Kāinga Ora
Homes and Communities

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18 January 2023

s9(2)(a) [redacted]

Thank you for your requests dated 7 December 2022 under the Official Information Act 1992 (the Act). I will respond to each request in turn:

Request 1:

1. Please provide under the Official Information Act, a copy of the current Kainga Ora property maintenance standards and guidelines applied by Kainga Ora to houses which it owns itself.

2. Please provide under the Official Information Act, a copy of the current Kainga Ora property maintenance standards and guidelines applied by Kainga Ora to houses which it leases from private owners.

Attached as Appendix A is a copy of the '*Amenity Condition Manual (ACM-200)',* which is released to you in full. I note that this document is the standard used for both Kāinga Ora owned and leased homes.

Request 2:

Kainga Ora engages SPM Assets to undertake periodic inspections of properties leased by Kainga Ora from private owners.

Please provide under the Official Information Act the "Inspection Methodology Specification" that is applied for these inspections.

For clarity, I wish to know what condition factors Kainga Ora have instructed SPM Assets to report on when undertaking an annual property inspection.

Attached as Appendix B is a copy of the *'Scope of Services for inspecting and reporting on Home Leased Properties'*, which is an extract from the Conditions of Contract for Consultancy Services with an external supplier. This document is released to you in full.

Request 3:

1. Please advise the number and suburb of residential properties in Whangarei district that are leased by Kainga Ora via the Version 6.2 Kainga Ora housing lease programme.

2. Please advise the number and suburb of residential properties in Whangarei district that are leased by Kainga Ora via the Version 6.0 Kainga Ora housing lease programme.

3. Please advise what qualification criteria is used by Kainga Ora to determine whether a Version 6.2 lease can be used for leasing a private owner property. Please find attached.

I note that on 25 October 2022, we provided you with a copy of the Version 6.2 Housing New Zealand Limited Lease agreement. There are ten properties leased by Kāinga Ora under the Version 6.2 agreement, as follows:

- six in Raumanga,
- three in Kamo
- one in Hikurangi

There are seven properties leased by Kāinga Ora on version 6.0 as follows:

- three in Kamo
- four in Onerahi

Regarding question three, there is no set criteria. If the property is new to the portfolio we mostly offer the latest version, which is the Version 6.2 Lease Agreement. If we are renewing a lease with an owner then they can either remain on that lease or take up another version, except if they were on Version 5 lease, which we are phasing out.

Please note that Kāinga Ora proactively releases its responses to official information requests where possible, and out response to your request may be published at https://kaingaora.govt.nz/publications/official-information-requests/ with your personal information removed.

Yours sincerely

Rachel Kelly
Manager Government Relations

Amenity Condition Manual (ACM-200)

For the 2022-2023 Financial Year

Specification of work to be done, and materials to be used, in undertaking Te Mahi Ngātahi work in properties owned and/or managed by Kāinga Ora – Homes and Communities.

Effective from: 1 July 2022

VERSION 10

Document Control

Title	*ACM-200: Amenity Condition Manual*
Version	10
Date	July 2022
Author	Various/Kāinga Ora – Homes and Communities
Editor	Matt Walker (Senior Technical Writer)
Reviewers	Lisa Sosich (Quality Homes Advisor) Graeme Bush (PBMC Technical Manager)
Approvals	Rohan Bush (Director – Building Sustainability, Innovation, and Standards) Doug Spick (Director – Maintenance Contracting and Asset Services)

Refer to Section 10: Version Control for details on changes introduced with the new version of the ACM-200.

Contents

1 GENERAL

INTRODUCTION

The Kāinga Ora *Amenity Condition Manual* (ACM-200) describes and establishes the acceptable standard of amenity in the properties owned and managed by Kāinga Ora – Homes and Communities.

The amenity is the value, purpose, or service a component in the property is intended to provide.

A component is assessed on the degree of degradation for the condition and functionality for how it performs.

For example: the amenity of a roof is to provide weather protection for a property; the condition and functionality of the roof will affect its ability to provide that intended amenity.

A component is assessed against the standard of amenity presented in this resource.

This resource should be used alongside the *M-215: Maintenance and Programmed Work Specification* and the suite of *Scoping Guides* published by Kāinga Ora.

ACM-200 STANDARD

The ACM-200 standard for condition and functionality, which each component is required to meet, is derived from, and consistent with, the principles and criteria contained therein.

To meet its customers' needs, Kāinga Ora has specific expectations **above** the requirements articulated in current legislation.

These expectations ensure **all properties** owned and/or managed by Kāinga Ora:

- can be adapted for a range of lifetime needs
- can withstand accelerated wear
- are cost-efficient to operate; and
- have increased safety features to meet the needs of our customers

This resource responds to the mandated requirement for Kāinga Ora to deliver "Public housing solutions that contribute positively to well-being [by] providing good quality, warm, dry, and healthy rental housing."[1]

In doing so, Kāinga Ora focuses on providing housing that delivers in the following four critical areas:

- **Dry:** The building envelope is weather-tight and durable, and provides protection from internal moisture and mould.
- **Warm:** The thermal envelope provides effective thermal performance and heating.
- **Safe:** Safety for Kāinga Ora customers is provided via security measures, driveway safety, early fire warning systems, and protection from incidental injury.

[1] New Zealand Government (2019, s 14 (1(a))). *Kāinga Ora – Homes and Communities Act 2019*. Retrieved from: http://www.legislation.govt.nz/act/public/2019/0050/latest/LMS196215.html

- **Essential amenity:** Properties provide essential services and amenities using high-quality products; Kāinga Ora homes are energy-efficient, healthy, sustainable, and adaptable for a range of user needs.

LAYOUT

The ACM-200 contains an index, introduction, glossary, and component sheets.

The component sheets are grouped into seven sections that align with the *Co-Ordinated Building Information Groups and Classes* used by the construction industry.

These sections are as follows:

1. Site	2. Structure	3. Enclosure	4. Interior
5. Finish	6. Services	7. External	

COMPONENT SHEETS

A component sheet is provided for each of the main components found in a property.

Component sheets provide the information required to assess whether the relevant component is acceptable (or unacceptable) in terms of its condition and functionality.

Each sheet includes a description of the component and, in some cases, additional specific information to help determine if a component meets the amenity standard.

It is essential you read the descriptive notes to gain a full understanding of the standard's intent.

Sheets also contain statements and photos defining the acceptable and unacceptable standard for condition and functionality.

The ACM-200 does **not** cover every possible situation; in some cases, exceptions are acceptable with approval from the relevant Asset Manager.

The information provided herein should be sufficient to enable you to apply the overall intent of this standard on property condition and functionality.

CRITICALITY

Criticality relates to the habitability, quality of life, and health and safety aspects of the property and components being assessed.

These categories define a situation resulting from a component that is deemed 'unacceptable' and the recommended response time.

This requires assessors or document users to make a judgement on the category of criticality resulting from an unacceptable component, and respond accordingly.

You should immediately contact Kāinga Ora in the event a situation is judged to be "Critical" or "High".

LEVELS OF RISK

The levels of criticality are listed on the table below.

Table 1: Criticality risk levels

LEVEL	DESCRIPTION	RESPONSE
Critical	Immediate and sustained impact on continuing occupancy of property	URG Response: within 4 hours
High	Impacts person's safe and healthy use of property	URG/GEN Response: within 4 hours to 10 days (depending on the situation and isolation of hazard)
Moderate	Impacts on the daily function of property	GEN/Programmed Response: within 10 days or programmed repairs
Low	Impacts on the quiet and peaceful enjoyment of property	Programmed Response

INTENDED USERS

Unless otherwise instructed by Kāinga Ora, Maintenance Partners and nominated Contractors should use the ACM-200 as the standard to which all required scoping activities are undertaken.

Similarly, Quality Auditors should audit properties that have undergone maintenance work to the standard of the ACM-200.

All Kāinga Ora staff, including those employed in the Customer Support Centres, Lease and Asset Services Team, Market Delivery Team, and those working in Place-based Services should use the ACM-200 to determine whether components in Kāinga Ora properties, including potential acquisitions, meet the required standard for condition and functionality.

Properties that fall within the Home Lease Programme need to be maintained to the standard defined in ACM-200.

GLOSSARY

Additional terms are defined in the Ministry of Business, Innovation, and Employment's *New Zealand Building Code Handbook* (2014).

- **Accessible:** Having features to permit use by all users including people with disabilities.
- **Access route:** A continuous route that permits movement to and from the apron of the building to the spaces within the building interior.
- **Access point:** A place where access may be made to a drain or discharge pipe, for inspection, cleaning, or maintenance.
- **Building:** Includes all structural and non-structural components, fixtures, services, drains, permanent mechanical installations, glazing, partitions, ceilings, and temporary supports.
- **Building interior:** The inside of the house / building.
- **Building envelope:** The construction of the building itself, effectively serving as the separation between the interior and the exterior environments.
- **Property exterior:** The section including ancillary buildings and exterior amenities.
- **Cavity-wall:** A term used to describe a wall that incorporates a drained cavity.

- **Cladding:** The exterior weather-resistant surface of a building.
- **Cladding system:** The weather-proof enclosure of a building, including: building wraps; claddings and their fixings; windows; doors; and all penetrations, flashings, seals, joints, and junctions.
- **Contaminant:** Includes any substance (including gases, liquids, solids, micro-organisms, energy, or heat) that is likely to taint, pollute, and affect the performance of a component.
- **Damage:** To render something either wholly or partly inoperable or ineffective; the loss of functionality performance or appearance.
- **Drain:** Pipes, fittings, and equipment intended to convey waste-, foul-, or surface-water to an outfall.
- **Floor waste:** An outlet located at the low point of a graded floor or at a level floor designed to receive accidental or intentional discharges.
- **Fixture:** An article intended to remain permanently attached to, and form part of, a building.
- **Foul-water:** The discharge or effluent from any sanitary fixture or appliance.
- **Framing:** Structural members to which lining, cladding, flooring, or decking is attached, or which are dependent upon for supporting the structure, or for resisting forces applied to it.
- **Habitable space:** A space used for activities normally associated with domestic living. Excludes bathrooms, laundries, toilets, pantries, walk-in wardrobes, corridors, hallways, lobbies, or space that is unoccupied for extended periods.
- **House:** Any house, unit, flat, or dwelling in which people are housed.
- **Hygiene:** Personal and domestic preventative measures to reduce the incidence and spreading of disease.
- **Hygienic:** In a condition that reduces the incidence and spread of disease.
- **Impervious:** A surface or material that does not allow the passage of moisture.
- **Performance:** A measurement of some output or behaviour.
- **Performance criteria:** What is expected to be delivered or provided; the standard to be measured against for compliance.
- **Potable:** Water that is suitable for human consumption.
- **Property:** The house and section, including boundaries, entries, and all that is enclosed in the defined area.
- **R-value:** The common abbreviation for describing the values of both thermal-resistance and total thermal-resistance.
- **Sanitary appliance:** An appliance that is intended to be used for sanitation (for example, a washing machine or dish-washer).
- **Sanitary fixture:** Any fixture that is intended to be used for sanitation (for example, a toilet, bath, or shower).
- **Sanitary waste:** The discharge of effluent from any sanitary fixture or sanitary appliance.

- **Sewer:** A drain that is under the control of, or maintained by, a Local Authority or network utility operator.
- **Sound condition:** Being in a condition that is intact; having no defects that impact on appearance or intended function.
- **Storage water heater:** A water tank with an integral water heater for the heating and storage of hot water.
- **Surface water:** All naturally-occurring water, other than sub-surface water, which results from rain-fall on the site or water flowing onto the site.
- **Weather-tightness or weather-tight:** Terms used to describe a building's resistance to the weather to limit moisture ingress, prevent undue dampness inside the building, and damage to building elements.

FEEDBACK

As an organisation, Kāinga Ora constantly seeks to improve the quality of its resources.

If you have suggestions for how this resource can be improved, or you identify any errors, please contact the resource owners – the Kāinga Ora Quality Homes Advisory Team – at: QualityHomesQueries@kaingaora.govt.nz

2 SITE

22 GROUND-WORK

22.1 RETAINING WALLS

PURPOSE

To provide ground stability between different ground levels.

DESCRIPTION

A retaining wall is a structure that stabilises banks and provides ground stability between different ground levels.

Retaining walls can be constructed from masonry, stone, brick, concrete, or timber.

Retaining walls require good drainage from behind, such as being partially back-filled with metal/gravel, drainage holes, and/or drainage coil in the base of the structure.

ACCEPTABLE

- All retaining walls are structurally-sound.
- There is sufficient drainage is in place.

UNACCEPTABLE

- The retaining wall:
  - is unstable;
  - has moved out of place;
  - is substantially cracked; or
  - is leaning outwards.
- The ground is unstable or slipping and requires a retaining wall.
- There is no drainage for the retaining wall.

23 FOUNDATIONS

23.1 PILES

PURPOSE

To provide solid, stable, and level support for house construction and for the floor.

DESCRIPTION

Pile foundations can be either concrete or timber piles embedded in concrete, or driven, round timber poles. The floor structure (joists and bearers) are fastened or 'tied' to the piles.

Types of piles include anchor and cantilever piles that resist lateral loads; braced piles that are restrained with diagonal braces; and ordinary piles that only carry gravity loads.

ACCEPTABLE

- Floor and foundations are structurally-sound.
- Piles provide adequate support for the house.
- Piles provide for a flat floor.

UNACCEPTABLE

- Piles have moved.
- Piles have dropped from subsidence.
- Piles are in poor condition (e.g. split, broken, or cracked).
- Piles are missing.
- Piles are not fixed in place in the ground or tied to the bearers.
- The floor structure is incomplete.
- Soil around the piles has eroded or cracked.
- Pile bracing is missing or damaged.

3 STRUCTURE

31 CONCRETE

31.1 WALLS AND FLOORS

PURPOSE

To provide a solid, stable, and level foundation to support the building structure, and to provide a floor.

DESCRIPTION

Perimeter foundation walls and floor slabs are constructed of reinforced concrete with construction joints to control cracking.

Concrete floors are normally constructed with reinforced poured concrete footings, a foundation perimeter wall, and a concrete slab poured and 'floated' smooth to form the interior floor.

Some floors use a 'slab-on-grade' process where the solid, poured floor also forms the footings.

ACCEPTABLE

- Concrete floor and foundations are structurally-sound.
- The concrete floor is smooth and level.
- The concrete floor-level or perimeter foundation wall achieves adequate ground clearance to control ground water from entering the building or sub-floor.
- The concrete perimeter foundation wall provides adequate sub-floor natural ventilation.

UNACCEPTABLE

- The concrete floor or perimeter foundation wall has:
  - sunk from subsidence;
  - excessive cracking or structural cracks; or
  - is displaced from the building structure;
- Concrete has degraded, is crumbling, or is spalding.
- There is moisture in the floor or sub-floor.
- There is an unfinished or painted floor that is not slip-resistant.

31.2 PAVING

PURPOSE

To provide a sealed, hard surface for safe movement to and around the building.

DESCRIPTION

Hard surfaces are concrete paths, driveways, patios, stairs, ramps, landings, and parking areas. Concrete paving is a permanent, low-maintenance surface that provides for ease-of-access to and around the property, while protecting the area from erosion.

Concrete surfaces are generally poured on-site and shaped to falls to allow surface water drainage.

ACCEPTABLE

- Concrete steps, ramps, and landings are structurally-sound.
- The concrete surface is laid to fall water away from the building
- Concrete surfaces are safe.
- Steps and ramps have a uniform and safe rise and adequate landings.

UNACCEPTABLE

- The surface presents a tripping or slipping hazard (e.g. greater than 15mm).
- There is ponding, or excess water on the surface.
- The surface is damaged, broken up or cracked.
- There are weeds growing through the surface.
- There is moss or lichen growth on the surface.

38 TIMBER

38.1 ROOF FRAMING

PURPOSE

To provide structural support for the roof covering and ceiling lining.

DESCRIPTION

The framing that forms the structure to support the roof is referred to as the rafter or truss.

In hipped or gabled roof structures the roof framing forms a space above the ceiling.

In skillion roof structures, the ceiling lining is usually fixed to the bottom of the rafters forming a sloping ceiling; there is no space above the ceiling.

ACCEPTABLE

- Roof structural system is complete and structurally-sound.
- Roofing is fully-supported.
- The ceiling is fully-supported.

UNACCEPTABLE

- The roof's structural system has failed.
- There is environmental, wind, or earthquake damage.
- Rafters or trusses are split, rotten, warped, and/or heat-damaged.
- Fixings are missing or have deteriorated.
- The bracing is damaged.
- Ceilings are sagging.
- The substrate is wet.

4 ENCLOSURE

42 WALL CLADDING

42.1 TIMBER WEATHERBOARD

PURPOSE

To provide a durable and protective exterior wall surface.

DESCRIPTION

Timber weatherboard is vertical or horizontal profiled timber that is over lapped and fixed to the framing.

Weatherboard joints are usually concealed with a metal soaker. The timber weatherboard system is completed with a paint finish.

ACCEPTABLE

- Timber board cladding system is complete and sound.

UNACCEPTABLE

- Timber board cladding is not:
  - weather-tight; or
  - securely fixed to the wall framing.
- Soakers or jointers are missing or broken.
- Soakers, jointers, or fixings are rusting.
- There is rot, end-grain splitting, or holes in the weatherboard.
- The coating system has failed.

42.2 PLYWOOD CLADDING

PURPOSE

To provide a durable and protective exterior wall surface.

DESCRIPTION

Plywood cladding is comprised of panels of plywood or sheeting fixed to the framing. These panels may be interlocking, joined with jointers, or may have trim over the joint for weather-tightness.

Plywood is completed with a paint finish.

Sheeting is manufactured with an aluminium, PVC, or vinyl cover finish.

ACCEPTABLE

- The cladding system is complete and sound.
- There is adequate ground clearance to control ground water from entering the cladding system.
- The coating system is in good condition.

UNACCEPTABLE

- Cladding is:
  - not weather-tight;
  - warped, delaminated, or has edge-splitting; or
  - is not securely fixed to the wall framing.
- There is the presence of ground moisture 'wicking' into the plywood cladding
- Joints are open for moisture to enter behind the cladding.
- Soakers or jointers are missing, damaged, or unsecure.
- There are missing, cracked, or broken panels
- The coating system has failed or the cover finish exposes the substrate.

42.3 SUB-FLOOR COVER BOARDS

PURPOSE

To protect the sub-floor structure and secure the area from uncontrolled access.

DESCRIPTION

Timber cover boards are the trim fixed to the building's sub-floor framing.

Cover boards are spaced to allow for air flow under the house and are completed with a paint finish.

ACCEPTABLE

- Cover boards:
  - close-in the sub-floor area;
  - are sound; and
  - provide adequate sub-floor natural ventilation.
- The coating system is in good condition.

UNACCEPTABLE

- The sub-floor is not fully enclosed.
- Cover boards are not securely fixed.
- There is rot in the cover boards.
- There is evidence of moisture in the sub-floor.

42.4 FASCIA BOARDS

PURPOSE

To provide a durable and protective edge to the roof surface.

DESCRIPTION

Timber fascia boards are the trim that runs along the edge of the roof at the eaves. Spouting is usually attached to the timber fascia boards.

Barge boards are the exposed boards that finish the end of a projecting roof.

ACCEPTABLE

- The fascia or barge board finish to the roof edge is sound.
- The coating system is in good condition.

UNACCEPTABLE

- Fascia boards are not weather-tight.
- Fascia or barge boards are not securely fixed to the roof structure.
- Fascia boards are split, warped, rotting, or the joints have come apart

42.5 FIBRE-CEMENT CLADDING

PURPOSE

To provide a durable and protective exterior wall cladding.

DESCRIPTION

Fibre-cement cladding can be either a weatherboard or panel-sheet form. The substrate is made from cement mixed with ground sand, cellulose fibre, and other additives.

It is important to maintain a good waterproof, or paint coating, on all fibre-cement cladding. It is also critical to ensure there is a gap between the bottom of the cladding and the ground.

Fibre- cement can act as a moisture 'reservoir', resulting in dampness in the home and an increase in moisture loadings levels within the wall. This can cause swelling, delamination, and eventual material-failure.

ACCEPTABLE

- The fibre-cement cladding system is complete and sound.
- There is adequate ground clearance to control ground water from entering the cladding system.
- The coating system is in good condition.

UNACCEPTABLE

- Fibre-cement cladding is not weather-tight.
- There is ground moisture 'wicking' into the fibre-cement cladding.
- Soakers or jointers are missing, damaged, or unsecure.
- Fibre-cement cladding is: warped; has delaminated edges; or is not securely fixed to the wall framing.
- There are missing, cracked, or broken panels.
- The coating system has failed or the surface is not sealed.

42.6 CEMENT ASBESTOS CLADDING

PURPOSE

To provide a durable and weather protective exterior wall surface.

DESCRIPTION

Duroc siding is cement or asbestos-based cladding system with direct fix to framing/battens.

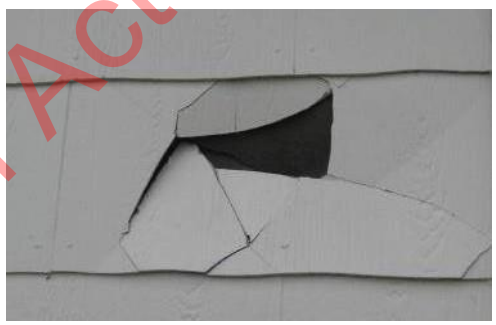
Duroc siding can be painted or unpainted.

ACCEPTABLE

- The cladding system is complete and sound.
- There is adequate ground clearance to control ground water from entering the cladding system.

UNACCEPTABLE

- Asbestos cladding is not weather-tight
- There is ground moisture 'wicking' into the asbestos cladding.
- Joints and cracks are open for moisture to enter behind the cladding system.
- Asbestos cladding is not securely fixed to the wall framing.
- There are missing, cracked, or broken panels.
- The coating system has failed or the surface is not sealed.



42.7 SOFFIT CLADDING

PURPOSE

To provide a lining to the underside of the roof eave or barge over-hang.

DESCRIPTION

Soffit is the lining on the underside of a roof eave or barge over-hang; it may also be referred to as eaves lining.

Eaves linings may be boxed flat or sloping over the framing, or the linings may be laid behind exposed rafters.

The soffit may be clad with sheet material or timber boarding.

In some older buildings, soffits may have ventilation slots or vents and may be constructed of perforated-hardboard (peg board).

ACCEPTABLE

- The cladding system is complete and sound.
- The coating system is in good condition.

UNACCEPTABLE

- Soffit is not weather-tight.
- There is rot or mould on the soffit.
- The soffit is not securely fixed to the framing.
- There are holes in the soffit and/or panels are missing or broken.
- Joint strips or trims are missing, damaged, or not securely fixed.
- There is evidence of moisture, vermin, or birds entering the soffit.
- The coating system is flaking, peeling, or damaged.

42.8 PROFILED METAL CLADDING

PURPOSE

To provide a durable and protective exterior wall surface.

DESCRIPTION

Profiled metal cladding is comprised of vertical or horizontal profiled steel sheets that are lapped and fixed to framing. They are most commonly used on garages and sheds.

Profiled steel can be pre-painted, zinc- or aluminium-coated, or galvanized.

ACCEPTABLE

- The cladding system is complete and sound.

UNACCEPTABLE

- Metal cladding is not weather-tight.
- There are broken, missing, or damaged sheets.
- The cladding is not securely fixed to the wall structure, and/or sheets are lifting, moving, or loose
- Soakers or flashings are missing, not securely fixed, or are in poor condition.
- The coating system has failed.

42.9 BRICK VENEER CLADDING

PURPOSE

To provide a durable and protective exterior wall-surface.

DESCRIPTION

Brick veneer wall consists of a single, non-structural external layer of masonry – typically brick – that is tied back to the building structure, timber, or metal framing. The wall has a ventilated cavity.

While bricks are usually left in a natural state, they may also have a paint finish.

ACCEPTABLE

- The cladding is complete and sound.
- Brick veneer forms part of a ventilated moisture-draining cladding system.
- The brick surface or the coating system is in good condition.

UNACCEPTABLE

- The cladding system is not weather-resistant.
- There are cracks in the brick veneer.
- Cavity ventilation is obstructed or blocked.
- Brick veneer is not securely fixed to the wall framing.
- There is the presence of efflorescence, or 'mineral salts', on the surface, or the coating system has failed.

42.10 CONCRETE VENEER CLADDING

PURPOSE

To provide a structural element as well as durable, protective exterior wall.

DESCRIPTION

Concrete block and pre-cast concrete panel claddings generally provide a structural system for the building as well as the substrate for the waterproof coating. They often form the sub-floor of the house.

Pre-cast concrete walls are cast in sections/panels, either on-site or in a pre-cast factory, and are lifted into place and bolted together. Sections are sealed, typically with gaskets or caulk.

Concrete block masonry walls are made from hollow concrete blocks, laid like bricks, with steel reinforcing, and filled with concrete. Some early block systems may be hollow.

ACCEPTABLE

- Concrete blocks and panels are complete and structurally-sound.
- A concrete block perimeter foundation wall provides adequate natural ventilation in the sub-floor.
- The coating system is in good condition.

UNACCEPTABLE

- The cladding system is not weather-tight.
- There are cracks in the concrete block or panels.
- There is moisture in the sub-floor.
- There is the presence of efflorescence, or ‘mineral salts’, on the surface, or coming through the coating.
- The coating system has failed or the surface is not sealed.

42.11 STUCCO CLADDING

PURPOSE

To provide a durable, protective exterior wall.

DESCRIPTION

Stucco is concrete plaster applied in several layers to a rigid or flexible backer. It is reinforced with galvanised meshed wire and then surface-coated. This is presented as a continuous, seamless finish with no junctions to the exterior walls.

ACCEPTABLE

- The cladding system is complete and structurally-sound.
- There is adequate ground clearance to prevent ground water from entering the cladding system.
- The coating system is in good condition.

UNACCEPTABLE

- Stucco cladding is not weather-tight.
- There is ground moisture 'wicking' into the stucco cladding.
- The cladding is damaged or cracked.
- The cladding is not securely fixed to the wall structure.
- The coating system has failed.

43 ROOFING AND DECKING

43.1 PROFILED METAL ROOFING

PURPOSE

To provide a durable, weather-tight roof cover.

DESCRIPTION

Iron or steel roofing is cold rolled and formed into various profiles.

The roofing sheets can be galvanised or zincalume coated or pre-coated.

ACCEPTABLE

- The roofing system is complete and sound.
- The roof's profile has adequate fall to control rain-water flow towards gutters and spouting.
- The coating system is in good condition.

UNACCEPTABLE

- The roofing system is not weather-tight
- The roof profile has been flattened, is misshapen, and inhibits rain-water shedding
- There is evidence of water ponding.
- Metal roofing sheets are not securely fixed to the roof structure.
- Roof accessories, such as hip, valley flashings and ridging, are missing, not securely-fixed, corroded, or blocked.
- There is accumulation of debris, moss, or lichen growth on the surface
- There is damage caused by the installation of equipment such as TV aerials.
- Metal roofing sheets are corroded (presenting as red or white rust).
- The coating system has failed.

43.2 MASONRY TILE ROOFING

PURPOSE
To provide a durable, weather-tight roof cover.

DESCRIPTION
Clay or concrete interlocking roof tiles laid over roof battens are fixed with tie wires or nails.

Ridges and caps are pointed to the tiles for a weather-tight system.

ACCEPTABLE
- The roofing system is complete and sound
- The roof is structured to take the weight of the masonry tile roofing.
- The roof's profile has adequate fall to control rain-water flow towards gutters and spouting.
- There is minimal moss and lichen growth.
- The tile surface or the coating system is in good condition.

UNACCEPTABLE
- The roofing system is not weather-tight.
- Roof profile demonstrates evidence of sagging or tile displacement.
- Masonry tiles are missing, loose, or broken.
- Pointing is missing, loose, or cracked
- There is evidence of tile surface erosion, cracking, or chipping that will cause the tile to leak or become porous.
- Roof accessories, such as ridging are missing or not securely fixed.
- There is excessive accumulation of debris, moss, or lichen growth.
- There is damage caused by the installation of equipment such as TV aerials.

43.3 CEMENT ASBESTOS ROOFING

PURPOSE

To provide a durable and weather protective roof surface.

DESCRIPTION

Fibre-cement roofs (Super 6, Super 8, and corrugate profiles) are comprised of a fibrous asbestos product.

Refer to and follow the Kāinga Ora *Asbestos Management & Control Policy* (HS-213).

ACCEPTABLE

- The roofing surface appears intact and is sound.
- There is minimal debris and/or moss and lichen growth.

UNACCEPTABLE

- The roof is not weather-tight.
- Roofing is extremely weathered, has deteriorated to expose the asbestos fibre, or has a 'fluffy' appearance.
- Roofing is brittle, broken, or can be crushed by hand
- Roof accessories, such as metal hip or valley flashings ridging, are corroded, blocked, or not weather-tight.
- There is accumulation of debris, moss, or lichen growth.

43.4 PRESSED-STEEL TILE ROOFING

PURPOSE

To provide a durable, weather-tight roof cover.

DESCRIPTION

Pressed-metal or alloy roof tiles are fixed to battens that are fixed onto rafters or trusses. Pressed-metal tiles may be pressed into long-run sheets.

Pressed-steel tile roofing systems can withstand a lower pitch than masonry tiles and are typically supplied with purpose-made flashings for hips, ridges, and gables.

Pressed-metal and alloy roof tiles may have a stone-chip coating bound in acrylic glue.

Early pressed stone-chip metal roofs are prone to lose chips but, in an otherwise good condition, these can be resurfaced or repainted by professionals.

Roofs are prone to being damaged by moss and mould and people walking on them as well as, in coastal environments, corrosion.

ACCEPTABLE

- The roofing system is complete and sound.
- The roof's profile has adequate fall to control rain-water flow towards gutters and spouting
- The tiles' surface or the coating system is in good condition.

UNACCEPTABLE

- The roofing system is not weather-tight.
- Tiles are dented or depressed to a degree where it allows water to 'pool', or in a way that opens up joints or overlays.
- Roof accessories, such as metal hip or valley flashings ridging, are corroded or blocked.
- There is accumulation of debris, moss, or lichen growth.
- There is evidence of surface coating delamination and/or tile corrosion.
- There is a significant loss of stone chips.

43.5 DECKS

PURPOSE

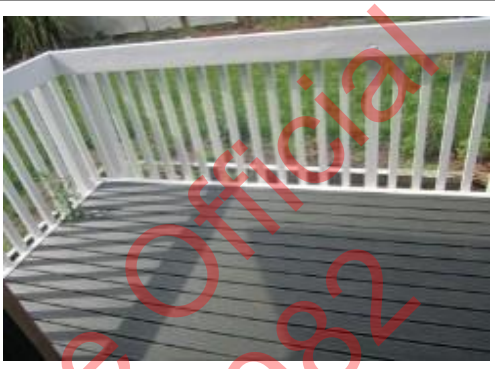
To provide an outdoor living area and a landing at entrance ways.

DESCRIPTION

A timber deck is an open platform suspended over the ground on piles and attached to the exterior of a house. Timber decking is laid over a timber structure.

ACCEPTABLE

- The deck system is complete and structurally-sound.
- The deck forms part of a ventilated moisture-draining system.
- The decking surface is safe.



UNACCEPTABLE

- The deck's structural system does not meet legislative requirements.
- There is excessive structural movement.
- There is water draining into the building where the deck is attached.
- The deck has rot, mould, splitting, or deck-, bearer-, joist-, or pile-deterioration.
- Joist hangers or bolts or other structural connectors are missing, loose, or corroded
- There are hazards such as: slippery or warped decking; non-slip coating; or protruding nails.
- Access to services such as a gully-trap or sub-floor is restricted.
- The coating system to the structure or surface shows evidence of deterioration.
- Handrails or balustrades are not present for external decks, stairs and landings. Refer to Section 2.10 of *M-219: Void Scoping Guide* for requirements.

43.6 STEPS, RAMPS, AND LANDINGS

PURPOSE

To provide access between differing levels exterior to the building.

DESCRIPTION

Stairs, landings, and ramps constructed of timber.

ACCEPTABLE

- Steps, ramps, and landings are complete and structurally-sound.
- Steps and ramps have a uniform and safe rise and adequate landings.
- The surface of all steps, ramps, and landings are safe.

UNACCEPTABLE

- Handrails are not present on stairs. Refer to Section 2.10 of *M-219: Void Scoping Guide* for requirements.
- The support structure has rot, rust, or deterioration.
- There is water draining into the building where the steps, ramp, or landing is attached to the building.
- There are hazards such as slippery or warped decking; non-slip coating; protruding nails; or missing or uneven steps or landing.
- Access to services such as a gully-trap or the sub-floor is restricted.
- The coating system to the structure or surface shows evidence of deterioration.
- Where a door opens outwards to the exterior there must be a landing at the top of the stairs, the door cannot open straight out onto the stairs. Refer figure 72.

44 MEMBRANE ROOFING

44.1 RUBBER SHEET MEMBRANE

PURPOSE

To provide a durable, water-resistant cover to a roof, deck, or gutters.

DESCRIPTION

Membrane roofing is usually laid over plywood to achieve a continuous, water-resistant cover to low-slope roofs, decks, or gutters.

The membrane consists of one layer of glue fixed synthetic rubber and may have an applied protective coating or decking laid over the membrane, such as for trafficable areas over an interior space.

Membrane roofing is also used to form internal gutters and parapet wall up-stands. The base and sides of the gutter are lined with the membrane to form a continuous finish.

ACCEPTABLE

- The roofing system is complete and sound.
- The roof or deck profile, parapet, or gutter has adequate fall to control rain-water flow away from the building.
- The membrane's surface or protective coating system is in good condition.

UNACCEPTABLE

- The roof is not weather-tight.
- Hardening, cracking or cuts are allowing moisture to penetrate the membrane.
- There is movement between the membrane and the substrate; or the substrate is damaged.
- The fall to drain-water is ineffective or ponding has occurred.
- Joints or flashings are lifting, unsealed, or missing.
- There is accumulation of debris, moss, or lichen growth
- The surface's coating system shows evidence of deterioration.

45 WINDOWS AND DOORS

45.1 EXTERIOR WINDOWS

PURPOSE

To provide for natural light and ventilation into the indoor environment.

DESCRIPTION

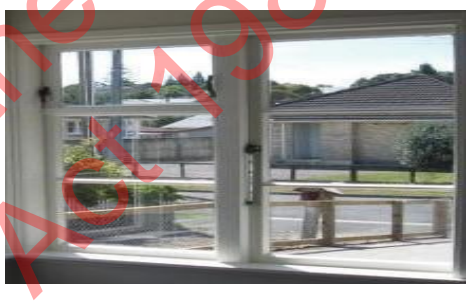
Window joinery is most commonly timber or aluminium; timber joinery normally uses putty to seal glazing, while aluminium joinery uses a rubber bead.

Exterior timber facings and scribers, head, jamb and sill flashings all form part of the weather-tight system around window joinery by closing the gaps between joinery and claddings.

External joinery requires assessment from both sides for condition of the joinery, beads, putty, flashings, facings, finish, and function of the hardware to prevent intrusion and injury reduction.

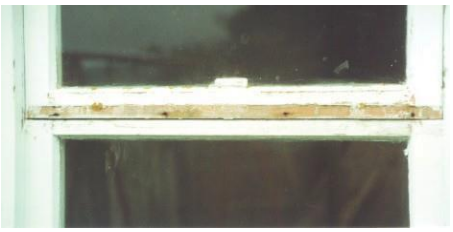
ACCEPTABLE

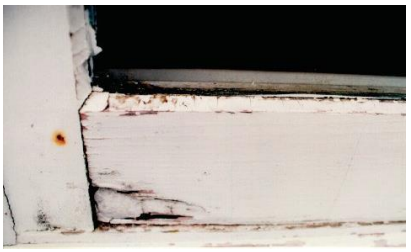
- The joinery system is complete and sound.
- There are opening sashes for adequate air-flow.
- All opening sashes are operational and have the appropriate security-/safety-stays.
- The coating system is in good condition.



UNACCEPTABLE

- The joinery system is not weather-tight.
- There is rot, rust, or decay.
- Flashings or scribers are missing, broken, or damaged.
- The opening sash does not seal or cannot be opened or closed.
- Glazing seals or putty are missing, damaged, or not securely holding the glass.
- There is access through louvres to locks or handles on an external door or window.
- Security-/safety-stays are missing, damaged, or ineffective.
- Air-flow to remove moisture is ineffective.
- The coating system is in a deteriorated condition, flaking, peeling, or bubbling.





45.2 EXTERIOR DOORS

PURPOSE

To allow the building to be secured and to have a weather-protected point of entry.

DESCRIPTION

Exterior doors are most commonly solid timber, timber-framed, or aluminium and may be sliding, bi-folding, or hinged.

In an emergency, exterior doors provide direct egress from the building without the use of a key and prevent intrusion.

ACCEPTABLE

- The door system is complete and sound.
- Doors are fully-operational and secure with a key-less egress.
- The coating system is in good condition.

UNACCEPTABLE

- The door system is not weather-tight.
- There is evidence of rot, rust, or decay.
- The door cannot be freely opened or closed.
- The door requires a key to exit.
- The coating system shows evidence of deterioration.

45.3 SKYLIGHTS

PURPOSE

To direct natural light and ventilation from the roof into the indoor environment.

DESCRIPTION

Tube skylights are a roof-mounted dome that directs natural light into a highly reflective tube that extends from the roof level to the ceiling level, terminating in a ceiling-mounted diffuser.

The roof dome system may provide passive or mechanical ventilation.

ACCEPTABLE

- The skylight system is complete and sound.
- The roof-mounted dome is in good condition and is moderately clean.
- The ceiling-mounted diffuser is in good condition and moderately clean.

UNACCEPTABLE

- The skylight system is not weather-tight.
- Roofing or flashing supporting the tube dome is damaged.
- The roof-mounted dome is missing, broken, or very dirty.
- The ceiling-mounted diffuser is missing, broken, or very dirty.
- The reflective tube from the roof to the ceiling:
  - is damaged;
  - has holes or tears;
  - is not adequately supported; or
  - is not securely fixed at either end.

45.4 GARAGE DOORS

PURPOSE

To allow the vehicle storage area to be secured.

DESCRIPTION

Garage doors are generally of light-weight pre-finished metal over a structural frame.

Garage doors are most commonly a roller door on a drum located above the opening, or a door that lifts up and runs on tracks (for example, a tilting door with one rigid panel or a sectional door with horizontal hinged sections).

Note: Where a tilt door requires replacement, ensure a roller or sectional door is scoped for.

ACCEPTABLE

- When closed, the door has no holes and seals along any and all edges.
- The door is easy and safe to operate.
- The door is secure.
- The door is in good condition (with only minor surface damage).

UNACCEPTABLE

- The door has a gap at the top, bottom, and/or sides.
- Door panels are damaged.
- Door runners or tracks are faulty.
- The automatic door opener is faulty.
- The locking or latching mechanism is not working.

46 GLAZING

46.1 GLAZING

PURPOSE

To allow natural light and thermal energy into the indoor environment and allow visibility to the outdoor environment while providing a weather-tight surface.

DESCRIPTION

Glass fitted to windows or doors is referred to as 'glazing'. A single piece of glazing is called a pane of glass.

Glazing is available in a number of thicknesses, colours, and opacity and can be single- or double-glazed.

Double-glazing has two panes of glass separated by a spacer and sealed together in an integrated glass unit. The space between panes is air or gas-filled and may contain desiccant crystals to absorb moisture in the space. Double-glazing reduces heat-loss or -gain through windows.

Glazing has specific characteristics for sound attenuation (acoustic glass), reduced light-transmission (tinted, opaque, or frosted glass), increased strength and durability (toughened, safety glass), or standard annealed glass that will splinter and shatter when damaged.

ACCEPTABLE

- Glazing is complete and sound.
- Glazing is safe for the location.
- Glazing has only minor cracks (i.e. less than 140mm).

A typical mark showing it is safety glass. The licence number is for third-party certification

UNACCEPTABLE

- Glazing has cracks longer than 140mm across the corner of a window or door.
- Glazing is broken, missing, or cracked.
- Glazing has an edge that can catch or cut occupants or objects.
- Glazing is not secure (loose or rattling).
- Glazing is unsafe (annealed glass where toughened is required).
- Glazing is laminated glass.

47 INSULATION

47.1 CEILING INSULATION

PURPOSE

To reduce heat lost through the ceiling.

DESCRIPTION

Ceiling insulation is available as loose-fill, segments, and blanket. The most common forms of ceiling insulation are polyester, wool, or fibreglass blanket.

Blanket is draped over ceiling joists which limits the thermal bridging through the timber. Segmented ceiling insulation is most effective when placed between ceiling joists.

Loose-fill insulations include macerated paper ("Insulfluff®"), loose sheep's wool, Rockwool, and chopped fibreglass. Fibreglass loses effectiveness in damp conditions.

ACCEPTABLE

- Insulation is dry and safe.
- Insulation is installed throughout the entire available ceiling space.
- There is a label with insulation and installation details clearly visible near the ceiling access point.
- Insulation is at least 120mm-thick.

UNACCEPTABLE

- There is no insulation.
- Insulation has gaps.
- There is compression within the installed layer of insulation.
- Insulation does not have adequate clearance from a down-light.
- Insulation does not have adequate clearance from a chimney.
- There is moisture in the insulation or ceiling cavity.

47.2 FLOOR INSULATION

PURPOSE

To reduce heat-loss through the floor.

DESCRIPTION

Under-floor insulation is available as low-density bulk insulation, semi-rigid polyester insulation, and polystyrene sheets.

Polystyrene sheets are friction-fitted between joists, supported by small brackets, to maintain a gap between the underside of the floor and the top of the sheet. Edge joints against framing and butt joints between sheets are continuously-glued with no gaps.

Semi-rigid polyester insulation is friction-fitted between joists. To be effective it must have no gaps or compression points and must be hard-set against the underside of the floor.

Bulk insulation is a light-weight, low-density polyester or fibre-glass, stapled between joists. It comes in a range of colours, usually white, grey, or light green. To be effective it must have no gaps or compression points, and must be hard-set against the underside of the floor.

ACCEPTABLE

- Insulation covers the entire floor-area and is sound.
- There are visible labels that indicate live wires.
- There is a label with clearly-visible insulation and installation details near the sub-floor access point.
- Polystyrene sheet insulation is securely fitted to the underfloor and supported with brackets.
- Semi-rigid polyester insulation is friction-fitted between joists.
- Bulk insulation is stapled between joists.

UNACCEPTABLE

- There is no under-floor insulation to the sub-floor.
- Where there is adequate space, floor insulation does not cover the complete floor-area.
- Insulation is dislodged, sagging, damaged, or has holes or gaps.
- There are no visible labels.
- Insulation is stapled to the floor.
- Regardless of the condition, single reflective foil (see Fig.143) is not acceptable.

47.3 WALL INSULATION

PURPOSE

To reduce heat-loss through the walls.

DESCRIPTION

The most effective wall insulation is semi-rigid polyester segments.

Softer forms of blanket insulation, including fibre-glass, will slump over time. Even small creases and minor gaps in insulation significantly decrease thermal-performance.

ACCEPTABLE

- Insulation is dry.
- Insulation is fitted complete to the wall area it covers.

UNACCEPTABLE

- There is moisture in the insulation or wall.
- Insulation has gaps around the perimeter or between segments.
- There is no building wrap or gap between the insulation and the external cladding.
- Insulation is compressed and tucked.
- Regardless of its condition, the use of single reflective foil is not acceptable.

47.4 ON-GROUND VAPOUR BARRIERS

PURPOSE

To prevent ground moisture from evaporating into the sub-floor space.

DESCRIPTION

On-ground Vapour Barriers (GVB) are comprised of polyethylene film and are installed under the building onto the ground surface, providing a protective barrier from ground dampness and moisture.

ACCEPTABLE

- The GVB is in good condition with cuttings around foundations and piles.

UNACCEPTABLE

- There is no GVB with an exposed ground sub-floor.
- The GVB does not comply with the *Healthy Homes Standards*.
- The GVB is torn or similarly damaged.
- The GVB is not taped around piles and/or is not pinned or sufficiently weighed down along overlaps and edges.

48 ENCLOSURE SUNDRIES

48.1 EXTERIOR HAND-RAILS AND BALUSTRADES

PURPOSE

To prevent an accidental fall from the building or spaces associated with a building.

DESCRIPTION

A barrier to prevent an accidental fall should be rigid, of sufficient strength to withstand the pressure of users leaning against it, and of a design that prevents head-entrapment and climbing by children.

A balustrade is the infill parts of a barrier and can have a hand-rail attached to it.

Hand-rails are fixed to a wall or barrier at a fixed-height to provide support for users to safely navigate stairs or ramps. Hand-rails are typically timber or steel with a suitable hand-grasping profile.

ACCEPTABLE

- Barriers are structurally-sound and safe.
- Hand-rails are adequately supported, smooth, and graspable.

UNACCEPTABLE

- The balustrade or hand-rail does not meet legislative requirements.
- Balustrades, hand-rails, support structures, or fixings have rot, rust, or deterioration.
- There is no hand-rail.
- Where the barrier is attached to the building, there is water draining into the building.
- There is structural movement.
- There are hazards such as protruding nails.
- The coating system shows evidence of deterioration.

48.2 FIRE ESCAPE LADDERS AND STAIRS

PURPOSE

To assist emergency evacuation of multi-level buildings.

DESCRIPTION

Fire escape ladders and stairs are attached to the exterior of the building, with access from an upper floor, such as a window or door. Fire escape ladders and stairs are generally constructed of timber or steel.

ACCEPTABLE

- Fire escape ladders and stairs are structurally-sound and safe.

UNACCEPTABLE

- Fire escape ladders and/or stairs are not firmly secured.
- Ladders, stairs, support structures, or fixings show evidence of rot, rust, or deterioration.
- Where the stair is attached to the building, there is water draining into the building.
- There is structural movement.
- There are hazards such as protruding nails.
- The coating system shows evidence of deterioration.

48.3 SUB-FLOOR DOOR

PURPOSE

To provide secure access to the sub-floor area under the building.

DESCRIPTION

The sub-floor door provides access to the sub-floor area to allow maintenance under the building.

If not provided from the outside, access to the sub-floor may be through an access hatch within the building.

Note – Where there is not sub-floor access on the exterior envelope, access to the sub-floor may be through an access hatch within the building.

ACCEPTABLE

- The sub-floor door is easily opened and large enough for a person to access the sub-floor area.
- The sub-floor door is easily secured in the closed position.

UNACCEPTABLE

- There is no sub-floor access (refer to note above).
- The opening is too small or obstructed.
- The sub-floor door has come off its hinges or is not easy to open.
- The sub-floor door or frame is damaged or rotten.
- The sub-floor area is being used to store rubbish.
- The pad-bolt is damaged, missing, or misaligned.

5 INTERIOR

51 WALL- AND CEILING-LININGS

51.1 CEILING ACCESS-PANEL

PURPOSE

To provide access to the roof-space.

DESCRIPTION

Ceiling access-panel is provided to access the roof-space.

ACCEPTABLE

- The location and size of the access-panel provides unimpeded access for maintenance.
- The ceiling access-panel is safe to operate and secure.
- The access-panel and trim is in good condition.

UNACCEPTABLE

- There is no access to, or cover for, the ceiling cavity.
- The ceiling access-panel is difficult to open, does not stay open, or does not provide easy access for maintenance.
- Ceiling-access is restricted.
- The ceiling access-panel or trim is damaged or loose.
- Ceiling access-panel is uninsulated.

51.2 WET-WALL-LININGS

PURPOSE

To provide a durable, hygienic, and easy-to-clean wall surface in wet-areas.

DESCRIPTION

Wet-wall-linings have a durable, high-gloss, pre-finished surface that is impervious to water and easy-to-clean.

Jointing systems at sheet edges and junctions with other components prevent water ingress to walls, the ceiling, and floor and effectively drain-water off the wall surface without pooling along joints or recesses.

Drained joints prevent capillary attraction between the wet-wall lining and sanitary fixtures or flooring.

Note: When scoping to replace shower linings around a bath ensure any shelves situated at the end of the bath is replaced with a false wall. A shelf can be seen in Figure 158.

ACCEPTABLE

- The wet-wall lining system is complete and sound.
- Surface finish and joints are in good condition, can be easily-cleaned, and present with only minor surface mould.

UNACCEPTABLE

- There is no wet-wall lining above the shower rose, shower tray, bath, and/or basin.
- There is no drained joint between the bottom edge of wet-wall lining and the shower tray, bath, basin, or coved flooring.
- The lining is bowing, has delamination, or deterioration
- There is the presence of water pooling along joints.
- Joints and cracks are open for moisture to enter behind the wet-wall lining system.
- There is moderate to heavy mould.

51.3 TRIM

PURPOSE

To provide a decorative and functional junction between surfaces and materials.

DESCRIPTION

Timber trim is used to cover joints and gaps at wall, ceiling, and floor junctions and finished with paint or polyurethane.

Scotia or cornice trim occurs at the junction of the wall and ceiling.

Skirting trim occurs at the junction of the wall and the floor.

Architrave trim surrounds a door or window opening.

Wall batten trim is a bead generally used to cover a joint between two sheets of wall or ceiling lining.

ACCEPTABLE

- The trim is complete across its entire length.
- The trim is fixed firmly to the wall, ceiling, or floor surface.
- The trim is in good condition, with only minor surface mould.

UNACCEPTABLE

- There are loose, missing, or broken pieces.
- There are significant gaps at corners and joins.
- There are visible gaps between the trim and the wall, ceiling, or floor surface
- There is evidence of water damage.
- There is mould to more than 20% of trim surfaces or mould is thick and concentrated in a localised area.
- There is evidence of borer damage.
- Surface-finishes are flaking or peeling over food preparation, eating, or sleeping areas or to more than 20% of the trim length.
- Skirting or architraves are medium density fibre board.

52 DOORS

52.1 INTERIOR DOORS

PURPOSE

To enclose and connect spaces.

DESCRIPTION

Interior doors are hollow-core, flush-panel doors with a paint or polyurethane finish. Doors can be hinged or sliding; sliding doors should be surface-sliding, not cavity-sliding.

Flush doors have an outer skin on each face of ply or medium-density fibre board. Skins are separated by a cardboard honey-comb lattice or a polystyrene foam core.

ACCEPTABLE

- Doors freely open and close.
- Doors have firmly-attached clashing strips.
- Doors are operational and include appropriate hardware.
- The door and frame are in good condition with only minor surface-scuffs and scratches.

UNACCEPTABLE

- The door frame is missing a door.
- The door or frame is damaged.
- Door clashing strips are loose or missing.
- The door cannot be freely opened or closed.
- There is missing or damaged hardware.
- There are significant scuffs or scratches to more than 20% of the door area.
- Door patches are not flush or the finish does not match the surface.
- The surface finish shows evidence of deterioration.

53 FLOORS

53.1 TIMBER FLOOR

PURPOSE

To provide a level base to the building.

DESCRIPTION

Solid timber floors are made from dressed profiled timber boards that are laid together. The timber comes in two styles: square-edged boards; and a tongue-and-groove system. The floor is generally sealed with a clear finish.

ACCEPTABLE

Timber flooring must be covered with a floor covering such as vinyl or carpet however the flooring must be:

- Complete and sound.
- Securely fixed to the sub-floor structure; nails are counter-sunk.
- There is adequate ground clearance and sub-floor ventilation.
- Borer damage is superficial and can be treated.
- The floor finish is in good condition.

UNACCEPTABLE

- Significant spring.
- The ~~floor,~~ support structure, or fixings shows evidence of rot, rust, or deterioration.
- The floor has holes, water- or mould-damage.
- Nails are 'popping' or protruding through the timber floor.
- There is evidence of significant borer damage.
- The coating system shows evidence of deterioration.

53.2 PLYWOOD SHEET AND PARTICLE BOARD

PURPOSE

To provide a level-base to the building.

DESCRIPTION

Plywood sheet-flooring is made of multiple layers of wood veneer that is bonded together.

Particle board flooring is made of wood chips or particles that are bonded together with an adhesive under high pressure. It may have a protective coating on one side to prevent moisture ingress from the ground.

ACCEPTABLE

Timber flooring must be covered with a floor covering such as vinyl or carpet however the flooring must be:

- Complete and sound.
- Securely fixed to the sub-floor structure; nails are counter-sunk.
- There is adequate ground clearance and sub-floor ventilation.
- The floor finish is in good condition.

UNACCEPTABLE

- There is separation between sheets, or joints are not tight
- Wood-based floors have significant spring.
- Floors, support structures, or fixings show evidence of rot, rust, delamination, or deterioration
- Floors have holes, or water- or mould-damage
- Nails are 'popping' or protruding through a floor.
- The coating system shows evidence of deterioration.

55 JOINERY AND PROPRIETARY FIXTURES

55.1 BENCH-TOPS

PURPOSE

To provide a durable, hygienic, water-resistant surface for food preparation.

DESCRIPTION

Bench-tops provide a smooth, level kitchen work-surface that is durable, hygienic, and water-resistant. Bench-tops can be acrylic, stainless-steel, or timber with a hard, durable surface such as polyurethane or laminate.

Bench-tops with an integrated or inset sink have either an integrated up-stand or protective water-tight lining finished against adjacent surfaces.

ACCEPTABLE

- The bench-top is level, impervious to liquids, and hygienic.
- The bench-top is securely fixed in place and is fixed to the cabinet carcass.
- Bench-tops with a sink have an up-stand or protective lining to adjacent surfaces.
- Junctions between the bench-top and adjacent surfaces are sealed.

UNACCEPTABLE

- The bench-top is loose or is not in the correct position.
- The surface of the bench-top is pitted, worn, scratched, delaminating, or cannot be easily cleaned.
- The adjacent surface is damaged or cannot be easily cleaned.
- Junctions between the bench-top and adjacent surfaces are not water-tight.
- Mouldy silicone or sealant

55.2 KITCHEN CABINETS

PURPOSE

To provide hygienic and secure storage for food, crockery, and utensils in the kitchen.

DESCRIPTION

Cupboards, drawers, and pantries are made from timber with a paint finish or melamine, custom-board, plywood, or medium-density fibre board with a serviceable veneer or laminate finish.

Doors on hinges are fitted with latches; there is a child-proof safety latch or restrictor fitted to doors placed directly under the sink.

Ensure there is a functioning pair of child proof catches provided to one set of under-sink cupboards. Refer to the *M-219: Void Scoping Guide*.

Drawers on runners and rollers are fitted with stops to prevent them from being easily pulled out of the cabinet.

Pantry and cupboard doors, drawer fronts, sides, and tops have a durable surface that is free from holes and damage, protects the cabinet structure, and provides a hygienic, easy-to-clean surface.

ACCEPTABLE

- Kitchen cabinetry is complete and securely-fixed in place
- Drawers and doors are easy and safe-to-operate and fitted with appropriate hardware.
- Drawers are removable (to allow for cleaning).
- Doors are securely-hung.
- Surface finishes are hygienic.

UNACCEPTABLE

- Kitchen cabinetry has moved, and/or is not fixed in place
- Drawers and doors are difficult to open or do not fully close.
- Hardware is missing or damaged.
- Cabinet fronts, sides, or tops have holes, gaps, rot, delamination, or other signs of deterioration.
- There is evidence of water, mould, insects, or rodents
- Interior surfaces of cupboards and drawers, and cabinet fronts, sides, and/or tops are not easy-to-clean.

55.3 LAUNDRY CABINET

PURPOSE

To provide secure storage in the laundry.

DESCRIPTION

Laundry cabinets can be manufactured from pre-finished steel with integrated tub and taps, or a timber cabinet with a paint finish. The finish is water-resistant, easy-to-clean, and hygienic.

The laundry cabinet is securely fixed to the wall and has an integrated up-stand or protective, water-tight lining finished against adjacent surfaces. Laundry cabinets have a child-proof restrictor or latch fitted to the door.

ACCEPTABLE

- The cabinet is in good condition and securely-fixed to the wall.
- The cabinet interior is dry and has evidence of minor mould.
- The cupboard door is easy and safe-to-operate.
- The cupboard door has the appropriate hardware.

UNACCEPTABLE

- The cabinet has moved or is not fixed in place.
- The door is: difficult to open; not fitted with a functioning child-proof restrictor; or does not latch in the closed position.
- The cabinet has holes, gaps, rot, delamination, or other signs of deterioration.
- The interior surface has moderate or significant mould.
- Adjacent surface is damaged or is not easy-to-clean.
- Junctions between the cabinet and adjacent surfaces are not water-tight.

- Mouldy silicone or sealant
- The finish is in poor condition and is not easy-to-clean.

55.4 VANITY CABINET

PURPOSE

To provide adequate storage in the bathroom.

DESCRIPTION

Vanity cabinets with integral hand basins are securely fixed to the wall and sealed to a water-resistant splash-back behind the basin. Cabinets can be wall-or floor-mounted. The finish is water-resistant and easy-to-clean, and is easy to keep hygienic.

Note: for void properties, where water damage has occurred to a vanity cabinet or top, due to close proximately to a shower/bath, consider installing a basin and wall unit. This will eliminate any future water damage.

ACCEPTABLE

- The cabinet is in good condition and is securely fixed to the wall.
- The vanity's surface is hygienic and has only minor cracking.
- The cabinet's interior is dry and has only very minor mould.
- There is a water-resistant splash lining behind the cabinet and the basin is sealed to the lining.

UNACCEPTABLE

- The cabinet has moved or is not fixed in place.
- The door or drawer is difficult to open or does not fully-close.
- Door or drawer hardware is missing or damaged.
- The surface has significant cracks, scratches, holes, gaps, rot, delamination, or other signs of deterioration.
- The interior surface has moderate or significant mould.
- The adjacent surface is damaged or not easily cleaned.
- Junctions between the cabinet and adjacent surfaces are not water-tight
- Cabinet finish is in poor condition and is not easy-to-clean.
- Mouldy silicone or sealant.

55.5 MEDICINE CABINET

PURPOSE

To provide secure storage in the bathroom.

DESCRIPTION

The bathroom medicine cabinet is securely-fixed in or on the wall, typically above or near the basin or vanity.

The cabinet is typically either of timber construction with a paint finish that is water-resistant or melamine and can be easily kept clean and hygienic. The hinged-door has an operable latch.

The door has a mirror front.

ACCEPTABLE

- The cabinet is in good condition and is securely-fixed in or on the wall.
- The surface finish is hygienic and has only minor surface mould.
- The door is easy and safe to operate and has the appropriate hardware.
- The mirror is securely-fixed and has only minor reflective surface defects.

UNACCEPTABLE

- The cabinet has moved or is not fixed in place.
- There is mould over more than 20% of the surface.
- The door is missing, difficult to open, or does not fully-close.
- Door hardware is missing or damaged.
- The mirror is not securely-fixed or is cracked or broken.
- More than 10% of the mirror's reflective surface is defective.
- The cabinet finish is in poor condition and is not easy-to-clean.

55.6 CUPBOARDS AND WARDROBES

PURPOSE

To provide adequate storage for clothes, linen, and the hot water cylinder.

DESCRIPTION

Cupboards can be 'built in' or free-standing. Free-standing cupboards are securely-fixed to the wall structure. Unless a pre-finished lining material is used, interior walls and doors have a paint finish. Timber shelving may be unfinished.

Wardrobes can be 'built in' or free-standing with doors and a paint finish.

Storage cupboards used to hang coats and store boots are typically an open storage closet referred to as the "hall recess"; these are generally found in the hall or entrance lobby.

Linen cupboards used to store linen have shelving and a door.

Hot water cylinder cupboards have a door.

ACCEPTABLE

- Cupboards are complete and structurally-sound.
- The interior linings, floor, and shelves of cupboards are clean and dry.
- Door or hardware is easy and safe to operate.

UNACCEPTABLE

- Cupboards have become displaced from the building structure or are not fixed in place.
- There is evidence of holes, moisture, or mould in interior linings, floors, or shelves.
- Doors or hardware are missing or damaged.
- The cupboard finish is in poor condition.

55.7 DOOR HARDWARE

PURPOSE

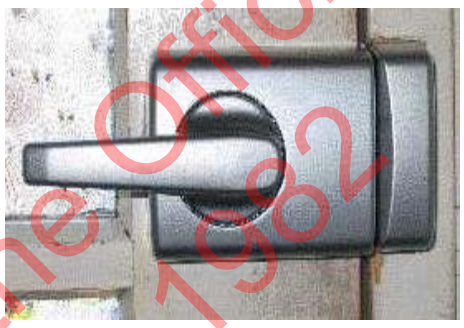
To enable the safe, effective door-operation.

DESCRIPTION

Door hardware includes: hinges; locks; latches; knobs; handles; and strike plates housed into the door jamb.

Doors need hardware for safe functionality; door closers close the door slowly and firmly with sufficient pressure to latch the door; privacy latches have emergency release from the outside; and door-stops protect wall linings.

ACCEPTABLE



- Hardware is complete and functional.
- Doors have the appropriate hardware that is easy and safe to operate.
- Exterior doors have a secure door lock, and can be unlocked from the inside without a key.
- Interior doors have a latch, can be opened from the inside, and cannot be locked.

UNACCEPTABLE

- Hardware is missing or damaged.
- Exterior door cannot be locked or require a key to unlock from the inside.
- Interior doors can be locked.
- Privacy locks cannot be released from the outside in an emergency.
- The door stop is missing or ineffective.

55.8 WINDOW HARDWARE

PURPOSE

To enable the safe, secure operation of window sashes.

DESCRIPTION

Window hardware includes: hinges; stays; passive vents; fasteners; and catches. Window hardware ensures a closed window forms a good seal. Window security-stays protect occupants from falling or secure the building.

ACCEPTABLE

- Hardware is complete and appropriate, and is easy and safe to operate.
- Closed sashes are secure and form a good seal.
- Open sashes are safe and secure.

UNACCEPTABLE

- Hinges, fasteners, catches, restrictors, or security-stays are missing or damaged.
- Sashes cannot be closed securely.
- Where there is a fall-height of more than 2m, sashes cannot be secured in an open position or do not prevent access.
- When closed, there is the presence of gaps around the sash.
- The window fire escape sash with a security stay has the pin in the 'locked' position.

55.9 SUB-FLOOR GRILL

PURPOSE

To provide adequate ventilation to the sub-floor area underneath the building.

DESCRIPTION

Sub-floor ventilation grills provide ventilation to the sub-floor cladding or perimeter wall.

To test there is adequate ventilation to the sub-floor area, get some dirt from under the house, and rub it firmly in your hands. If the dirt stains like mud, there is too much moisture and the sub-floor ventilation is inadequate.

ACCEPTABLE

- Sub-floor ventilation grills are sound, secure, and complete
- The sub-floor is dry and secure.

UNACCEPTABLE

- The sub-floor ventilation grill is broken, missing, or loose
- The sub-floor ventilation grill is partially-or-fully-obstructed.
- There is too much moisture in the sub-floor.

55.10 JOINERY HARDWARE

PURPOSE

To enable the safe, secure operation of joinery and storage.

DESCRIPTION

Joinery and furniture hardware includes: cabinet handles; child-proof restrictors or stays; range anti-tipping device; coat hooks; wardrobe rails; towel rails; grab-rails; toilet roll-holder.

ACCEPTABLE

- Hardware is complete, appropriate, and is easy and safe to operate.
- Hardware is securely-fixed in place.

UNACCEPTABLE

- Hardware is missing, rusted, damaged or is not securely-fixed in place.
- The toilet roll-holder cannot be easily reached
- The towel rail is positioned so that towels touch the floor or is fixed with a toggle-bolt or plastic plug.
- The grab-rail cannot be easily reached.

55.11 SMOKE ALARMS

PURPOSE

To provide smoke detection warning.

DESCRIPTION

Smoke alarms provide an early smoke detection warning by emitting a high pitched sound when smoke is detected. Smoke cannot be detected in 'dead' air space.

Smoke alarms include test and 'hush' buttons to allow nuisance alarms to be silenced.

Alarms may be battery-type or interconnected (see Section 6.3 of *M-219: Void Scoping Guide* for further information).

ACCEPTABLE

- The alarm is securely-mounted and is clean.
- The alarm is fully operational.

UNACCEPTABLE

- The alarm is missing.
- There is a wall or other obstruction within 300mm of the smoke alarm.
- The alarm is not firmly fixed to the ceiling or has broken or missing cover.
- There is no working battery.
- The test button does not work.
- There is dirt or paint on the surface or under the cover.
- The alarm is not fitted in accordance with the *M-215: Maintenance and Programmed Work Specification.*

55.12 CURTAINS

PURPOSE

To provide privacy and mitigate heat-loss; shower curtains control water discharge.

DESCRIPTION

Curtains are hung on a curtain track or curtain rod system, that is fixed to the wall or ceiling.

Curtain track systems support a track and sliding eyelets; rod systems support a rod and glides.

Refer to the *M-244: Curtain Scoping Guide*.

ACCEPTABLE

- Curtains are easy to open, clear of the window or opening, safe, and adequately supported.
- The track or rod system is securely-mounted and extends the full length of the window or shower.

UNACCEPTABLE

- There is no curtain track or rod system.
- The curtain track or rod is bowing, twisting, or is too short.
- Curtain track fixings are loose or missing.
- The curtains do not seal along the top at the wall are not face-fixed.
- The curtain does not fully open, there are too many sliding eyelets or they are damaged or worn or missing
- Curtains are missing or are excessively dirty.
- There is a flammable surface within 1m of the curtain.
- The shower curtain does not discharge water into the bath or shower tray.
- All curtains must be cleaned when a property becomes vacant.
- Shower curtains are dirty.
- Shower curtain does not adequately fall into the bath.
- Shower/bath track is rusted.

6 FINISH

62 TILING

62.1 WALL TILES

PURPOSE

To provide a wall-surface that is durable, hygienic, and easy-to-clean.

DESCRIPTION

Wall tiles are a hard decorative lining, normally made of ceramic that are adhered to the wall-surface and jointed by grouting. Tiles' surface finish provides protection to the wall from heat and water ingress.

Sealed grout provides a joint that is impervious to water and resistant to dirt, grease, and mould.

ACCEPTABLE

- Tiles are complete and sound.
- Tiles are sealed around fittings.
- Joints are easy-to-clean.
- Tiles and joints have only minor surface mould.
- There is only minor mismatching of tiles.

UNACCEPTABLE

- There is water pooling on joints, sills, or in recesses.
- There is water- or heat-damage to adjacent surfaces.
- Tiles are missing, cracked, or damaged.
- Grout has absorbed dirt, is missing, or has moderate to heavy mould.
- Tiles are porous or have surface deterioration.
- Tiles are significantly mismatched.

62.2 FLOOR TILES

PURPOSE

To provide a floor-surface that is durable, hygienic, and easy-to-clean.

DESCRIPTION

Floor tiles are hard, decorative flooring, normally made of ceramic, slate, terracotta, or marble. Tiles are adhered to the floor-surface and jointed by grouting.

Sealed-grout provides a joint that is impervious to water and resistant to dirt, grease, and mould. Threshold strip provides a smooth joint between different floor finishes.

ACCEPTABLE

- Tiles are complete, sound, and safe.
- Tiles are sealed around fittings and along edges.
- Tiles and joints are easy-to-clean.

UNACCEPTABLE

- There is water pooling on joints or edges.
- Tiles are missing, cracked or damaged.
- Grout has absorbed dirt, is missing, or has mould.
- Tiles are porous or have surface deterioration.
- There are sharp edges.
- Threshold strips are missing or a hazard.
- Tile surface is not slip-resistant.

64 RESILIENT SURFACING

64.1 VINYL

PURPOSE

To provide a floor-surface that is durable, water-resistant, hygienic, and easy-to-clean.

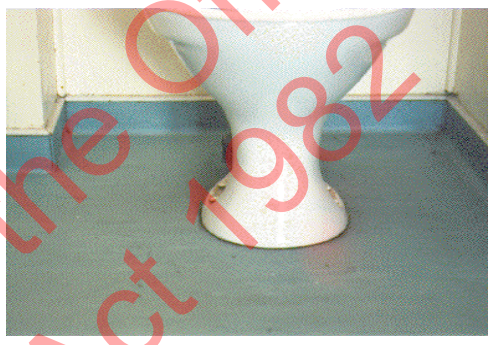
DESCRIPTION

Vinyl flooring is available in sheet and tile form, and is fixed to the floor or ply underlay, with adhesive. The seams on vinyl flooring are heat-welded; seams on tiles and linoleum are butted (not welded).

Vinyl has a water-resistant surface. Threshold strip provides a smooth joint between different floor finishes.

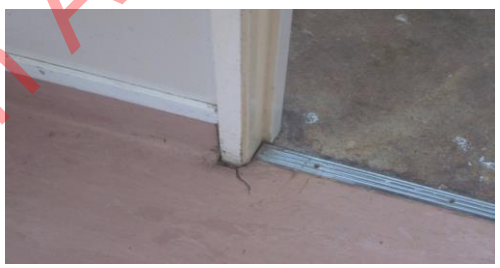
ACCEPTABLE

- Vinyl is in good condition, and is securely fixed and safe
- Vinyl is sealed to the edges or trims.
- Joins are water-tight.
- Water-resistant surfaces are easy-to-clean.



UNACCEPTABLE

- Vinyl is damaged, cracked, or torn.
- Vinyl is not fixed in place.
- Vinyl is not continuous under the edges of fixtures.
- Joins are not water-tight.
- Threshold strips are missing or a hazard.
- Vinyl surfaces are worn thin or heavily marked over more than 20% of the floor-area or through the main traffic area.



65 CARPETING

65.1 CARPET

PURPOSE

To provide a durable, comfortable floor-covering.

DESCRIPTION

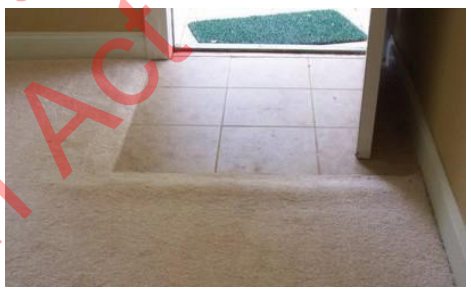
Carpet is nylon, wool, or blended floor-covering that provides a durable, comfortable finish to interior floor surfaces. Carpet can be glue-fixed or stretched over an underlay onto perimeter carpet grippers.

ACCEPTABLE

- Carpet is securely-fitted and safe.
- Carpet has only minor wear, staining, or discoloration.

UNACCEPTABLE

- Carpet is loose or is a trip hazard.
- Carpet is badly stained or discoloured.
- Carpet is threadbare over more than 20% of the floor-area or through the main traffic area.
- Carpet has an unpleasant odour, is water-damaged, or has mould.



67 PAINTING, DECORATION, AND COATING

67.1 EXTERIOR PAINT

PURPOSE

To provide a durable, protective exterior surface.

DESCRIPTION

Unless it is a veneer or a pre-finished coating (for example, aluminium, PVC, or vinyl), the exterior surface of the building usually has a paint finish.

ACCEPTABLE

- Paint finish protects the substrate from rain, wind, and sun.
- Paint finish has a reasonable appearance.

UNACCEPTABLE

- Paint is flaking, peeling, bubbling, or has otherwise deteriorated.
- The surface does not have an adequate coverage of paint, or has not received a top-coat of paint.
- There is water-damage to the substrate.
- There is organic growth or mould on the surface.
- Any glazing compound is unpainted.

67.2 INTERIOR PAINT

PURPOSE

To seal and decorate interior surfaces.

DESCRIPTION

Paint is an aesthetic and protective covering applied to the surface of the ceiling, walls, windows, doors, trims, and cabinetry. Unless previously finished with polyurethane or a pre-finished product, all surfaces are painted.

Surface mould is acceptable if it can be cleaned without damaging the surface. Surface mould is a light to moderate covering of mould that has not penetrated or damaged the finished surface and can be cleaned using common household products.

ACCEPTABLE

- Paint covers all surfaces and has adequate coverage.
- The paint finish has a reasonable appearance.
- The painted surface has only minor pin or nail holes, markings, stains, or flaking.

UNACCEPTABLE

- There are significant cracks in the surface finish.
- There is the presence of sagging or bowing substrate.
- Within a square-metre of the surface area, there are:
  - more than 20 **pin** holes; or
  - more than 5 **nail** holes.
- There is flaking paint above food preparation, dining, or sleeping areas
- Mould and stains over more than 20% of the surface area.
- There is heavy, thick, or concentrated mould in a localised area.
- There are mismatched patches of paint.

67.3 POLYURETHANE

PURPOSE

To clear-seal the interior surface.

DESCRIPTION

Polyurethane is a hard, durable, water-resistant protective covering applied to the surface of doors, cabinetry, benchtops, and trims.

Polyurethane is only used to finish repairs on existing polyurethane finish surfaces.

ACCEPTABLE

- The polyurethane finish covers the entire surface.
- The polyurethane finish is water-resistant and has a reasonable appearance
- Polyurethane surfaces have only minor markings, scratches, or wear.

UNACCEPTABLE

- There is moisture damage to the substrate.
- Flooring is damaged, has significant defects, or has significantly mismatched flooring-patches.
- The polyurethane surface is worn thin or heavily scratched or marked over more than 20% of the floor-area.

67.4 WALLPAPER

PURPOSE

To seal and decorate wall linings.

DESCRIPTION

Wallpaper is an aesthetic, protective covering applied to the surface of an interior wall.

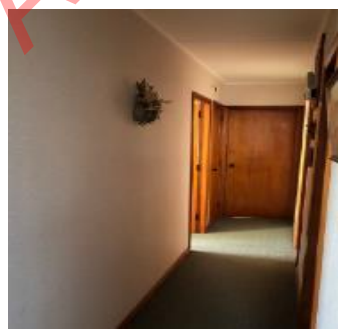
Depending on the condition of each wall in the room, changing from wallpaper to a paint finish can be done one wall at a time.

If possible, localised areas of damage can be re-glued.

Wallpaper replacement is no longer acceptable; where wall-paper is no longer in an acceptable condition, painting is required. Refer to Section 3.5 of *M-219: Void Scoping Guide.*

ACCEPTABLE

- Wall paper finishes cover all surfaces.
- Wall paper finishes have a reasonable appearance.



UNACCEPTABLE

- There are significant cracks in the surface finish.
- There is sagging or bowing substrate.
- Within a square-metre of the surface area, there are:
  - more than 20 pin holes; or
  - more than 5 nail holes.
- There is mould, stains, markings, or torn or lifting wallpaper over:
  - more than 20% of a single drop; or
  - more than 20% of the majority of drops on a wall.

- There is heavy, thick, or concentrated mould in a localised area.
- There are significantly mismatched patches of wallpaper.
- There are mismatched patches of wallpaper.
- There is mould, stains, markings, or torn or lifting wallpaper over **more** than 20% of a single drop **or** of the majority of drops on a wall.
- There is heavy, thick, or concentrated mould in a localised area.
- There is an excessive number of pin or nail holes.

7 SERVICES

71 LIQUID SUPPLY

71.1 LOCAL WATER-SUPPLY

PURPOSE

To provide a potable water-supply for sanitary and hygiene requirements, consumption, food preparation, utensil washing, and laundering.

DESCRIPTION

The majority of water-supply is reticulated water provided via a Local Authority water-main. The property is connected to the water-main via a mains connection at the toby on the property.

The toby is a mains isolating-tap, normally located on the property boundary in a toby box in the ground. In apartments and flats, the toby may be found where the water pipe first enters the unit, or in a common riser cupboard.

Local Authority water supply for potable water meets the *Drinking-water Standards for New Zealand 2005* (Revised 2008) (DWSNZ).

Leaks can occur in the buried water-supply line between the meter and the building. These leaks are often difficult to detect because the supply pipe is usually buried at least 600mm below the ground surface. If the Toby box contains water, and the water is not due to rain or irrigation run- off, this may indicate a leak.

ACCEPTABLE

- There is an adequate, reticulated supply of potable water.
- The toby is fully operational and sound.

UNACCEPTABLE

- There is water in or around the toby box.
- There is insufficient potable water.
- Non-potable water supply is not clearly labelled.
- The toby cannot be easily reached or is damaged.

71.2 ARTESIAN RAIN-WATER-SUPPLY

PURPOSE

To provide a potable water-supply for sanitary and hygiene requirements, consumption, food preparation, utensil washing, and laundering.

DESCRIPTION

Potable water is free of contaminants that may cause illness, is visually clear and not offensive in appearance odour or taste. Artesian/ground-water and rain-water collection are alternatives to a reticulated Local Authority supply.

Artesian water or ground-water is drawn from underground by a pump; water can be stored in a tank or pumped to a pressurised vessel and supplied on demand.

Rain-water is collected from the roof and stored in a holding tank, then piped to the house and pressurised for supply. Storage tanks have a cover lid to protect water from heat and sunlight. Sediment may accumulate below the outlet of the tank.

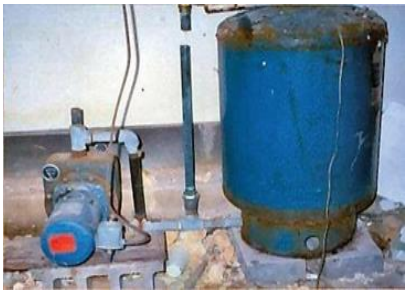
Water supplies intended for human consumption, food preparation, utensil washing, oral hygiene, or personal hygiene is to meet the *Drinking-water Standards for New Zealand 2005* (Revised 2008).

ACCEPTABLE

- There is an adequate potable water-supply.
- Supply and storage systems are complete, fully operational, safe, secure, and sound.

UNACCEPTABLE

- There is insufficient potable water-supply or water storage capacity.
- Supply or storage systems are damaged, degraded, or are not water-tight.
- Pipe-work has contaminants or sediment is accumulating within.
- Rain-water collection for potable water-supply is in contact with contaminants such as preservative-treated wood or lead paint.
- Tank has sediment accumulating above the storage tank outlet.
- The tank's cover cannot be removed for inspection or cannot be secured.
- The tank's stand is not structurally-sound.
- There is vermin in the tank.



71.3 HEADER TANK

PURPOSE

To hygienically and efficiently pressurise open-vented hot water systems.

DESCRIPTION

Header tanks provide gravity-fed water pressure to a hot water open-vented system; this is often known as a low pressure system.

The header tank is fed from mains water-supply and the water level is regulated by a ballcock or float valve. Water is fed from the header tank to the bottom of the hot water cylinder.

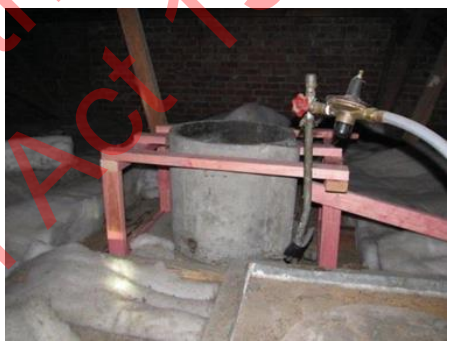
Available water pressure in the unit is determined by the height of the water level in the tank above the water outlets.

Header tanks are normally located in the ceiling's roof cavity and can also be externally located on top of the roof.

Internal header tanks have a drip or over-flow tray to collect and divert over-flow water to a drain on the exterior of the building.

ACCEPTABLE

- There is an adequate supply of hot water pressure to ensure an adequate water-flow.
- The header tank is safe, secure, and sound.



UNACCEPTABLE

- The tank, ballcock, or pipe-work is leaking or damaged.
- The tank is over-flowing.
- There is no over-flow tray or over-flow does not flow to an exterior drain.
- The tank has no cover or lid.
- The tank's seismic restraint does not meet legislative requirements.

71.4 WATER PIPE SYSTEM

PURPOSE

To deliver and distribute water.

DESCRIPTION

Hot and cold water pipes distribute pressurised water from the water-supply to sinks, toilets, laundries, bathtubs, and related fixtures.

Supply pipes can be made of copper or polybutylene. Galvanised water pipes deteriorate as they age and can contaminate the water with rust.

Water pipe systems have hot water delivery temperature of 45-50ºC; hot water temperature at the closest tap is 50°C.

Water delivery temperature is set to 45°C at the shower.

A temperature limiting-valve is designed to mix cold water into the discharging hot water so that water delivered from the hot water cylinder to the taps never exceeds a set temperature.

The water flow-rate is a maximum of 10 l/min and at least 6 l/min at the shower.

ACCEPTABLE

- The pipe system is safe and sound.
- Pipes have an adequate flow of water.
- Pipes and connections are appropriately sized, fitted, and protected.
- Water volume can be measured and shut off for maintenance purposes.

UNACCEPTABLE

- Water-supply, back-flow, or cross-connection is not potable or is contaminated.
- Water storage or hot water-supply is inadequate
- Water-supply does not have mechanisms to prevent scalding, electric shock, or explosion.
- Water pipes and connections are too small, loose, corroded or leaking, are vulnerable to freezing, or cause noise transmission within the building.
- The hot water pipe is not insulated for the first 1m from the hot water cylinder.
- There is no tempering-valve or it is not adjusted to deliver the correct outlet temperature.

• There is no isolating valve provided to each separate unit or a shut-off valve is not provided at the boundary. • There is no water meter, it does not function, or it is not easily-accessible.

71.5 SOLAR HOT WATER

PURPOSE

To provide an energy-efficient supplementary water heating system.

DESCRIPTION

Solar hot water systems can be used to supplement normal, or replace less-efficient, hot water systems.

Water or glycol is circulated through a collector, normally located on a north-facing roof surface to maximise solar input. This harnesses energy from the sun to heat the fluid, which, in turn, is transferred to a heat exchanger in the hot water cylinder.

Passive solar systems (also called thermosiphon systems) have no control or pumps and rely on thermos-siphoning for heat transfer. Active solar systems (known as forced circulation) use an electronic controller and an electric pump to circulate the fluid or storage water. Tanks can be located in attics, basements, or outside the building at ground level.

Repairs and maintenance of a solar hot water system should always be carried out by a qualified solar hot water specialist.

ACCEPTABLE

- There is an adequate hot water supply.
- Structural supports for the system and components are sound.
- The heater and components are complete, secure, safe, sound, and protected.

UNACCEPTABLE

- There is not an adequate hot water supply.
- There is structural failure in the building; structures are unable to support the load of the system and its components.
- The heater, pipe-work, collector panels, cylinder, controller, or safety devices are damaged, loose, corroded, or leaking.
- There is bleaching of the absorber surface.
- Pipe-work is not fully lagged.
- Roof penetrations are not sealed or incompatible materials have been used (causing degeneration of roofing or adjacent materials).
- Panels are not appropriately-oriented or angled.
- Water discharges to the roof.

- The system does not provide protection from Legionella bacteria.

71.6 SANITARY FIXTURES

PURPOSE

To provide a durable, hygienic, water-resistant surface.

DESCRIPTION

Sanitary fixtures include: kitchen sinks; laundry tubs; shower trays; wash basins; bathtubs; toilet suites; and accessories.

Kitchen sinks are made of stainless steel, and can be integrated or inset into the bench-top. The sink has a sink plug and chain and is positioned under the taps, any water or liquid on the sink benchtop and in the sink drains to the sink waste. The sink is earth bonded.

Laundry tubs are made of stainless-steel, and can be bracket-mounted or supported on a tub cabinet. The tub has a waste connection with a built in over-flow, a plug and chain and a separate discharge pipe for the washing machine. The tub is earth bonded.

Shower trays are made of stainless-steel, may have a stainless-steel threshold, and is earth bonded. Accessible showers have a shower hose hand piece, slide, wall rail, and brackets.

Wash basins are made of vitreous or acrylic, and can be wall-mounted or integral with vanity cabinets. The basin has a waste connection with a built in over-flow and a plug and chain.

Bathtubs may have a high lip-edge and overflow, has a waste connection and a plug and chain.

Toilets are made of vitreous toilet pan, plastic two-flap seat, and a cistern. Most cisterns are plastic with an internal water flushing mechanism. The cistern over-flow exits by a pipe either through the wall or directly into the pan.

Please note: if the dwelling does **not** include one or more spaces that house sanitary fixtures (that is, a kitchen and/or laundry and/or bathroom and/or toilet), you should undertake a scope to add these spaces – and all required components (as set out in Section 6 of the *M-219: Void Scoping Guide*) – to the dwelling. Where required, contact Kāinga Ora for additional guidance.

ACCEPTABLE

- The fixture effectively manages water.
- The fixture is safe, easy-to-clean, securely fixed in place, and sound
- There are effective water-resistant splash linings.

UNACCEPTABLE

- The fixture is not secured in place or is unstable.
- The fixture is not sealed to adjacent surfaces or penetrations are not adequately sealed.
- The fixture is leaking or there is water-damage in adjacent surfaces.
- There is no plug and chain or the plug is not secured by a chain.
- The surface is damaged, cracked or has deteriorated making it hard to clean.
- Stains have compromised vitreous china and cannot be removed by cleaning.
- There is more than 50x50mm of rust within a localised area.
- Stainless steel fixtures are not earth bonded.
- Waste connections leak or are blocked.
- The fixture has broken, loose, or missing components
- The laundry tub is concrete or has no separate discharge pipe.
- The shower is excessively slippery or does not effectively retain water.
- The toilet is not flushing fully or is over-flowing
- Cistern over-flow pipe is not draining clear of the building.

71.7 TAP-WARE

PURPOSE

To provide an outlet for water delivery.

DESCRIPTION

Tap-ware includes: bath, basin, and kitchen taps and mixers; shower-heads and mixers; laundry taps; and exterior taps.

Exterior taps are potable (unless marked otherwise) and made of brass with screwed thread outlet for the connection of a hose fitting.

Taps are clearly identified as hot (red) or cold (blue) and may have level handles.

Shower-mixer/s meet the requirement for a flow-rate of 6–8 litres-per-minute. Refer to Section 6.8 of *M-219: Void Scoping Guide.*

ACCEPTABLE

- Tap-ware is complete, secure and in a serviceable condition.
- Taps are easy to operate and completely shut-off the water-supply when closed.
- Water is unobstructed when a tap is fully-open.
- There is hot and cold running water over the kitchen sink and the laundry tub.
- Hot and cold running water is supplied in bathrooms, hand basins, baths, and showers.
- The laundry includes separately-controlled hot and cold tap outlets for washing machine hose connections.

UNACCEPTABLE

- Taps and mixers are not clearly labelled as hot or cold.
- The water delivery temperature is not safe.
- The outlet or part of it is missing, broken, or damaged.
- The outlet is loose or is not securely screwed back to the wall, splash-back, or fixture.
- The outlet is dripping or leaking.
- The outlet is difficult to operate
- Water-flow and pressure is too high or low.

72 GAS

72.1 GAS SUPPLY

PURPOSE

To provide gas for cooking appliances, hot water or space heating.

DESCRIPTION

Reticulated gas is piped into the property (via a mains supply-pipe) to a shut-off valve and meter installed and owned by the gas supplier.

Gas meter and isolation valves are mounted at ground level on an external wall, within 3m of the front of the building in a straight line from a gas main. Metering equipment for apartment buildings may be located in a room on an external wall of the building, with vents and opening doors that can be accessed from the street.

Bottled gas is supplied to the property via bottled LPG, connected to a regulator and condensate trap. Bottles or cylinders are located so gas delivery can be made safely by one person without excessive manual handling or risk. Bottles are sized for the number of appliances installed in the building.

All bottles/cylinders have a LAB number allocated by Work Safe when a cylinder is approved. Bottles/cylinders are tested and certified every ten years; this is recorded on the bottle.

Gas is reticulated from the gas meter or gas bottle regulator through the building's gas pipe system to the various appliances.

ACCEPTABLE

- The supply system is complete, fully operational, safe, secure, and sound.
- Gas isolation valves and handles are clearly identifiable and operational.

UNACCEPTABLE

- There is inadequate gas supply for the number of appliances.
- Isolation valves cannot be turned off or the 'open' and 'closed' positions are not clearly visible.
- There is a leak in the gas system (presenting as a strong smell of gas).
- Gas mains, meters, or covers are not securely fixed.

- Gas bottles' seismic restraint does not meet legislative requirements.
- Bottles do not have a LAB number or is out of the test date.
- Connection hoses have cracks or evidence of deterioration or have not been replaced for more than 5 years.
- Residue in condensate trap exceeds 2-3ml or has not been drained for more than 2 years.
- Change-over valves and regulators have not been checked for more than 10 years.
- The bottle is located in a poorly-ventilated area, under stairs, in the sub-floor, or adjacent to doors, windows, air vents, flue terminals
- There are combustible materials within 1m of the gas bottle.
- The bottle is not easily-accessible.

72.2 GAS WATER HEATER

PURPOSE

To provide a hot water system.

DESCRIPTION

Gas continuous-flow hot water systems heat the water on demand using a gas burner as the water passes through the heater coil, this allows for an endless supply of hot water.

The unit is typically mounted on an exterior wall which allows for open ventilation, the hot water delivery pipe-work on the exterior and under-floor of the house needs to be lagged.

Gas hot water storage cylinders use a gas flame to heat water and can run on natural gas or LPG. Hot water is retained within an insulated cylinder and is thermostatically controlled to maintain the set temperature.

Gas hot water cylinders can be located internally or externally; are required to be externally flued or ventilated if within a confined area; and suitably seismically-restrained.

ACCEPTABLE

- Isolation valves are fitted to hot and cold supply pipes
- The unit is well-ventilated and securely-fixed.

UNACCEPTABLE

- There is leaking pipe-work, valves, or cylinders.
- The unit's seismic restraints do not meet legislative requirements.
- There is no tempering-valve it is not adjusted to deliver the correct outlet temperature.
- The hot water pipe is not lagged.
- Isolation valves are missing or are not working.
- The cylinder is not externally venting.

72.3 GAS SPACE HEATER

PURPOSE

To provide space heating.

DESCRIPTION

A gas heater can run on natural gas or LPG. Gas heaters typically require electricity: for ignition; to run the fan; and for electronic controls. Heaters are flued to the building exterior and have suitable heat shields to protect adjacent surfaces.

ACCEPTABLE

- The heater is complete, fully operational, easy to use, safe, secure, and sound.
- The heater is externally-flued.
- The element flame is crisp, quiet, and blue.

UNACCEPTABLE

- There is leaking pipe-work or a smell of unburnt gas.
- The heater is not easy to operate.
- There is combustible material within 1m of the heater.
- The heater is not securely-fixed in place.
- The heater is not flued externally or the flue is leaking or obstructed
- The heater's electrical supply is not hard-wired.
- The heater's ignition or controls are not labelled, or are damaged or missing.
- The heater's burn element is damaged.
- There is a yellow-coloured flame or black soot.
- Heat shields are damaged or missing.

72.4 GAS RANGE

PURPOSE

To provide cooking and grill functions for food preparation.

DESCRIPTION

A gas range is a free-standing appliance with a gas element cook-top and gas element oven; it can have an electrical supply for ignition and oven light or an in-built piezo ignition system. The gas range is supplied with two oven racks, a grill tray, an oven tray, and is fitted with an anti-tip safety device and safety chain.

A gas hob is a surface-mounted cook-top with gas fired heating elements, pot holders, and controls.

Any wall or other surface that is adjacent to the gas range or hob is protected from heat and cooking residue.

ACCEPTABLE

- The gas range or hob is complete, fully operational, safe, and secure.
- The gas range or hob is clean and in good condition.
- The flame is blue, crisp, and quiet.

UNACCEPTABLE

- The ignition or gas elements are faulty.
- Control knobs are faulty, not labelled, or have no heat indicators
- Cook-top pot holders or burner plates are missing or damaged.
- The oven door does not close or does not seal when closed.
- The oven door handle is missing or is not easy to operate safely.
- The anti-tip device or pin is missing or does not prevent the range from falling over.
- The safety chain is missing or does not prevent damage to the gas supply line.
- Oven racks or trays are missing or do not fit.
- The surface of the oven lining cannot be easily cleaned or is corroded.

- There is a yellow-coloured flame or black soot.
- Wall heat shields are damaged or missing.

74 LIQUID DISPOSAL

74.1 RAIN-WATER SPOUTING

PURPOSE

To manage rain-water shed from the roof, and to direct it to a rain-water storage system, soak-pit, or local storm-water system.

DESCRIPTION

Spouting or guttering is a channel that collects and diverts rain-water from the roof.

External gutters suspended from the eaves below the edge of the roofing material are made of galvanised steel, copper, painted aluminium, or PVC.

Concealed gutters are located between the fascia and the rafter-ends; are not visible; have lower falls; and have a higher risk of water entering the building in the event of blockage.

Valley gutters manage water between intersecting roof planes; they are made of steel or butynol.

Internal gutters where the roof planes intersect over an internal part of the building are made of butynol over plywood and fall towards a rain-water head on the perimeter of the building. The gradient and capacity of the gutter is critical; heavy rain-water flows or blockages will cause water to flow inside the building.

A rain-water head and scupper is used to connect an internal gutter to the down-pipe. Down-pipes collect rain-water from the gutter and direct it into a disposal or catchment system.

ACCEPTABLE

- Gutters and down-pipes are secure and sealed.
- Gutters and down-pipes have adequate fall.

UNACCEPTABLE

- Gutters or down-pipes are warped, corroded, have holes or are leaking or blocked.
- The gutter's outer-edge is higher than the inner edge.
- Gutters do not fall towards the down-pipe or the gradient is insufficient.
- There is evidence of water ponding.
- Gutter and down-pipes are not securely-fixed.

• There is accumulation of debris, leaves, balls, or other rubbish.	

74.2 VENT-PIPE

PURPOSE

To manage the intake of air into and out of the sanitary system.

DESCRIPTION

The vent for the soil pipe allows air to pass through the drainage system to prevent a vacuum building up when the toilet is flushed.

The vent is typically a PVC stack that extends from the drain connection up past the roof; some older homes have an external 4" cast-iron stack.

Some vent-pipes are concealed in the wall and can only be seen where they connect to the discharge pipe, directly behind the toilet, and where they exit on the roof.

An acceptable alternative is an air admittance valve, generally installed 800mm above ground-level.

ACCEPTABLE

- The vent-pipe is secure and sealed.
- The vent-pipe effectively manages sewerage odour.

UNACCEPTABLE

- There is a detectable sewerage odour.
- Vent-pipe penetration is not weather-tight or is too short.
- Cast-iron pipes are excessively rusted.
- Vent-pipe joints are not secure and/or leak.
- Vent-pipes are not securely fixed in place.

74.3 GULLY-TRAP

PURPOSE

To manage the discharge of waste-water from sanitary fixtures.

DESCRIPTION

A gully-trap receives the discharge from waste-water fixtures such as the bath, shower, hand basin, kitchen sink, and laundry tub. Traps connect to a suitable sewerage or septic system. The gully-trap has an air-trap to block the venting of foul air from the sewer system to the atmosphere.

Gully-traps are made of concrete with an iron grate, or PVC with a matching grate. The gully-trap provides a point at which foul-water can over-flow and, in the event of a blockage, the drain can be unblocked.

ACCEPTABLE

- The gully-trap and grate lid are intact and sound.
- The gully-trap effectively manages sewerage odour.
- Waste pipes effectively allow water to flow into gully-trap.

UNACCEPTABLE

- The gully-trap or grate is missing or damaged
- The grate or lid does not fit snugly onto the gully-trap
- The gully-trap or grate is obstructed/blocked.
- Foul odours or gases are emanating from the gully-trap.
- The gully-trap is not sitting above ground level.
- Waste water does not effectively flow directly into gully-trap

74.4 SEWERAGE

PURPOSE

To manage the disposal of foul-water.

DESCRIPTION

The internal plumbing sanitary system connects to a sewerage system. A main sanitary sewer discharges to the Local Authority's mains sewerage system, where waste is reticulated back to waste treatment plants.

Materials used for pipes include: cast-iron; concrete; steel; uPVC; cement- lined ductile iron; and copper. Components may include: vents; access points for inspection and maintenance; rodding; and larger access chambers.

A septic tank is a waste management system, used where there is no available public foul-water connection. Domestic waste-water is discharged to a septic tank where suspended matter and solid waste settles and is decomposed by anaerobic bacterial action within the sludge. An outlet from the septic tank discharges the treated water to a soakage field. A septic tank is pumped and cleaned when the total depth of sludge and scum exceeds one third of the tank's liquid depth.

ACCEPTABLE

- The sewerage system is secure and effectively manages disposal of foul-water.
- The septic tank system is intact, stable, and in good condition.

UNACCEPTABLE

- Gully-traps/toilets 'back-up' or do not flush clear.
- The ground is moist or soggy, or there is a consistent foul-water smell.
- Access points, hatches, or lids are broken, missing, or unsecure.
- The septic tank is full of sludge, and scum solids fill the tank and over-flow to the soakage field.
- The septic tank is damaged, cracked, or leaking.
- The septic tank's outlet filter or pipe-work is clogged, damaged, or missing.
- The septic tank system has biological failure from chemical poisoning.
- The septic tank system has a power outage and/or its alarm, blower, or control box is not functioning.

- The tank's irrigation system is damaged or has uneven distribution.
- Storm-water enters the septic tank system.

74.5 DRAINAGE

PURPOSE

To manage the disposal of storm- and ground-water.

DESCRIPTION

Water run-off from the roof and hard surfaces is collected and directed to soak-holes, rain-water storage tanks, or to the Local Authority's storm-water system directly or from the road-side curb.

ACCEPTABLE

- The drainage system effectively manages storm-water run-off from the roof.
- The drainage system effectively manages ground-water run-off from the driveway and pavement.

UNACCEPTABLE

- The pipes, tanks, or drainage systems are over-flowing.
- Pipes are broken, joints are disconnected, or traps are cracked/broken.
- Down-pipes discharge directly onto the ground or hard surface.
- There is water collecting or being discharged under the building.
- There is evidence of erosion or ponding.

75 SOLID-FUEL HEATING

75.1 SOLID-FUEL HEATER

PURPOSE

To provide space heating.

DESCRIPTION

A solid-fuel heater can use wood, coal, or pellets; it can be a free-standing unit or inserted into an existing open fire cavity. The fire-box is lined with fire-bricks and fitted with a stainless-steel flue, a sealable door, a panel surround, and a controllable vent operated by a lever on the front of the unit to regulate air entering and leaving the fire-box. The unit and flue are seismically-restrained and sit on a fire-proof plinth or hearth surrounding or protruding from the front of the unit.

Wood burners are designed to only use wood; they use combustion air from the top with the wood fuel burning from the top downwards. Fuel can sit and burn effectively on a flat base; wood burners will have a small grate or no grate at all.

Multi-fuel burners are designed to use wood or coal, which burns at a higher temperature than wood. Multi-fuel burners require combustion air from underneath the fuel, and have an open grate feature to let the air through to the fuel.

Pellet burners are designed to use pellets made from recycled waste such as wood shavings and saw-dust. Pellets are loaded into a hopper in the unit and are automatically screw-fed into the fire. There is a heating element, electronic controls, suction and convection fans, and a combustion chamber and exhaust flue. Heat output is controlled by a thermostat.

ACCEPTABLE

- The heater is complete, fully operational, easy-to-use, safe, secure, and sound.
- The heater is externally-flued.
- The heater is clean and in good condition.

UNACCEPTABLE

- The heater does not meet Local Authority emission standards.
- The seismic restraint does not meet legislative requirements.
- There is combustible material within 1m of the heater.
- Heat shields or guards are damaged or missing.
- The fire-proof plinth or hearth is damaged or there is the presence of heat damage to adjacent surfaces.

- The fire-box is dirty, cracked, split, or corroded.
- The door does not fully-close or the door seal is missing.
- Damper controls or door handles are not insulated or are not easy to operate.
- The screw-feed system is not functioning.
- Glass in the door is cracked, missing, or broken
- The flue is dirty, loose, damaged, leaking, or blocked
- There is corrosion on the flue's cowl or fastenings.

75.2 WET-BACK

PURPOSE

To supplement the heating of water in the hot water system.

DESCRIPTION

Wet-back water heaters are integrated into a solid-fuel heater and connected to the hot water cylinder. Heat from the combustion process is used to heat water jackets installed within the fire-box and the heated water circulates to the hot water cylinder.

Pipe-work between the cylinder and the wet-back is lagged.

ACCEPTABLE

- The wet-back water booster and pipe-work is fully operational and safe.
- The wet-back provides adequate hot water supply.

UNACCEPTABLE

- Hot water supply is inadequate
- The wet-back or pipe-work is leaking or damaged.
- Pipe-work is not lagged.
- There are valves or constraints in the inlet or outlet path between the wet-back and the hot water cylinder.

76 VENTILATION AND AIR-CONDITIONING

76.1 HEAT PUMP

PURPOSE

To provide space heating or cooling.

DESCRIPTION

Heat pumps use refrigeration technology to extract heat from the outside air and transfer it inside. They are a two-part or split system with an indoor inverter and an outdoor compressor, which both require electrical supply.

The inverter unit is typically wall-mounted, has controls, heating coils, a fan for distributing heat, and an air-filter to keep dust off the heating coil fins. Cooling may produce condensation. The inverter unit is fitted with a condensation tray to remove excess moisture and safely discharge it outside.

The compressor unit contains a compressor, motor, fan, and cooling/heating coils. It is secured to a concrete pad outside, with anti-vibration mounts. The compressor unit requires good air movement in, out, and around the unit. The compressor unit is fitted with a condensation drain to safely discharge excess moisture.

Although the likelihood is low, air-borne water droplets from condensate or over-flow pipes may contain legionella bacteria which, if inhaled via drops or mist, can cause Legionnaires' disease.

ACCEPTABLE

- The compressor and inverter units are secure, fully operational, and safe
- Condensate drains safely discharge to the ground.
- Filters are clean and wall penetrations are sealed.

UNACCEPTABLE

- The compressor unit is loose, does not have adequate anti- vibration mounts, or is damaged
- The compressor unit is not mounted on a hard level surface.
- The compressor unit's air intake/exhaust is dirty or is not 500mm-clear from obstructions.
- The inverter unit is loose or damaged.
- The inverter unit is covered or is not 150mm-clear from obstructions.
- Filters are clogged or dirty.

- The inverter unit's condensate tray is missing or does not drain.
- The condensate drain is able to form air-borne droplets or discharges over a path.
- Capping for pipe-work is missing or damaged, or pipe-work is not protected.
- Wall penetrations are not weather-tight.
- Electrical supply to the compressor or inverter is damaged.

76.2 BATHROOM EXTRACT

PURPOSE

To extract moisture, odours, and stale air.

DESCRIPTION

An extract fan system comprises an intake grille, extractor fan, ducting, and exterior louvres or cowling.

An integrated unit mounted through an exterior wall or window has automatic gravity-louvres or fixed louvres to prevent rain and wildlife entering the building.

Ducted fans have ducting from the intake point to the exterior and typically use flexible aluminium duct.

ACCEPTABLE

- The extract fan effectively manages the removal of water vapour from the room.
- The extract fan is complete, fully operational, easy-to-use, safe, secure, and sound.
- The extract fan is sealed at wall penetrations.
- The extract fan is clean and in good condition.

UNACCEPTABLE

- The extract fan is dirty or damaged.
- The extract fan is vented into the roof cavity or the sub-floor or is not vented to the exterior.
- Ducting is loose, damaged, or compressed.
- The switch is not easy to operate.
- The extract fan, louvres, or cowling are loose or not weather-tight.
- Exterior grilles are dirty, obstructed, or damaged.

76.3 RANGE-HOOD EXTRACT

PURPOSE

To extract moisture and cooking odours.

DESCRIPTION

A range-hood is mounted over a stove and consists of an extractor fan, filters, ducting, and a light. There are two types of kitchen range-hoods: externally-vented and re-circulating.

Externally-venting range-hoods draw air through a washable filter and exhaust it outside.

Re-circulating range-hoods draw air through a washable filter followed by a carbon filter that absorbs odours, before it is re-circulated into the kitchen. Carbon filters can be cleaned or replaced when they no longer function.

ACCEPTABLE

- The range-hood extract effectively manages the removal of moisture and odours from the room.
- The range-hood is complete, fully operational, easy to use, safe, secure, sound
- Filters are clean and washable.

UNACCEPTABLE

- The range-hood is loose or mounted height is a head hazard.
- The range-hood is not vented to the exterior.
- Filters are dirty, obstructed, or damaged.
- Isolation switch, lights, or switches are missing, damaged, or are not easy to reach or operate safely.

77 ELECTRICAL

77.1 MAINS

PURPOSE

To provide a safe power-supply connection to the property.

DESCRIPTION

Electricity is supplied to the property via an underground or over-head mains supply cable. The supply cable has an insulated anchor attached to the building and the cable is connected in a junction box.

ACCEPTABLE

- The cable is firmly attached at each end.
- The overhead cable is insulated and safe.
- There is an insulated anchor and covered junction box.
- The “live wires” signage is clearly visible.

UNACCEPTABLE

- The overhead cable is under 5m above ground or is not clear of trees or other obstructions.
- The underground cable is not protected above ground by conduit.
- Cable insulation is degraded.
- The anchor has degraded insulation, is loose, or has a rusted cover.
- The cable is not clearly marked at entry or exit points.
- The cable is exposed at the junction box.
- The junction box is damaged, loose, or open.

77.2 METER BOX

PURPOSE

To maintain a safe, metered power supply to the property.

DESCRIPTION

The main meter box is commonly mounted on an external wall, with a cover and a vision panel for meter reading. It is the first point of connection for the mains supply cable, and houses the main supply meters and main isolating switch for the building.

The main meter box contains the main isolating fuse and switch to the house. It can be separate to the main distribution board or combined with an external distribution board.

ACCEPTABLE

- The meter box is secure, electrically-safe, and sound.
- The meter box has a clear vision panel.

UNACCEPTABLE

- The meter box is not firmly fixed to the wall
- The meter box is not weather-tight.
- The meter box cover is damaged or loose.
- The cover is missing or cannot be secured.
- The vision panel is missing, or damaged or the meter is not legible through the panel.

77.3 DISTRIBUTION BOARD

PURPOSE

To provide an isolation point for all electrical outlets.

DESCRIPTION

Distribution boards can be separate or combined with the meter box. The distribution board divides the main electrical supply into sub-circuits for lighting, power-points, hot water heating, and the range.

The distribution board protects individual sub-circuits with fuses, circuit breakers, residual current devices, or miniature current breakers. The board also provides an isolating point for circuits, and earth and neutral connection points.

ACCEPTABLE

- The distribution board is complete, easy-to-use, electrically safe, and secure.
- There are clearly-labelled circuits.
- The distribution board is in good condition.

UNACCEPTABLE

- The distribution board cannot be easily reached or is damaged.
- The cover is missing or cannot be secured.
- Fuses, circuit breakers, residual current devices, or miniature current breakers are not labelled.
- The distribution board is fitted with over-capacity fuses or circuit breakers.

77.4 EARTH ELECTRODE

PURPOSE

To provide a low-resistance path from the metal body of an appliance to the earth.

DESCRIPTION

Connection to earth is achieved by driving an earth electrode into the ground. All non-current-carrying metal parts of equipment are connected to a common earth at the main board. The main board is connected to an earth electrode, which will provide a return path for electrical fault currents.

Earth electrode types are comprised of a non-ferrous or stainless-steel 12mm rod, a galvanised steel 16mm rod, and a galvanised iron 20mm pipe.

The electrode will have an earth wire clamped to it by using a suitable brass clamp and a permanent label is securely fitted at the connection point.

ACCEPTABLE

- The earth electrode and cable is secure and sound.
- There is a clear label stating: “EARTHING CONDUCTOR - DO NOT DISCONNECT”.

UNACCEPTABLE

- The cable and earth electrode connections are not continuous.
- The electrode label is missing or illegible.
- Pipes conveying water, gas, or flammable liquids or materials are used as earth electrodes.

77.5 EARTH BONDS

PURPOSE

To provide protection from electric shocks.

DESCRIPTION

Earth bonding reduces the risk of electrocution from fault currents by connecting all exposed metal fittings in the property to a common earth at the main distribution board.

Earth bonding consists of a green or yellow-and-green cable that is connected with a metal clamp to the metal surfaces.

Metal sinks and bench tops, metal hand-basins, and metal water and gas pipe-work conduct electricity and are connected to earth by a bonding system.

If a piece of plastic replaces a section of metal pipe, a permanent earth conductor connects the two sections of metal pipe to fully isolate and earth both live parts.

ACCEPTABLE

- An earth bonding system connects all metal components to earth.

UNACCEPTABLE

- The metal component is not isolated from live parts.
- The metal component is not connected to an earth bond.
- The earth bond is not continuous.

77.6 ELECTRIC WATER HEATER

PURPOSE
To heat and store hot water.

DESCRIPTION
Electric hot water cylinders (HWC) use an electric element to heat the water. Heated water is stored in the HWC at a thermostatically-controlled temperature set to 60°C to prevent the growth of legionella bacteria. The thermostat and element are contained behind a sealed, anti-tamper access panel cover.

Electric HWCs have an open-ended vent pipe; mains-supplied systems have a pressure-relief safety valve fitted in conjunction with a cold water expansion valve.

Cylinders marked as 'A grade' or 'MEPS Approved' are insulated. All other hot water cylinders are 'wrapped' for extra insulation. HWCs are seismically-restrained.

ACCEPTABLE
- The HWC is fully operational, electrically safe, secure, and sound.
- The HWC provides adequate hot water supply.

UNACCEPTABLE
- There is no or an inadequate supply of hot water.
- The HWC, valve, or pipe-work is leaking or damaged.
- There is water over-flowing from the vent-pipe or from the pressure-relief valve.
- The HWC is not externally venting.
- The cylinder's seismic restraint does not meet legislative requirements or are not present.
- The electric access panel cover is missing or unsealed.
- The cylinder is not insulated.
- There is no tempering-valve or it is not adjusted to deliver the correct outlet temperature.
- The hot water pipe is not lagged.

• There is no over-flow tray or over-flow does not flow to an exterior drain.	

77.7 ELECTRIC SPACE HEATER

PURPOSE

To provide space heating.

DESCRIPTION

Electric panel heaters have a thermostat, an on/off switch, a power-indicating light, and a heat-setting control. Control features are clearly labelled and can be integrated as a single control.

The heater is securely-fixed to a wall and the electrical supply is hard-wired.

Panel heaters that produce radiant heat are typically located on the coldest wall in the living space. Electric panel heaters that produce convective heat are typically located such that heat is directed towards the coldest wall.

ACCEPTABLE

- The electric panel heater is fully operational, easy-to-use, electrically safe, secure, and sound.
- There are clearly-labelled controls.
- The electric panel heater is clean and in good condition.

UNACCEPTABLE

- The heater is not firmly fixed to the wall.
- There is combustible material in contact with the heater.
- Controls cannot be easily reached or safely-operated, and are not clearly-labelled.
- Heater air grills are obstructed or dirty.
- The electrical cable or power supply has been damaged or is not hard-wired.
- There is evidence of scorching or heat damage.

77.8 ELECTRIC RANGE

PURPOSE

To provide cooking and grill functions for food preparation.

DESCRIPTION

An electric range is a free-standing appliance with electric cook-top elements and an electric element oven. The range is connected to the electrical supply, typically with a 32-amp plug complete with 1.5m-long lead.

An electric wall-oven is a joinery cavity-mounted electric element oven, while an electric hob is a surface-mounted cook-top with radiant, tubular, or solid heating elements, pot holders, and controls.

An oven has cooking and grill functions, and an oven light and heat indicators on the control switches.

An electric range or electric wall-oven is supplied with two oven racks, a grill tray, and an oven tray; it is fitted with an anti-tip safety device and a safety chain.

Any wall or other surface next to the electric range or hob should be protected from heat and cooking residue.

If they are in a good condition, existing ceramic tile and stainless steel heat-shields are acceptable.

ACCEPTABLE

- The electric range, oven, or hob is complete, fully operational, electrically safe, and secure.
- The electric range, oven, or hob is clean and in good condition.

UNACCEPTABLE

- Elements are faulty
- The control knobs are faulty, not labelled, or do not have heat indicators.
- Cook-top pot holders or plates are missing or damaged.
- The oven door does not close or seal when closed and/or the door handle is missing or is not easy to safely-operate.

- The wall oven is not firmly-fixed into the joinery cabinet.
- The anti-tip device or pin is missing or does not prevent the range from falling over.
- Oven racks or trays are missing or do not fit.
- Surface or oven lining cannot be easily cleaned or is corroded.
- Heat shields to the wall are damaged or missing.
- Wiring is exposed or damaged.

77.9 LIGHT FITTINGS

PURPOSE

To provide and control artificial light.

DESCRIPTION

Artificial lighting enables safe movement in the absence of natural light.

ACCEPTABLE

- Light fittings are fully operational, secure and electrically-safe.
- Illumination levels are safe.

UNACCEPTABLE

- Light fittings are faulty or damaged.
- Light fittings are not firmly-fixed in place.
- Switches are faulty, loose, or cracked.
- Wiring is exposed or damaged.
- Light levels are inadequate for safe path through a space.
- Emergency exit signs are not illuminated.
- There are polychlorinated biphenyls in the fittings.

77.10 POWER-POINTS

PURPOSE

To provide switched electrical outlets for the connection of appliances.

DESCRIPTION

Power-points connect the electrical distribution system to fixed and portable electrical appliances.

Power-points are typically single- or double-switch units.

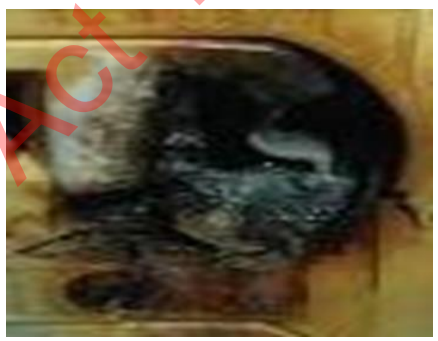
Wet-areas have a residual-current device outlet or residual-current operated circuit breaker with over-current protection outlet and test button.

ACCEPTABLE

- Power-points are fully operational, secure, and electrically-safe.
- Power-points are safe to use.

UNACCEPTABLE

- Power-points are faulty or damaged.
- Power-points are not firmly fixed to the wall.
- Electrical appliances cannot be safely-operated.
- Power leads are an electric shock or trip hazard.
- When pressed, the residual current outlet test button does not disconnect the power.
- There is evidence of scorching.



77.11 DATA OUTLETS

PURPOSE

To provide a telecommunications point for the connection of a telephone or other telecommunications device.

DESCRIPTION

Data outlets are the points that provide connection to a telephone or other telecommunications device inside the building.

ACCEPTABLE

- Data outlets are fully operational, secure, and electrically-safe.
- Data outlets are safe to use.

UNACCEPTABLE

- There are no data outlets.
- Data outlets are faulty or damaged.
- Data is not firmly fixed to the wall.
- Data outlets are not easy to access safely.
- Cabling is exposed, loose, or damaged.

77.12 HARD-WIRED SMOKE ALARMS

PURPOSE

To provide smoke detection warning.

DESCRIPTION

Hardwired smoke alarms are mains-powered and provide an early smoke detection warning to occupants by emitting a high-pitched sound once smoke is detected. Smoke cannot be detected in dead air-space.

Hardwired smoke alarms may have a back-up battery in the control panel. Smoke alarms have a test and hush button to allow 'nuisance' alarms to be silenced.

ACCEPTABLE

- The smoke alarm is securely mounted and is clean.
- The smoke alarm is fully operational.

UNACCEPTABLE

- The smoke alarm is faulty, damaged, or missing.
- There is a wall or other obstruction within 300 mm of the smoke alarm.
- The smoke alarm is not firmly-fixed to the ceiling.
- The test button does not work.
- There is dirt or paint on the surface or inside the fitting
- The back-up battery in the control panel is faulty or missing.

77.13 TELECOMMUNICATIONS SUPPLY

PURPOSE

To provide a connection to the New Zealand telecommunications network.

DESCRIPTION

A telecommunications connection for telephone and data may consist of a standard copper or an ultra-fast broadband fibre connection or a combination of both.

The telecommunications supply from the street is a low-voltage cable via an existing pole or underground duct to the property.

This is connected to an External Termination Point (ETP), a small junction box on the exterior of the building. This is typically the demarcation point between the responsibility of the supplier and Kāinga Ora.

From the ETP, the copper network connects to a master 'jack-point' in the building; the fibre network connects to an Optical Network Terminal or Internal Network Terminal, which is the starting point for the phone and broadband services.

ACCEPTABLE

- The data and telephone connection is fully operational, secure, and sound.

UNACCEPTABLE

- There is no data and/or telephone connection.
- The line or connection points are faulty.
- The junction box is damaged, loose, or open.

8 EXTERNAL

82 ASPHALTIC PAVING

82.1 ASPHALT

PURPOSE

To provide a sealed hard surface.

DESCRIPTION

Hard surfaces are paths, driveways, patios, and parking areas around the property.

Asphalt, tarmac, and hot-mix are terms for hard surfaces sealed with a bituminous continuous cover.

ACCEPTABLE

- The path is easy to use and safe.
- The driveway is safe and structurally-sound.

UNACCEPTABLE

- The driveway or path's hard-surface is missing or inadequate.
- The surface presents a tripping or slipping hazard (e.g. greater than 15mm)
- There is ponding or excess water on the surface.
- The surface is damaged, broken up, or cracked.
- There is evidence of erosion of the substrate.
- There are weeds growing through the surface.
- There is moss or lichen growth on the surface.

83 LANDSCAPING

83.1 LAWNS, PLANTING, AND TREES

PURPOSE

To provide improvement of the natural features of a property.

DESCRIPTION

Lawns are easy to cut and planting is free of noxious weeds such as privet.

Planting and trees are located so that roots and foliage are clear of buildings, foundations, footpaths, driveways, and fences.

ACCEPTABLE

- Lawns, planting, and trees are safe and easy to maintain.

UNACCEPTABLE

- The lawn is damaged or uneven.
- Planting is over-grown.
- There are spines, thorns, and poisonous or noxious weeds.
- There is planting covering the building.
- There is a large tree shading the building and/or clothes line.
- Trees or planting blocks out light from windows.
- Paths or driveways are obstructed by planting.

84 FENCING

84.1 FENCES

PURPOSE

To define property boundaries and to provide privacy and a secure children's area.

DESCRIPTION

Fencing can be timber, metal, or post and wire. Fences erected with palings typically have the palings facing the public side of the fence.

Wing fencing is used when only the rear of the section is fenced.

Health & Safety: Fibre-cement sheeting may contain asbestos and where work is to be scoped refer to the Kāinga Ora *Asbestos Management and Control Policy (HS-213)*

ACCEPTABLE

- Fencing is complete and structurally-sound.
- Fencing is safe and in good condition.

UNACCEPTABLE

- The fence is not stable or upright.
- The fence has deteriorated from rot or rust.
- The fence structure or infill panels are damaged or missing.
- The fence has sharp tops, spikes, or verticals that protrude above the top rail.
- There is excessive moss or lichen.

84.2 GATES

PURPOSE

To control access to secure the property.

DESCRIPTION

Gates can be single-hinged gates or split-gates and can be located along boundaries or within the property when used to create secure areas.

Gates used to create secure areas have a self-closing gate with a self-latching mechanism.

However, if existing gates are not pool gates and are fit-for-purpose, if required, they shall be retained and repaired.

ACCEPTABLE

- Gates are structurally-sound, easy to operate, and secure
- Gate posts are structurally-sound.

UNACCEPTABLE

- Gates do not easily open and close.
- Gates or hinges are damaged, misaligned, or missing.
- Gates do not latch closed.
- Gates are rusty or rotten.
- Latches are not safely-positioned.
- The pool gate does not self-close.
  - To test: open the gate 100mm and ensure it self-closes and latches from that position.

84.3 CLOTHESLINE

PURPOSE

To provide for drying washing outdoors.

DESCRIPTION

Clotheslines can be: rotary, fold-out, retractable, or T-bar type.

Clotheslines are mounted on independent posts with a hard-stand and a hard surface from the building to the clothesline. Clotheslines are positioned to facilitate access and clothes drying.

ACCEPTABLE

- The clothesline is fully operational, safe, and structurally-sound.
- The clothesline effectively manages the drying of washing.
- The clothesline is accessible and easy-to-use.

UNACCEPTABLE

- The line is inadequate for the wash load.
- The clothesline is shaded by planting, fences, or buildings
- The clothesline is not firmly fixed in place.
- The clothesline is damaged or not easy and safe to use.
- Lines are loose, frayed, rusty, or leave marks on clothes.
- The hard-stand or path is missing or inadequate.
- The clothesline is difficult to access.
- There is no path to the clothesline.

84.4 LETTERBOX

PURPOSE

To identify the property and for mail delivery.

DESCRIPTION

The letterbox is a lockable, weather-tight receptacle to receive mail up to the size of A4 packages. The letterbox can be free-standing, mounted on a fence or wall, or a door slot.

Where there are multiple dwelling units at a property location, each unit is individually numbered as close as practical to the front door.

Property identification is legible from the street for emergency responders, postal staff, and members of the public.

ACCEPTABLE

- The letterbox is fully operational, secure, and sound.
- The property number is easy to identify from the street.

UNACCEPTABLE

- The letterbox is not firmly fixed to a post or fence.
- The letterbox is not weather-tight.
- The property identification number is missing or illegible.
- The letterbox is too small or too big.
- The letterbox or support is damaged, rusty or rotten.
- The letterbox has protruding sharp edges or over length screws or bolts.
- The letterbox cannot be pad-locked.

9 SUPPORTING INFORMATION

This document works in conjunction with other Kāinga Ora reference material.

The following reference documents provide useful information and context to assist Maintenance Partners in completing and submitting appropriate requirements of the Contract.

- *Asbestos Management and Control Policy* (HS-213)
- *M-215: Maintenance and Programmed Work Specification*

10 VERSION CONTROL

Changes to this version of the ACM-200 are listed on the table below.

Please note

Stylistic changes (e.g. presenting text in italics) are not listed.

Where the meaning or intent of content has not changed, syntactical revisions (i.e. grammatical copy-edits) are not listed.

If you have questions about a particular change, please contact Kāinga Ora at QualityHomesQueries@kaingaora.govt.nz

SECTION	CHANGE
Whole Document	Grammatical copy-edits to correct errors and improve readability Figure captions removed
41	Tanking and pre-cladding section removed
44.1	Sub-section renamed to "On-ground Vapour Barriers" and relocated to section 47: Insulation.
47.4	On-ground Vapour Barriers sub-section updated; references to foil barriers removed; references to sealed laps removed. New photos added.
55.11	Reference to interconnected alarms and M-219 added
71.6	New figures showing additional examples of unacceptable sanitary fixtures added

Kāinga Ora
Homes and Communities

Scope of Services for Inspection & Reporting on Home Leased Properties

Kāinga Ora
Homes and Communities

Contents

Kāinga Ora
Homes and Communities

1. Purpose

This document identifies and provides details of inspections and reporting program for Home Leased Properties that are leased to Kāinga Ora – Homes and Communities for social housing purposes. These properties are occupied by the tenants of Kāinga Ora and are managed by Lease Team. Kāinga Ora – Homes and Communities lease's about 2510 properties from private owners and 1450 properties are on a lease agreement which requires Kāinga Ora to provide the landlord a copy of an annual inspection report.

The snippet below is from a standard version 6 lease agreement.

15. LESSEE TO CARRY OUT PERIODIC INSPECTIONS AND REPORT TO LESSOR

15.1 The Lessee shall (either itself or through its representatives or contractors contracted by the Lessee) carry out annual inspections of the Premises and then report to the Lessor in writing on the outcome of those inspections. The Lessee's inspection reports to the Lessor shall, where applicable, identify and make recommendations on any work in respect of the Premises for which the Lessor is responsible under this Lease which the Lessee considers may need to be undertaken.

15.2 The parties shall use their reasonable endeavours to agree upon an annual programme for any work for which the Lessor is responsible under this Lease (both parties acting reasonably), having regard to any recommendations made by the Lessee in its inspection reports to the Lessor. That programme:

(a) is to identify what actions may be needed, when that action should be undertaken and the expected cost of that action; and

(b) may, without limiting the Lessee's rights under clauses 12 and 13 in any way, also identify whether any action is to be undertaken by the Lessor or by the Lessee on the Lessor's behalf in accordance with clause 12 or 13 (as applicable).

2. Required Outcome

Inspect each property annually and undertake a visual assessment of the condition of the property and all its building elements. Provide an electronic report in a pdf format to list the condition of every element in each room and exterior of the premises. This report must identify and make recommendations on work that needs to be done on the premises by the property owner (where applicable) and any tenant damages that needs to be rectified by Kāinga Ora – Homes and Communities.

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3. Reporting Format and Scheduling

Inspections and Reporting: Full comprehensive room by room inspection with all visible issues and observed concerns are to be noted in an electronic format.

The report must identify cause of damage to building elements (if any) and maintenance required with suggested timeframe for such repairs to be completed. The report may be presented a tabular format as below:

- Health & Safety issues noted in **Red**
- Any other work required are to be noted in **Yellow**
- No further work required to be noted in **Green**.

The inspector will add comments on whether the work is due to structural issues, fair wear and tear or tenant damage. Where areas have not been able to be accessed these should be advised within the reports. The reports are to be provided to Kāinga Ora – Homes and Communities within 10 working days after the inspection and emailed in a PDF format to LeaseTeam@kaingaora.govt.nz

For scheduling purposes Kainga Ora will provide the current list of all HLP properties to the service provider in the form of a spreadsheet every week. The list will contain the following details.

1. Property reference for site.
2. Address
3. Tenants name
4. Typology of property.
5. Lease start date or lease renewal option date.
6. Lease manager details name
7. Any risks that Kainga Ora is aware of.
8. Relevant Tenancy Managers name.
9. Asset Status Reason
10. Void Status

Based on this list the service provider will send out inspection letters to the tenants between 7 to 14 days in advance of inspection. Kāinga Ora – Homes and Communities will advise if any properties need to be prioritized at the commencement of the contract. Lease additions or terminations will be updated on the property list. The most recent inspection date will be provided to the new supplier with the expectation that the future inspections would be completed annually with alignment to this date/month. There may be small increase in the number of properties requiring inspection during the course of this contract.

3.1 Items to be covered in each room

Home Leased Property types range from single stand alone house, duplex, flats single/double/multi storey and twin units single/double level.

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Refer to the list below for the items that are to be covered which has been expanded further in the excel spreadsheet attached. The conditions for all facilities in a property are to be noted on the report. Please note that any items that are not specifically identified, but would reasonably be considered to form part of the premises for residential occupation will also need to be reported on. A sample report is also attached for reference.

a) **Lounge:** Doors, handles, stops, locks, walls, lights, power points, window frames, joinery, latches, stays, window glass, blinds/curtains, curtain track, heating device, ceiling, floor covering, smoke detector.

b) **Kitchen and dining:** Doors, handles, stops, locks, walls, lights, power points, window frames, joinery, latches, stays, window glass, blinds/curtains, curtain track, stove /oven, anti tip device if applicable, range hood, cupboards, cupboard latches and handles, draining board/bench, sink, taps, plug, ceiling, floor covering, smoke detector.

c) **Hot water cylinder:** Location, type and condition.

d) **Stairs / Hall**: Doors, handles, stops, locks, walls,rails, lights, power points, window frames, joinery, latches, stays, window glass, ceiling, floor covering, smoke detector.

e) **Bedrooms:** Doors, handles, stops, locks, walls, lights, power points, window frames, joinery, latches, stays, window glass, blinds/curtains, curtain track, wardrobe door and rail, ceiling, floor covering, smoke detector.

f) **Bathroom/ toilet:** Doors, handles, stops, locks, walls, lights, power points, extractor fan, window frames, joinery, latches, stays, window glass, vanity / mirror cabinet, wash basin, plug and taps bath, plug and taps, shower tray, hose, curtain, towel rails / toilet roll holder, toilet pan, seat and cistern, ceiling, floor covering, smoke detector.

g) **Laundry:** Doors, handles, stops, locks, walls, lights, power points, window frames, joinery, latches, stays, window glass, wash tub , plug and taps, ceiling, floor covering.

h) **Exterior:** Exterior locks, fences/gates, garage/carport/shed/locks, condition of cladding ,grounds/paths/driveways, foundation vents, clothesline, drains/exterior taps, letter box, decks/hand rails/balustrades, guttering, roof to the extent visible from ground.

i) **Garage :** walls, ceiling, window glass, window joinery, super tub, Doors including garage and internal access door, motor, remote, track, floor, light and light switches, power points etc.