



COMPREHENSIVE PROPERTY REPORTS

0275485573

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<https://www.cprnz.com/>



RESIDENTIAL PROPERTY REPORT COPY

1234 Main St. Paraparaumu Wellington 5032

Buyer Name

29/09/2021 9:00AM



Inspector

Travis Mackay

A small, handwritten signature of Travis Mackay in black ink.

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

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REPORTS YOU
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COMPREHENSIVE PROPERTY REPORTS LIMITED

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1: PROPERTY DETAILS & SUMMARY

Information

PROPERTY & CLIENT INFORMATION

PROPERTY & CLIENT INFORMATION

ADDRESS: 121 STREET

CLIENT: BOB

DATE: 28/09/2021

PROPERTY DETAILS

DECADE OF CONSTRUCTION: 1970s

LEVELS: MULTIPLE

CLADDING SYSTEMS: WEATHERBOARD

ROOF COVERINGS: DECRAMASTIC PRESSED METAL
PILE PROFILE

FOUNDATION SYSTEM: CONCRETE FOUNDATION WALLS,
CONCRETE PILES

WEATHER CONDITIONS: HUMID, WARM, SUNNY

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

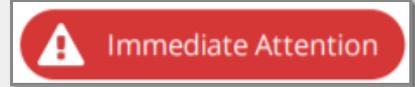
Summary

Immediate Attention

PDF

COLOUR CODING GLOSSARY

COLOUR CODING GLOSSARY



HANDYMAN

TRADE QUALIFIED

EXPERT

Skill level required to remedy the observation

**REMEDIAL WORK REQUIRED WITHIN:
0-24 MONTHS**

**REMEDIAL WORK REQUIRED WITHIN:
0-12 MONTHS**

**REMEDIAL WORK REQUIRED WITHIN:
0-6 MONTHS**

Time frame the observation should be remedied within

1 2 3 4

1 2 3 4

1 2 3 4

1-4 Indicates the level of importance each observation is

THIS IS ONLY A GUIDE.

EXAMPLES OF COLOUR RATINGS**EXAMPLES OF OUR COLOUR RATINGS****BLUE OBSERVATIONS:**

- REMEDIAL WORK REQUIRED WITHIN: 0-24 MONTHS
- Low level moisture readings "within" the NZ Standards were detected at the time of inspection.
- The room/area/item was in a generally good overall condition and 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/or general handyman knowledge to improve it to a good condition.
- The observation may have a low to moderate estimated repair and/or replacement cost.

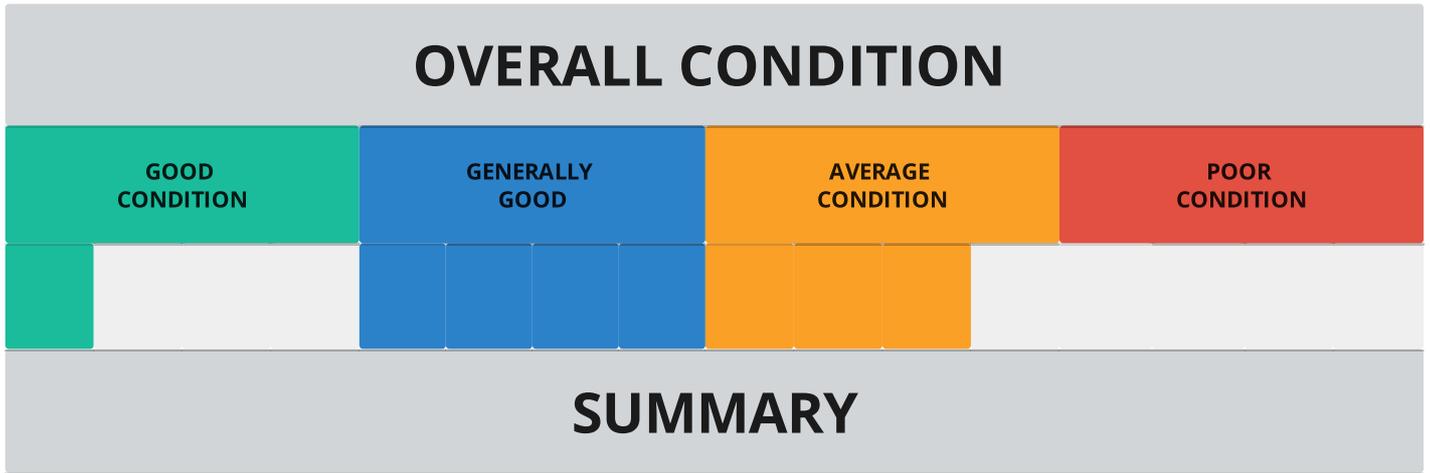
ORANGE OBSERVATIONS:

- REMEDIAL WORK REQUIRED WITHIN: 0-12 MONTHS
- MOISTURE DETECTED (HIGH LEVELS) 17.0% - 40.0%
- The room/area/item is deemed below the standard that is expected for the age and style of this property.
- The observation requires skilled handyman or trade level work to improve it to a good condition.
- The observation may require ongoing maintenance.
- There may be a moderate repair and/or replacement cost.

RED OBSERVATIONS:

- REMEDIAL WORK REQUIRED WITHIN: 0-6 MONTHS
- MOISTURE DETECTED (VERY HIGH LEVELS) 40.0% - 100.0%
- 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.
- There could be a high estimated cost required to correct this observation.
- The observation may be a direct safety issue and/or the observation may have the potential to become a safety issue in the future.

OVERALL SUMMARY



OVERALL SUMMARY: The building overall is in a generally good condition relative to its age, location and era of construction. This particular property appears to have been generally well maintained. The property is however due some minor and/or moderate maintenance work in specific areas. One or two areas may require a trade contractor.

MAINTENANCE IS KEY: 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: MAINTENANCE | REPAIR REQUIRMENTS

Information

|

**PRIORITISED
MAINTENANCE
SCHEDULING**



**+ ESTIMATES
& RECOMMENDED
CONTRACTORS**

CLADDING SUMMARY

CLADDING SUMMARY



PRIORITISED MAINTENANCE

HANDYMAN				TRADE QUALIFIED				EXPERT			
REMEDIAL WORK REQUIRED WITHIN: 0-24 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-12 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-6 MONTHS			
1	2	3	4	1	2	3	4	1	2	3	4

SIDING MATERIALS

- Cladding is in an average overall condition.
- Weathering and/or cracking of the cladding materials.
- Weather seal breakdown and/or raw materials exposed to the elements.
- ASBESTOS cladding needs attention

GROUND CLEARANCE

- Generally good in most areas.
- One or more areas are to close and/or in contact with the ground.

WEATHER SEAL

- Indication of through wall moisture ingress at the time of inspection.

WEATHER SEALING ESTIMATES**ESTIMATE | CLADDING**

All costings are rough guides only and are not to be taken as quoted prices.

CLADDING (DIY) WEATHER SEALING ESTIMATE:

\$4,000.00 - \$18,000.00 Repair and/or replace damaged and/or deteriorated materials + Weather seal paint.

CLADDING (PROFESSIONAL) WEATHER SEALING ESTIMATE:

\$18,000.00 - \$55,000.00 Repair and/or replace damaged and/or deteriorated materials + Weather seal paint.

TIME REQUIREMENTS**TIME REQUIREMENTS | CLADDING**

CLADDING WEATHER SEALING: Within the next: **0-12 Months**

NOTE: (Full weather sealing is past due)

We recommend having any weather sealing issues done sooner rather than later to prevent more expensive repairs in the future.

We have provided rough estimates for the work required. The costings provided by CPRNZ are not associated to the contractors below. These costings range from the DIY maintenance work, up to the cost of having a professional tradesperson complete all the work required. We recommend getting exact quotes from the specialist contractor you choose to hire, as quotes can be very different from one company to another.

CONTRACTORS | CLADDING**PROFESSIONAL CLADDING WEATHER SEALING**

CAPITAL PAINTING SERVICES | 021 053 5192

FREE QUOTES



EXTERIOR ROOFING SYSTEMS SUMMARY

ROOFING SUMMARY



PRIORITISED MAINTENANCE

HANDYMAN				TRADE QUALIFIED				EXPERT			
REMEDIAL WORK REQUIRED WITHIN: 0-24 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-12 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-6 MONTHS			
1	2	3	4	1	2	3	4	1	2	3	4

Some observations may be deemed cosmetic and therefore acceptable. Many of the following observations are relatively common for this aging buildings. If they are indicated with an orange or red highlight, we have deemed they need further investigation and/or repair by a trade qualified contractor.

ROOF COVERINGS

- Moderate areas of concern at the time of inspection.
- Rust/Oxidization sighted in the roof coverings.
- Deterioration of the coverings protective coating.
- Lichen noted on roof coverings.
- Edges lifting.
- Incomplete fixings.

FLASHINGS

- Overall condition of roof flashings was generally good.
- Barge and/or verge flashings appear correctly installed.
- Ridge and hip flashings appear to be correctly installed.

PENETRATIONS

- Roofing penetration/s appear to have a generally good weather seal.

FASCIAS & SOFFITS

- Fascias are in a generally good condition with one or more isolated areas needing attention.
- Soffits need weather sealing

WEATHER SEAL

- Indication of minor moisture ingress through the roof coverings
- Attic area shows excess visible light coming through from the exterior.

ESTIMATE | ROOFING

ESTIMATE | ROOFING

All costings are rough guides only and are not to be taken as quoted prices.

ROOFING (DIY) WEATHER SEALING ESTIMATE:

\$800.00 - \$3000.00 Repair and/or replacement of damaged and/or deteriorated materials + Weather seal paint.

ROOFING (PROFESSIONAL) WEATHER SEALING ESTIMATE:

\$12000.00 - \$18000.00 Repair and/or replacement of damaged and/or deteriorated materials + Weather seal paint system.

ROOFING (PROFESSIONAL) REPLACEMENT ESTIMATE:

\$30000.00 - \$80000.00 Full replacement of damaged and/or deteriorated materials. **(Depending on if the coverings contain asbestos)**

TIME REQUIREMENTS**TIME REQUIREMENTS | ROOFING**

ROOFING WEATHER SEALING: Within the next: **0-12 Months**

NOTE: (Full weather sealing is required at this stage)

We recommend having any weather sealing issues done sooner rather than later to prevent more expensive repairs in the future.

We have provided rough estimates for the work required. The costings provided by CPRNZ are not associated to the contractors below. These costings range from the DIY maintenance work, up to the cost of having a professional tradesperson complete all the work required. We recommend getting exact quotes from the specialist contractor you choose to hire, as quotes can be very different from one company to another.

CONTRACTORS | ROOFING**PROFESSIONAL ROOFING WEATHER SEALING**

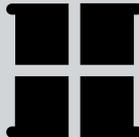
APEX ROOFS | 021 655 100

**PROFESSIONAL ROOFING REPLACEMENT**

ELEMENT ROOFING | 022 652 2022



JOINERY SUMMARY

JOINERY											
PRIORITISED MAINTENANCE											
HANDYMAN				TRADE QUALIFIED				EXPERT			
REMEDIAL WORK REQUIRED WITHIN: 0-24 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-12 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-6 MONTHS			
1	2	3	4	1	2	3	4	1	2	3	4

JOINERY GLAZING

- Single glazed joinery

TIMBER JOINERY

- Timber joinery appears to be in an average to poor overall condition.
- Paint deterioration at areas of timber joinery.
- Weathering and/or cracking of the timber joinery materials.
- Draught sealing is unsatisfactory in multiple areas.
- Moderate condensation/moisture damage to one or more sills. (Interior)
- Hardware needs repair and/or replacement.

JOINERY FLASHINGS

- Multiple areas require the application of a paintable sealant.
- Sub-standard and/or missing flashing/s.
- Sub-standard and/or missing scriber/beading.

ESTIMATE | JOINERY

ESTIMATE | JOINERY

JOINERY (DIY) WEATHER SEALING ESTIMATE:

\$1,000.00 - \$6,000.00 Repair and/or replace damaged and/or deteriorated materials + Weather seal paint.

JOINERY (PROFESSIONAL) WEATHER SEALING ESTIMATE:

\$2,000.00 - 8,000.00 Repair and/or replace damaged and/or deteriorated materials + Weather seal paint.

JOINERY (PROFESSIONAL) RETRO-FIT ESTIMATE:

\$35000.00 - \$75000.00 Retrofit to double glazing.

TIME REQUIREMENTS**TIME REQUIREMENTS | JOINERY**

JOINERY WEATHER SEALING: Within the next: **0-12 Months**

We recommend having any weather sealing issues done sooner rather than later to prevent more expensive repairs in the future.

We have provided rough estimates for the work required. The costings provided by CPRNZ are not associated to the contractors below. These costings range from the DIY maintenance work, up to the cost of having a professional tradesperson complete all the work required. We recommend getting exact quotes from the specialist contractor you choose to hire, as quotes can be very different from one company to another.

CONTRACTORS | JOINERY

PROFESSIONAL WEATHER SEALING | TIMBER JOINERY

CAPITAL PAINTING SERVICES | 021 053 5192

FREE QUOTES



PROFESSIONAL JOINERY REPLACEMENT

WESTVIEW ALUMINIUM JOINERY | 04 526 4400

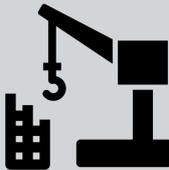


PROFESSIONAL GLASS EXPERTS

AFFORDABLE GLASS WELLINGTON | 027 446 9058



STRUCTURAL SUMMARY

STRUCTURAL SYSTEMS											
PRIORITISED MAINTENANCE											
HANDYMAN				TRADE QUALIFIED				EXPERT			
REMEDIAL WORK REQUIRED WITHIN: 0-24 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-12 MONTHS				REMEDIAL WORK REQUIRED WITHIN: 0-6 MONTHS			
1	2	3	4	1	2	3	4	1	2	3	4

ROOFING STRUCTURE

- Timber trusses/roofing frame work shows to be generally good.
- Structural defects in some structural timber elements of the roofing system.

CONCRETE FOUNDATION WALLS

- Foundation walls showed only age related and/or the expected settlement type observations.
- Efflorescence sighted on areas of the concrete foundations.

PILES & SUBFLOOR

- Sub floor timber elements are in generally good overall condition.
- No signs of borer in the timber framing of the subfloor elements.
- Timber rot noted in subfloor area.
- Piles appear to be undermined in areas.

RETAINING & NON RETAINED SLOPES

- Non-retained slopes appear stable.
- One or more areas of retaining wall show defects.

NOTE: Some cracking observations may be deemed cosmetic and therefore acceptable. Some observations noted are relatively common for aging buildings. If they are indicated with an orange or red highlight we have deemed they may need further investigation and/or repair by a trade qualified contractor.

ESTIMATE | STRUCTURE

ESTIMATE | CLADDING

All costings are rough guides only and are not to be taken as quoted prices.

STRUCTURE (DIY) ESTIMATE:

\$2800.00 - \$8000.00 Repair and/or replacement of damaged and/or deteriorated materials.

STRUCTURE (PROFESSIONAL) ESTIMATE:

\$8000.00 - \$12000.00 Repair and/or replacement of damaged and/or deteriorated materials.

STRUCTURE (PROFESSIONAL) REPILING ESTIMATE:

Re-piling and or Re-Strengthening of structural elements: **N/A**

TIME REQUIREMENTS**TIME REQUIREMENTS | STRUCTURAL**

STRUCTURAL REQUIREMENTS: Within the next: **0-36 Months**

NOTE: You can do all of this yourself.

We have provided rough estimates for the work required. The costings provided by CPRNZ are not associated to the contractors below. These costings range from the DIY maintenance work, up to the cost of having a professional tradesperson complete all the work required. We recommend getting exact quotes from the specialist contractor you choose to hire, as quotes can be very different from one company to another.

CONTRACTORS | STRUCTURAL**STRUCTURAL EXPERTS | RETAINING & FOUNDATIONS**

CLARK CONSTRUCTION | 0800 425 275

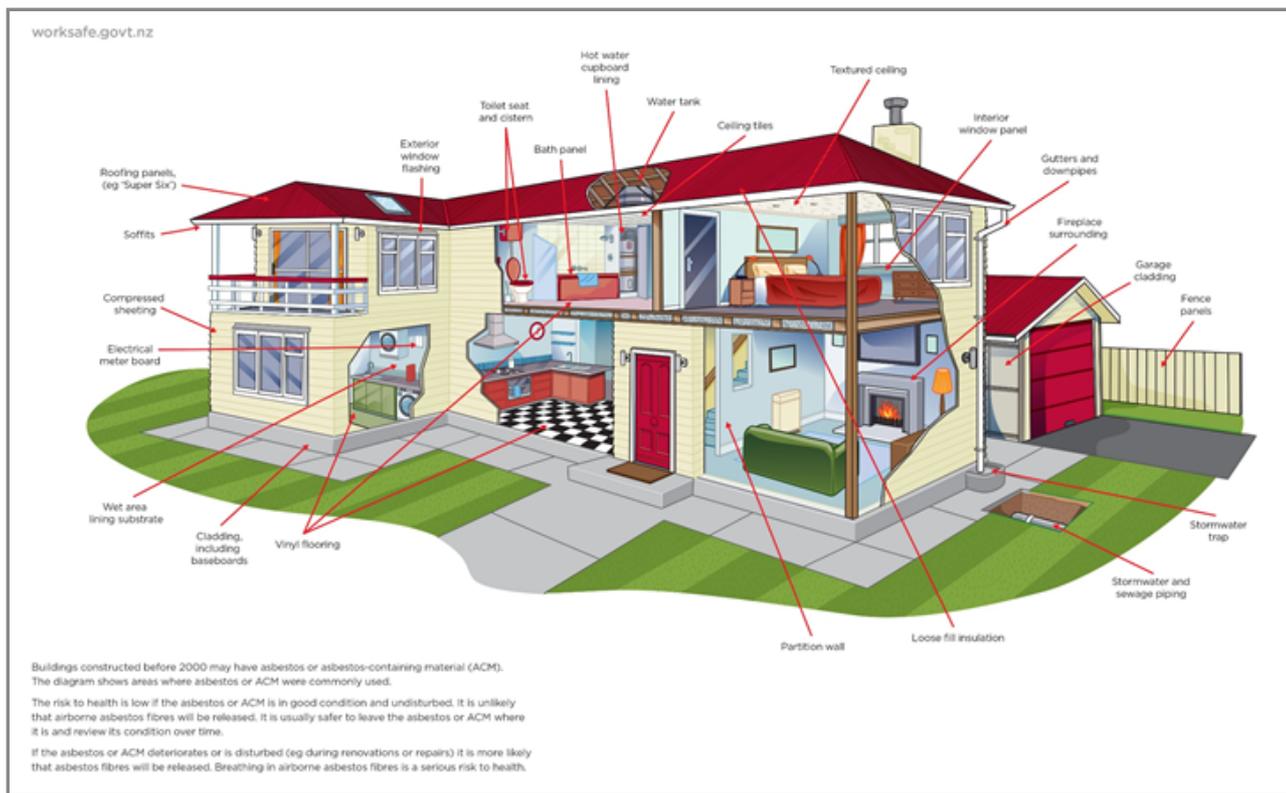
FREE QUOTES



ASBESTOS RESIDENTIAL HOUSES

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
- Water tank
- Ceiling tiles
- Textured ceiling
- Interior window panel
- Gutters and downpipes
- Fireplace surrounding
- Garage cladding
- Fence panels
- Stormwater trap
- Stormwater and sewage piping

- Hot water cupboard lining
- Loose fill insulation

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



SHADOWLINE CONTAINS ASBESTOS



SHADOWLINE CONTAINS ASBESTOS. SOFFITS POSSIBLY CONTAIN ASBESTOS



CONTAINS ASBESTOS



POSSIBLY CONTAINS ASBESTOS



SHADOWLINE CONTAINS ASBESTOS



DECRAMASTIC ROOF COVERINGS CAN CONTAIN ASBESTOS

ASBESTOS INFORMATION

Asbestos Removals

HazMat Removals - Class A & B Licensed Removalists.

*Qualified Asbestos supervisors on every removal job.

*Trained and qualified staff Class A or B staff with face fitted masks and PPE

*Site Safe Building Passports and additional external training. This includes working at heights and in confined spaces (Site specific).

*Worksafe notification for your peace of mind, ensuring they are aware of your removal and to allow for a professional check of our work.

*Third party Assessment Clearance Certificate. (For every removal over 10m2 this is mandatory)

*A safe home or workplace once our asbestos removal is complete!

Cladding, stipple ceilings, textured ceilings, soffits, fibre cement boards, Tile roofs, decramastic roofing, super 6 fencing and roofing, Hardiboard, Shed / garage removals, chimney removals, contaminated soil and many more. Contact HazMat today for a confidential removal quote.

[ASBESTOS REMOVAL CONTRACTOR](#)

4: OBSERVATIONS | CLADDING

		IN	NI	NP	O
4.1	CLADDING OBSERVATIONS	X			X

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

Information

|

CLADDING SYSTEMS



TIMBER WEATHERBOARD

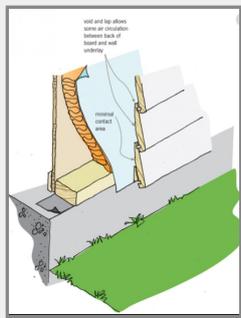
WEATHERBOARD CLADDING SYSTEMS

This is the traditional cladding material for New Zealand homes. Weatherboards are usually shaped planks fixed horizontally and lapped over each other. Rainwater drains down the outside and can only get inside if it is forced upwards between the boards. It then runs down the backs of the weatherboards, exiting the wall at the bottom. Weatherboards can be vertical as well. Wood cladding requires regular re-staining or re-painting. With careful maintenance, however, you can expect it to last 40 years or more. Under the Building Code new-built homes must include a maintenance programme for any timber cladding in order to be signed off. Smart property investors keep an even stricter maintenance schedule for their older weatherboard homes. We recommend you do the same to best protect your investment.

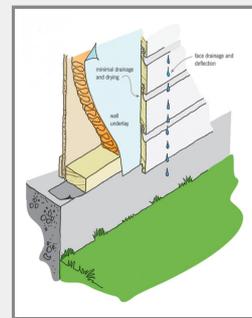
PROs Vs CONs

Advantage: flexible, rarely leaking, easy to maintain, lightweight, environmentally friendly materials.

Disadvantage: it needs to be cleaned and painted every five years, and it will be mildewed, deformed and changed in a humid environment all year round. Fragile, poor fire performance



Bevel-back weatherboard cladding direct-fixed.



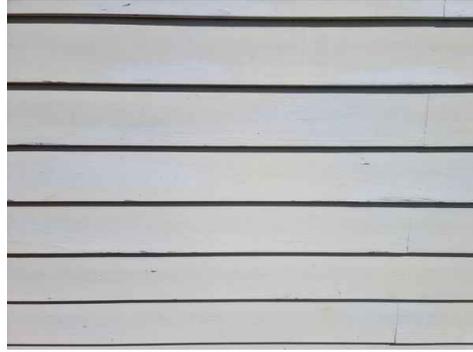
Rusticated weatherboard cladding direct-fixed.

Different types of timbers have been used over the last century, 1880's it was kauri and totara timber, 30 years later the 1910's rimu, miro, matai, and totara were used, The 1940's saw a decline of Matai and miro trees, 1970's pinus radiata and western red cedar would become the new timber of choice, Rimu was still around until the late 1980's, most commonly used today Pine and western red Cedar.

SCRIBERS, BOXED & UN-BOXED CORNERS

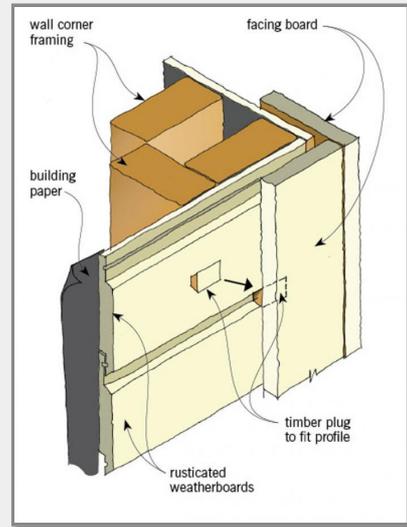
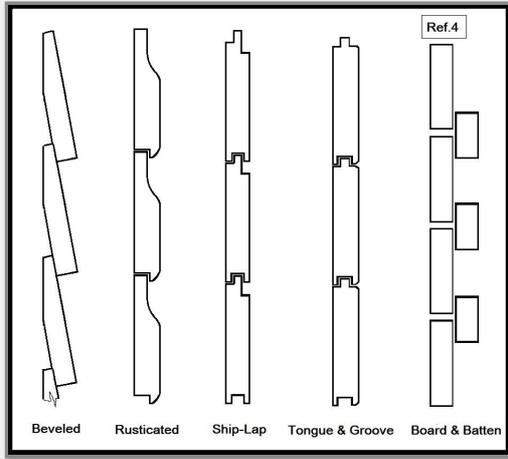
Scribers are used at joinery sections, cladding corners, cladding transitions etc. They play a huge role in keeping the property weathertight. Scribers should be checked by the owners of a dwelling as part of their maintenance schedule. If separation gaps are found, apply a paintable silicone sealant to the area, wait for it to cure and apply a weather sealant paint over the top.

Corners with weatherboard cladding. External corners are typically finished with boxed corners and scribers or joints are mitred and covered with soakers to protect the corner from weather and general damage. Scribers should be fitted at the edges of each facing board to cover and seal the gaps left by the slant of each board. Internal corners should have angled flashing installed behind the weatherboards. **Ground clearance.** It is important to keep yard build up cleared from cladding system edges.



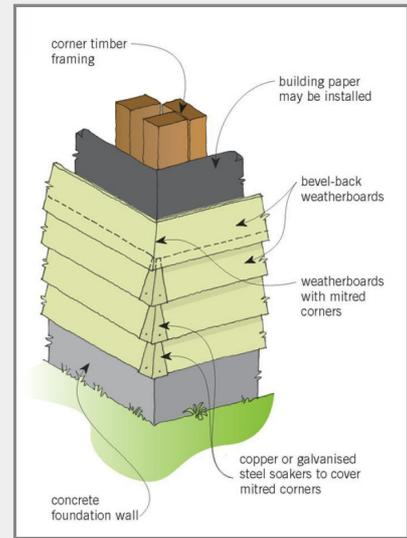
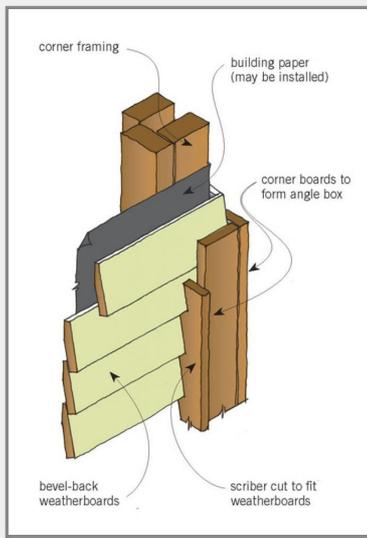
TIMBER WEATHERBOARD 2

EXAMPLES ONLY



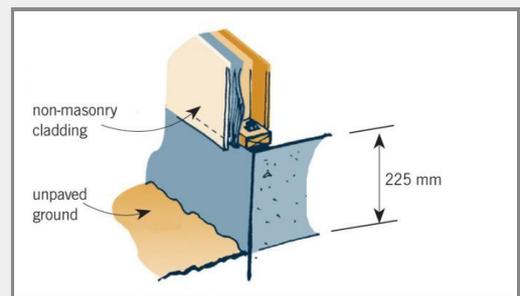
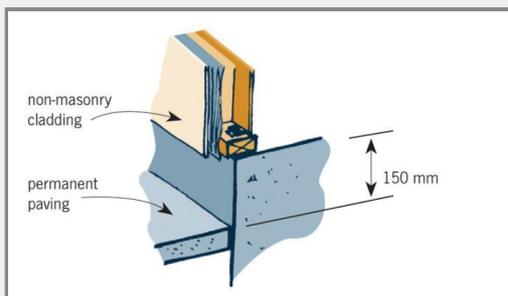
WEATHERBOARD TYPES

TIMBER PLUG



BOXED CORNER

UN-BOXED CORNER

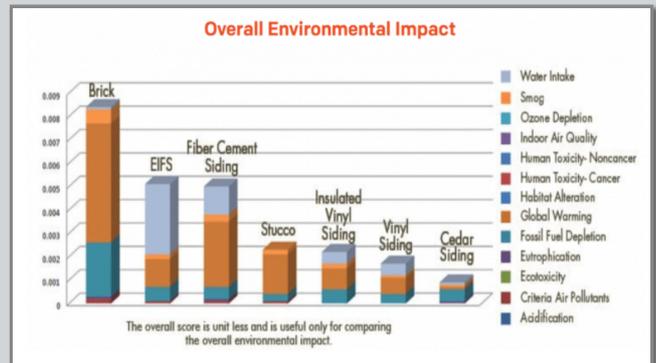




FIBER CEMENT CLADDING

FIBRE CEMENT CLADDING

SIDING PRODUCTS	R-VALUE
● Stone	.01
● Stucco	.10
● Brick	.11
● Fiber Cement	.15
● Vinyl Siding	.60
● Wood	.81
● Insulated Siding	2.0 - 3.5



Fibre cement is a siding material that was introduced to the market in the 1980's as a replacement for asbestos cement siding products. It has become common in some parts of the country, offering design versatility and a solid feel. Some fibre cement manufacturers include James Hardie, Nichiha, and Allura. With so many siding products available on the market today, it's important to understand the benefits, as well as the possible problems with James Hardie fibre cement siding.

Fibre cement is a composite material that is made up of sand, cement and cellulose fibres. Fibre cement cladding comes in various forms but it is most commonly seen in sheet form, and in horizontal boards. ... However, the thicker and denser the fibre cement board, the better thermal and sound resistance it will have.

If you are cutting the fibre cement sheet inside, use either a score and snap knife, hand guillotine or fibre shears as this will help keep the dust down to a minimum. Ensure the material is positioned so the dust will blow away from your face and anyone working nearby **Most appropriate** in highly corrosive environments where products with lower embodied energy have a reduced life span.

Maintenance: Low. Powder coated finishes generally have a life expectancy of 15 years and, although fading is common, they rarely require repainting for protection. Products like Hardiplank fibre cement siding will require regular painting to maintain their appearance, unlike other sidings such as brick or insulated vinyl. Some factory-painted siding panels are available, and come with up to 15 year warranties that cover peeling, cracking, and chipping. However, many homeowners find themselves needing to repaint their home sooner, and warranties can be very particular about what is covered. Caulking may also be required to help maintain the warranty and protect against the next problem with fibre cement siding we will cover, moisture absorption. Absorptive claddings like fibre cement can hold moisture, leading to panel damage, rot, and even mould problems. It is critical that all installation steps are very carefully followed by a professional to ensure all penetrations and gaps are properly treated with the appropriate paint or caulk to protect the panels from moisture infiltration. Close attention must be paid to all required gap clearances between rooflines and decks during installation, to not put fibre cement in continued contact with more moisture.

Fibre cement is a common siding product that can improve the appearance of a home, but it also has some disadvantages compared to other products available today. Before investing in new siding, it's critical to determine which characteristics are important for your particular project.

Fibre cement is a cementitious product, therefore it serves as a bridge for energy loss, compared to other more energy-efficient siding products.

SOME FIBRE CEMENT PRODUCTS CONTAIN ASBESTOS

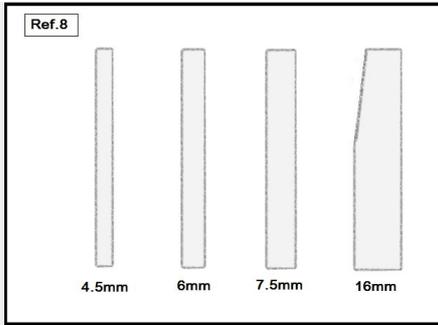
JAMES HARDIE CLADDING

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 as 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.

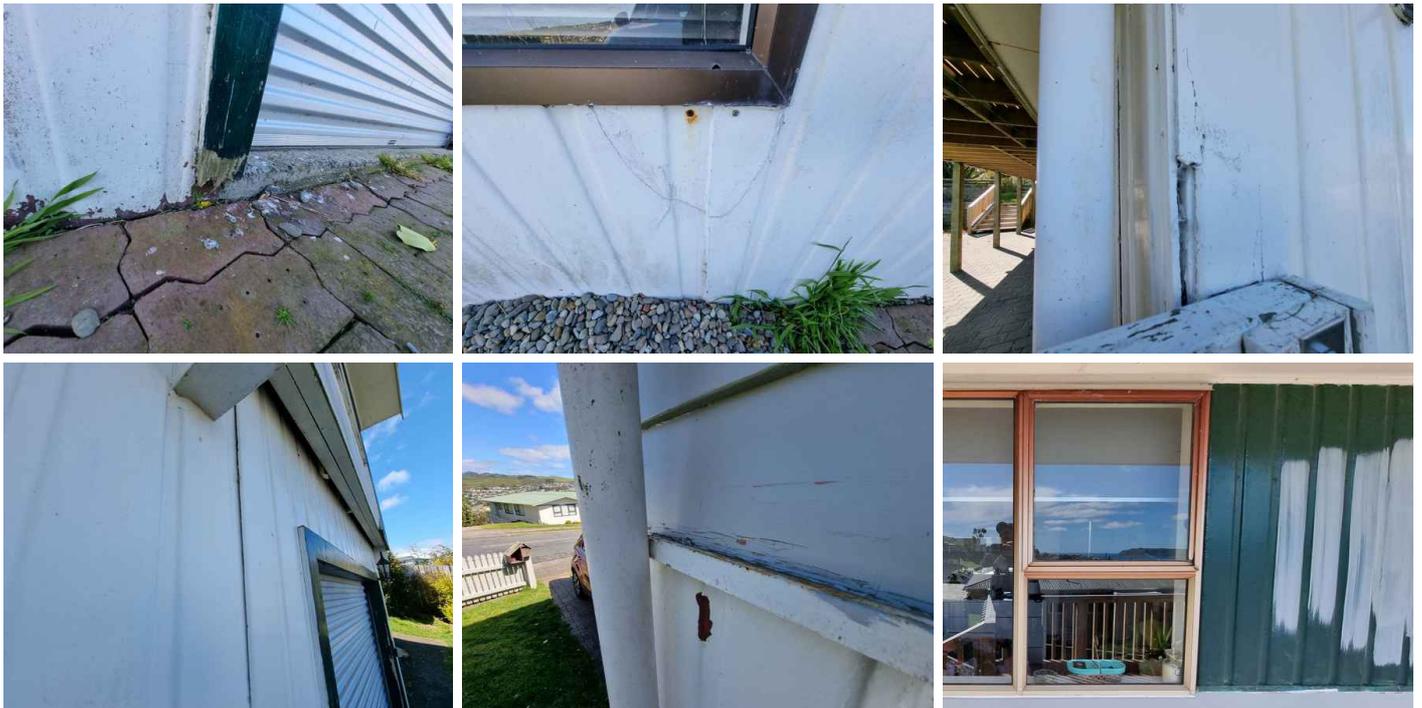
Fibro is short for fibrous, Fibro sheets were made from cement with asbestos fibrous making the sheets ridged and stronger, throughout New Zealand it was a very popular product, used for roof claddings , wall claddings, sheeting eaves, garden sheds this was due to its durability. James Hardie & Co. manufactured 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.



SHADOWLINE | HIGHLINE CLADDING

SHADOWLINE | HIGHLINE

Highline was a product well known in Australia and New Zealand as (ACM) asbestos containing material in it. They ceased making it in 1985 with ACM in it. However trying to find what was made and when and dates around it in NZ can prove difficult as just because a factory stopped making it, stocks in outlets may not have been exhausted until quite some time afterwards. There is no real problem with this cladding as long as its in good condition and not breaking down. We recommend keeping this section of cladding well painted and weather sealed.



Observations

4.1.1 CLADDING OBSERVATIONS

OBSERVATION | WEATHER SEALING

 Trade Work Required

WEATHER SEALING OBSERVATIONS

Exterior sections may have shown deterioration and/or excess visual indications that an issue exists and/or is developing. Elevated moisture levels may or may not have been caused by these observations, regardless these areas should be repaired and monitored closely.

The cause may be one and/or more of the following:

- One or more sections of cracked, weathered and/or damaged cladding.
- Failed seal around joinery sections.
- Failing head flashing.
- Failing weather proofing paint.
- Failed penetration seals.
- Inadequate ground clearance.

SOLUTIONS

- **Repairs to cladding** must be done correctly. In the areas where it is possible for you to complete the weather sealing requirements yourself, we recommend you obtain as much current and relevant information from the experts before starting. Minor 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. If you are not 100% confident in your abilities to weather seal these areas to a high standard. We would recommend you have any cracked, weathered and/or damaged cladding sections repaired and sealed by a cladding specialist. **NOTE:** Cracks in any monolithic cladding systems should be repaired by a qualified monolithic specialist.
- **Weatherproof painting** should be done by a painting/cladding specialist who can offer a 5+ year guarantee on their work.
- **Ground clearance** is one of the more difficult observations to remedy and often you just have to manage the areas to the best of you ability. In the areas where it is possible to make modifications we recommend you fix the ground clearance issues by either;
 1. Adding a drainage to the concrete area directly beneath the affected cladding areas. (The sort you see in front of garage doors)
 2. Adding a drainage to area directly beneath the affected cladding areas. (Excavate the soil and slope fall away from the cladding)

CONTRACTORS | CLADDING

PROFESSIONAL CLADDING WEATHER SEALING

CAPITAL PAINTING SERVICES | 021 053 5192

FREE QUOTES



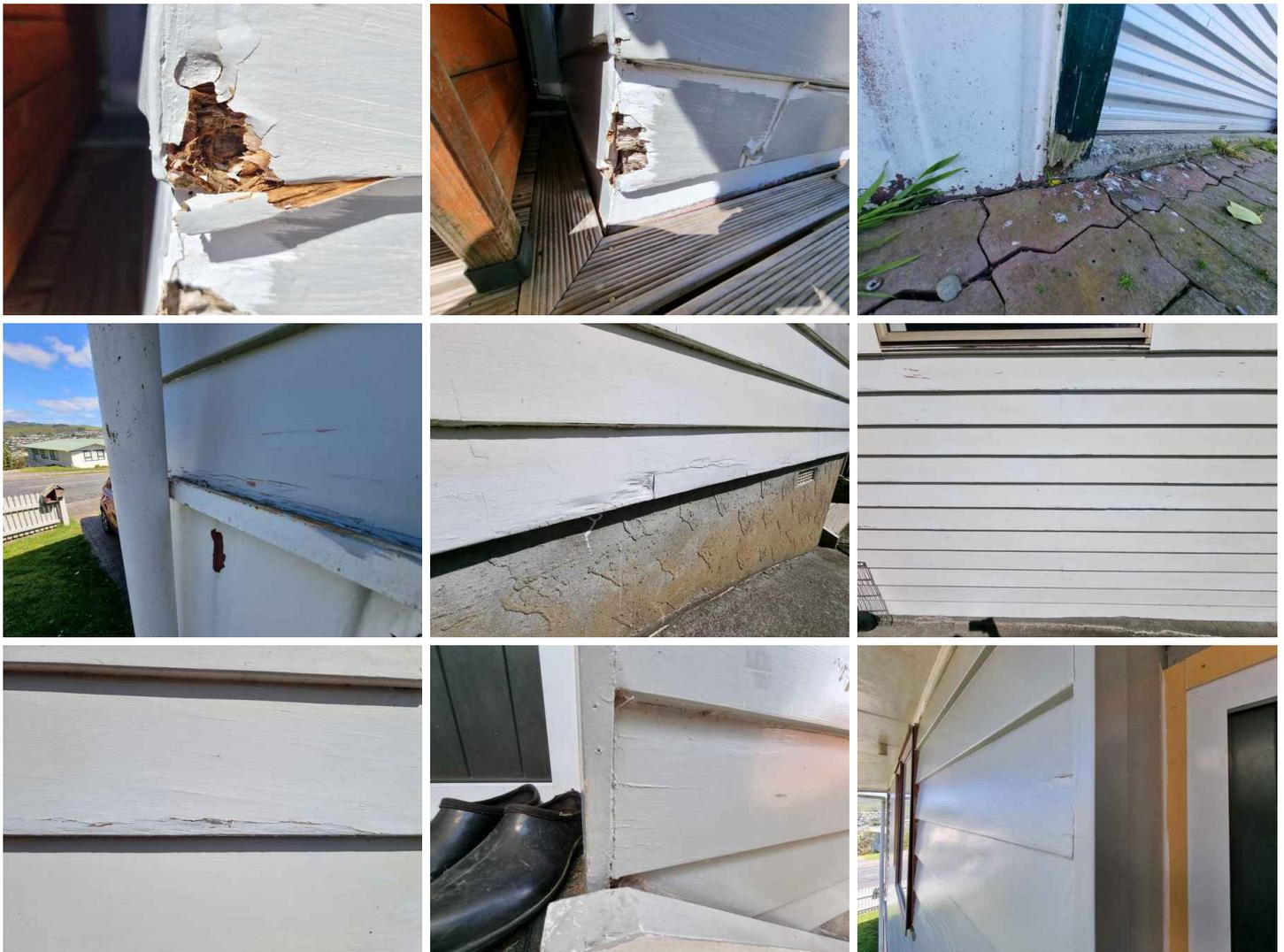
PROFESSIONAL CLADDING REPLACEMENT

TEXTURITE COATINGS | 027 341 3454



- **Repairs to interior linings** are relatively simple depending on the extent of the work required. Replacing and/or repairing Gib products can be done by anyone with the right knowledge and/or skill level. Settlement cracking in interior walls are very common in older buildings due to the wall lining techniques used then. The new technique of will 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.

PROFESSIONAL GIB STOPPER
PROSTOP FINISHINGS | 022 356 9527
FREE QUOTES





4.1.2 CLADDING OBSERVATIONS

OBSERVATION | HARDIES CLADDING

 Trade Work Required

OBSERVATION | CLADDING

One or more of the following may apply:

- Siding too close to and/or in contact with the ground.
- Open cladding joins.
- Cracks and/or splits in cladding.
- Failed weatherproofing.
- Weathered corners.
- Moisture damage.
- General damage.
- Cladding penetrations show failing waterproofing seal.
- Rotten and/or waterlogged cladding.
- Lichen, Algae and/or moss sighted in one or more areas.

This cladding may contain asbestos. No testing of the cladding was done during the inspection unless prior requested.

4.1.3 CLADDING OBSERVATIONS

DAMAGED ASBESTOS BUILDING MATERIALS



CRACKED AND/OR DAMAGED ASBESTOS

Cladding material may contain asbestos.

We do not recommend you carry out any repair work yourself without having the cladding materials tested.

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

SEE LINK BELOW

[ASBESTOS INFORMATION](#)

Health risks: asbestos

Asbestos can cause cancer and other serious diseases years after exposure.

Some work with asbestos is restricted, and Worksafe must be notified before it is carried out.

On this page:

- Testing for asbestos
- Other work with asbestos
- Rental properties

Asbestos sheets were sometimes used as a stucco substrate in art deco houses, and in later floorings or decorative ceilings which may have been installed.

It becomes a health hazard when materials or elements containing asbestos are removed or broken up, thereby allowing the fine particles to become airborne and able to be inhaled. Unfortunately, the danger is often underestimated because symptoms often do not appear until 15–20 years after exposure.

Testing for asbestos

If you suspect asbestos may be present, the following laboratories are able to test the material:

- Dowdell and Associates, Auckland (09 526 0246)
- Capital Environmental Services, Wellington (04 566 3311)
- K2 Environmental Ltd, Christchurch (03 384 8966) or Auckland (09 275 1261)
- Precise Consulting and Laboratory Ltd, Christchurch (03 943 5394)
- Environmental and Industrial Analysis Group, Christchurch (03 377 4314).

For cladding or flooring, a sample approximately the size of a \$2 coin is required. For decorative ceiling finishes, a minimum of one teaspoonful is required, and this should include any sparkly material. Samples should be obtained in accordance the Approved Code of Practice for the Management and Removal of Asbestos.

Restricted work

The Health and Safety at Work (Asbestos) Regulations (2016) regulate working with asbestos. They set out the new rules around the removal of asbestos, and the circumstances where WorkSafe must be notified.

Licence system for asbestos removal

Three types of licence are available for asbestos removal: Class A (where the biggest risk to health exists), Class B, and an asbestos assessor licence.

An asbestos assessor inspects the finished job for Class A removal, provides a clearance certificate, and can also carry out air quality monitoring during removal if required.

No licence is required for asbestos removal:

- up to and including 10 m² of non-friable asbestos or asbestos-containing material (ACM), cumulatively, over the whole course of the removal project for the site
- asbestos-contaminated dust or debris (ACD) that is associated with removing 10 m² or less of non-friable asbestos or ACM and any associated minor ACD.

The Class A and Class B removal licences are held by a business, rather than a person. The asbestos assessor licence is held by a person.

Other work with asbestos

Even when work with asbestos is not defined as restricted work, it must nevertheless be carried out with care. If products containing asbestos are in sound condition and left alone, they do not pose a major risk. Do not use power saws or sanders or similar tools on materials containing asbestos, as this can release the fibres into the air.

When working with asbestos:

- seal off the work area to minimise exposure to others
- wear disposable overalls and cap
- use a half-facepiece respirator with a class P1 filter suitable for asbestos dust
- keep asbestos-based material damp while handling it
- clean up at the completion of each day's work.

Do not:

- waterblast the asbestos-based material
- break sheets or drop them, causing them to break.

Cleaning up

- Collect residue from the washing or other work with asbestos while it is still wet and bag in plastic or a closed container.
- Clearly mark bags/containers 'Asbestos Hazard - wear respirator and protective clothing while handling the contents'.
- Dispose of asbestos at a place approved by the local authority and cover immediately with at least 1 m of earth.
- Vacuum residue and dust from all surfaces (including unsealed drawers and cupboards) using a vacuum cleaner fitted with a HEPA filter.
- Wet mop after vacuuming.

Rental properties

There are specific requirements for residential properties that are rented out that don't apply to owner-occupied homes.



DAMAGED SHADOWLINE



DAMAGED SHADOWLINE



SHADOWLINE



TEST RESULTS PENDING

5: OBSERVATIONS | JOINERY

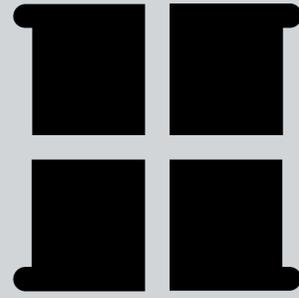
		IN	NI	NP	O
5.1	JOINERY OBSERVATIONS	X			X

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

Information

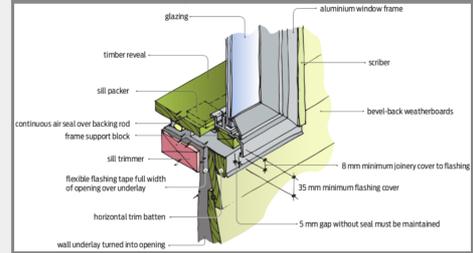
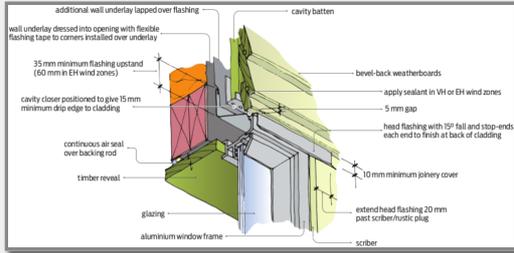
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JOINERY

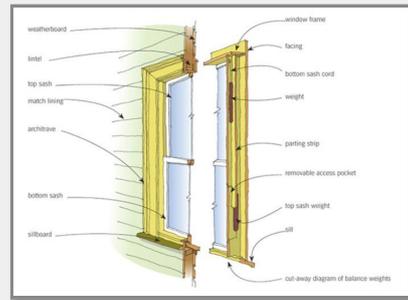
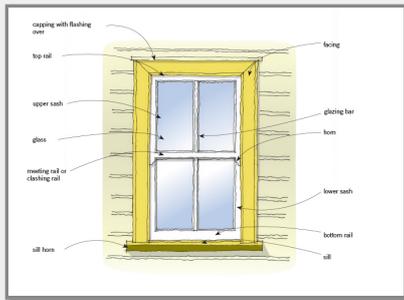


JOINERY OBSERVATIONS: WEATHERBOARD | JOINERY & FLASHINGS

ALUMINIUM JOINERY WEATHERBOARD CLADDING



TIMBER JOINERY WEATHERBOARD CLADDING

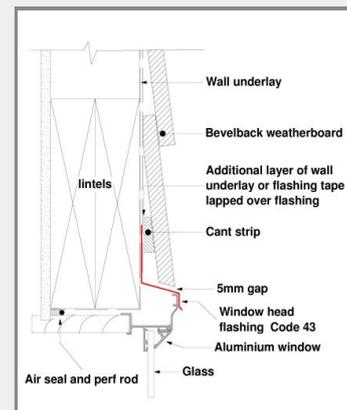
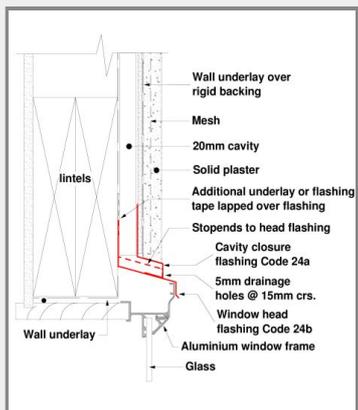


Doors and windows need regular cleaning and maintenance to keep them weatherproof and in good working order. If they're not maintained, problems can occur such as sticking, rot or corrosion. Some maintenance tasks are common to all windows and doors. Others depend on the material the window is made from.

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.

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.

HEAD FLASHING DETAIL



Observations

5.1.1 JOINERY OBSERVATIONS

OBSERVATION | JOINERY

Trade Work Required

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 scribes and/or failing head flashings.





6: OBSERVATIONS | ROOFING

		IN	NI	NP	O
6.1	EXTERIOR ROOFING OBSERVATIONS	X			X

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

Information

ROOFING SYSTEMS



EXTERIOR ROOFING OBSERVATIONS: DECRAMASTIC "COATED STEEL" ROOF COVERINGS

DECRAMASTIC "STONE COATED STEEL"

Interlocking panels mimic slate, clay or shingles and resist damage caused by heavy rains (up to 8.8 inches per hour), winds of 120 miles per hour, uplifting, hail and freeze-thaw cycles. Consequently, they're an economical, effective choice for wet, windy regions. Some stone-coated steel roofs are warranted for the lifetime of the house. **Some decramastic roof coverings can contain asbestos.**

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.

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)

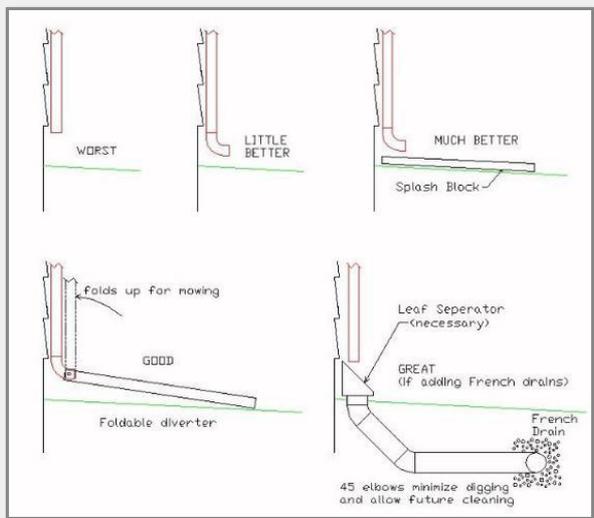
BOOT & CHIMNEY FLASHINGS

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 aluminium 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 DRAINAGE

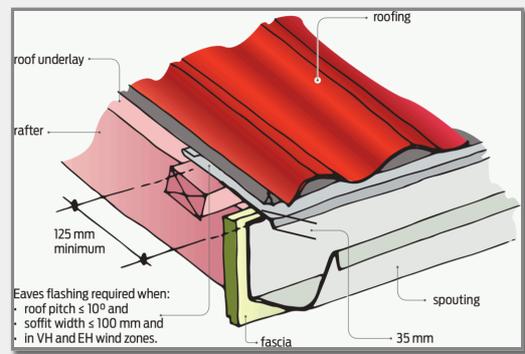
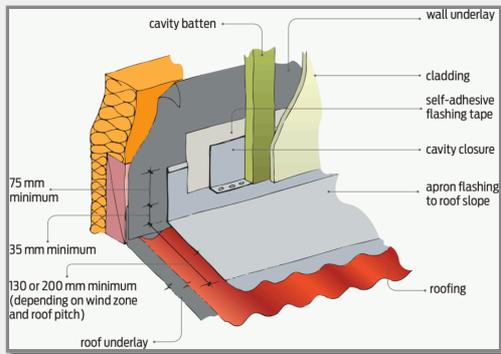
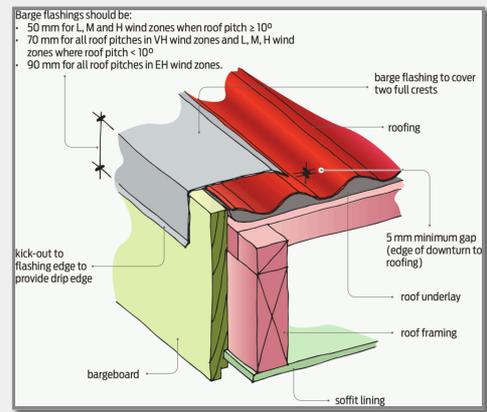
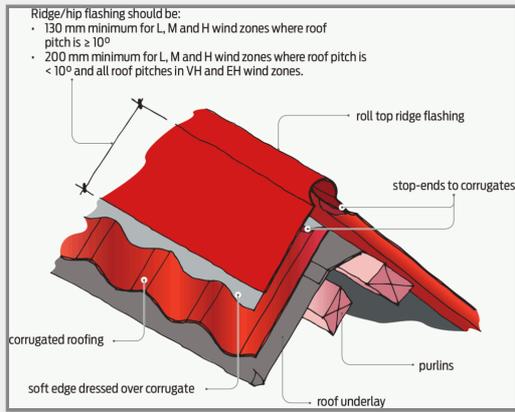
The roof's purpose is to protect the structure, the people, and the things below. This means keeping your home sheltered from weather elements like wind, sun, and rain. Your roof's drainage system is an integral part of keeping your home protected since it controls the flow of water to prevent it from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

ROOF DRAINAGE EXAMPLES



EXTERIOR ROOFING OBSERVATIONS: ROOF FLASHINGS

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**

Observations

6.1.1 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.



ULO

- Unidentified landed object.

Bro what the hell is this?

Is it supposed to be a vent cowling? **BAHAHAHA**



6.1.3 EXTERIOR ROOFING OBSERVATIONS

IRON | PAINTING/WEATHER SEALING



Trade Work Required

PAINTING/WEATHER SEALING REQUIREMENTS

- Roof coverings show signs of discolouring / fading of the coverings protective coating. Any breakdown of roofing materials can cause the repair cost to quickly escalate into a replacement cost if not corrected early.

SOLUTION: RUST ARREST AND RESEALING

- We recommend having the roofing system repaired and resealed by a qualified roof painter, it might cost a little more now, but it can save you thousands in the long term.

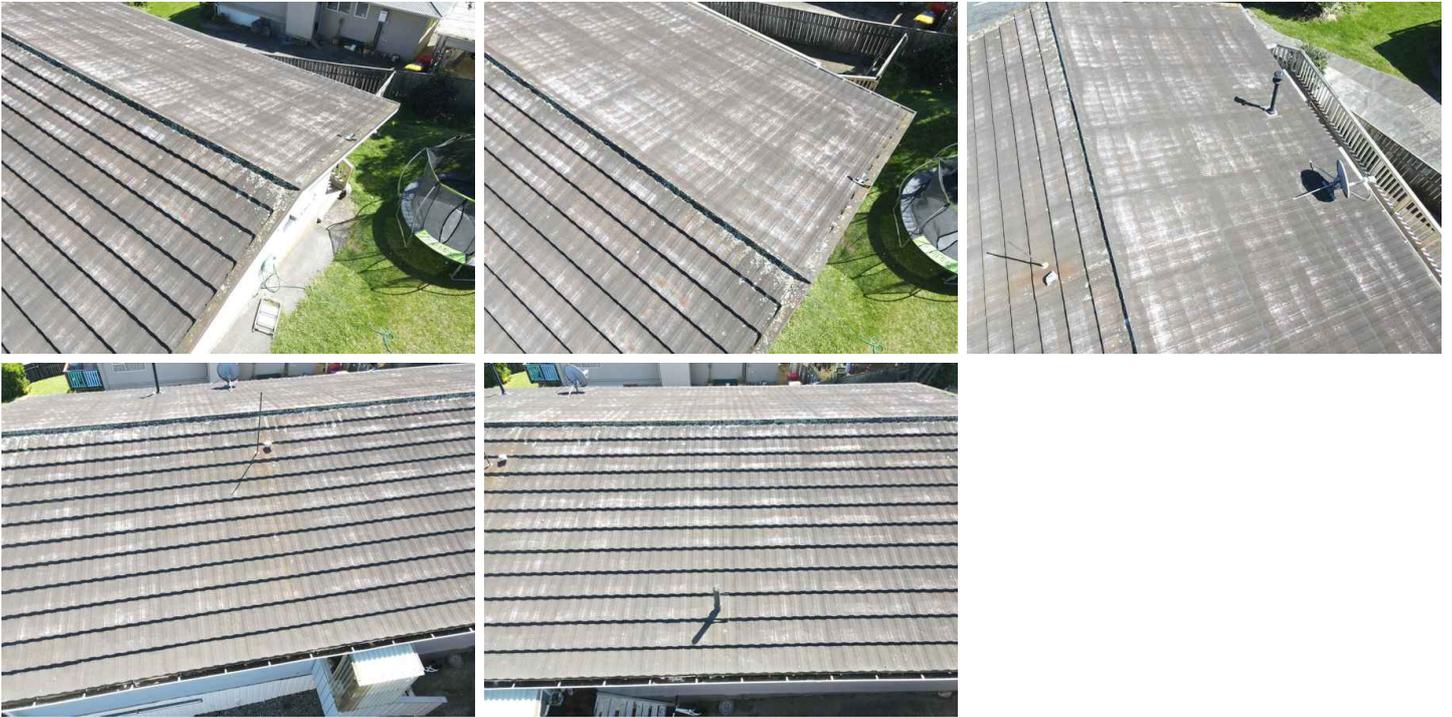
Resealed metal roofs and/or metal roof fixtures are susceptible to rust over time. This is why it's important to make sure you rust arrest the oxidization thoroughly before applying any roofing weather seal products. Once the coverings are correctly weather sealed you must still make sure the roof gets the proper maintenance from a professional roof repair/painting contractor every two or three years or whenever you first notice any rust reforming. It only takes a small section of rust to start a chemical reaction that will quickly affect the entire roof coverings **"Paint before painting is due"**

CONTRACTORS | ROOFING

PROFESSIONAL ROOFING WEATHER SEALING

APEX ROOFS | 021 655 100





6.1.4 EXTERIOR ROOFING OBSERVATIONS

GUTTERING NEEDS ATTENTION



GUTTERING SECTION MISSING

Guttering section is missing and/or has not been installed.

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.

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.



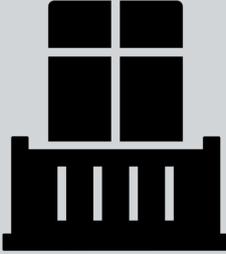
7: OBSERVATIONS | DECKING

		IN	NI	NP	O
7.1	DECKING OBSERVATIONS	X			X

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

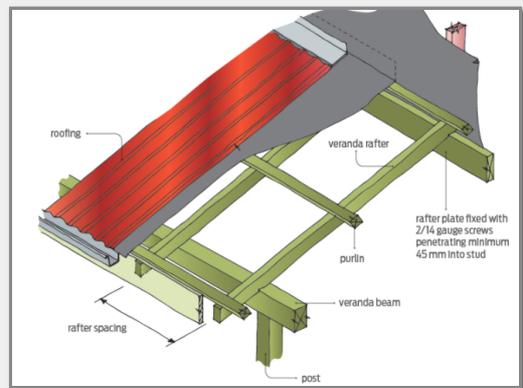
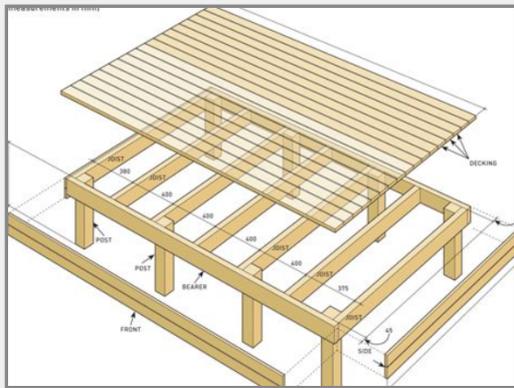
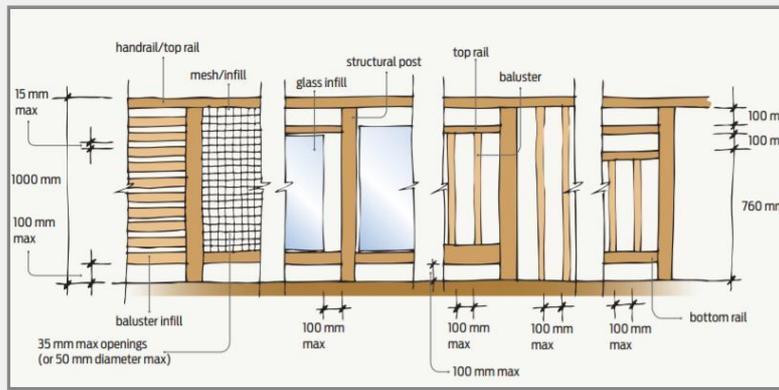
Information

|

<h1>DECKING</h1>		
		

DECKING OBSERVATIONS: DECKING ELEMENTS

DECKING | BALUSTRADE
VERANDA | PORCH



The following checks should be made annually: Look at where the structure meets the wall of the house. Is there anywhere that water can sit or track into the house? Do the flashings take water away from the house wall and allow it to drain away? If the cladding relies on paint to keep the water out, is that coating continuous or is there any point where water might penetrate? Is there any sign of timber beginning to decay? For example, is there any sign of excessive cracking or 'softness'? Is there proper waterproofing around the cantilevered joists or around other joists that penetrate the house wall? Are the posts correctly connected to the structure should not wobble. Are bolted connections tight? Are any galvanised steel connectors corroding? **Minimum height to the top of a balustrade is 1000mm** from foot level. No gap can be bigger than 100mm but different barrier materials each have their own restrictions and requirements. **Porches and verandas** are usually made from permanent materials and often extend over raised decks or patios. Porches are roofed structures which project from the face of a building. They may have sides but they are open at the front. Porches are generally used to protect a building entrance and to provide shelter. A veranda is typically a long porch and can extend along the full length, or even around more than one side, of a building. A building consent is usually not required for building work related to a porch or veranda up to 20 square metres, and attached to the ground-floor or first-storey level.



Observations

7.1.1 DECKING OBSERVATIONS

 Maintenance Item

INCORRECT GAP

INCORRECT GAP OFF CLADDING

- The gap between the decking and cladding is tight, this allows the accumulation of debris and can create moisture damage issues to the cladding system.

7.1.2 DECKING OBSERVATIONS

 Trade Work Required

PORCH | VERANDA NEEDS REMOVING AND REBUILDING

PORCH | VERANDA NEEDS REMOVING AND REBUILDING

- Material deterioration, under foot movement/sag noted.
- Recommend a qualified builder assess and quote for repair and/or replace.



8: OBSERVATIONS | STRUCTURE

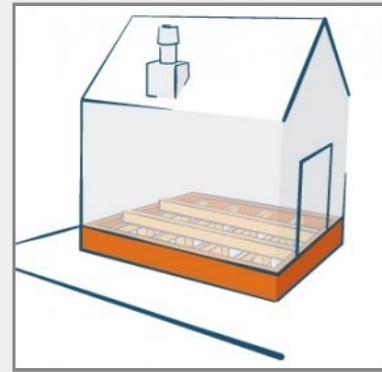
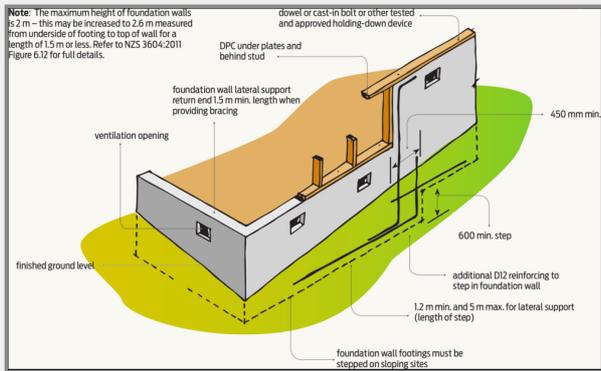
		IN	NI	NP	O
8.1	FOUNDATION OBSERVATIONS	X			X
8.2	ROOF STRUCTURE OBSERVATIONS	X			X

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

Information

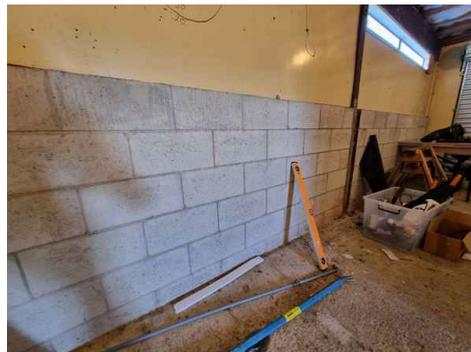
FOUNDATION OBSERVATIONS: RING FOUNDATION | FOUNDATION WALLS

EXAMPLE OF A RING FOUNDATION



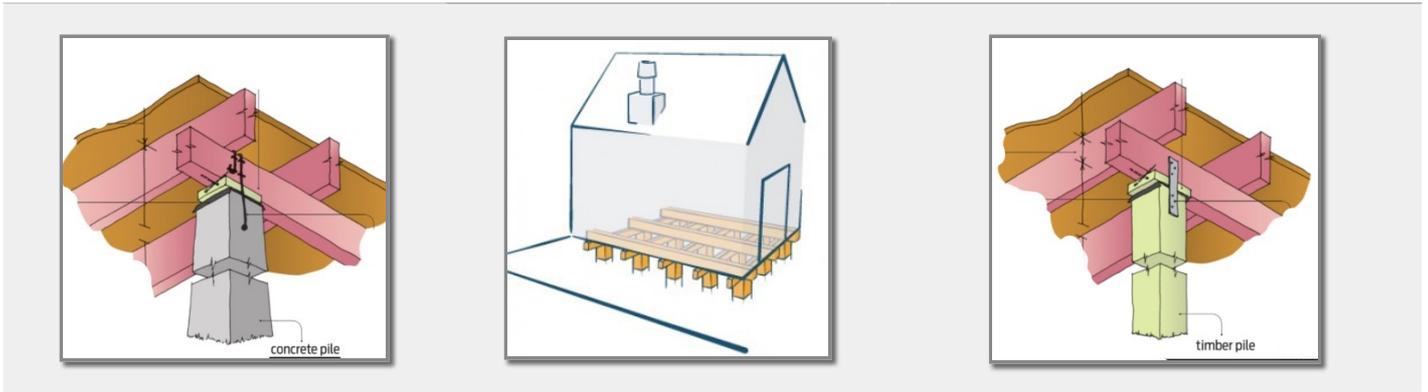
THIS SYSTEM MAY NOT APPLY. EXAMPLE ONLY

The foundation of a building or civil structure is the element that connects it to the ground. It's located at the very bottom of the construction, in direct contact with the soil, and acts to transfer loads safely from the building to the ground



FOUNDATION OBSERVATIONS: PILES & SUBFLOOR

PILES AND STRUCTURAL CONNECTION POINTS



THIS SYSTEM MAY NOT APPLY EXAMPLE ONLY

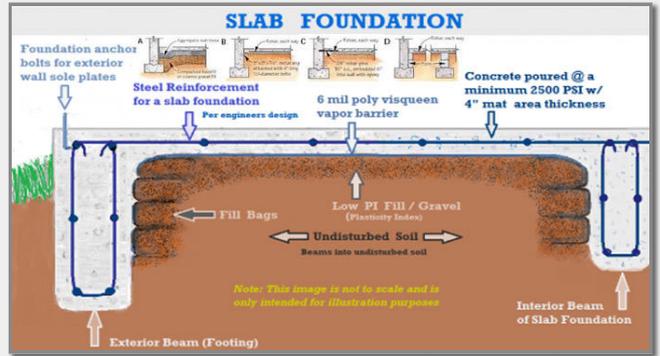
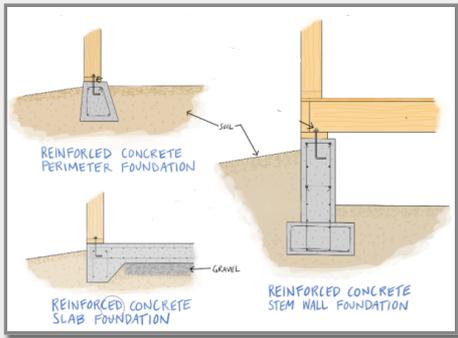
What is the purpose of a building foundation?

Foundation Functions: The three most important are to bear the load of the building, anchor it against natural forces such as earthquakes, and to isolate it from ground moisture. The relative importance of these functions changes with the type of land underneath the building and the building design.



FOUNDATION OBSERVATIONS: SLAB FOUNDATION

SLAB FOUNDATION EXAMPLES



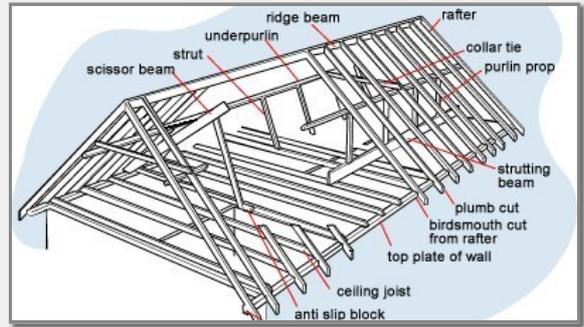
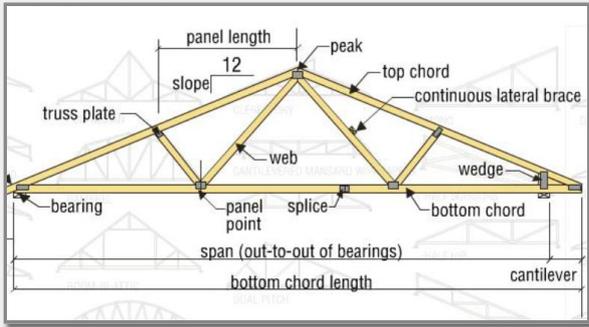
THIS SYSTEM MAY NOT APPLY EXAMPLE ONLY

Reasons for failure: No matter how well the structure is planned, there is always some chance of failure. One of the main reasons of foundation failure is the use of non-porous backfill soil. When soil such as clay is used, it behaves like a sponge and holds a large volume of water. This causes instability when the soil expands or contracts. The other important reasons for failure would include an improper curing period (a minimum of 3 days is a must), insufficient compaction of the layers and interruptions in concreting (should be done in a single stretch).



ROOF STRUCTURE OBSERVATIONS: STRUCTURE

EXAMPLES OF ROOFING STRUCTURES



A roof truss is a prefabricated structure designed to support a roof on a building. They come in two main types: flat and pitched. Those types can be broken down into more specific roof truss types that can suit all manner of construction projects. Typically triangular in shape, they are made off site and usually lifted into place before being secured.

'Truss' refers to the triangular construction of the structure. The structure will often include these triangle shapes in various configurations to fit the pitch, size or design of a roof. Triangles are very efficient shapes that allow finite control of load which is why they are used in construction. As they have to support the entire weight of a roof, they need to be strong and stable, which a triangle most definitely is.

WHICH IS STRONGER RAFTERS OR TRUSSES? Once in place, rafters use up more wood, so they weigh more, but trusses are stronger because they are more efficient and have the capacity to produce maximum strength using fewer materials in the end.



Observations

8.1.1 FOUNDATION OBSERVATIONS

SURFACE CRACKING



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.

See **STRUCTURAL INFORMATION** for more details



8.1.2 FOUNDATION OBSERVATIONS

EFFLORESCENCE | STANDING WATER

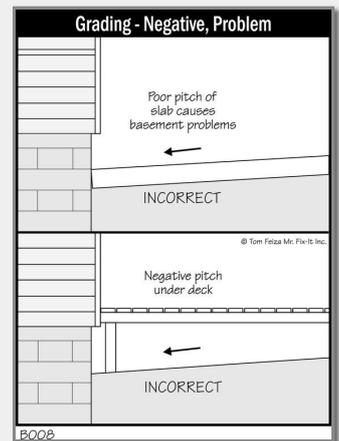
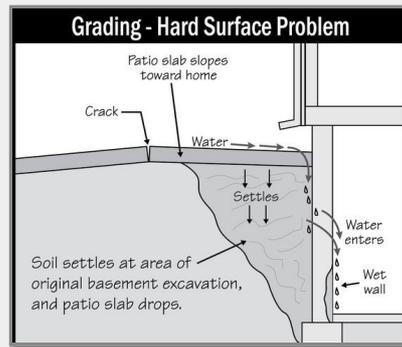
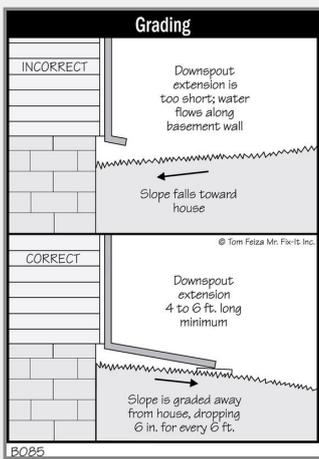
 Trade Work Required

EFFLORESCENCE ON SURFACE OF CONCRETE

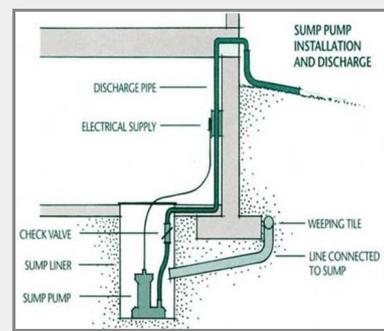
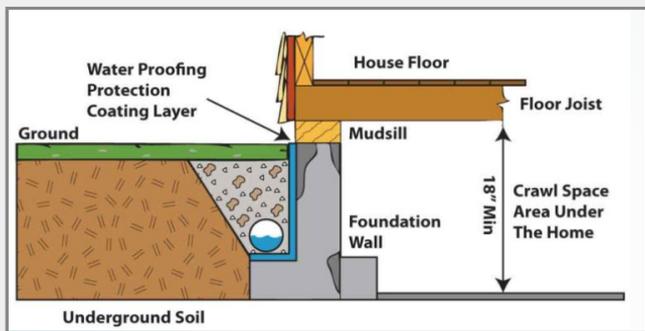
Efflorescence is usually caused by a combination of the following factors:

- 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.
- Poor exterior drainage.

POSSIBLE CAUSES



POSSIBLE SOLUTION #1



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.

POSSIBLE SOLUTION #2 & 3



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



8.1.3 FOUNDATION OBSERVATIONS
ROTTEN TIMBER

 Trade Work Required

ROT NOTED

The subfloor timber shows rot in one or more isolated areas. This is somewhat common and expected for a building of this age and type of foundation, however it's not ideal, the cause should be addressed and the repair work done sooner rather than later.

Any affected timbers should be removed where possible 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 sterilization.

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**.

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 softwoods 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.

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 meter 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.



8.1.4 FOUNDATION OBSERVATIONS

IMPROPER CONSTRUCTION PRACTICES Trade Work Required**SUB-STANDARD CONSTRUCTION PRACTICES NOTED**

- The construction in this area is somewhat questionable.

SOLUTION

- We recommend further investigation by a qualified construction contractor.



8.1.5 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.



8.1.6 FOUNDATION OBSERVATIONS

STORMWATER REQUIRES DIVERTING



STORM WATER PATH THROUGH UNDER FLOOR AREA

- Natural landscape rainwater surface runoff is flowing through the underfloor area and is or will undermine the foundation work of the structure.
- Storm water must be managed to minimise the risk of flooding. But allowing all storm water from a property to run into drains not only wastes a potential source of garden water but also means that contaminants such as oil, paint and animal droppings are carried into waterways.

SOLUTIONS

Storm water may be disposed of:

- into a local authority storm water system – either directly, or by slow release with the use of an on-site detention tank
- into a soak pit, following the guidance in New Zealand Building Code Verification Method E1/VM1
- into a retention tank, to store water for gardening, toilet flushing etc. (but not drinking)
- into a raingarden with suitable planting
- into a natural watercourse (with local authority consent)
- water from roofs can be harvested into a water storage tank for all water requirements.

Storm water runoff can be reduced by:

- collecting and storing rainwater in storage tanks
- using permeable paving
- incorporating swales to slow the rate of surface water movement
- planting a rain garden. Slightly below road level, rain gardens are filled with plants such as rushes and irises that love water
- installing a green roof as part of a new building design.

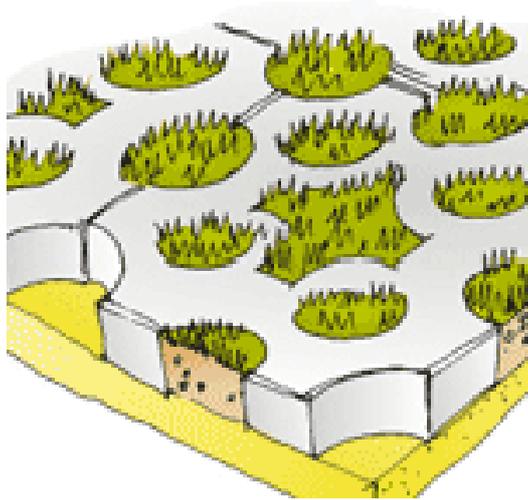
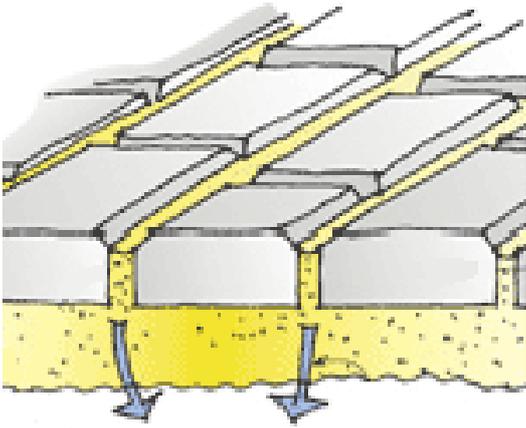
Permeable paving

Storm water runoff rate can be reduced by using permeable paving for driveways, footpaths and parking areas instead of hard, impervious paving such as asphalt or concrete.

Permeable or porous surfaces include:

- gravel
- concrete-grass paving
- porous concrete/asphalt
- open-jointed paving over gravel
- proprietary paving stones where water flows through the paver itself
- perforated polypropylene units that can be filled with gravel or pebbles

PERMEABLE OR POROUS SURFACES



Open joint paving

Concrete/grass paving

Storm water runoff will be slowed by open paving blocks that allow water to infiltrate through gaps. Grass is usually planted in the gaps.

Paving blocks on a sand base and with open joints can be used to slow rainwater runoff but they are not as permeable as concrete/grass paving options.



8.2.1 ROOF STRUCTURE OBSERVATIONS

IMPROPER CONSTRUCTION PRACTICES

 Trade Work Required

SUB-STANDARD CONSTRUCTION PRACTICES NOTED

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



9: OBSERVATIONS | GROUNDS

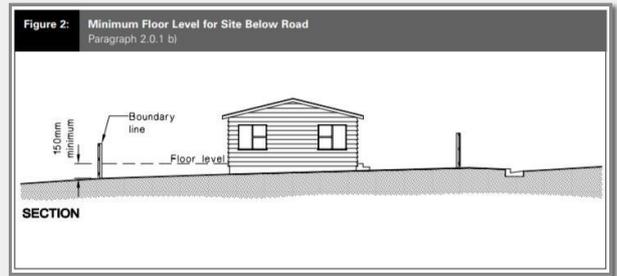
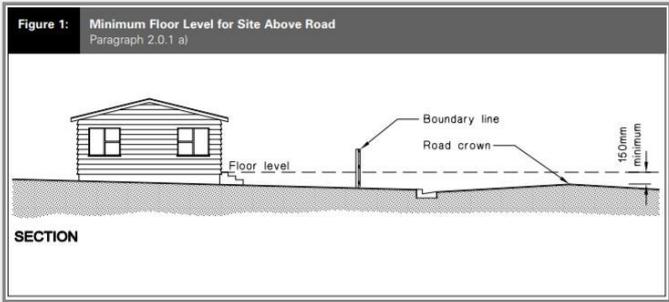
		IN	NI	NP	O
9.1	RETAINED & NON-RETAINED LAND OBSERVATIONS	X			X
9.2	DRIVEWAY & YARD OBSERVATIONS	X			X

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

Information

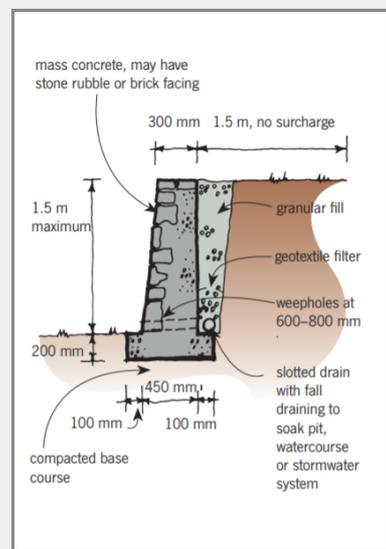
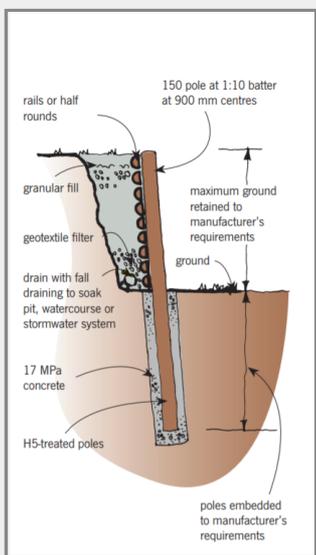
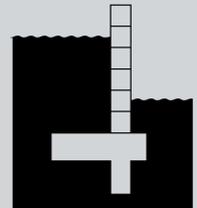
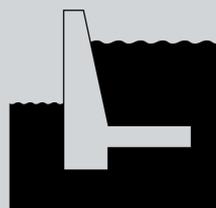
RETAINED & NON-RETAINED LAND OBSERVATIONS: RETAINED & NON RETAINED SLOPES

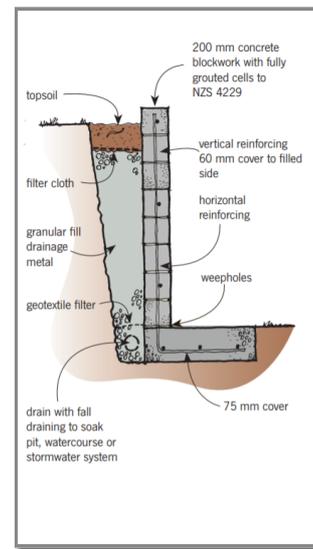
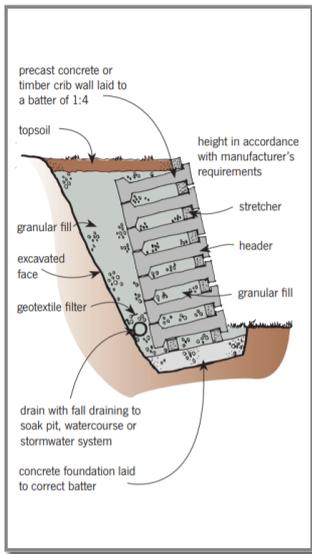
SITE GRADIENTS & GROUND DRAINAGE



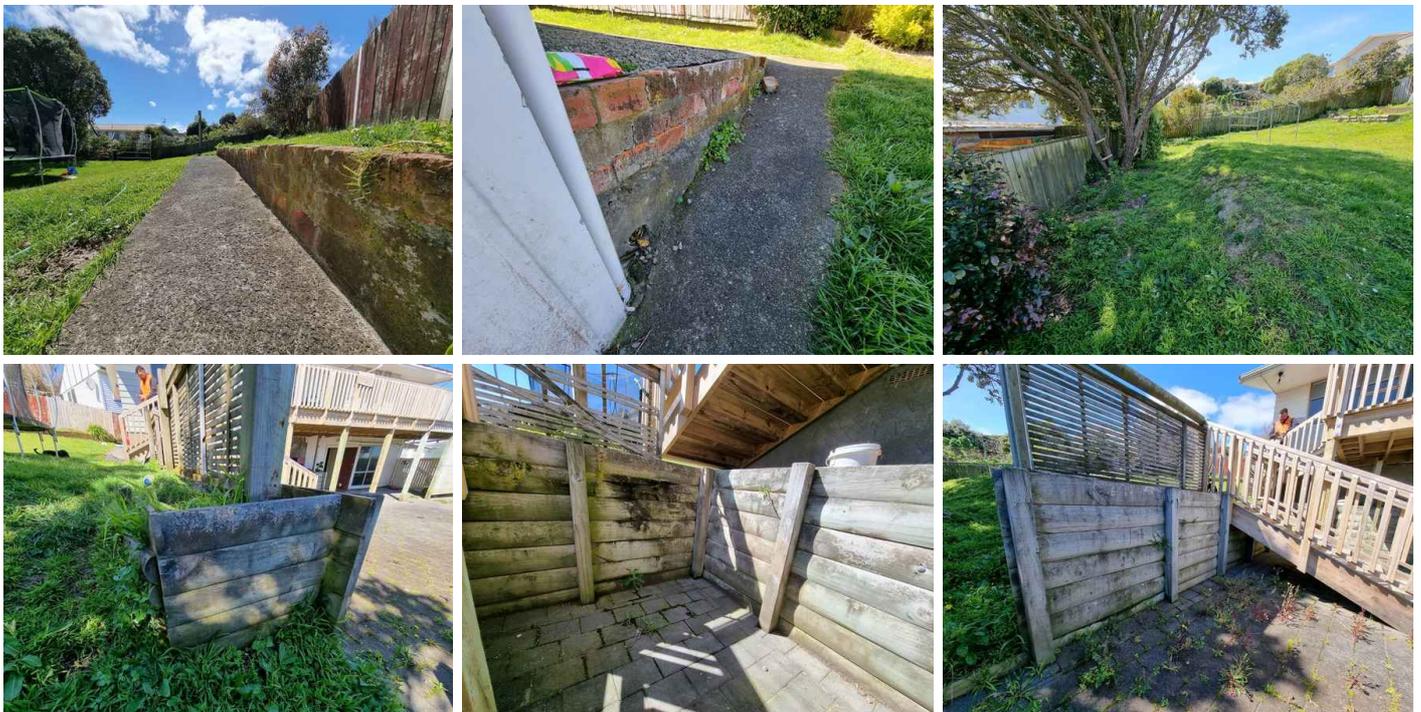
Having the floor level wrong can lead to on-going moisture problems. It could also bring serious Building Code compliance problems and potential drainage problems due to insufficient heights of flooring above ground and/or lack of fall to the drains. The Building Code states that houses must be built 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.

TYPES OF RETAINING WALLS



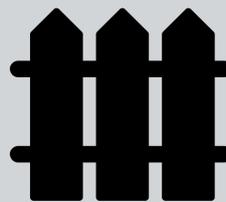


A retaining wall is built to hold back a bank of earth where there is a change of grade. There are different types of retaining walls, and not all require a building consent.



DRIVEWAY & YARD OBSERVATIONS: |

GROUNDS



Observations

9.1.1 RETAINED & NON-RETAINED LAND OBSERVATIONS

RETAINING DEFECTS SIGHTED

 Trade Work Required

RETAINING DEFECTS SIGHTED

- Defect/s sighted in retaining and/or non retained section.
- This is a relatively common observation for this particular area.
- Further investigation is advised.
- Further deterioration could result.

RETAINING INFORMATION

- Check whether work requires a building consent. Building or repair work on a wall retaining less than 1.5 metres of ground and not supporting a surcharge does not require a building consent. (A surcharge is an additional load on the land above the wall, such as a car park or driveway.)
- If the wall is taller than 1.5 m or there is a surcharge, then building consent is required. When a building consent is required, the wall must be designed by a registered engineer
- Some proprietary retaining wall systems (particularly crib walls) have pre-engineered design tables that may be used without the need to engage an engineer
- Where there is a suspicion of ground movement, getting advice from a geotechnical engineer is recommended
- Even where consent is not required the wall must still comply with the Building Code, including clauses B1 Structure, B2 Durability and F4 Safety from falling
- In almost all circumstances, good piped drainage behind the wall is essential to dispose of water – a build-up of water behind the wall is the principal cause of retaining wall failure.



9.2.1 DRIVEWAY & YARD OBSERVATIONS

GROUND SETTLEMENT AND/OR FLAT CONCRETE CRACKS



GROUND SETTLEMENT AND/OR FLAT CONCRETE CRACKS

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.



10: OBSERVATIONS | UTILITIES

		IN	NI	NP	O
10.1	UTILITIES OBSERVATIONS	X			X
10.2	VENTILATION OBSERVATIONS	X			X
10.3	INSULATION OBSERVATIONS	X			
10.4	EXTERIOR UTILITIES	X			X

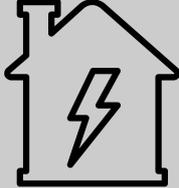
IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

UTILITIES OBSERVATIONS: CAVITY UTILITIES

CAVITY UTILITIES





ELECTRICAL

WIRING: All live wires sighted were TPS and showed no major defect. 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

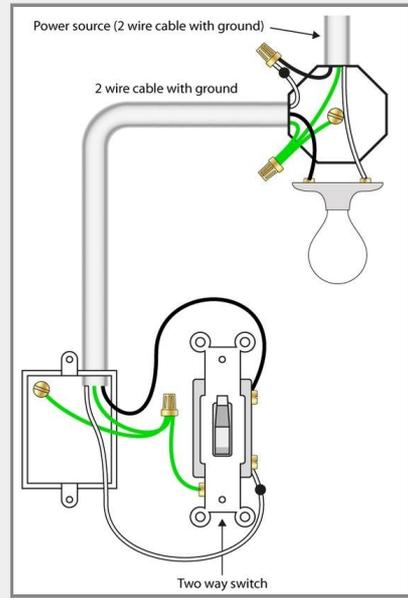
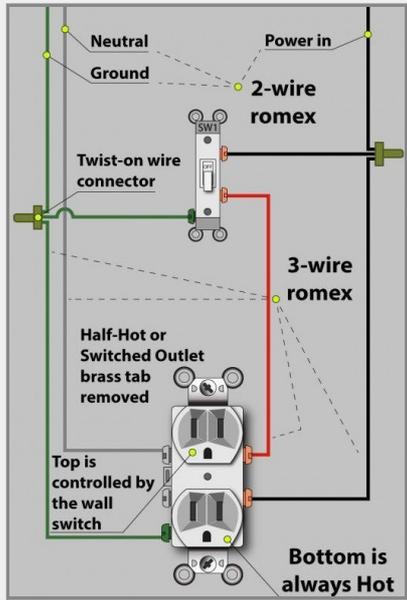
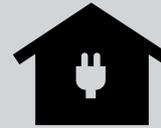
ROOF PENETRATIONS: All accessible roofing penetrations were inspected from within the ceiling cavity, plus all penetration flashings, boots and/or general weather sealing around penetrations was inspected from the exterior.

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.

UTILITIES OBSERVATIONS: ELECTRICAL SYSTEMS

INTERIOR ELECTRICAL SYSTEMS



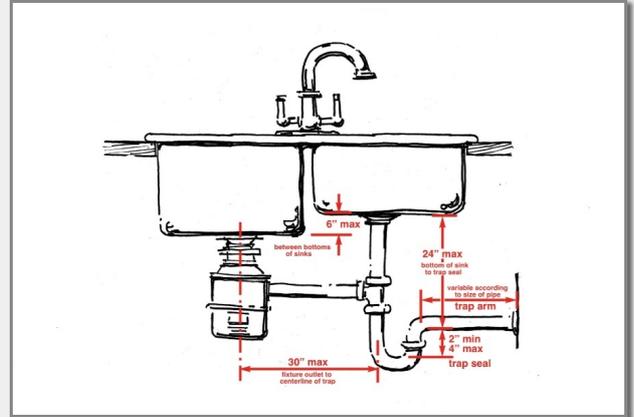
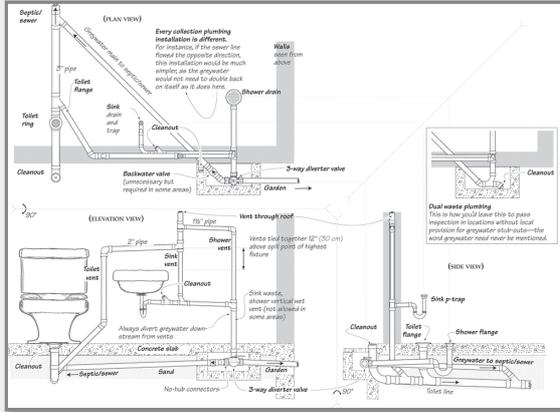
GOOD INFORMATION ON HOME ELECTRICAL SYSTEMS

[SINGLE PHASE ELECTRICITY EXPLAINED \(YOUTUBE LINK\)](https://www.youtube.com/watch?v=W0_1xRqT8uU&t=459s)

https://www.youtube.com/watch?v=W0_1xRqT8uU&t=459s

UTILITIES OBSERVATIONS: PLUMBING SYSTEMS

INTERIOR PLUMBING SYSTEMS



5 TYPES OF PLUMBING LEAKS



1. WATER SUPPLY LEAKS

A gusher leak in pipes results from burst pipes, solder joint failure, or splitting of the pipe. They are easy to notice as they make a lot of noise.



2. PINHOLE LEAKS

Pinhole or drip leaks are a result of loose threaded fitting, corrosion, or worn-out valves. They are slow and subtle, but they can waste a lot of water.

3. DRAIN LEAKS

Drain leaks can be hard to notice at first, but they present themselves as flooding or moulding in the basement, impacted soil, or nasty smells.



4. SINK STRAINER LEAKS

Sink strainer leaks in the sink can occur due to poorly installed sink drains, corrosion, loose parts, and worn gaskets.

5. DRIPPING FIXTURES

Leaks in fixtures like toilets, tanks, or faucets occur due to bad gaskets, loose threaded fitting, corrosion, or faulty valves.



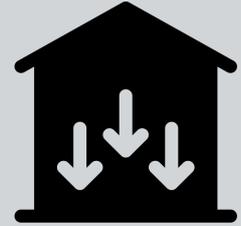
INSULATION OBSERVATIONS: FIBREGLASS INSULATION**FIBREGLASS INSULATION**

This is the type most familiar to Kiwis. We've all seen the TV ads. It's commonly made from recycled glass and offers excellent thermal performance, i.e. it traps heat more effectively than most other materials of the same thickness. On the downside, the glass fibres can be irritating to skin and eyes, while some people have concerns about the chemicals used to bond the fibres during manufacture.

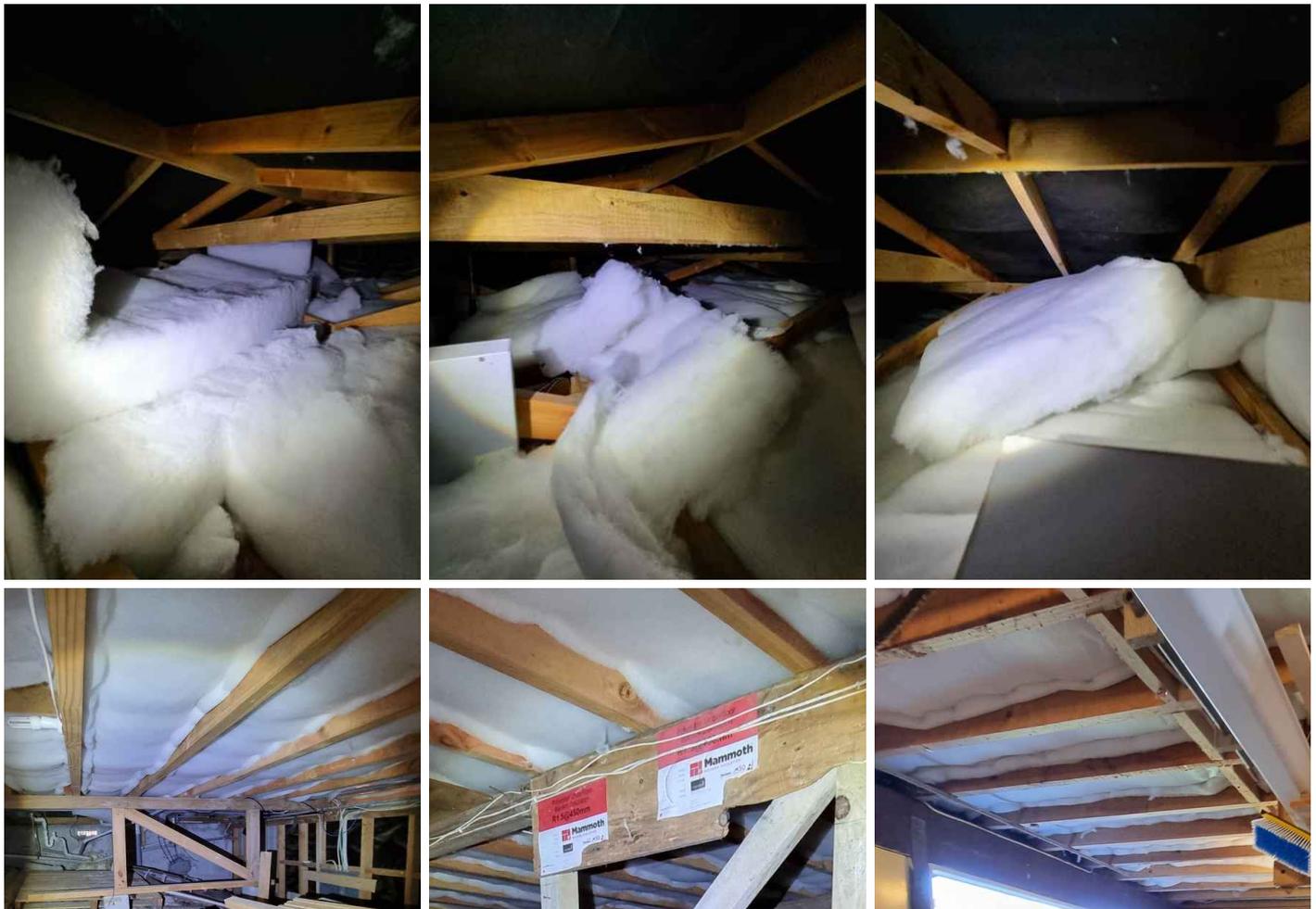


INSULATION OBSERVATIONS: POLYESTER INSULATION

POLYESTER INSULATION

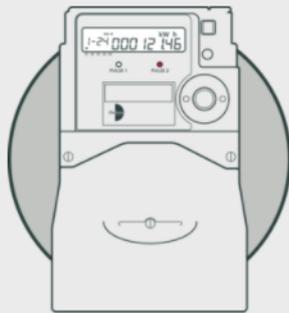
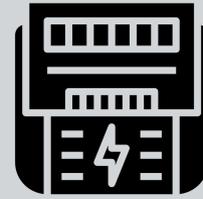


This is often made from recycled plastic, such as PET drink bottles – an eco-friendly way to turn a waste product into a green insulation resource. It offers a good level of insulation performance, especially when installed as a large ‘blanket’ that rolls out to cover the entire roof space, including joists. This is an excellent way to minimise hidden heat loss. Harrison's Home Energy Solutions uses a polyester insulation brand that contains no chemical additives, unlike some fibreglass insulation products.



EXTERIOR UTILITIES: METER | CIRCUIT BREAKERS | FUSES

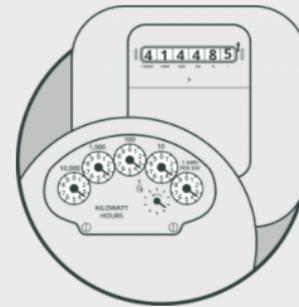
WIRING & FUSES



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.

Legislation requires:

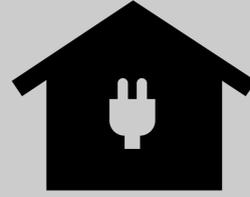
- a 100-300 mA RCD covering the whole installation
- a second 10-30 mA RCD covering circuits in wet rooms (kitchen, bathroom, utility room, etc.)
- circuit breakers on each circuit.

However, you can meet these specifications and save space on the circuit breaker panel: on some circuits, you can replace two devices (RCD and circuit breaker) with a single device (RCBO). This will protect these circuits against current leaks and overloads at the same time.



EXTERIOR UTILITIES: ELECTRICAL

**MAINS POWER ENTRY
& OTHER ELECTRICAL ITEMS**

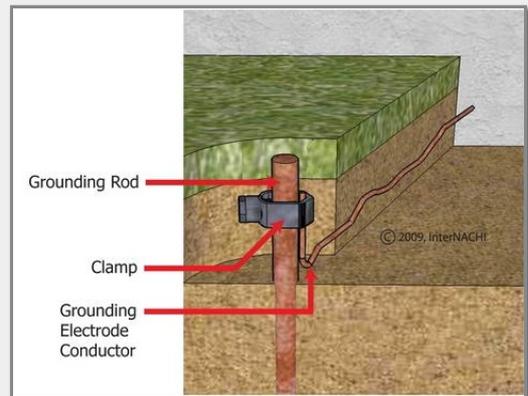
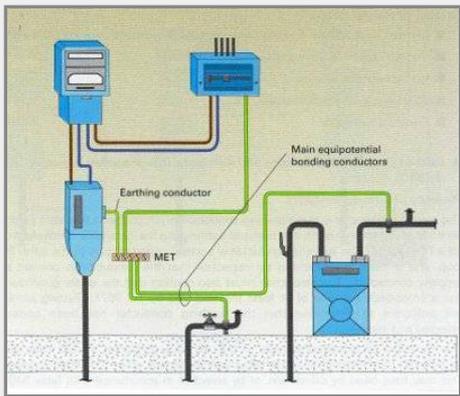


Many homeowners do not realise they are responsible for power lines and poles which supply electricity to their property. Inside private property boundaries, owners are legally responsible for the safety and maintenance of their electrical installation.

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.

EXAMPLES ONLY







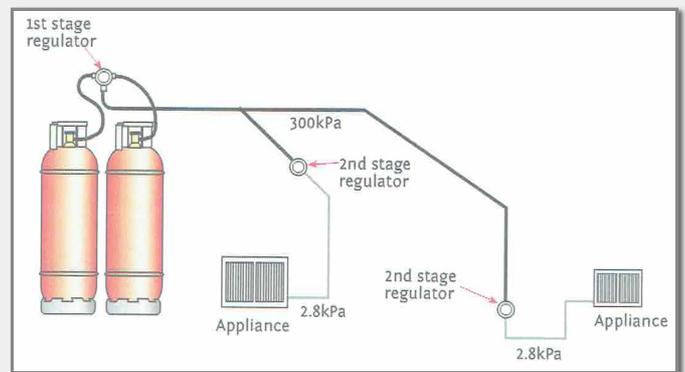
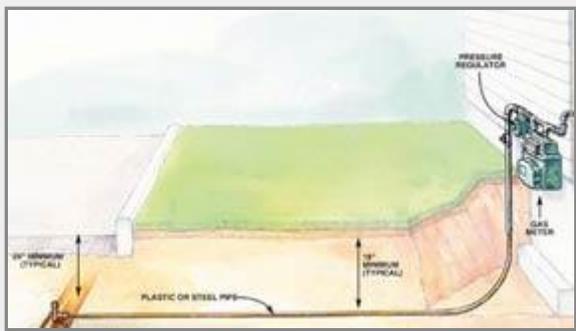
EXTERIOR UTILITIES: GAS

MAINS GAS ENTRY



Main gas shut off valve: Your main shut off valve is located just before the gas meter. This is called your “street side valve”. On the inside of your house, where the pipe enters your house, you can find your “house side valve.” This ball valve is attached to a black iron pipe. (Newer homes) Once you’ve located your main shutoff valves, it is a good idea to label them. The illustrations shows how gas is brought into the house from the street and from bottles.

EXAMPLES ONLY



EXTERIOR UTILITIES: VENTS

EXTRACTION VENTS



Requirements for new extractor fans: For the ventilation standard, a 'kitchen' is a room with an indoor cooktop and a 'bathroom' is a room that has a bath or shower. All kitchens and bathrooms must have an extractor fan vented to the outside.

Rangehoods and central systems that recirculate air (without venting to the outside) can still be used but will not meet the standard.

The regulations don't specify where in a room the extractor fan should be installed. The best option is to install a fan as close to the source of moisture as possible, however, this may not be practical in all situations.

Kitchen extractor fans: The fan and all ducting must be at least 150 mm in diameter or the fan with ducting must have an exhaust capacity of 50 litres per second. A rangehood is suitable if it ventilates to the outside.

Bathroom extractor fans: The fan and all ducting must be at least 120 mm in diameter, or the fan with ducting must have an exhaust capacity of 25 litres per second.



Observations

10.1.1 UTILITIES OBSERVATIONS

UNSATISFACTORY ELECTRICAL ITEM

Trade Work Required

UNSATISFACTORY ELECTRICAL ITEM

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



10.1.2 UTILITIES OBSERVATIONS

UNSATISFACTORY PLUMBING ITEM



UNSATISFACTORY PLUMBING ITEM

- The item/s in this section require tidying up.
- The less questions you give buyers to ask the less things they will have to knock you back on.

**PLUMBING CONTRACTOR:
H2FLO PLUMBING SOLUTIONS
DAN KENDELL | 0273216211**





10.2.1 VENTILATION OBSERVATIONS

UNSATISFACTORY VENTILATION ITEM

Trade Work Required

UNSATISFACTORY VENTILATION ITEM

One or more of the following may apply:

- The item/s in this section requires cleaning/repair/replacement.
- The ventilation system has been poorly installed.
- Bathroom fan vents into the attic, this can cause moisture and mold to form in the ceiling cavity. Both scenarios can be harmful to your health over time.
- Ventilation system need to be upgraded and/or installed throughout the property.
- Kitchen rangehood not ducted to the exterior.
- Kitchen extractor fan does not meet the requirements of the healthy homes standards
- Bathroom fan vents into the attic, which can cause moisture and mould. Ducting not connected to the soffit vent.
- Bathroom extractor fan does not meet the requirements of the healthy homes standards.

EXTRACTION UNITS

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.

SOLUTION: VENTILATION / EXTRACTION

Recommend a qualified contractor property install the correct exhaust fan unit/s to terminate to the exterior of the dwelling.



11: OBSERVATIONS | MOISTURE

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

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

Information

|

MOISTURE TESTING	
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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 may require further investigation with other moisture detecting equipment.

Thermal Imaging does not detect moisture! Put simply, it is used to identify areas that show "**Temperature 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.

Our Unique Moisture Testing System works by having two person teams at every property inspection. Both inspectors have a thermal imaging camera and separate moisture detection equipment, these are calibrated upon arrival to site, with baseline resistance levels set at entry to each room. (On-site, room by room calibrations allow for the varied density levels and overall moisture absorption of each tested material and/or tested area) Each tool is used independently from the other and both inspectors follow the same procedure but with one in reverse order. (Senior Inspector uses Thermal imaging to identify where best to test for possible moisture ingress. Second Inspector uses Contact Moisture testing indications, that are then substantiated and traced with Thermal imaging)

How the double-blind system works: If one inspectors meter and/or camera indicates an area that requires further investigation, the inspector will flag the area through our software, thus notifying (at the end of inspection) the other inspector to double check the area with their independent moisture detecting equipment. This unique double-blind moisture inspection system was developed to eliminate incorrect identification of elevated moisture and equally confirm, trace and isolated moisture ingress to the affected areas only.

In some inspections, a vendor may attempt to distract us from the process as we near an area that they know to have issues. Our two-person inspection processes, with in app flagging for areas to revisit won't allow us to ever miss anything accessible. Other times vendors and/or tenants may try to disguise a problem by drying affected areas prior the inspection, installing new linings, painting over surfaces and/or placing furniture in front of problematic areas. As our standard inspections are non-invasive and is of a visual nature, we cannot move the vendor's furniture and/or belongings without explicit consent in writing. Therefore, we can't be held liable for unidentified observations that were concealed and/or disguised at the time of inspection. Obtaining a vendor statement about the house's moisture condition and a final pre-settlement inspection when the house is empty is highly recommended. If any areas of concern are sighted once the dwelling is vacant, Immediate notification about the newly identified problem areas to your solicitor and/or inspector would be strongly advised.

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. A DIFFERENT BASELINE % MAY BE SET FOR EACH AREA AND/OR BUILDING MATERIAL TESTED. WE WILL ADVISE YOU IF THE AREAS TESTED WERE **DRY**, **DAMP** AND/OR **WET**.

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.

17-40%

MOISTURE DETECTED (HIGH LEVELS) 17.0 - 40.0% 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.

40-100%

MOISTURE DETECTED (VERY HIGH LEVELS) 40.0 - 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

11.1.1 THERMAL & MOISTURE TESTING OBSERVATIONS

 Trade Work Required

ELEVATED MOISTURE LEVELS

ELEVATED MOISTURE LEVELS

Indication of moisture documented with the FLIR MR60, FLIR MR277, FLIR PIN PROBES and/or Visual Signs of Moisture Ingress were noted.





Moisture

21.6

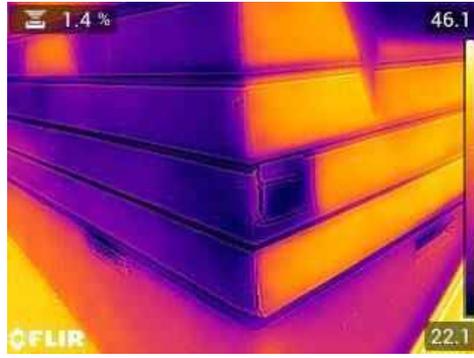
Pinless Mode



Moisture

18.9

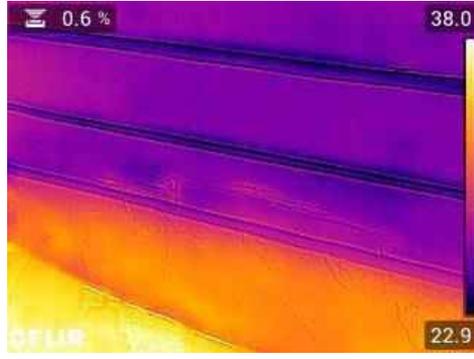
Pinless Mode



Moisture

25.1

Pinless Mode



Moisture

71.1

Pinless Mode



Moisture

12.7

Pinless Mode



12: INFORMATION | MAINTENANCE

Information

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

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:

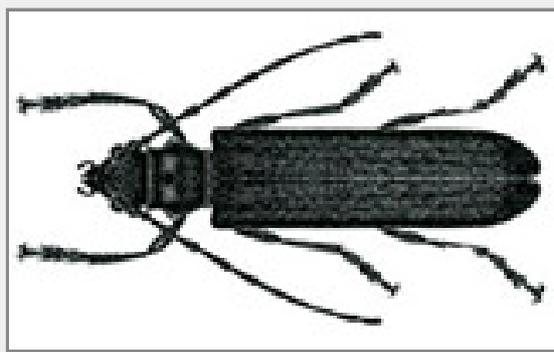
[PEST CONTROL SERVICES WELLINGTON](#) Phone: 0800 997 378

GROUND MOISTURE BARRIERS

[MOISTURE BARRIERS WELLINGTON](#) Phone: 021657387

BORER**RECOGNISING & TREATING BORER**

Borer attacks untreated and damp timber. Make sure any timber components are well ventilated to prevent damp. For minor, or early infestation, treat the infested areas. Replace badly affected timber. (This can be easier said than done sometimes)

RECONISING BORER**Common House Borer****Two-Toothed Longhorn borer**

There are up to 7 species of borer in New Zealand. The most common is the **Common House Borer**. Signs that you may have borer in your home timbers, doors or furniture include small (2-4mm) flight holes on the surface of the timber and piles of fine sawdust. The **Two-Toothed Longhorn borer** is a native to New Zealand and also common. It is a much larger beetle and its flight holes are larger, up to 7mm, and more oval in shape. This type of borer is less likely to be found in buildings.

SOLUTION: BORER TREATMENT

There are up to 7 species of borer in New Zealand. The most common is the Common House Borer. Signs that you may have borer in your home timbers, doors or furniture include small (2-4mm) flight holes on the surface of the timber and piles of fine sawdust. The Two-Toothed Longhorn borer is a native to New Zealand and also common. It is a much larger beetle and its flight holes are larger, up to 7mm, and more oval in shape. This type of borer is less likely to be found in buildings.

Borer-infested timber can be treated, but if timbers are severely weakened you should strengthen the timber or ultimately the timber may need to be replaced.

The only long-term treatment for borer is a residual surface application of a product including insecticide or preservative. The treatment must last longer than the lifecycle of borer. This type of treatment can only be used on bare timber, so you may need to strip the timber of paint or varnish before treatment. If you see evidence of borer in your weatherboards, there is a good chance the borer is more extensive than it seems. This is because borer tends to attack from the inside of the boards. The only long-term solution is to replace the affected weatherboards and treat the framing timber behind while the wall is open.

Borer like seasoned or moist untreated timber. They are often found on the south side of buildings or in floor timbers because these areas are prone to damp. They are also fond of soft (sapwood) or untreated wood and can be common in untreated native timbers in older homes. It is not uncommon to have borer attack some boards and not others – the untouched ones are probably harder heart wood. Some wood is naturally resistant to insect attack – for example, macrocarpa. Kiln drying radiata pine improves borer resistance. Provided it remains dry, radiata is suitable for internal framing, heart quality macrocarpa and eucalypt species for weather-exposed timbers. For piles the Building Code Acceptable Solution requires timber treated to at least H5. Using untreated wood would require an Alternative Solution under the Building Code. Speak to your timber retailer for the best option for the intended application or see NZ Standard 3602. Sawn timber is also more prone to borer attack than a smooth surface.

Airborne treatments (such as bombs, misting or fogging) will only kill the adults on the wing (November to March) and won't stop the larvae from eating away at the inside of your timber.

Kiwicare No Borer Injection Spray



Any large-scale infestation should be treated by a professional with the right safety equipment. Professional Borer treatment cost between \$150.00 & \$300.00 The treatment soaks into the timber and borer larvae and pupae are killed as they consume it. The treatment will provide borer stopping power for at least 5 years.

POLYBUTYLENE PLUMBING PIPE

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:

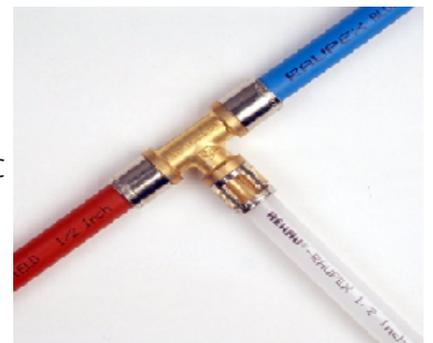
- usually stamped with the code "PB2110";
- ½" to 1" in diameter.
- flexible and sometimes curved, unlike rigid piping materials such as copper;
- not used for waste, drain or vent piping;
- most commonly grey in color, but they can also be white, silver, black or blue. Blue PB is used primarily outdoors 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 whether or not a pipe is made from PB.



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.

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.

ALUMINIUM JOINERY MAINTENANCE

Aluminium Doors & Windows

Doors and windows need regular cleaning and maintenance to keep them weatherproof and in good working order.

Pitting: If you don't clean your windows and frames, you are inviting corrosion of the aluminium, which leads to pitting on anodised aluminium. This will shorten the product life. You can repair the pitting by cleaning, sanding and repainting according to the paint manufacturer's instructions.

Powder coat chalking: This is due to age. To help keep powder coat finishes looking good for longer, apply a vinyl restoring solution or light oil after cleaning. This will also reduce the effect of chalking.

Sashes won't open freely: This happens if the sash is twisted, the friction stays are too tight, or the building has settled or the sash frame has swelled. If the sash is twisted, you are likely to break the glass trying to straighten it. Contact a window professional to remedy this. If the stays are too tight, adjust them or replace them. If the problem is due to building settlement, consider having re-piling and/or levelling done, then adjust the window.

Sashes won't stay open: This is caused by worn or inadequate friction stays. Replace the stays using the correct stay for the window size and wind area. You could also fit a casement stay to hold the window open, although this is not easily done with aluminium. You may need a professional to replace the stays.

Blocked outlets: This will cause condensation to build up. Clear out the dirt and obstructions from the outlets.

Seals to the frame joints deteriorating: This is due to thermal expansion or age. It could allow moisture to get in. If the window has removable exterior glazing beads, remove the rubbers and beads and clean. Apply a bead sealant before putting the bead and rubber back on.

Scratching or surface damage: This should not affect the performance and is an aesthetic issue. Buff the surface before applying a vinyl restorative or light oil.

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.

TIMBER WEATHERBOARDS | MAINTENANCE

WEATHERBOARD MAINTENANCE

CLEANING

Almost all materials and finishes on the exterior walls will last longer if they are cleaned from time to time. Cleaning removes dust, dirt, mould, mosses, chemical residues and salt spray, all of which can hasten deterioration.

- Wash down the exterior of the building yearly.
- Increase cleaning frequency to 3-monthly in geothermal or severe marine areas.
- Where unpainted steel cladding is used, wash down areas not rain-washed at 6-monthly intervals.
- Clean glass every 3-4 months, more frequently in severe marine areas.
- Carry out cleaning with a low-pressure hose, a soft brush and a gentle detergent. Water-blasting might sound like a good idea, but it can lead to long-term damage if it forces water through gaps into the wall assembly.

PAINTING

External paint coatings don't last forever, and recoating must be carried out routinely to maintain decorative and weather-resistant properties. How long external paint will last depends on the:

- quality of surface preparation and condition of the old paint. Paint will last better when the old paint is still in a reasonably sound condition and the surface is well prepared for the new paint
- quality of the paint used. Typically, you get what you pay for – extremely cheap paints are likely to deteriorate faster than better quality (more expensive) paints
- amount of sun shining on it – paint on the south side of a building gets less UV light exposure and will last longer than paint on the north or west side
- colour – lighter colours tend to last longer than darker because they absorb less heat, so expand and contract less
- size and type of material under the paint. Paint on wide timber boards won't last as long as on narrow boards because the overall movement in wide boards is greater. Paint properly applied to cement-based materials (concrete, cement plaster, fibre-cement products) tends to last longer than paint on timber
- cleanliness of the painted surface – wash down often to remove airborne chemicals and dirt from the surface
- number of coats applied
- underlying colour – applying a dark colour directly over a light one can cause a previously sound paint to lose adhesion because of the higher surface temperature.
- Paint on weatherboard or fibro can last up to 15 years. Gloss or semi-gloss timber window trim needs repainting every few years. However, Painted weather seal on timber should still to be refinished every 2 to 5 years.

"Paint before it looks like it's due to be painted"

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.

LIMITATIONS

Every effort is made to provide you with the most comprehensive property report possible, especially so when it comes to moisture ingress, However in some very rare situations moisture ingress can be

overlooked when using the thermal imaging and/or moisture meters. If we have noted a "visual" indication of historic and/or current moisture ingress damage and/or a high risk area for ingress to occur. Then we must stress that these areas be addressed as if moisture ingress is occurring in the present tense and you should have the areas correctly sealed sooner rather than later.

Please note: Dry weather can affect a moisture inspection as less moisture will remain in the structure. A wet season and/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, aluminium siding or wet surfaces, aluminium foil. Decayed timber (dry) is not detected by non-invasive moisture meter. A more invasive 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 linings, 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 and/or belongings. Therefore 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. If any areas of concern are sighted once the dwelling is empty, Immediate notification about these problems to your solicitor and inspector would be strongly advised.

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.

13: THERMAL IMAGING | GALLERY ONLY

Information

|

MOISTURE TESTING



CPRNZ MOISTURE INSPECTION SYSTEMS BY FLIR

FLIR MOISTURE TESTING EQUIPMENT



FLIR MR277
Moisture Hygrometer
IGM™ Moisture Meter
& MSX® IR Camera
FLIR Lepton microbolometer



FLIR MR176
Moisture Hygrometer
IGM™ Moisture Meter
& IR Camera
FLIR Lepton microbolometer



FLIR MR59
Ball Probe Moisture Meter



FLIR MR55
Pin Probe Moisture Meter



MR06
Wall Cavity Probe



MR02
Moisture Pin Probe

Commercial & Residential Building Inspections with FLIR

Missing, damaged, or inadequate insulation, building envelope air leaks, moisture intrusion, and substandard work are costly to residential and commercial building owners. Thermal imaging can help you quickly target the source of the problem so you can help customers make informed decisions on repairs.

GALLERY IMAGES

THERMAL IMAGING GALLERY ONLY

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

This is a **gallery only section**
to be referred back too, if required at a later date.

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 the relative humidity at the time. This is a **gallery only section and therefore may contain images that we used to locate moisture.*

WET AREAS

Wet areas are the rooms or spaces containing sanitary fixtures and appliances – including bathrooms and ensuites, toilets, laundries, kitchens, entries and garages.

They and can be subject to high levels of moisture from:

- direct wetting
- high humidity levels
- condensation.

Poor wet area design or installation can increase the risk of slips and other safety hazards, and can compromise accessibility and occupant comfort. Design and building faults can also lead to damage in building structure or finishes – such as rot in framing; deterioration/disintegration of linings, flooring, and cabinetry; and peeling paint. Structural damage in wet areas is becoming more common. It is often not immediately obvious, but can be substantial. With good design, detailing and installation of waterproof membranes and impervious finishes to manage the moisture generated, wet areas can be durable, healthy, safe and comfortable, and should not result in damage to the building structure, surface finishes and fixtures.

ATTIC AREAS

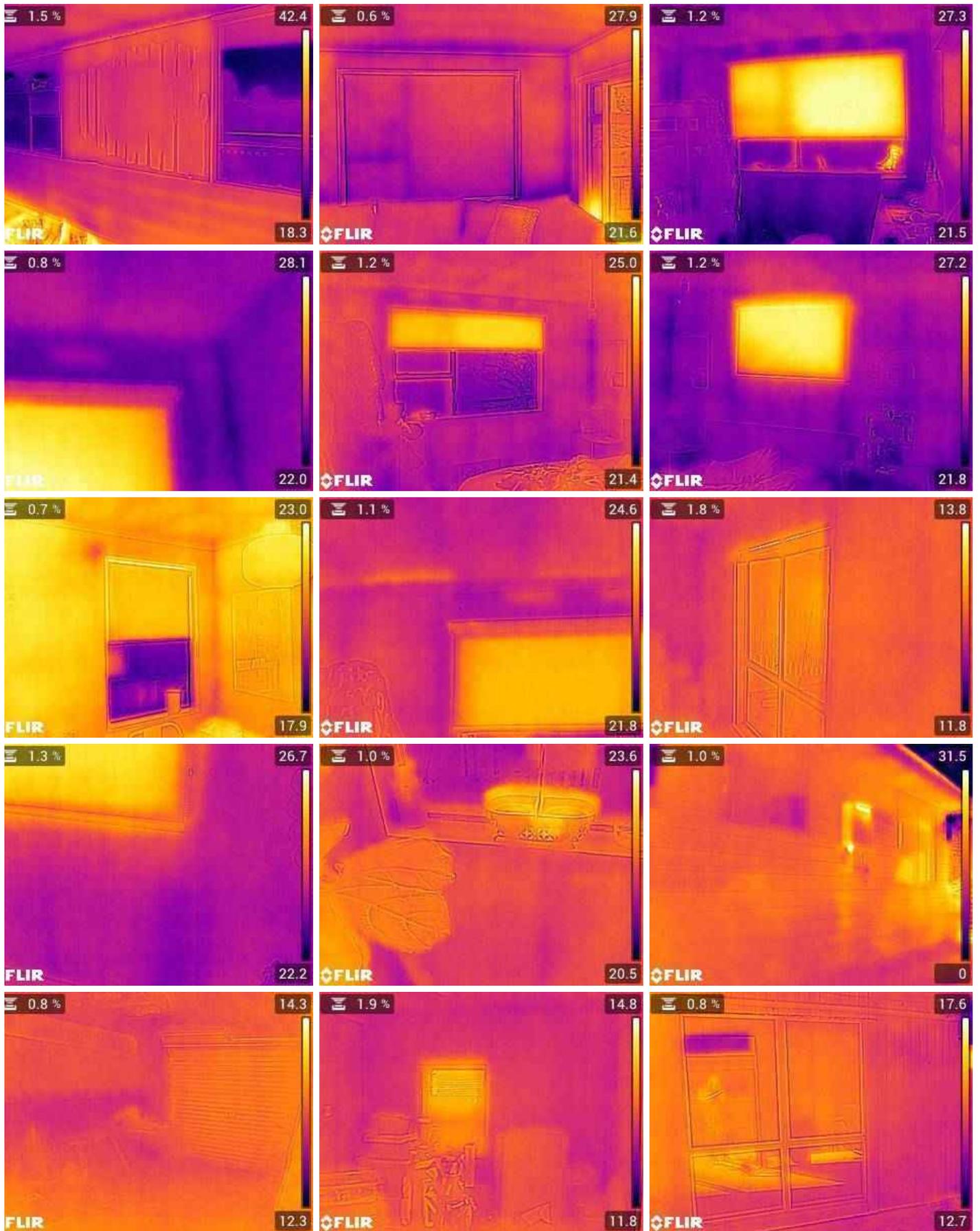
Thermal imaging reads temperature differentials in a defined area. A common reason to do this is to find trapped moisture. For example, a roof absorbs heat from the sun. As the sun goes down and temperatures dip, wet areas of the roof release heat slower than dry areas. The temperature differential is shown on the image through variations in colour. Using the thermogram, we can pinpoint where water may have leaked through the roof and into the insulation.

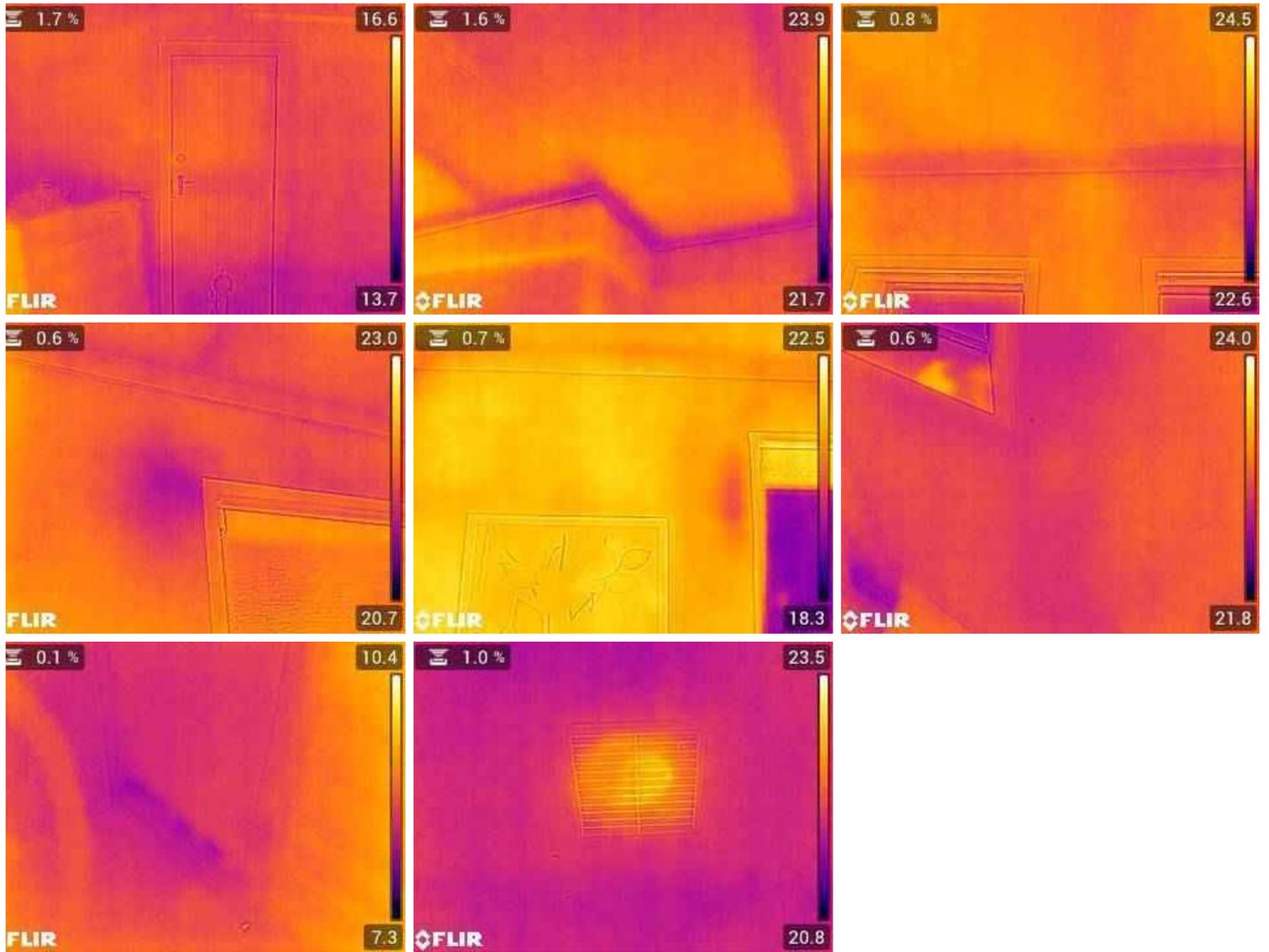
ELECTRICAL & PLUMBING ITEMS

Using thermal imaging on the electrical system is a simple way to check for overloaded circuits, motor bearing failure, issues with electricity distribution, even loose connections.









STANDARDS OF PRACTICE
