wasting heat.

Try to avoid surrounding electrical wiring to avoid wires overheating.

WALLS

Unlike installing insulation into existing roofs and floors, installing insulation into an existing wall will require applying for a building consent.

Accessing the wall cavity from either the inside lining or the outside cladding is difficult. Often the best time to install wall insulation is when wall linings are removed as part of other renovations.

There are different requirements depending on whether the wall has an existing wall underlay (or building paper) or not. The presence of wall underlay in one part of the wall doesn't guarantee that it's present or in good condition for other parts of that wall.

The wall cavity needs to be checked for signs of moisture or mould and followed-up as appropriate.

All the above possibly puts installing wall insulation into the "too hard" basket for many homeowners.

WINDOWS

There are many options available now for reducing the heat loss through the window glass such as adding additional panes of glass (double- or triple-glazing), using special coatings on the glass panes (low-E coatings) or using argon gas between the panes to slow down heat transfer.

Improvements to a window frame include adding thermal insulation within the window frame (thermally broken) or using more insulating materials such as PVC or timber.

The Window and Glass Association of New Zealand (WANZ) operates a 6-star labelling scheme (like the appliance rating labels) called Window Energy Efficiency Rating System (WEERS), which rates the energy efficiency of particular windows (the more stars the better). Many window retailers will have these ratings available for their products.

It can be expensive to replace a house lot of existing windows with higher performing windows. If you're looking for a cheaper option, consider installing secondary glazing.

MOISTURE IN THE HOME**MOISTURE IN THE HOME**

Every winter we hear and see stories of people living in extremely damp, mouldy conditions.

It's a symptom of living in older wooden houses in a temperate climate with inadequate heating, ventilation and insulation. However, it isn't just extreme cases that need to be fixed — most of us would be more comfortable if we reduced the dampness in our homes.

A damp home is an unhealthy home, there's no argument there. But it isn't just that — damp air takes more energy to heat than dry air, so it literally pays to remove moisture from your home.

Musty smells, mouldy walls and ceilings, weeping windows and damp clothes in wardrobes are all signs you need to reduce moisture and increase ventilation or heating.

Start by reducing dampness sources. Moisture gets into your home in many ways. One of the biggest sources is moisture evaporating up from the ground through your floors (as much as 40L per day per 100m²). Check for dampness under your house and fix any drainage, guttering, downpipe or plumbing problems — then consider installing a sealed moisture control sheet.

Other daily activities can add moisture to your home:

- Use pot lids when cooking to contain steam and a kitchen rangehood or fan that vents outside.
- Drying clothes inside can add 5L of moisture per load. Make use of good winter days to dry clothes outside. Using the fastest spin speed on your washing machine minimises the amount of drying needed. If you use a vented clothes dryer, ensure it vents outside.
- Cooking can add up to 3L a day. Use pot lids when cooking to contain steam and a kitchen rangehood or fan that vents outside.
- Showers and baths add up to 1.5L per day per person. Use an extractor fan when showering or taking a bath, or at least open a window. You can also fit a dome to your shower to contain moisture.
- Don't use unflued gas heaters to heat your home. Not only are they dangerous unless well vented, they add up to 1L of moisture to the air per hour.

Sources of moisture

Cooking	3.0/day
Clothes washing	0.5/day
Showers and baths	1.5/day (per person)
Dishes	1.0/day
Clothes drying (unvented)	5.0/load
Gas heater (unflued)	Up to 1.0/hr
Breathing, Active	0.2/hr per person
Breathing, Asleep	0.02/hr per person

Perspiration	0.03/hr per person
Pot plants	As much as you give them

Once the main sources of dampness are removed or reduced, you can think about ventilation. Just living and breathing adds moisture into the home, and we can't stop doing that. However, we can open windows to let a breeze through and vent moisture-laden air. It seems counter-intuitive to open windows on a cold winter day, but removing moisture will be healthier and make your heating more efficient. Get in the habit of airing your home every day or leaving windows slightly open.

Many of these tips are free or low-cost, but they can be highly effective. Further options start to get pricier.

You could consider a dehumidifier to target parts of the home that don't get enough airflow and remain damp. However, they aren't a magic bullet — the best dehumidifiers in our tests remove up to 9L per day at 12°C, but only desiccant models perform when it's colder. They are effective at drying smaller spaces, and act as a small heater too (they put out about 300 to 400W of heat).

MOULD

Mould is known to cause inflammation, allergies and infections.

It is a relatively straightforward process to remove mould from hard non-porous surfaces, such as glass or ceramic tile. However, removing mould from porous substances such as wallboard, wood and carpets is more difficult and more hazardous. This is because spores can be released when disturbing rotten material, which can cause inflammation, allergies and infections.

NEW HOMES

In new buildings, some moisture is trapped during the construction process. Wet timber may also have been used. The sequencing and timing of the construction process is important to avoid this and be sure to avoid storing construction materials out in the open where possible.

Under the floor

To prevent damp air from building up under the floor:

- Ensure there is sufficient ventilation. Vents are often obstructed by vegetation and should be cleared.
- Make sure water isn't draining from paths or gardens under the house. You may need to create channels or underground drains to divert surface run-off.
- Cover the ground area beneath your home with heavy-grade polythene, taped at the joints and trimmed neatly against the foundation walls.

Ventilating

Let moist air out and dry air in by:

- Opening your windows – especially in wet areas such as bathrooms and kitchens. Even in winter, it's worth opening windows to let the house dry out.
- Closing doors to contain steam/condensation in wet areas.
- Using extractor fans in bathrooms and kitchens (but never vent them into the roof space above the ceiling or under the floor. Always vent them outside).
- Venting clothes dryers to the outside. A typical load contains 5 litres of water. This is released as water vapour, which can end up creating thousands of litres of damp air.
- Installing vents into windows.
- Using a forced ventilation system. That said, forced ventilation systems can be expensive to install. Try to address the cause of the moisture build-up instead.

Insulating

- Block off draughts. Use draught seal tape around windows and doors. Block off unused chimneys, but ensure it's not an airtight seal as air needs to circulate into the chimney to allow drying if rain gets in.
- Insulate your ceiling. This helps keep your home warm and reduces condensation; 42% of heat loss is through the ceiling/roof. Older homes often don't have any ceiling or wall insulation.
- Consider installing double or secondary glazing.
- Check existing insulation is in good condition. As a guide, insulation should fill up to the top of the roof/ceiling joists.
- Insulate beneath the floor. The floor accounts for 10% of heat loss. You will need reasonable access under the floor and, in windy sites, the insulation will need to be protected by a separate layer of lining material, for example plywood or fibre cement.
- Well-fitted heavy curtains, drawn on winter nights, will help retain heat gained from the sun during the day.

Heating

- If the indoor temperature is at least 7°C warmer than the outdoor temperature, it'll prevent condensation forming on colder surfaces. The World Health Organisation recommends an indoor temperature of at least 16°C in bedrooms and 18°C in living areas.
- Use low levels of heat all the time rather than high levels in short bursts. This reduces condensation.
- Don't use unflued gas or kerosene heaters inside – they release up to 1L of water per hour.
- In damp cupboards, consider installing a cupboard heater.

UNDERFLOOR VENTILATION/VAPOUR BARRIERS

UNDERFLOOR VENTILATION/VAPOUR BARRIERS

For a suspended timber floor where the subfloor space cannot be 'adequately ventilated' then the ground is required to be entirely covered with a vapour barrier (see E2/AS1 Clause 10.2.7 and NZS 3604: 1999 Section 6.14).

This method can also be used as a retrofit solution to lower the relative humidity of the subfloor floor air in existing houses after ensuring adequate subfloor ventilation is also provided (see Build, October/November 2006, pages 34–36 or BRANZ Bulletin 457 Ventilation of enclosed subfloor spaces). Installation is described in section 9 of NZS 4246: 2006 Energy efficiency – Installing insulation in residential buildings.

FIBRE CEMENT MAINTENANCE

FIBRE CEMENT MAINTENANCE

THIS DOES NOT APPLY TO CLADDING CONTAINING ASBESTOS

Exterior House Washing Recommendations for Fibre Cement Siding and Trim

Follow these recommendations to clean the exterior of your home and to help maintain the beauty and value of your James Hardie siding.

- Wash down the exterior surfaces every 6 to 12 months with a garden hose to remove dirt and debris, gently clean your siding with a soft brush or wet soft cloth in a side to side motion in the direction of the plank siding.

NOTE: Clean by working small sections at a time, starting from the top down to prevent dripping or streaking onto the cleaned area.

- A low pressure water spray* and a soft medium bristle (non-metal) siding cleaning brush is most suitable for cleaning fiber cement products.

NOTE: Acid and high pressure washing can damage the fiber cement surface and is not recommended.

- Clean James Hardie ColorPlus® products by using water and a soft brush or cloth. For stubborn dirt or stains, a mild detergent and a soft brush may be used.

NOTE: For paint applied in the field, refer to the paint manufacturer for washing and maintenance requirements.



Pictured clockwise from top left: Soft All Paint Brush, Horsehair Brush, Siding Brush, Chip Brush,

***Pressure Washer Warning:**

Extra care should be taken when cleaning your siding and trim using a pressure washer. To minimize the chance of damaging your siding and trim use a wide fan tip, keep a minimum of 6 feet from the wall, and keep the pressure below 1500 psi.

General Fibre Cement Siding Maintenance

Maintaining the exterior of your home helps prevent water intrusion and is an important part of sustaining the beauty and value of your home. The extent and nature of maintenance will depend on the design of your house, its geographic location, the amount of weather and sun exposure, and the landscaping near your house. As a guide, it is recommended that normal fiber cement maintenance tasks and care include:

- Installing gutters and downspouts on your home—if they are not already present when you purchased the home.
- Cleaning out your gutters, blocked pipes, and overflows of any debris, leaves, twigs and dirt.
- Keeping vegetation such as shrubs, bushes, and small trees trimmed back and away from the home and siding.
- Adjusting sprinkler systems so they do not excessively spray on siding or continuously soak the ground near your house.
- Avoiding direct contact with deicing salts, as these salts may prematurely damage the finished look of the siding. We recommend the use of sand or gravel to manage snowy or icy surfaces near siding.
- Ensuring required external ground clearances (typically 6 in.) and drainage slopes are maintained. **NOTE:** Do not in fill landscaping up to the siding.

Re-Painting Siding

ColorPlus® Products

- ColorPlus® Touch-up Kits can be used to cover nicks, scrapes and nail holes that may occur over time.

- If the touch up area is larger than the size of a dime, the use of ColorPlus® Touch-up Kit is NOT recommended. It is advised to replace the damage siding with a new section of ColorPlus® siding.



Primed Products

- If your James Hardie siding was originally painted after it was installed on your home, then check the original paint manufacturer's recommendations for reapplication of paint.

NOTE: Do not use stains or oil-based/alkyd paints on James Hardie products.



Fiber Cement Siding Repair or Patching

- Re-applying caulking when it has begun to show signs of wear can help keep moisture from getting into the wall cavity. These areas include, but not limited to, penetrations, flashings, plank and trim connections, and in some cases, between plank joints.

NOTE: James Hardie recommends the use of caulks and sealants that remain permanently flexible. Look for the words "permanently flexible" written clearly on the label or in the accompanying literature. For best results, use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher, or a Latex Joint Sealant complying with ASTM C834. Caulking/sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions or ASTM C1193.

- Dents, chips, cracks and other minor surface damage in James Hardie siding and trim products can be filled with cementitious patching compound.

Refer to manufacturer's recommendations for products that are compatible with fibre cement.

INSPECTOR INFORMATION: T MACKAY**INSPECTOR:****TRAVIS MACKAY****COMPANY:****COMPREHENSIVE PROPERTY REPORTS LTD****QUALIFICATIONS AND BACKGROUND:**

Trade Qualified Inspector NZS 4306:2005: 7000+ Published Reports.

Expert Mediation/Trial Witness Testimonials (Multiple Specialized Skill sets).

Engineering Qualifications and Structural work history: Professional Engineer: (4-year Bachelor of Engineering) - (Honours) Qualified Level 6 Aeronautical Engineer. NZ Chartered Member Structural Engineering. Structural Engineer: CMEngNZ 1016320. Qualified Fitter Welder (All tickets held, all positions) - (NDT Inspector level).

MS Structural Reinforcement, Design, Fabrication and Fit-out of EQC buildings (Residential and Commercial). EQC Assessment Expert.

General Construction and Conventional Cladding work history: 25+ years in the residential and commercial engineering and building sectors. Registered Builder BP-103979. Property investing, Building new spec homes, Renovating 100+ year old villas and bungalows, Maintenance scheduling and maintenance work on all construction eras and systems.

Monolithic Construction and Leaky Homes work history: Original cladding systems install, Repair work of moisture damaged homes, Full recladding of homes on the now abolished Leaky Homes Register. Qualified L3 Thermographer. (Designer of this ANZ Accepted Inspection Report Template and Inspection System)

Other Related Qualifications: Autodesk Certification in Draft and Design AutoCAD. 6x Current International Tool Patents in the Structural Fabrication Fields and 1x Current International Design Patent in the Automotive Industry.

I hereby certify that I have carried out the inspection of the property site at the above address in accordance with NZS 4306:2005 residential property inspection and I am competent to undertake this inspection. An inspection carried out in accordance with NZS 4306:2005 is not a statement that a property complies with requirements of any Act regulation or bylaw, nor is the report a warranty against any problems developing after the date of the inspection. This report represents the general condition of the home listed above. As with all homes it is important to remember that maintenance and improvements to a house will be required from time to time. The improvements recommended in this report are not considered unusual for a home of this age or type. NZS 3602 Timber and wood-based products for use in buildings NZS 3640 Chemical preservation of round and sawn timber NZS 3604 Timber-framed buildings

LIMITATIONS**LIMITATIONS**

Limitations listed may or may not directly apply to the specific inspection. This list is to show some of the possible limitations faced during the inspection.

Area/s Not accessible. During the time of the inspection the inspector will check that insulation has been installed in accessible visual areas only. Septic system not inspected Tub / sink overflows not tested. Service size cannot be determined. The inspector is not required to and does not physically walk on roof surfaces in excess of a 3.6 metres, roofs inaccessible by a 3.6 metre ladder, covered by moisture, moss, debris or frost, or of any type not intended to be walked on (e.g. slate, clay tile, concrete tile, aluminum, wood shingles, wood shakes, etc). The inspector is not required to determine or report the age or life expectancy of any roof coverings. Roofs that cannot be accessed directly by the inspector may have defects which are not visible from the ground or the roof's edge. This report neither addresses future leaks nor does it certify that the roof is leak-free. The roof space was not inspected due to limited or no access visible at the time of inspection. Chimney flues not inspected. Insulation can not be seen in the wall cavity areas, unless looked at invasively. Service size could not be determined. Service wires could not be sized and fuse ratings (if applicable) could not be read. Structural inspection limited to visible and accessible areas of the foundation only, as per inspection package or client request. Buried tanks are not included in the inspection. Environmental Consultants can assist if this is a concern. Chimney inspection limited by inaccessibility of roof. Foundation inspection limited to visible and accessible areas only. NO ACCESS TO UNDER FLOOR. Security systems, including smoke detectors, may have been sighted but not tested. Storage in attic. Visual inspection not possible, or incomplete. The main disconnect cover was not removed. Car in garage. Visual inspection not possible, or incomplete. Continuity of air / vapour barrier not verified. Old sewer lines are prone to blockage. Roof inspected by ladder at the edge of the roof and/or by drone. The crawlspace was inspected by entering the area. The power was turned off throughout the house. Weather Distortion. Access Blocked. Due to typical construction constraints, evaluation of plumbing components is limited to readily accessible, visible areas. Furniture and/or other objects restricted access. No access to garage. Visual inspection not possible, or incomplete. Obstructed. The foundation is a slab-on-grade configuration. It is not possible to inspect under this type of foundation during a normal home inspection. The fuse block(s) were not pulled. The roofing inspection was limited by being too fragile to walk on. Typically, roofs covered in anything other than asphalt shingles should not be walked on as the covering is easily damaged. Box cannot be opened without shutting off the power or breaking the lock. Exterior wall(s) inaccessible. Visual inspection not possible. Inspection of chimneys, flues and vents is limited to readily accessible and visible external conditions only. Generally, flues, liners and footings are not visible for inspection. Limited access to sub floor, insulation may not have been sighted. Recreational facilities, such as spas, saunas, steam baths, pools, tennis courts, or exercise/entertainment equipment, is not inspected. The knee-wall space was not inspected due to limited or no access visible at the time of inspection. Unable to sight Drainage pipe work. Concrete tiles become porous over time and would need resealing to exterior or replacement. Gas shut off. Limited or no access to ceiling space - insulation may not have been sighted. No comments/recommendations made with respect to cosmetic finishes. Safety controls, whether automatic or manual, are not tested because these controls are rarely used by the homeowner (other than in an emergency) and activating these safety controls could damage the controls or equipment. These controls should be tested during annual servicing. Storage against exterior wall(s). Visual inspection not possible. There may be defects hidden behind the finished walls or insulation which are not visible at the time of inspection. The service box was locked by the utility. Finishes, insulation and/or storage, at the time of the inspection, conceal structural components which may, or may not, have defects. Flashing inspection limited by inaccessibility of roof. Heat loss calculation are not done as part of the home inspection. These calculations are usually done prior to construction in order to determine the required capacity of the heating system. There are specialists available if this is a concern. Main valve not located. Plants and/or Garden growth restricted access. Safety hazard to inspector. The system ground was not visible or was inaccessible. Vegetation (vines, shrubs, trees, etc) against the build restricted visual inspection. Complete heat exchanger is not visible or inaccessible. At most, only 10% of the heat exchanger is visible through visual inspection. There may be problems with the heat exchanger that are not apparent with this inspection. Main shut off valve not tested., New finishes, paint and/or trim hide historical clues to condition of house. No access to wall space. The roofing inspection was limited by slope (more than 3.6 metres). The service panel / main disconnect was not accessible. Access to the power service panel / main disconnect was restricted. Isolating / relief valves not tested. Restricted or no access under decks. Storage in some areas limited inspection. The roofing inspection was limited by restricted or no access. Absence of historical clues due to new paint/finishes. Ceiling Space sighted from manhole, very limited access. Concealed plumbing not inspected. Restricted or no access under steps. The attic was inspected by entering the area. The roofing inspection was limited by height. Not easily accessible. Electrical tests could not be performed and equipment / appliances requiring electricity could not be operated. Elevators not inspected. Limited pool inspection. The objective of our limited visual pool inspection is to determine if the pool and related equipment may benefit from a more thorough inspection by a qualified pool specialist. The scope of our inspection includes a limited visual inspection of the pool electrical system, primary circulation system, pool barrier system, the pool interior surface and surrounding deck. We do not dismantle components such as filters, pumps and heaters. We do not test water chemistry. We do not test or operate pool heaters, cleaning systems, control valves, chemical injectors or similar components. Radiator / Zone Values Not Tested. The roofing inspection was limited by trees. Water treatment equipment not tested or inspected. Concealed electrical components are not inspected. Fascia and soffits not fully accessible or visible. Inspection limited to visible, accessible areas only. Quality of chimney draw cannot be determined. The roofing inspection was limited by another building. Exterior inspection from ground level and/or by drone. Lead may be present in paint if the house was built prior to 1978. Testing for the presence of lead paint is not part of this inspection. Environmental Consultants can assist if this is a concern. Neither the condition nor flow can be evaluated through underground or covered water or sewer/waste lines. The power was turned off in

some areas of the house. Electrical tests could not be performed and equipment / appliances requiring electricity could not be operated. The roofing inspection was limited due to installed solar panels. Asbestos may be present in many building products and materials. Environmental Consultants can assist if this is a concern. The roofing inspection was limited by slippery, wet conditions. The system has been shut off or is otherwise inoperative. As turning the system on could result in an unsafe situation, the appliance(s) will not be able to be tested. Asbestos may be present in many building products and materials. Environmental Consultants can assist if this is a concern. Moisture problems may result in visible or concealed mould growth. Environmental Consultants can assist if this is a concern. Lead may be present in exterior paint if the house was built prior to 1992, or in the soil. Testing for the presence of lead is not part of this inspection. Environmental Consultants can assist if this is a concern. Step flashing installation and material restricted by the use of sealant. Assessment of flashings is limited to readily accessible and visible sections only. Most roof leaks will occur at the flashings. Poor weather may have limited the inspection process. Roofing/material type comments are intended to provide a general description of materials used. Actual materials were not verified

The inspector shall perform:

a non-invasive visual examination of the readily accessible, visible, and installed systems and components of the building (listed in Section 4.0 [Standards of Practice](#)) moisture, temperature and humidity measurements ([refer to Section 4.8 Moisture, Humidity, and Temperature](#))

mold samples according to the IAC2 Mold Sampling Procedures ([refer to Section 5.0 IAC2 Mold Sampling Procedures](#))

The inspector shall report:

moisture intrusion, water damage, musty odors, apparent mold growth, or conditions conducive to mold growth; results of a laboratory analysis of all mold samplings taken at the building; and any system or component listed in Section 4.0 [Standards of Practice](#) that were not inspected and the reason(s) they were not inspected.

Interior

The inspector shall inspect: A. a representative number of doors and windows by opening and closing them; B. floors, walls and ceilings; C. stairs, steps, landings, stairways and ramps; D. railings, guards and handrails; and E. garage vehicle doors and the operation of garage vehicle door openers, using normal operating controls. II. The inspector shall describe: A. a garage vehicle door as manually-operated or installed with a garage door opener. III. The inspector shall report as in need of correction: A. improper spacing between intermediate balusters, spindles and rails for steps, stairways, guards and railings; B. photo-electric safety sensors that did not operate properly; and C. any window that was obviously fogged or displayed other evidence of broken seals. IV. The inspector is not required to: A. inspect paint, wallpaper, window treatments or finish treatments. B. inspect floor coverings or carpeting. C. inspect central vacuum systems. D. inspect for safety glazing. E. inspect security systems or components. F. evaluate the fastening of islands, countertops, cabinets, sink tops or fixtures. G. move furniture, stored items, or any coverings, such as carpets or rugs, in order to inspect the concealed floor structure. H. move suspended-ceiling tiles. I. inspect or move any household appliances. J. inspect or operate equipment housed in the garage, except as otherwise noted. K. verify or certify the proper operation of any pressure-activated auto-reverse or related safety feature of a garage door. L. operate or evaluate any security bar release and opening mechanisms, whether interior or exterior, including their compliance with local, state or federal standards. M. operate any system, appliance or component that requires the use of special keys, codes, combinations or devices. N. operate or evaluate self-cleaning oven cycles, tilt guards/latches, or signal lights. O. inspect microwave ovens or test leakage from microwave ovens. P. operate or examine any sauna, steam generating equipment, kiln, toaster, ice maker, coffee maker, can opener, bread warmer, blender, instant hot-water dispenser, or other small, ancillary appliances or devices. Q. inspect elevators. R. inspect remote controls. S. inspect appliances. T. inspect items not permanently installed. U. discover firewall compromises. V. inspect pools, spas or fountains. W. determine the adequacy of whirlpool or spa jets, water force, or bubble effects. X. determine the structural integrity or leakage of pools or spas.

The Inspector/s is Not Required and Shall Not Move items of furniture during the Inspection. We here by make note, that any issues concealed and / or not inspected due to the restrictions of any such household items, therefore not included in the final report are advised to be re-inspected at a time and cost agreed by parties involved. With our disclosure being that costing may well total the sum of a secondary report.

Kitchen

10.1 The inspector shall inspect: F. installed ovens, ranges, surface cooking appliances, microwave ovens, dishwashing machines, and food waste grinders by using normal operating controls to activate the primary function. 10.2 The inspector is NOT required to inspect: G. installed and free-standing kitchen and laundry appliances not listed in Section 10.1.F. H. appliance thermostats including their calibration, adequacy of heating elements, self cleaning oven cycles, indicator lights, door seals, timers, clocks, timed features, and other specialized features of the appliance. I. operate, or confirm the operation of every control and feature of an inspected appliance.

Attic: Ventilation and Insulation

The inspector shall inspect: A. insulation in unfinished spaces, including attics, crawlspaces and foundation areas; B. ventilation of unfinished spaces, including attics, crawlspaces and foundation areas; and C. mechanical exhaust systems in the kitchen, bathrooms and laundry area. II. The inspector shall describe: A. the type of insulation observed; and B. the approximate average depth of insulation observed at the unfinished attic floor area or roof structure. III. The inspector shall report as in need of correction: A. the general absence of insulation or ventilation in unfinished spaces. IV. The inspector is not required to: A. enter the attic or any unfinished spaces that are not readily accessible, or where entry could cause damage or, in the inspector's opinion, pose a safety hazard. B. move, touch or disturb insulation. C. move, touch or disturb vapor retarders. D. break or otherwise damage the surface finish or weather seal on or around access panels or covers. E. identify the composition or R-value of insulation material. F. activate thermostatically operated fans. G. determine the types of materials used in insulation or wrapping of pipes, ducts, jackets, boilers or wiring. H. determine the adequacy of ventilation.

Foundation

The inspector shall inspect: A. the foundation; B. the basement; C. the crawlspace; and D. structural components. II. The inspector shall describe: A. the type of foundation; and B. the location of the access to the under-floor space. III. The inspector shall report as in need of correction: A. observed indications of wood in contact with or near soil; B. observed indications of active water penetration; C. observed indications of possible foundation movement, such as sheetrock cracks, brick cracks, out-of-square door frames, and unlevel floors; and D. any observed cutting, notching and boring of framing members that may, in the inspector's opinion, present a structural or safety concern. IV. The inspector is not required to: A. enter any crawlspace that is not readily accessible, or where entry could cause damage or pose a hazard to him/herself. B. move stored items or debris. C. operate sump pumps with inaccessible floats. D. identify the size, spacing, span or location or determine the adequacy of foundation bolting, bracing, joists, joist spans or support systems. E. provide any engineering or architectural service. F. report on the adequacy of any structural system or component.

Heating

The inspection of the heating system is in conjunction with the NZS4306:2005 Residential Property Inspection Standard guidelines. According to the guidelines, the home inspector will inspect the installed heating equipment, the vent systems, flues and chimneys where readily accessible.

Roof

The inspector shall inspect from ground level or the eaves: A. the roof-covering materials; B. the gutters; C. the downspouts; D. the vents, flashing, skylights, chimney, and other roof penetrations; and E. the general structure of the roof from the readily accessible panels, doors or stairs. II. The inspector shall describe: A. the type of roof-covering materials. III. The inspector shall report as in need of correction: A. observed indications of active roof leaks. IV. The inspector is not required to: A. walk on any roof surface. B. predict the service life expectancy. C. inspect underground downspout diverter drainage pipes. D. remove snow, ice, debris or other conditions that prohibit the observation of the roof surfaces. E. move insulation. F. inspect antennae, satellite dishes, lightning arresters, de-icing equipment, or similar attachments. G. walk on any roof areas that appear, in the inspectors opinion, to be unsafe. H. walk on any roof areas if doing so might, in the inspector's opinion, cause damage. I. perform a water test. J. warrant or certify the roof. K. confirm proper fastening or installation of any roof-covering material.

Exterior

The inspector shall inspect: A. the exterior wall-covering materials, flashing and trim; B. all exterior doors; C. adjacent walkways and driveways; D. stairs, steps, stoops, stairways and ramps; E. porches, patios, decks, balconies and carports; F. railings, guards and handrails; G. the eaves, soffits and fascia; H. a representative number of windows; and I. vegetation, surface drainage, retaining walls and grading of the property, where they may adversely affect the structure due to moisture intrusion. II. The inspector shall describe: A. the type of exterior wall-covering materials. III. The inspector shall report as in need of correction: A. any improper spacing between intermediate balusters, spindles and rails. IV. The inspector is not required to: A. inspect or operate screens, storm windows, shutters, awnings, fences, outbuildings, or exterior accent lighting. B. inspect items that are not visible or readily accessible from the ground, including window and door flashing. C. inspect or identify geological, geotechnical, hydrological or soil conditions. D. inspect recreational facilities or playground equipment. E. inspect seawalls, breakwalls or docks. F. inspect erosion-control or earth-stabilization measures. G. inspect for safety-type glass. H. inspect underground utilities. I. inspect underground items. J. inspect wells or springs. K. inspect solar, wind or geothermal systems. L. inspect swimming pools or spas. M. inspect wastewater treatment systems, septic systems or cesspools. N. inspect irrigation or sprinkler systems. O. inspect drain fields or dry wells. P. determine the integrity of multiple-pane window glazing or thermal window seals. The inspection of this home's exterior system is carried out in conjunction with the NZS4306:2005 Residential Property Inspection Standard.

According to the guidelines, the home inspector will inspect the exterior wall covering, flashing and trim; all exterior doors, attached decks, balconies, stoops, steps, porches, and their associated railings; the eaves, soffits, and fascias where accessible from ground level; the vegetation, grading, surface drainage, and retaining walls on the property when any of these are likely to adversely affect the building; walkways, patios, and driveways leading to dwelling entrances. The inspector will describe the exterior wall covering. The home inspector is not required to inspect screening, shutters, awnings, and similar seasonal accessories; fences; geological, geo-technical or hydro-logical conditions; recreational facilities; outbuildings; seawalls, break-walls, and docks; erosion control and earth stabilization measures.

See the NZS4306:2005 Residential Property Inspection Standard for more detail.

While every effort is made to find all areas of concern, some problems may go unnoticed. The inspection is not meant to be technically exhaustive. Please keep in mind that the inspector has your best interest at heart. Any repair items mentioned in this report should be considered before purchase. It is highly recommended that qualified contractors be used to further inspect or repair issues identified in this inspection report.

Gutters, downspouts, lot grading, window wells, walks, patios, driveways and landscaping all contribute to basement leakage. Basements can leak even if cracks are not visible. That being said, a basement, which is not leaking today, may leak at any time for any number of reasons.

This inspection is not a guarantee that the basement will never leak.

Fascia and soffits are generally inaccessible and not fully visible. Often, this area is prone to concealed rot, insect and pest damage.

Electrical

The inspector shall inspect: A. the service drop; B. the overhead service conductors and attachment point; C. the service head, gooseneck and drip loops; D. the service mast, service conduit and raceway; E. the electric meter and base; F. service-entrance conductors; G. the main service disconnect; H. panelboards and over-current protection devices (circuit breakers and fuses); I. service grounding and bonding; J. a representative number of switches, lighting fixtures and receptacles, including receptacles observed and deemed to be arc-fault circuit interrupter (AFCI)-protected using the AFCI test button, where possible; K. all ground-fault circuit interrupter receptacles and circuit breakers observed and deemed to be GFCIs using a GFCI tester, where possible; and L. smoke and carbon-monoxide detectors. II. The inspector shall describe: A. the main service disconnects amperage rating, if labelled; and B. the type of wiring observed. III. The inspector shall report as in need of correction: A. deficiencies in the integrity of the service entrance conductors insulation, drip loop, and vertical clearances from grade and roofs; B. any unused circuit-breaker panel opening that was not filled; C. the presence of solid conductor aluminium branch-circuit wiring, if readily visible; D. any tested receptacle in which power was not present, polarity was incorrect, the cover was not in place, the GFCI devices were not properly installed or did not operate properly, evidence of arcing or excessive heat, and where the receptacle was not grounded or was not secured to the wall; and E. the absence of smoke detectors. IV. The inspector is not required to: A. insert any tool, probe or device into the main panelboard, sub-panels, distribution panelboards, or electrical fixtures. B. operate electrical systems that are shut down. C. remove panelboard cabinet covers or dead fronts. D. operate or re-set over-current protection devices or overload devices. E. operate or test smoke or carbon-monoxide detectors or alarms F. inspect, operate or test any security, fire or alarms systems or components, or other warning or signaling systems. G. measure or determine the amperage or voltage of the main service equipment, if not visibly labeled. H. inspect ancillary wiring or remote-control devices. I. activate any electrical systems or branch circuits that are not energized. J. inspect low-voltage systems, electrical de-icing tapes, swimming pool wiring, or any time controlled devices. K. verify the service ground. L. inspect private or emergency electrical supply sources, including, but not limited to: generators, windmills, photovoltaic solar collectors, or battery or electrical storage facility. M. inspect spark or lightning arrestors. N. inspect or test de-icing equipment. O. conduct voltage-drop calculations. P. determine the accuracy of labeling. Q. inspect exterior lighting.

Plumbing

The inspection of the plumbing system is in conjunction with the NZS 4306:2005 Residential Property Inspection Standard guidelines. According to the guidelines, the home inspector will inspect the interior water supply and distribution systems including all fixtures and faucets, the drain, waste and vent systems, the water heating equipment, the flues and chimneys where applicable, the fuel storage and fuel distribution systems where applicable and the drainage sumps, sump pump and related piping.

The inspector will describe the water supply, drain, waste and vent piping materials, the water heating equipment including the energy source, and the location of the main water and fuel shut-off valves.

The home inspector shall operate the systems using normal operating controls. Safety and shut-off controls (eg. valves), whether automatic or manual, are not tested because these controls are rarely used by the homeowner (other than in an emergency) and activating these safety controls could damage the controls or equipment (usually by leaking).

The inspector will open readily accessible panels provided by the equipment manufacturer or installer for routine maintenance by the homeowner.

The home inspector is not required to inspect the interiors of flues or chimneys which are not readily accessible, the clothes washing machine connections, wells, well pumps, or water storage related equipment, water conditioning systems, solar water heating systems, fire or lawn sprinkler systems, or private waste disposal systems. (Septic tank).

The inspector is not required to determine whether water supply and waste disposal systems are public or private, or the quantity or quality of the water supply.

See the NZS 4306:2005 Residential Property Inspection Standard for more detail.

MOISTURE DETECTION INFORMATION

With limited time at each inspection, there could be areas of moisture not detected at the time of inspection. Any moisture readings and/or absence of elevated moisture levels, found at the time of inspection only apply to the date and time they were inspected. The opposite side of any moisture detection is also checked to identify possible causes and/or damage. Areas indicated to show moisture/thermal differences are usually first found with the FLIR Thermal Imaging Camera and where possible they are double checked and confirmed with a FLIR Pin Probe and/or FLIR Moisture Meter. The photos provided are to show the areas of concern, and not the definitive example of moisture. It is not possible to fully document our inspection process as it would take time and distract from the inspection system itself. Thermal imaging: Thermal imaging does not show "moisture" As the name states, it identifies different temperatures. Thermal imaging is used to locate areas of concern that we can then investigate further. It is also used to track moisture through thermal patterns to its point of origin.

There could be areas with excessive wear and tear not visible at the time of inspection. Some individual items featured in an observation, may only be noted with a photo. This is because we deem the photo in itself explanation enough. If you decide to have the work quoted by the appropriate trades person/s. We have provided a list of contractors that we consider to be reliable, honest trades people. However we can not be held responsible for any quotes and/or work carried out by these trades people. You will find a

list of generic and custom limitations that may have restricted or otherwise inhibited the inspection, located at the end of this report. NOTE: Any and all observations noted within this report apply to the time and date the of inspection only.

While every effort is made to find all areas of concern, some problems may go unnoticed. The inspection is not meant to be technically exhaustive. Please keep in mind that the inspector has your best interest at heart. Any repair items mentioned in this report should be considered before purchase. It is highly recommended that qualified contractors be used to further inspect or repair issues identified in this inspection report.

STANDARDS OF PRACTICE
