



Housing Standard: Design

(M-255)

*Design standards for new properties owned and/or managed
by Kāinga Ora – Homes and Communities*

Date: April 2021

VERSION 5



Contents

INTRODUCTION	5
PURPOSE	5
DWELLING-TYOLOGIES	6
DWELLING-CATEGORIES	6
RESOURCE STRUCTURE.....	7
<i>Sub-sections</i>	7
1. HOUSING: TYPICAL	8
1A – SPACE.....	9
1B – BUILDING SYSTEMS AND MATERIALS	18
1C – PRODUCTS	39
2. HOUSING: DIVERSE	48
INTRODUCTION	49
DIVERSE CATEGORIES.....	49
<i>Full universal design</i>	49
<i>Accessible</i>	49
<i>Community-group housing (CGH)</i>	50
2A – SPACE.....	51
2B – BUILDING SYSTEMS AND MATERIALS	57
2C – PRODUCTS	67
APPENDICES	70
APPENDIX A: PROVISIONING TABLES	74
APPENDIX B: HOUSING RISK MATRIX	76
APPENDIX C: REFERENCE DOCUMENTS.....	77
<i>Legislative resources</i>	77
<i>Internal Kāinga Ora resources</i>	77
<i>Externally-produced resources</i>	77
APPENDIX D: DOCUMENT VERSION CHANGE REGISTER	78

List of Tables

TABLE 1: MINIMUM FLOOR-AREAS AND SANITARY FIXTURES.....	74
TABLE 2: MINIMUM KITCHEN SPACE REQUIREMENTS	74
TABLE 3: MINIMUM OUTDOOR LIVING REQUIREMENTS.....	74
TABLE 4: HOT WATER (HW) REQUIREMENTS	74
TABLE 5: MINIMUM R-VALUES FOR THERMAL COMFORT¹.....	75
TABLE 6: EXTERNAL MOISTURE RISK MATRIX	76
TABLE 7: RESOURCE CHANGE REGISTER - WHOLE DOCUMENT.....	78
TABLE 8: RESOURCE CHANGE REGISTER - TYPICAL	78
TABLE 9: RESOURCE CHANGE REGISTER - DIVERSE	84
TABLE 10: RESOURCE CHANGE REGISTER - APPENDICES	90

IMPORTANT NOTE

Copyright © 2020, Kāinga Ora – Homes and Communities. This resource is the property of Kāinga Ora – Homes and Communities. It is prohibited to reproduce, adapt, or use this resource – either in part or whole – without the written permission of Kāinga Ora.

Kāinga Ora makes no representations or warranties to any person regarding the accuracy, completeness, or fitness-for-purpose of any information contained in this document. Any reliance on or use of the information in this document is entirely at that party's own risk.

Kāinga Ora accepts no responsibility to anyone for any loss or damage, whether direct or indirect, consequential or otherwise, arising from reliance on or use of the information in this document, including any adaptation or modification of that information by any party. Any person who relies on this document should ensure the information contained is fit for its own purposes, and, accordingly, may wish to seek independent advice.

DOCUMENT CONTROL

Title	M-255: Housing Standard – Design
Status/Version	Current – Version 5
Date	March 2021
Author(s)	Original Author Unknown [v5 updated by Matt Walker (Senior Technical Writer)]
Editor	Matt Walker (Senior Technical Writer)
Latest version approved by	Stacey Marsh (Manager: Quality Homes Advisory Team) Rohan Bush (Director: Building Sustainability, Innovation, and Standards)
Contact for enquiries or amendments	Quality Homes Advisory Team QualityHomesQueries@kaingaora.govt.nz

CHANGE LOG

REV	YEAR	DESCRIPTION
A/1	2015	<i>Changes to:</i> <ul style="list-style-type: none"> Part 2(B) Appendix Table 6.
B/2	2016	<i>Changes to:</i> <ul style="list-style-type: none"> Part 2(B) Part 2(C) Appendix Tables 3, 4, and 6.
C/3	2016	<i>Changes to:</i> <ul style="list-style-type: none"> Part 2(A) Part 2(B) Part 2(C) Appendix Tables 3, 4, 5, and 7.
D/4	2019	<i>Changes to align with:</i> <ul style="list-style-type: none"> Organisational changes (transition to Kāinga Ora – Homes and Communities).
E/5	2020	<i>Corrections to errors and/or omissions identified in version 4.</i> <i>Changes to align with:</i> <ul style="list-style-type: none"> 6-Homestar® requirements Residential Tenancies (Healthy Homes Standards) Regulations (2019) Kāinga Ora Whole-of-house Heating Policy (2020) Kāinga Ora Accessibility Policy: 2019 – 2022 (2019)

Note

For an itemised list of changes made since the previous version, please refer to [Appendix D](#).

INTRODUCTION

Legislative controls on housing are actioned through building governance; additional requirements for all rental housing must align with [relevant legislation](#).

To meet its customers' needs, however, Kāinga Ora – Homes and Communities (“Kāinga Ora”) has specific expectations **above** these requirements.

These expectations ensure **all new properties** designed, constructed, and maintained by Kāinga Ora:

- Can be adapted for a range of lifetime needs.
- Can withstand accelerated wear.
- Are cost-efficient to operate.
- 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.”¹¹

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.
- **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.

Purpose

This standard is a resource for key stakeholders – including, but not limited to: designers; contractors; and quantity surveyors – to meet the set of measurable criteria for minimum spatial requirements, supported by building systems and products.

It is intended for use with [a range of resources](#) produced and/or applied by Kāinga Ora in the development of new homes.

Collectively, these documents outline the requirements for site, planning, and housing-density requirements for the development of all new properties owned and/or managed by Kāinga Ora.

¹ New Zealand Government (2019, s14 (1(a))). *Kāinga Ora – Homes and Communities Act 2019*. Retrieved from: <http://www.legislation.govt.nz/act/public/2019/0050/latest/LMS196215.html>

Dwelling-typologies

The types of new properties owned and/or managed by Kāinga Ora include:

- Single- and multi-storey **stand-alone dwellings**.
- Single- and multi-storey **terraced dwellings** (those that share at least one wall with another dwelling).
- **Apartments** – including duplexes, ‘three-storey walk-ups’, and other multi-storey apartment blocks.
- **Multi-unit developments** (sometimes called ‘complexes’) that include multiple dwellings of the same or different typologies sitting within a defined boundary. Dwellings in such developments may include dedicated amenities or may share them, and often include other communal amenities (such as multi-purpose rooms) and services (such as lifts).

NOTE

The requirements specified in this resource apply to **all** of the dwelling-types listed above.

Dwelling-categories

As well as providing the ‘typical’ or ‘standard’ typologies listed above, this resource identifies [‘Diverse’ variations](#) for customers who: live with higher needs; live with conditions that may be associated with the ageing process; or live in supported environments.

In providing for such customers, Kāinga Ora provides ‘diverse’ housing that can be classified as one of the following:

- **Full universal-design:** a sub-category that includes housing that is “more liveable for the entire population [and, as such, ensures it] is, or can be, fit for purpose for more customers, whether or not they have a disability. This includes (but is not limited to) young and growing families, people of all ages who experience temporary injury or illness, those with mobility, visual or cognitive impairments, and the growing ageing population [sic]”².
- **Accessible:** a sub-category that includes housing that “meet [full] universal design plus additional features for customers with a physical or non-physical disability [including] moderate to severe mobility or sensory deprivation issues [sic]”³.
- **Community-group housing (CGH):** a sub-type of social housing that provides residential housing for a range of specific target populations (for example, individuals seeking refuge). CGH dwellings include a combination of dwelling-types and will often include shared or communal spaces (for example, a shared kitchen). These dwellings are “of a bespoke design [and] are often heavily modified to suit...customers’ needs [sic]”⁴.

² Silver, J. (14 May 2020; pp.1-2). *Defining what meets the target of 15% new builds meeting universal design standards – 101 Factsheet*. Internal paper for the Kāinga Ora – Homes and Communities Construction Leadership Group.

³ Ibid

⁴ Kāinga Ora – Homes and Communities (4 Oct 2019). *Community Group Housing* [Online]. Retrieved from: <https://kaingaora.govt.nz/working-with-us/community-group-housing/>.

Resource structure

This resource recognises the typical needs for a range of customer groups including:

- Those who are single/living alone.
- Couples.
- Single-parent families.
- Multi-generational families.
- Families with a large number of children.

These are represented in the [Housing: Typical](#) sections.

Sub-sections

The [Housing: Typical](#) and [Housing: Diverse](#) sections are comprised of three sub-sections:

- Sub-section A: SPACE - Spatial Functionality:
 - The design of the site and built form, orientation, layout and features.
 - Provision of requirement for designers.
- Sub-section B: SYSTEMS – Building systems:
 - Building systems and building materials.
 - Provision of requirement for designers and builders.
- Sub-section C: PRODUCTS – Resilient building products:
 - Quality products Kāinga Ora has researched to meet the specific requirements needed to meet its customers' needs, and required durability and environmental considerations.
 - Optional products procured by Kāinga Ora are available for re-development and new build projects.
 - The inclusion of such products will align cost-effectively with future maintenance work undertaken by Kāinga Ora and/or its contractors.

In addition to the requirements specified herein, additional requirements and/or variations – particularly in the case of specialist requirements for “diverse” customers – may be specified in a given *Project Brief*.

Clarification and Feedback

Please contact our Quality Homes Advisory Team (QualityHomesQueries@kaingaora.govt.nz) if any content provided in this resource requires clarification, you have suggestions for how the resource could be improved, or you identify errors in this resource.



1. HOUSING: TYPICAL

Standards for 'typical' 1- to 6-bedroom homes



1A – SPACE

Please note

Complex and/or multi-storey developments **will have additional** project-specific requirements; these should be identified in the relevant *Project Brief*.

1 DRY HOUSING – TYPICAL SPACE	
Built outcomes	Measurable Criteria
1.1 Weather-tight and Durable	<p>Kāinga Ora has specific requirements for protecting the building exterior from external moisture. These are as follows:</p> <ol style="list-style-type: none"> a. The dwelling-design earns a risk matrix assessment score of 12 or less (see Table 6). <ol style="list-style-type: none"> i. There are limitations in achieving this score. b. The roof has eaves with adequate spouting – including gutters, down-pipes, and drains – to control and direct water run-off to a collection system. c. Spouting is positioned 200mm clear of walls. d. There is efficient drainage for the removal of storm-, surface-, and ground-water. e. The building (including: the sub-floor; service penetrations; doors; and windows) is protected from the ingress of water, vermin, insects, birds, and vandals. <ol style="list-style-type: none"> i. If the space is enclosed, a ground moisture-barrier is installed in the sub-floor cavity. <p>Notes</p> <ol style="list-style-type: none"> 1. The following are not permitted: <ol style="list-style-type: none"> a. Flush eaves, parapets, internal gutters, and decks over internal spaces. b. Retaining walls as part of the building envelope. c. Television aerials fixed through roofing. d. Trees with a drip-line within the building perimeter.
1.2 Moisture Reduction	<ol style="list-style-type: none"> a. All habitable spaces must provide natural ventilation that aligns with the G4/AS-VM (2019). b. Rooms with a shower and/or bath have an extraction fan and ducting with an exhaust-capacity of 25L/s or that is at least 120mm[∅]. c. Rooms with a cook-top have an extraction fan and ducting with an exhaust-capacity of 50L/s or that is at least 150mm[∅]. d. Rooms with wet-areas include moisture-impervious finishes.

2 WARM HOUSING – TYPICAL		
Built Outcomes		Measurable Criteria
2.1	Heating	<p>Kāinga Ora has specific requirements to provide a heat-source as per the below:</p> <ol style="list-style-type: none"> a. The main living-area has a fixed heating solution capable of achieving and maintaining a minimum temperature of 20°C. <ol style="list-style-type: none"> i. Heating provided in this area must have a heating-source that complies with current legislation. b. All other habitable areas have a fixed heating solution capable of achieving and maintaining a minimum temperature of 18°C. <ol style="list-style-type: none"> i. This includes hallways and transition spaces within the thermal envelope with a volume of $\geq 24\text{m}^3$. <p>Notes</p> <ol style="list-style-type: none"> 1. The “main living-area” is considered to be a lounge, dining, sitting, or family room used for general or everyday living; if there is more than one, the “main” living-area is considered to be the largest. <ol style="list-style-type: none"> a. This includes any other connected spaces that are always open to the living-area (that is, there is no solid barrier such as a door or window between the connected spaces). b. Open-plan living-areas (for example, an open kitchen-dining-living-area) must be treated as one single space. 2. “Other habitable areas” include hallways and/or open stair-wells that are of an equivalent volume to a double-bedroom, but exclude laundries, bathrooms, storage-areas, utility-areas, and garages. 3. Heating solutions and sources will depend on the results of calculations that take account of: room area/size; the areas of external walls and glazing; the region in which the dwelling is located; and an assessment of insulation. <ol style="list-style-type: none"> a. In the main living-area, this calculation is undertaken using MBIE’s Heating Assessment Tool. b. In other habitable areas, this is calculated using the <i>Whole- of-house Heating Calculator</i> developed by Kāinga Ora. 4. All heaters must be installed in accordance with the manufacturers’ instructions. 5. Heaters must not be placed so as to impede the functionality of the space in which they are located (e.g. impeding placement of furniture in a given space). 6. Heating sources must not impede provision of a clear floor-space. 7. Heaters may need to be mounted above 1.6m clear of the FFL (to allow for manoeuvring). 8. Gas heating is not permitted. 9. Refer to Section 2A (2.1) for additional specific requirements.

2.2	Thermal Performance	<p>Kāinga Ora has specific requirements for optimising an energy- efficient building envelope:</p> <ol style="list-style-type: none"> The living space is located for solar-gain in the winter. Thermally-effective Kāinga Ora curtains and tracks are fitted to all living-areas, dining-areas, and bedrooms. The building envelope has thermally-effective systems to meet minimum R-values (see Table 5). <p>Notes</p> <ol style="list-style-type: none"> It is not permitted to have cabinetry recessed into an external wall. Skylights are not permitted.
-----	----------------------------	---

3 SAFE		HOUSING – TYPICAL
Built Outcomes	Measurable Criteria	
3.1	Security	<p>Kāinga Ora has specific requirements for security and through the application of a <i>Crime Prevention Through Environmental Design</i> (CPTED) approach.</p> <p>EXTERIOR</p> <ol style="list-style-type: none"> Exterior common-areas, the street, and pedestrian access routes are visible from within the building. The building entry is visible from the street. The main-entry is well-defined and well-labelled, with some visibility to the exterior or common circulation space. Groups of units with a shared common entry-space have a secure, enclosed foyer. Exterior lighting has a minimum efficacy of 40lm/W, and is provided for all: <ol style="list-style-type: none"> Entry doors. Exterior steps. Pedestrian access-routes from the street and the car-park, driveways, parking-areas, and common-areas. All exterior lighting is comprised of LED lights with motion-sensors and daylight cut-off functionality. Visual and acoustic separation is maintained between units and from common circulation spaces. Where required, street frontage has 1.2m-high ‘safety fencing’. Side- and rear-boundaries have ‘privacy fencing’ that is at least 1.8m-high. The property exterior has physical boundaries to separate the unit from common-areas. All units have individual key-access. Services plant and equipment is screened from the street or common driveway.

**Security
(contd.)**

- m. Multi-unit developments with shared access areas have swipe- card access.
- n. All external doors can be locked and unlocked from the inside **without** a key.
- o. Where provided, secure children’s play-areas:
 - i. Are visible from the building.
 - ii. Include ‘safety fencing’ that is at least 1.2m-high.
 - iii. Include a latch set at 1.5m on a gate that opens into the play-area.
 - iv. Provide direct-access to the living-area.
- p. Clothes-lines are screened from the street and common-areas.
- q. Where provided, outdoor storage for garden tools and equipment is secure and enclosed.
- r. A letterbox and associated support system for all units:
 - i. Includes clearly-legible numbers.
 - ii. Is located at the street frontage or laneway.
- s. All house numbers are clearly-visible from the road-entrance.
- t. Each unit in common-areas is identified with clearly-legible, numbered signage.
- u. All signage includes pictograms.
- v. In common-areas, pathways have signage at each change of direction.
- w. Where provided, signage for access systems is integrated with way-finding signage.
- x. Individual car-parks in common-areas **must be** numbered.

INTERIOR

- y. All habitable spaces include **at least** one openable window that can be restricted to provide a maximum opening of 100mm.
- z. **All** equipment used for building services – including, where provided, MATV, CCTV, electronic access, and intercom systems – is in lockable cabinets, in a control room on the ground floor.

Notes

1. The following are **not permitted**:
 - a. Building services equipment protruding into circulation spaces.
 - b. Direct access to secure child play-areas from the main-entry.
2. Refer to the [Simple Guide to Urban Design & Development](#).
3. Refer to [Section 2A \(3.1\)](#) for additional requirements.
4. A CPTED safety audit and associated report from a qualified professional is required for:
 - a. all apartment blocks;
 - b. groups of 20 or more units; or
 - c. where required by the *Project Brief*.

3.2	Driveway safety	<p>a. Pedestrian pathways to the building entry are separate from the driveway.</p> <p>b. Children’s play-areas are separate from the driveway.</p> <p>c. There is clear vehicle visibility when entering, exiting, and manoeuvring on, the site.</p> <p>d. Steep-sites, long driveways, and/or common driveways include the following (as required):</p> <ol style="list-style-type: none"> i. Kerbing. ii. Wheel-stops, bollards, and speed humps. iii. Passing bays and drop-off zones. iv. Mirrors. v. Signage. <p>e. Driveway-design is appropriate for emergency, delivery service, and maintenance vehicles.</p> <p>Notes</p> <ol style="list-style-type: none"> 1. It is not permitted to have: <ol style="list-style-type: none"> a. The entry door opening directly onto a driveway or car-park. b. The entry door located where the pathway to exit the house is directly in front of the garage door or car-park. c. Vehicle entry to a play-area or access off a dedicated driveway and parking area. d. Planting and/or fencing obstructing clear sight-lines for vehicles entering/exiting the site. 2. Refer to A Guide to Driveway Safety for Property Owners. 3. Refer to Section 2A (3.2) for additional requirements.
3.3	Early Fire Warning	<p>Kāinga Ora has specific requirements for protection from fire as follows:</p> <ol style="list-style-type: none"> a. The number, location, and type of smoke alarms must comply with all legislative and Kāinga Ora-specific requirements. b. At least one smoke alarm is required in each: <ol style="list-style-type: none"> i. Bedroom. ii. Hallway and stairway. iii. Living-area and (where applicable) separate dining-area. iv. Garage (where there is direct internal-access). c. Where needed (as part of an apartment block or multi-unit development), fire services’ access panels and/or equipment are located to maintain the quality and amenity of the local environment. d. Buildings with four or more units and a shared common entry and circulation space have additional legislative and regulatory requirements. <ol style="list-style-type: none"> i. In these instances, inter-connected smoke alarms may be required. e. Where applicable, buildings with lifts have a fire-rated refuge zone on each floor.

	<p>Early Fire Warning (contd.)</p>	<p>Notes</p> <ol style="list-style-type: none"> 1. It is not permitted to locate smoke alarms within 300mm of: an exposed ceiling beam; ceiling apex; or wall. 2. Mechanically-operated fire protection systems (such as fire windows) are not permitted. 3. A specific fire design peer review must be undertaken by a Kāinga Ora-nominated Fire Design Engineer. 4. Refer to <i>Specific Requirements for the Installation of Fire Alarms in Kāinga Ora Properties</i>. 5. Refer to Section 2A (3.3) for additional requirements.
<p>3.4</p>	<p>Injury Reduction</p>	<ol style="list-style-type: none"> a. There is an appropriate risk-management strategy in place that mitigates environmental risks including: <ol style="list-style-type: none"> i. Soil contamination. ii. Flood plains, unstable land, and steep cliffs. iii. High-voltage power lines. iv. Water-ways. v. Storm-water manholes. vi. Major arterial routes, and railway lines. b. There is safe-access for all contractors maintaining the building. c. All steps (<i>including</i> exterior steps) have a hand-rail. d. Where provided, all interior stairs within a unit have a landing that is suitable for the installation of a child-restrictor gate at the top and bottom of the stairway. e. Where a fall-height is ≥ 500mm to a lower level, there is a 1.1m- high barrier that prevents children from climbing and/or becoming trapped in the barrier. f. Where the fall-height to a lower-level is ≥ 2m, access is prevented. g. Where an upper-level deck overlooks a pedestrian path or outdoor living-area the barrier is set back from the edge. h. Finishes (including flooring and paving) have resilience for protection from injury and accidental falls. i. The ceiling access-hatch is located in a circulation space. j. There is a shaving/medicine cabinet located in each bathroom. k. General storage cupboards and wardrobes can be opened from the inside. l. There is at least 300mm clearance between an oven/cook-top and a side wall. m. Kitchens have a heat-proof set-down that is located adjacent to the stove or oven. n. Where provided, internal access garages have doors that open inward to the dwelling.

Injury Reduction (contd.)	<p>o. There is secure, child-resistant storage in the:</p> <ol style="list-style-type: none"> i. Kitchen. ii. Laundry. iii. Bathroom iv. Outdoor storage (where provided). v. Garage (where provided). <p>Notes</p> <ol style="list-style-type: none"> 1. It is not permitted to locate: <ol style="list-style-type: none"> a. The ceiling access-hatch over a stair; within a wardrobe; or in a bedroom. b. Light fitting access over a stair. c. Doors and/or curtains adjacent to the stove. d. The stove within a circulation space. e. Manholes in children’s play-areas. 2. Refer to Section 2A (3.4) for additional requirements.
----------------------------------	---

4 ESSENTIAL AMENITY HOUSING – TYPICAL	
Built Outcomes	Measurable Criteria
4.1 Health	<p>Kāinga Ora has specific requirements for suitable space and sanitary amenities for the number of occupants (see Appendix A).</p> <ol style="list-style-type: none"> a. The minimum space of the building-area and its sanitary fixtures align with Table 1. b. Window-areas in external walls are no less than: <ol style="list-style-type: none"> i. 15% of the floor-area of living-areas and bedrooms where windows are not shaded by any wall, over-hang, nearby balcony, trees, or neighbouring property. ii. 20% of the floor-area of living-areas and bedrooms where windows are shaded by any wall, over-hang, nearby balcony, trees, or neighbouring property. c. The living-area is able to seat at least the number of dwelling-occupants (2 per bedroom). d. The dining-area is able to seat at least the number of dwelling-occupants (2 per bedroom) at a table. e. The kitchen has minimum benching and storage in accordance with Table 2 plus space suitable for 2-days’ temporary waste and recycling storage. f. Where located in a garage, the laundry space is additional to the vehicle space and is sized in accordance with Table 1. g. The hot water cupboard is located to minimise pipe-runs and has minimum space that is suitable for a hot water cylinder sized in accordance with Table 4.

	<p>Health (contd.)</p> <ul style="list-style-type: none"> h. All building common-areas have facilities for cleaning, including a sink and equipment storage. i. Bedrooms: <ul style="list-style-type: none"> i. Have a minimum dimension of 2.9m in any direction. ii. Are suitable for x2 single beds (2.1 x 1m) – plans should show a Queen bed in the main bedroom and single beds in remaining rooms. iii. Are not directly accessed from living-, dining-, or kitchen- areas. iv. Have natural daylight. v. Have wardrobes that conform to Table 1. j. Outdoor storage to each property is: <ul style="list-style-type: none"> i. Located with a 1.2m clear-access to the yard. ii. Sized in accordance with Table 3. k. Outdoor spaces, decks, and/or patios: <ul style="list-style-type: none"> i. Can be accessed from the living-area. ii. Are protected from prevailing winds. iii. Are sized in accordance with Table 3. l. The clothes-line: <ul style="list-style-type: none"> i. Is located to maximise clothes drying. ii. Has a hard-stand. iii. Aligns with Table 3. m. Refuse service and collection areas: <ul style="list-style-type: none"> i. Are sized for the number of units in accordance with the local authority’s rubbish removal and recycling. ii. Have a hard-stand and appropriate drainage. iii. Are screened from the street. iv. Provide truck access to service bins for rubbish collection. n. There is an external hose tap in each separate yard, and all common-areas have a hard-stand and appropriate drainage. o. Where provided, the garage is at least 3.5 (W) x 5m (L). <ul style="list-style-type: none"> i. This excludes the laundry (when located in the garage) or storage space. <p>Notes</p> <ol style="list-style-type: none"> 1. It is not permitted to: <ul style="list-style-type: none"> a. Locate the laundry in the kitchen, dining, or living space. b. Provide mechanical ventilation in the living- or dining-areas and/or bedrooms. c. Use mechanically-operated (pumped) sanitary or water systems. 2. A storage shed is not required where garaging is provided. 3. Refer to the A Guide to Driveway Safety for Property Owners. 4. Refer to Section 2A (4.1) for additional requirements.
--	---

4.2	Lifetime Design	<p>Kāinga Ora has specific requirements for dwellings to be adaptable for a range of user needs; these are as follows:</p> <ol style="list-style-type: none"> a. The entry door: <ol style="list-style-type: none"> i. Is 910mm-wide. ii. Opens inward to the unit. iii. Has a 1.2m² landing protected from the weather with an external cover. iv. Has a level-access threshold. b. Buildings with a shared common entry-area have accessible units placed on the ground-level. c. A level-access entry, including ramp-access set at a maximum of 1:12, is an option for all dwellings in the future if required. d. Pathways are at least 1.2m-wide, from the: <ol style="list-style-type: none"> i. Street and driveway to the main-entry. ii. Dwelling to the clothes-line and the refuse service-area. e. All exterior stairs: <ol style="list-style-type: none"> i. Are accessible (with a maximum riser of 180mm and a minimum tread of 310mm). ii. Have a smooth, graspable hand-rail. iii. Have a minimum clear-width of 1.2m. f. The layout of the kitchen provides for a 1.5m^Ø turning-circle. g. Bathrooms located on the ground-floor are at least 1.9 x 2.1m. h. Separate toilets have a minimum clear-width of 1.05m. i. Circulation-areas have a minimum clear-width of 1.05m. j. All interior stairs are ‘main private’ and have: <ol style="list-style-type: none"> i. A maximum riser of 190mm and minimum tread of 280mm. ii. A minimum clear-width of 1.05m and 900mm clearance between the wall and the hand-rail. k. Stairs are suitable for the movement of large furniture items (e.g. a 2.1 x 1.5m Queen-sized bed). l. All internal doors (except wardrobe, cupboard, or storage doors) are 860mm (W) x 1.98m (H). m. Ceilings are 2.4 – 3.0m-high. n. For groups of units with 4 or more levels: the size, capacity, and weight of lifts facilitates accessibility and is suitable for the transportation of emergency equipment. o. There is at least 1 car-park per unit. <p>Notes</p> <ol style="list-style-type: none"> 1. Using a glazed sliding-door for the main-entry is not permitted. 2. Using winders on staircases is not permitted. 3. Refer to Section 2A (4.2) for additional requirements.
-----	-----------------	---

1B – BUILDING SYSTEMS AND MATERIALS

Please note

The systems outlined for each building element are of **minimum** quality for *Housing: Typical* to meet the performance criteria for dry, warm, and safe essential amenities in a condition that is easy-to-maintain for the whole-of-life cost.

1 PROPERTY EXTERIOR HOUSING – TYPICAL SYSTEMS		
Building Element	Measurable Criteria	
1.1	Driveways	<p>All vehicle driveways (including parking areas):</p> <ol style="list-style-type: none"> Are comprised of a minimum of 20MPa, 100mm-thick reinforced concrete. Have a non-slip finish over compacted base course; at least 75mm-thick. Are suitable for local environmental conditions. <p>Notes</p> <ol style="list-style-type: none"> Interlocking systems are not permitted.
1.2	Paving	<ol style="list-style-type: none"> Pedestrian paths: <ol style="list-style-type: none"> Are comprised of a minimum of 17.5MPa, 75mm-thick reinforced concrete. Have a non-slip finish, shaped to fall to allow drainage of surface-water, and non-ponding. Have a 100mm-high kerb adjacent to a driveway. All paths between the street and house entry, washing lines, and rubbish/recycling receptacles are 1.2m-wide. It is preferable to have concrete edging or a mowing strip that is at least 300mm-wide and falls away from the building. <p>Notes</p> <ol style="list-style-type: none"> It is not permitted to use non-continuous pavers laid with gaps between. See Section 2B (1.2) for additional requirements.
1.3	Retaining Walls	<ol style="list-style-type: none"> Retaining walls have a natural finish. Paint finishes are not permitted.
1.4	Fencing	<p>New fencing must comply with <i>Resource Consent</i> conditions.</p> <ol style="list-style-type: none"> Safety fencing is comprised of hot-dipped galvanised steel that is at least 1.2m-high, with a black, powder-coat finish and (after manufacture) a minimum galvanised coating of 600g/m².

	Fencing (contd.)	<ul style="list-style-type: none"> i. Steel posts: up to 1,5m-high - 50 x 50 x 1.6mm; up to 1.8m-high – 60 x 60 x 2.0mm. ii. Where supplied with anchor bolts, should be at least x2 M12 hot-dipped galvanised bolts, fixed at right angles to the direction of the fence. <p>b. Secure gates (provided with safety fencing) are comprised of galvanised steel with a black, powder-coat finish and are 1.2m-high.</p> <ul style="list-style-type: none"> i. Gates should: <ul style="list-style-type: none"> • Swing open into the secure children’s play-area. • Have self-closing hinges and an automatic magnetic latch set at 1.5m above ground level. <p>c. Privacy fencing is comprised of radiata pine, H3.2 timber board; 1.8m-high. Rough-sawn, H4- treated for ground contact timbers</p> <ul style="list-style-type: none"> i. Posts: 100 x 100mm at 2.4m maximum centres. ii. Rails: 100 x 50mm fixed with 1/12mm galvanised coach-bolt and washer <ul style="list-style-type: none"> • Three continuous rails between posts at least 900mm apart (to ensure children cannot climb over the fence). iii. Palings: non-lapped 150 x 25mm with 20mm gaps facing the street or on the public-side of fences. <p>Notes</p> <ol style="list-style-type: none"> 1. The following are not permitted: <ul style="list-style-type: none"> a. Safety fencing electro galvanising or pre-galvanising prior to manufacture. b. Close-boarded or wire mesh. c. Sharp tops, spikes, or verticals that protrude above the top-rail of the fence or gate. 2. Fencing provided for secure children’s play-areas must comply with the Building (Pools) Amendment Act (2016).
1.5	Decks, Patios, and Steps	<ul style="list-style-type: none"> a. Decking and steps to be concrete or timber. b. Ramps and steps should have a non-slip finish. c. Timber decking is 100 x 40mm OR 150 x 40mm H3.2 treated radiata pine. <ul style="list-style-type: none"> i. Laid with the grooved edge face-up, running across the direction of travel. <p>Notes</p> <ol style="list-style-type: none"> 1. Hardwood decking is not permitted.
1.6	Storage	<p>Storage sheds:</p> <ul style="list-style-type: none"> a. Have a lockable, triple-hinged, and braced door. b. Have a paint finish with a concrete or H3.2 plywood or timber floor. c. Are fixed down to avoid wind up-lift. <p>Notes</p> <ol style="list-style-type: none"> 1. See The Landscape Design Guide for State Housing for specific design-details for integrated storage. 2. It is not permitted to have services reticulated to a storage shed.

	Storage (contd.)	<p>3. Where a storage shed is located within 1m of a boundary or unit, it must be fire-rated.</p> <p>4. Refer to Section 2C (Diverse Products).</p>
1.7	Refuse	<p>a. Free-draining concrete pad to accommodate x2 240L wheelie bins.</p> <p>b. Screen from individual and / or communal areas.</p>
1.8	Clothes-lines	<p>a. Clothes-lines should:</p> <ol style="list-style-type: none"> Be a wall-mounted drop-down line; or a rotary line; or a T-bar type, comprised of galvanised steel. Have a line-length capacity in accordance with Table 3. Be 1.8m-high above ground-level. <p>Notes</p> <ol style="list-style-type: none"> It is not permitted to fix a washing line to the dwelling. See Section 2B (1.8) and Section 1C (Typical Products) for additional requirements.
1.9	Planting	<p>a. Top-soil:</p> <ol style="list-style-type: none"> Is a minimum 150mm. Is free of pernicious weeds, clay lumps, and solid matter exceeding 25mm. Has a Ph value of 6.5-7.5 and a humus content greater than 50%. <p>b. Grass-seed lawn should be treated with a high germination rate fungicide and bird-repellent.</p> <p>c. Battered sloping areas to have a weed-stop, UV-stabilised, polypropylene fabric sheet under number-3 bark mulch and planting.</p> <p>d. Planter-boxes must not be comprised of chemically-treated timber.</p> <p>Notes</p> <ol style="list-style-type: none"> It is not permitted to: <ol style="list-style-type: none"> Use planting with spines, thorns, poisonous, noxious weeds (such as privet) and/or species that contribute to allergies and asthma (pollinated by birds and insects rather than wind). Plant up to the building perimeter or adjacent to building systems. Use planting that prevents or limits solar-gain to the building or clothes-drying area(s). Refer to The Landscape Design Guide for State Housing for additional design guidelines.
1.10	Letterboxes	<p>All letterboxes should:</p> <ol style="list-style-type: none"> Include a latch, numbers, and hinges. Be weather-tight, resistant to corrosion, and lockable. Be securely fence-mounted or integral to the post system. Meet New Zealand Post's Mailbox Specifications. Be located at the street front or main-entry (as referenced and shown on dwelling plans).

	Letterboxes (contd.)	<p>Notes</p> <ol style="list-style-type: none"> Protruding sharp edges are not permitted. For the specific design of a combined box-system in common-areas refer to The Landscape Design Guide for State Housing. See Section 2B (1.10) for additional requirements.
--	-----------------------------	---

2 BUILDING ENCLOSURE		HOUSING – TYPICAL SYSTEMS
Building Element	Measurable Criteria	
2.1	Roofing	<ol style="list-style-type: none"> All roofing systems are screw-fixed, 0.55BMT-gauge steel. The paint finish must: be factory-applied; be suitable for the local environmental conditions; and use colours approved by Kāinga Ora. <p>Notes</p> <ol style="list-style-type: none"> Liquid-applied membranes are not permitted. Profiled plastic roofing is not permitted.
2.2	Rain-water	<ol style="list-style-type: none"> Spouting is externally-bracketed with a minimum flow-rate capacity of 85l/min. <ol style="list-style-type: none"> All spouting should be sized to align with the local rain-fall intensity and catchment area. Round down-pipes are: <ol style="list-style-type: none"> 80mm with PVC-mesh domes in truncated cone form; suitable for the rain-fall intensity and catchment area plus at least one additional down-pipe. <p>Notes</p> <ol style="list-style-type: none"> Concealed fascia spouting is not permitted. Down-pipes must not be located within 600mm of a corner on a building-perimeter. Where required, alternative solutions should match roofing and local environmental conditions. Refer to Section 1C (Typical Products).
2.3	Cladding	<ol style="list-style-type: none"> All cladding systems include a 20mm, drained, ventilated cavity, and vermin-stop protection. All paint finishes align with specifications set by Kāinga Ora. <p>Notes</p> <ol style="list-style-type: none"> The following are not permitted: <ol style="list-style-type: none"> Plywood cladding. Single-skin, exterior insulating finish systems. Polystyrene and plaster cladding systems. Horizontal profiled metal cladding. Stucco cladding systems. Stained finishes. Paint finishes with brick.

2.4	Sub-floor	<p>a. The sub-floor access door must be:</p> <ol style="list-style-type: none"> i. Hinged. ii. Closed with square-head, fixed security-screws. iii. Finished with paint. <p>b. The ground is over-laid with 250-micron (min.) polythene sheets, that are:</p> <ol style="list-style-type: none"> i. Lapped by 100mm. ii. Taped. iii. Fitted tightly to piles and foundation walls (to prevent water-ponding). <p>Notes</p> <ol style="list-style-type: none"> 1. An exposed sub-floor is not permitted.
2.5	Floor	<p>a. Floor is concrete or CCA-treated H3.2 plywood; at least 19mm-thick.</p> <p>b. All timber bottom plates are treated to H3.2.</p> <p>c. Timber floors have joist-spacing at a maximum of 600mm.</p> <p>d. Glue and screw or fix with annular grooved galvanised flooring nails.</p> <p>Notes</p> <ol style="list-style-type: none"> 1. LOSP-treated plywood is not permitted.
2.6	Thermal Insulation	<p>a. Insulation is 100% polyester to all ceilings, walls, and ground-level timber floors.</p> <p>b. Insulation is able to achieve the minimum R-values set-out in Table 5.</p> <p>Notes</p> <ol style="list-style-type: none"> 1. Fibreglass insulation is not permitted. 2. Where the insulation value is greater than that required, use the H1/AS and VM (2019) OR modelling methods specified in <i>NZS 4218:2009 – Thermal Insulation: Housing and Small Buildings</i>. 3. Refer to Section 1C (Typical Products).
2.7	Slab Insulation	<p>a. Slab-edge extruded polystyrene foam board insulation system.</p> <p>b. At least 50mm-thick to the perimeter of all concrete slabs.</p>
2.8	Entry Porch	<p>a. The main-entry porch must be roofed and weather-protected.</p>
2.9	Entry Door	<p>a. All exterior doors:</p> <ol style="list-style-type: none"> i. Have at least 3 hinges. ii. Are solid-core exterior quality timber or thermally-insulated aluminium. iii. H3.2-treated timber with a paint finish or aluminium powder-coated. iv. Where provided, glazing must be toughened. v. Timber jamb-liners are H3.2 with a paint finish.

2.9	Entry Door	<p>a. The main-entry door is at least 910mm-wide.</p> <p>b. All other exterior hinged-doors are at least 860mm-wide.</p> <p>c. Where used, side-lights must only be fixed-lights.</p> <p>Notes</p> <p>1. It is not permitted to:</p> <p>a. Use a sliding door as the main-entry door.</p> <p>b. Provide glazing below 1m on exterior hinged doors.</p> <p>2. See Section 2B (2.9) for additional requirements.</p>
2.10	Entry Door Hardware	<p>a. All exterior doors: have lever-type handles, key-less exit, and hold-back function inside; and are keyed alike.</p> <p>b. All hinged aluminium doors are fitted with a euro-cylinder lock.</p> <p>c. All hinged timber doors are fitted with a single-cylinder dead latch.</p> <p>d. Where there is no side-light provided, the main-entry door must have a fitted door-viewer with a 200° viewing-angle.</p> <p>Notes</p> <p>1. A key lock to the exterior for sliding doors is not permitted.</p> <p>2. Refer to Section 1C (Typical Products).</p>
2.11	Windows and Glazing	<p>a. Aluminium windows and doors must be powder-coat finished.</p> <p>d. Timber jamb-liners are H3.2, with a paint finish.</p> <p>e. At least one operable window per room.</p> <p>f. Factory-installed, stainless-steel window-restrictors that provide a maximum opening of 100mm must be fitted to:</p> <p>i. All operable windows with $\geq 2\text{m}$ fall to ground-level.</p> <p>ii. At least one operable window in each habitable space.</p> <p>g. All door glazing is toughened glass (unless fire-door set).</p> <p>h. All glazing over 1.5m high has at least one horizontal vision-rail.</p> <p>i. All glazing is clear and, where required for privacy, is surface-treated, etched glass.</p> <p>Notes</p> <p>1. The following are not permitted:</p> <p>a. Fibreboard jamb-liners.</p> <p>b. Bi-folding doors.</p> <p>c. Sliding windows.</p> <p>d. Louvres.</p> <p>e. Laminated glass.</p> <p>2. See Section 2B (2.11) for additional requirements.</p>

3 INTERIOR FINISHES		HOUSING – TYPICAL SYSTEMS
Building Element	Measurable Criteria	
3.1	Flooring: <i>(Entries; Kitchens; Dining-areas; Bathrooms; Laundries)</i>	<p>a. Lay commercial-grade flooring system (minimum: vinyl homogenous 2mm with matching vinyl welding rod) complete with aluminium threshold-strips.</p> <p>b. All flooring must:</p> <ul style="list-style-type: none"> i. Be: water-, abrasion-, and slip-resistant; easy-to-clean with a hygienic surface; continuous; and impervious. ii. Have an environmental performance eco-label from an approved 3rd -party scheme recognised by the NZ Green Building Council. iii. Where appropriate, extend into adjacent storage-areas (including linen cupboards). <p>c. Entries include a 900mm-deep (minimum) strip that extends to the full-width of the entry door.</p> <p>d. Kitchens and dining-areas:</p> <ul style="list-style-type: none"> i. Continuous flooring to the full extent of these areas including under all kitchen joinery and appliances. ii. Timber skirting boards to all wall-junctions. iii. Slip-resistance aligns with “dry in normal use” as defined in Table 2 of D1/AS1. <p>e. Bathrooms, separate toilets, and laundries</p> <ul style="list-style-type: none"> i. Continuous vinyl flooring to the full extent, including under toilets, vanities, and basins (but not baths or showers). ii. Provide 100mm-high coving to all walls: <ul style="list-style-type: none"> • Aluminium coved capping strip to exposed top-edge • Recess the coving behind wet-wall linings. iii. Bevel-edge tile reducer is indicated under flooring to form a wet flooring-well at the bathroom-entry. <p>f. Bathrooms and separate toilets have a level of slip-resistance that aligns with “dry in normal use” as defined in Table 2 of D1/AS1.</p> <p>g. Laundries have a level of slip-resistance that aligns with “wet in normal use” as defined in Table 2 of D1/AS1</p> <p>Notes</p> <ol style="list-style-type: none"> 1. Including a floor covering in the HWC cupboard is not permitted. 2. Refer to Section 1C (Typical Products). 3. See Section 2B (3.1) for additional requirements.

3.2	Flooring (Living-areas, Bedrooms, Hallways, & Stairs)	<p>a. Carpet: Nylon loop-pile; 100% solution-dyed; minimum pile-weight of 550-600g/m².</p> <p>b. Underlay: 69kg/m Kāinga Ora-procured underlay, complete with:</p> <ol style="list-style-type: none"> Zero VOC adhesive. Smooth-edge to the perimeter. Threshold bars at junctions with other flooring types. <p>c. Flooring must have an environmental performance eco-label from an approved 3rd-party scheme recognised by the NZ Green Building Council.</p> <p>d. Where they are adjacent, flooring must extend into wardrobes and storage and linen cupboards.</p> <p>Notes</p> <ol style="list-style-type: none"> It is not permitted to: <ol style="list-style-type: none"> Use specialist flooring finishes such as polished concrete or timber strip-flooring. Provide floor covering in the HWC cupboard. See Section 2B (3.2) for additional requirements. Refer to Section 1C (Typical Products).
3.3	Wall-linings	<p>a. At a minimum, wall-linings are a paper-faced gypsum board that is stopped for a level-4 finish.</p> <ol style="list-style-type: none"> Linings include a paint finish, except linings in the toilet, bathroom, or laundry. <p>b. All plaster-board must have an environmental performance eco-label from an approved 3rd-party scheme recognised by the NZ Green Building Council.</p> <p>c. Kitchens include an impervious, inflammable, heat-resistant, and easy-to-clean wall overlay between the stove-top and the range-hood that extends:</p> <ol style="list-style-type: none"> 100mm below the stove-top. To at least 300mm above the stove-top. To the side-wall (where located within 150mm of the stove-top). <p>Notes</p> <ol style="list-style-type: none"> Specialised interior wall-finishes (for example, ceramic tiles, or wallpaper) are not permitted. See Section 2B (3.3) for additional requirements.
3.4	Wet-wall-linings (Bathroom & Laundry)	<p>a. All splash-back areas (including the laundry tub and basin, separate toilet rooms, and shower and bath surrounds): smooth pre-finished polyurethane coated (on one side), fibre-cement sheet system that is:</p> <ol style="list-style-type: none"> Complete with: PVC scotia; sheet jointers; capping moulds; and internal and external jointers. Resistant to moisture damage, with an easy-to-clean hygienic surface. <p>b. Silicone sealant must have a mould-inhibitor.</p>

	Wet-wall-linings (contd.)	<p>c. All other areas have at least a paper-faced gypsum, moisture-resistant board (stopped for a level 4 finish) with a paint finish.</p> <p>Notes</p> <ol style="list-style-type: none"> Avoid fixing wet-wall linings over new plaster-board. The following are not permitted: <ol style="list-style-type: none"> Solvent-based adhesives for fixing fibre-cement sheet-linings. Contact between the wet-wall-lining and the up-stand of the shower tray. Contact between the wet-wall-lining and the bath. Bath edge-mouldings with high-lip baths. See Section 2B (3.4) for additional requirements.
3.5	Ceiling-linings	<ol style="list-style-type: none"> At a minimum: paper-faced gypsum board (stopped for a level-4 finish) with a paint finish (unless toilet, bathroom or laundry). All plaster-board must have an environmental performance eco-label from an approved 3rd-party scheme recognised by the NZ Green Building Council. There is a ceiling hatch for accessing all roof spaces that is: <ol style="list-style-type: none"> Comprised of 12mm plywood. At least 600mm². Fixed-closed with security-screws. Finished to match the ceiling.
3.6	Interior Doors	<ol style="list-style-type: none"> Are flush-finished. Have a solid polystyrene core and a 4mm, MDF skin. Are hung on at least x3 hinges. Are paint-finished. <p>Notes</p> <ol style="list-style-type: none"> Bi-folding and/or hollow-core doors are not permitted. Refer to Section 1C (Typical Products).
3.7	Trims	<ol style="list-style-type: none"> All interior trims, skirting boards, and architraves are H3.1 timber with a paint finish. <p>Notes</p> <ol style="list-style-type: none"> It is not permitted to use fibre-board for jamb-liners.
3.8	Curtains (Living-areas; dining-areas; bedrooms)	<ol style="list-style-type: none"> Curtains to all external glazed windows and doors are: <ol style="list-style-type: none"> Fire-resistant, triple-woven polyester. Hung on a face-fixed curtain track that allows curtains to open clear of glazing. Full-length curtains must finish 5-20mm above the FFL. <p>Notes</p> <ol style="list-style-type: none"> Curtains are not required in the: kitchen; bathroom; laundry; hallways; and/or glazed entrance door.

		<p>2. The following are not permitted:</p> <ol style="list-style-type: none"> Curtain-placement that allows them to come into contact with heaters or stoves. Pull-cords to curtains. Extendable curtain tracks. <p>3. Refer to Section 1C (Typical Products).</p>
3.9	Shower Curtain	<ol style="list-style-type: none"> Are 100%, machine-washable (up to 60°C) polyester. Are 1.8m-long. Have a weighted bottom edge. <p>Notes</p> <ol style="list-style-type: none"> See Section 2B (3.9) for additional requirements. Refer to Housing: Typical Products.

4 INTERIOR HARDWARE HOUSING – TYPICAL SYSTEMS		
Building Element	Measurable Criteria	
4.1	Hardware	<ol style="list-style-type: none"> All door handles are lever-type and fitted at 1.0m above the FFL. <ol style="list-style-type: none"> This excludes those on an internal-access garage door, which, where provided, are fitted with a door-closer and a handle located at 1.5m above the FFL. All doors include door-stops. Bathrooms and separate toilets have horizontal, lever-type handles with a privacy-lock that can be accessed from outside the room. Wardrobes, and linen, general storage, and hot water cylinder cupboards have: <ol style="list-style-type: none"> Horizontal, dummy-lever-type handles. A soft-close, counter-sunk magnetic catch that is flush-finished into the top-edge of the door and frame. <p>Notes</p> <ol style="list-style-type: none"> Bedroom, wardrobe, linen cupboard, hot water cylinder cupboard, and general storage cupboard doors must not be lock-able. Deadlocks with an internal key or tool function are not permitted. See Section 2B (4.1) for additional requirements. Refer to Section 1C (Typical Products).
4.2	Wardrobe Rail	<ol style="list-style-type: none"> 20mm[∅] galvanised pipe or an extruded aluminium rail mounted below the wardrobe shelf. <p>Notes</p> <ol style="list-style-type: none"> Removable-rails are not permitted. Where the rail is longer than 1.2m, provide mid-rail support. See Section 2B (4.2) for additional requirements.

4.3	Bathroom Fixtures	<p>a. Towel rails are 19mm[∅], grade-304, 1.2mm stainless-steel:</p> <ol style="list-style-type: none"> i. Minimum length is 900mm per bedroom. ii. Securely-fix at 1m above the FFL. iii. Mid-rail support is required for rails longer than 1.2m. <p>b. Showers include a 19mm[∅] grade-304 1.2mm stainless-steel rod, mounted for 1.8m-long curtain to fall below the shower threshold and discharge water into the tray</p> <p>c. Basin mirror: 400 (W) x 720mm (H) (minimum); located above the basin at 1.2m (maximum) above the FFL.</p> <p>d. Bathrooms and separate toilets include one toilet roll holder set within reach of the toilet (when seated).</p> <p>e. Separate toilet-rooms include one towel-ring.</p> <p>f. Mirror (separate to shaving/medicine cabinet)</p> <ol style="list-style-type: none"> i. 4mm safety glass with silver plating and vinyl coating. ii. Screw-fixed with proprietary stainless-steel counter-sunk head-screws, fitted with black neoprene washers with fine threaded upstands to receive chrome-plated dome screw-covers. iii. Larger mirrors (0.3-0.6m²) are screw-fixed with white powder-coated aluminium mounting channel top and bottom edges only with end caps. <p>Notes</p> <ol style="list-style-type: none"> 1. The following are not permitted: <ol style="list-style-type: none"> a. Adhesive fixing for mirrors. b. Heated towel-rails. c. Shower over bath. 2. See Section 2B (4.3) for additional requirements. 3. Refer to Section 1C (Typical Products).
------------	--------------------------	---

5 INTERIOR JOINERY HOUSING – TYPICAL SYSTEMS	
Building Element	Measurable Criteria
5.1 Kitchen Benches and Cabinetry	<p>a. Bench-tops:</p> <ol style="list-style-type: none"> i. Are 600mm-deep and comprised of two materials: <ul style="list-style-type: none"> • High-pressure laminate with a coved laminate up-stand behind; AND • Polished stainless-steel with an integral up-stand, an anti-spill lip to the front and sides, and a 37mm-high front edge. ii. Must be burn-, cut-, and stain-resistant and provide an easy-to-clean hygienic surface. <p>b. Cabinetry:</p> <ol style="list-style-type: none"> i. Minimum: 18mm moisture-resistant carcass, doors and drawers with pre-finished low-pressure laminate (melamine veneer or similar) to both sides with 2mm PVC edgings.

	<p>Kitchen Benches and Cabinetry (contd.)</p>	<ul style="list-style-type: none"> ii. Must include at least a 100mm-high toe-kick. iii. One cupboard – preferably beneath the sink – must include a child-resistant catch. <p>c. Doors:</p> <ul style="list-style-type: none"> i. Are no more than 450mm-wide. ii. Hinges provide a 115-170° opening and are recess-mounted; x3 per under-bench leaf and x4 to doors over bench height iii. Handles are horizontal, metal, bow-pull-style with 150 x 25mm finger-clearance. <p>g. The underside of the bench has drawers in banks of 4 (x2 smaller above x2 larger drawers at the bottom).</p> <ul style="list-style-type: none"> i. Provide a cutlery insert tray for the top drawer. <p>h. The pantry has x5 full-width fixed shelves.</p> <p>i. The microwave must be located at bench-height with an adjacent power outlet.</p> <p>Notes</p> <ol style="list-style-type: none"> 1. The following are not permitted: <ul style="list-style-type: none"> a. Over-cupboards. b. Sliding, bi-folding, or double-hung (corners) doors. c. A fixed-end panel to the fridge space. d. Fully-enclosed, temporary waste and recycling spaces and built-in bins. e. Melamine edge tape. 2. Refer to Table 2 for additional information. 3. See Section 2B (5.1) for additional requirements.
5.2	<p>Vanity Cabinets</p>	<p>a. Cabinetry and vanity-tops:</p> <ul style="list-style-type: none"> i. Comprised of durable, easy-to-clean materials. ii. Have a continuous, impervious, stain- and water-resistant, exposed surface-finish. <p>b. Basins:</p> <ul style="list-style-type: none"> i. Are integral, flush, and moulded into the bench-surface. ii. Are comprised of durable materials that are resistant to thermal-shock. iii. Include: an integral up-stand, over-flow, and soap-dishes; an outlet sized for a 40mm waste; and a chrome-on-brass or stainless-steel waste with plug-and-chain. <p>c. Cabinets:</p> <ul style="list-style-type: none"> i. Are wall-hung with heavy-duty wall-brackets or floor- mounted with a stainless-steel or water-proof plinth. ii. Include: <ul style="list-style-type: none"> • Adjustable, self-closing hinges. • Horizontally-fixed, satin-chrome, bow-shaped handles. • An epoxy-coated, white steel, drawer slide-system.

	Vanity Cabinets (contd.)	<p>Notes</p> <ol style="list-style-type: none"> 1. A wall-hung vanity option must be used where there is a gap of less than 100mm between the vanity and a shower or bath. 2. Refer to Section 1C (Typical Products).
5.3	Bathroom Cabinets (Shaving / Medicine)	<ol style="list-style-type: none"> a. Moisture-resistant carcass with: <ol style="list-style-type: none"> i. A mirror front. ii. A PVC edge. iii. Two shelves. iv. A child-resistant catch. v. An internal wall-recess. b. Mounted at least 1.2m above the FFL (to the lower edge of the cabinet). <p>Notes</p> <ol style="list-style-type: none"> 1. Refer to Section 1C (Typical Products).
5.4	Laundry Tub Cabinet	<ol style="list-style-type: none"> a. Includes: <ol style="list-style-type: none"> i. A pressed, seamless, and polished stainless-steel laundry bowl. ii. An anti-drip, integral over-flow. iii. A single-lever mixer. iv. A galvanised steel, powder-coated cabinet with a child-resistant catch on the cabinet door. v. A dedicated washer discharge pipe. b. The cabinet must be securely-fixed to the wall. <p>Notes</p> <ol style="list-style-type: none"> 1. Refer to Section 1C (Typical Products).
5.5	Wardrobe Shelving	<ol style="list-style-type: none"> a. Shelving is at least 400 (D) x 1.2m (W) and 18mm-thick. b. Pre-finished, low-pressure laminate with 2mm PVC-edging. c. Rests on securely-fixed, 70 x 25mm (min.) rails placed along the shelf-back and ends. d. Includes a 40 x 20mm pine 'stiffener' under the front-edge. e. Set at 1.65m above the FFL. <p>Notes</p> <ol style="list-style-type: none"> 1. See Section 2B (5.5) for additional requirements.
5.6	Linen Cupboard Shelving	<ol style="list-style-type: none"> a. Five fixed full-width x 400mm-deep shelves spaced at no more than 360mm centres vertically and with 10mm gaps between boards. b. Shelves to be made of 70 x 20mm solid timber slats. c. Screw-fix boards to 70 x 20mm rails at ends.
5.7	General Storage Shelving	<ol style="list-style-type: none"> a. Three 400mm-deep, full-width shelves: <ol style="list-style-type: none"> i. 18mm (min.) pre-finished, low-pressure laminate with 2mm PVC-edging. ii. Securely-fixed to 70 x 20mm (min.) rails along the cupboard-back and ends.

	General Shelving (contd.)	iii. Bottom shelf to be positioned 1.25m above the FFL.
5.8	Hot Water Cylinder Cupboard Shelving	<p>a. At least one full-depth and full-width shelf.</p> <p>b. 70 x 20mm solid timber slats; 10mm gaps between each slat.</p> <p>c. Screw-fixed to 70 x 20mm rails at ends.</p>

6 BUILDING SERVICES HOUSING – TYPICAL SYSTEMS		
Building Element	Measurable Criteria	
6.1	Mains Supply & Distribution	<p>a. All services have connection from the street front public junctions to building termination points.</p> <p>b. Electrical supply has:</p> <ol style="list-style-type: none"> i. A ‘smart’ meter that is either: <ul style="list-style-type: none"> • Externally-recessed, and wall-mounted in a weather-protected enclosure that is located adjacent to the main-entry. OR • Where provided, in a utilities and service room. ii. An internal distribution board with at least 20% spare capacity. <p>c. The ‘Earth’ pin is protected by a plastic “Toby box”.</p> <p>d. Telecommunications supply from the street is connected from an External Termination Point (ETP) on the exterior of the property.</p> <p>e. From the telecommunications’ ETP:</p> <ol style="list-style-type: none"> i. Copper networks connect to a master jack point. ii. Fibre networks connect to an ONT located in a cupboard via fibre-optic cabling and includes a: distributor; designated switched-socket; patch-panel; and cords. <p>f. All internal cabling is Cat 6.</p> <p>g. All manholes, cess-pits, and gully-traps must have a cast-iron frame and screw-down covers and/or grilles.</p> <p>h. Water-supply has a separate meter and “Toby box” per dwelling and an in-line filter at the entry-point of the building.</p> <p>i. All buildings with multiple dwellings have services running from public junctions to building termination points within a common shared-services trench.</p> <p>j. Where provided, common or shared electrical services (e.g. lighting provided in car-parks or shared entries; CCTV or other active security measures) are provided on a separate circuit and metered accordingly.</p>

	Mains Supply & Distribution (contd.)	<p>Notes</p> <ol style="list-style-type: none"> 1. The following are not permitted: <ol style="list-style-type: none"> a. Mechanically-operated/pumped storm- or waste-water systems. b. Surface-mounted meter boxes. 2. Where not currently available, there should be a building termination point for future supply of fibre-optic cable.
6.2	External Taps	<ol style="list-style-type: none"> a. At least two brass, screw-thread outlets per dwelling. b. Where appropriate for the typology, include provision to service all common-areas for groups of units.
6.3	Hot Water Cylinder	<ol style="list-style-type: none"> a. Either: <ol style="list-style-type: none"> i. Mains-pressure HWC. OR ii. Low-pressure (vitreous enamel), MEPS HWC, resistant to corrosion and pitting. b. Includes: <ol style="list-style-type: none"> i. A sealed thermostat cover. ii. Seismic restraints. iii. Vandal-resistant signage that states “No Scrap Value”. iv. A low-pressure, heavy-head 120kPa separate circuit (this is not suitable for mains-pressure). v. A tempering valve and incorporated anti-tamper device. vi. A safe tray that drains to the exterior. c. The drain-point is fitted with an anti-vermin trap and is located where any leaks will be easily-visible. d. Tempering valves are set to deliver a maximum water temperature of: <ol style="list-style-type: none"> i. 50°C at the nearest tap. ii. 45-50°C at all other outlets. e. All hot water pipes are insulated. <p>Notes</p> <ol style="list-style-type: none"> 1. Refer to Section 1C (Typical Products) and Table 4.
6.4	Bathtub	<ol style="list-style-type: none"> a. Acrylic, 110 litre-capacity bath; minimum length of 1.65m. b. Supplied with: a timber support frame; high-lip edge; and over-flow. <p>Notes</p> <ol style="list-style-type: none"> 1. See Section 2B (6.4) for additional requirements. 2. Refer to Section 1C (Typical Products).
6.5	Shower Trays	<ol style="list-style-type: none"> a. Comprised of pressed, polished, stainless-steel on a polystyrene base. b. Should be leak-resistant, and easy-to-clean with a hygienic surface. c. Have a load-capacity of 200kg. d. Include a fabricated stainless-steel threshold, and threshold flanges suitable to fit behind the wall-lining. <p>Notes</p> <ol style="list-style-type: none"> 1. Refer to Section 1C (Typical Products).

6.6	Toilet Suite	<p>a. Floor-mounted, vitreous china; with a concealed S-trap pan.</p> <p>b. Rigid plastic double-flap toilet seat.</p> <p>c. Low-flow, smart- and dual-flush 3/4.5 litre cistern.</p> <p>Notes</p> <p>1. See Section 2B (6.6) for additional requirements.</p> <p>2. Refer to Section 1C (Typical Products).</p>
6.7	Basin	<p>a. See Section 2B (6.7) for additional requirements.</p>
6.8	Floor-waste	<p>a. All bathrooms, separate toilets, and laundries (other than those located on the ground-floor) require a chrome-plated, brass floor-waste.</p> <p>b. All basins, bathtubs, kitchen sinks, and laundry tubs require a chrome-plated, brass waste-and-plug system.</p> <p>c. All showers require an easy-to-clean, weld-in, recessed stainless- steel flat-top trap-waste.</p> <p>Notes</p> <p>1. See Section 2B (6.8) for additional requirements.</p>
6.9	Kitchen Sink	<p>a. Polished 304-grade stainless-steel.</p> <p>b. At least 410 (W) x 355 (D) x 170mm (H) sink with integral over-flow and 440 x 390mm drainage tray.</p> <p>Notes</p> <p>1. Top-mounted sink bowls are not permitted.</p>
6.10	Kitchen Sink Mixers	<p>a. Single-lever, chrome-plated mixer with an easily-adjustable flow-rate set for $\leq 7.5\text{L}/\text{min}$.</p> <p>Notes</p> <p>1. Refer to Section 1C (Typical Products)</p>
6.11	Basin Mixers	<p>a. Single-lever, chrome-plated mixer with an easily-adjustable flow-rate set for $\leq 4.5\text{L}/\text{min}$.</p> <p>Notes</p> <p>1. Refer to Section 1C (Typical Products)</p>
6.12	Shower-rose Mixers	<p>a. Combined, wall-mounted shower-mixer and rose.</p> <p>b. Easily-adjustable delivery temperature.</p> <p>c. Maximum flow-rate set at $9\text{L}/\text{min}$.</p> <p>Notes</p> <p>1. See Section 2B (6.12) for additional requirements.</p> <p>2. Refer to Section 1C (Typical Products).</p>

6.13	Bath Taps	<p>a. Chrome-on-brass (including handle).</p> <p>b. The hot tap is located on the opposite side of the bath’s access-edge.</p> <p>Notes</p> <p>1. Refer to Section 1C (Typical Products).</p>
6.14	Washing Machine Taps	<p>a. Chrome-on-brass (including handle).</p> <p>Notes</p> <p>1. Refer to Section 1C (Typical Products).</p>
6.15	Smoke Alarms	<p>a. Listed to <i>BS EN 14604:2005 – Smoke Alarm Devices</i>.</p> <p>Notes</p> <p>1. Refer to Section 1C (Typical Products).</p> <p>2. See Section 2B (6.15) for additional requirements.</p>
6.16	Heaters	<p>a. Heaters are able to meet the requirements specified in Section 1A (2.1).</p> <p>b. Electric heaters should:</p> <ol style="list-style-type: none"> Be hard-wired and separately-switched. Be permanently wall-mounted. Include a manual thermostat and internal over-heat protection. Be rust-resistant and anti-freezing. Have a rating of IP24. <p>c. Energy-efficient heat retention is preferred.</p> <p>Notes</p> <ol style="list-style-type: none"> Electric resistance heaters must not have a capacity that exceeds 2.4kW. Where a higher capacity is required, a more efficient form of heating is required. All heat pumps should each have a separate, dedicated circuit. Provided there is available capacity, electric resistance heaters may be wired into existing circuits. It is not permitted to: <ol style="list-style-type: none"> Place a compressor unit within 500mm of any planting. Have a condensate discharge from a soffit, over a pathway, or where it can form air-borne droplets. See Section 2B (6.16) for additional requirements. Refer to Section 1C (Typical Products).
6.17	Stove	<p>a. Electric free-standing oven and hobs with:</p> <ol style="list-style-type: none"> An anti-tip device. A drop-bolt seismic movement limiting-device. An 80-litre capacity. An integral storage drawer. Controls set at a child-safe height.

	Stove (contd.)	<p>Notes</p> <ol style="list-style-type: none"> See Section 2B (6.17) for additional requirements. Refer to Section 1C (Typical Products).
6.18	Extraction: Kitchens	<ol style="list-style-type: none"> Range-hood ventilation system. Minimum extraction rate of 50L/s. Fire-resistant ducting that is ducted to discharge to the exterior. Includes washable filters and auto shut-off. Maximum noise level of 60dB. <p>Notes</p> <ol style="list-style-type: none"> It is not permitted to have the extract discharge through the soffit. Refer to Section 1C (Typical Products).
6.19	Extraction: Bathrooms & Laundries	<ol style="list-style-type: none"> Extract ventilation system that: <ol style="list-style-type: none"> Has a minimum extraction rate of 25L/s. Is ducted to discharge to the exterior. Includes a separate isolating switch-control with a time-delayed, automatic shut-off. Is mounted over the shower (where provided). Has a maximum noise level of 60dB. <p>Notes</p> <ol style="list-style-type: none"> Where a laundry is located in a garage, mechanical extraction is not required. <ol style="list-style-type: none"> The minimum alternative is passive ventilation with an openable window. It is not permitted to have the extract discharge through the soffit. Refer to Section 1C (Typical Products).
6.20	Lighting	<p>Exterior lighting</p> <ol style="list-style-type: none"> Light-fittings are: <ol style="list-style-type: none"> LED with motion sensors and daylight cut-off functionality. IP-rated for exterior use. Provides a minimum efficacy of 40 lumens-per-watt. Includes effective lighting controls. There are solar-powered solutions provided for common-areas and long driveways. Night-time lighting must enhance the capability of (where provided) CCTV systems and other security measures. <p>Interior lighting</p> <ol style="list-style-type: none"> There is at least one ceiling-mounted light-fitting for each separate area (i.e. entry, hallway, stairs, bathroom, laundry, kitchen, dining-area, living-area, bedroom, and, where provided, separate toilet and garage). <ol style="list-style-type: none"> LED, double-insulated with acrylic diffuser. IP-rating is suitable for wet-areas (where required).

	Lighting (contd.)	<p>g. Provides a minimum efficacy of 40 lumens-per-watt.</p> <p>h. All common-area light-fittings Include effective lighting controls.</p> <p>Light switches</p> <p>i. Polycarbonate with rocker-switch.</p> <p>j. Mounted at 1m above the FFL.</p> <p>k. Hallways and stairs have 2-way switching at either end.</p> <p>Notes</p> <p>1. Incandescent lamps, down-lights, halogen fittings, and fluorescent fittings are not permitted.</p> <p>2. See Section 2B (6.20) for additional requirements.</p> <p>3. Refer to Section 1C (Typical Products).</p>
6.21	Power	<p>a. All power-outlets/sockets are:</p> <p>i. Double-socket polycarbonate with rocker switch.</p> <p>ii. Mounted horizontally at 500mm above the FFL and 250mm above bench-tops.</p> <p>iii. Mounted at least 500mm away from internal corners.</p> <p>b. Combined living- and dining-areas have at least x4 double-socket outlets suitable for phone/data and TV.</p> <p>c. Kitchens:</p> <p>i. At least x4 double-socket outlets: x3 double-socket outlets above bench height (including an outlet for the fridge) plus x1 dedicated outlet for the stove.</p> <p>ii. Outlets must be at least 400mm from cooking surfaces.</p> <p>iii. Ensure one outlet is suitable for a microwave.</p> <p>d. Bedrooms:</p> <p>i. Rooms >9m² have at least x3 double-socket outlets (including x1 for each side of the bed).</p> <p>ii. Rooms <9m² have at least x2 double-socket outlets (including x1 for each side of the bed).</p> <p>e. Bathrooms have at least x1 RCD-protected, double-socket outlet located adjacent to the vanity at 1m above the FFL.</p> <p>f. Hallways, laundries, and (where provided) attached garages have at least x1 double-socket outlet each.</p> <p>Notes</p> <p>1. See Section 2B (6.21) for additional requirements.</p>
6.22	Data, Phone, & TV Outlets	<p>a. All outlets are mounted:</p> <p>i. Horizontally at 500mm above the FFL.</p> <p>ii. 250mm above bench-tops.</p> <p>iii. At least 500mm away from internal corners.</p> <p>b. Ensure there is:</p> <p>i. A phone/data and TV outlet located in any combined kitchen-dining-living area.</p>

	Data, Phone, & TV Outlets (contd.)	<ul style="list-style-type: none"> ii. A phone/data outlet located in a 10m² bedroom. iii. A phone outlet in the utilities and (where provided) service room. <p>Notes</p> <ol style="list-style-type: none"> 1. Where a dwelling has ≥2 storeys, locate the bedroom’s phone/data outlet above the ground-floor.
6.23	Aerials, Dishes, and MATV	<ul style="list-style-type: none"> a. Digital aerials are wall-mounted and connected to one outlet in the living-area. b. Attached and horizontally-separated housing units (i.e. 10+) with a common power source require MATV that has: <ul style="list-style-type: none"> i. The capability to distribute free-to-air and satellite television signals, and is suitable for digital channels. ii. As a minimum, a broadband signal-booster amplification system connected to a common electrical system. c. All cabling is at least concealed dual-shielded coaxial and, if underground, a ‘Flooded’ cable. d. Ensure aerials are mounted to minimise the impact on the environment. <p>Notes</p> <ol style="list-style-type: none"> 1. Roof-mounted digital aerials are not permitted. 2. Where required, high interference sites have channelized amplification. 3. MATVs require involvement from a specific Electrical Design Engineer and, for aerial mounting, a Structural Design Engineer. 4. Refer to the Simple Guide to Urban Design & Development.
6.24	Security	<p>General</p> <ul style="list-style-type: none"> a. Hardened or active systems (e.g. secure building access systems, lighting, or CCTV) are designed in accordance with a CPTED audit. b. All equipment is: <ul style="list-style-type: none"> i. Readily-available and locally serviceable. ii. Suitable for the local environmental conditions. iii. Integrated with other building systems. iv. Insect-, rodent-, and vandal-resistant. c. System resilience includes: the elimination of single points of failure; surge-protection devices; and a battery back-up. d. If located underground, cabling should be ‘Flooded’ cabling. <p>CCTV</p> <ul style="list-style-type: none"> e. Monitoring systems are required for multi-dwelling properties occupied by Kāinga Ora customers. <ul style="list-style-type: none"> i. All common-areas have continuous 24-hour monitoring. ii. As a minimum CCTV should cover: site-boundaries; vehicle access-routes; pedestrian pathways; car-parks; refuse and recycling areas; laundry facilities; building entries; stairways; lift-lobbies; communal hallways; and other common-areas.

	Security (contd.)	Notes <ol style="list-style-type: none">1. A Security Design Engineer and CPTED audit report is required for multi-dwelling properties.2. An on-site manager and regular on- or off-site monitoring is not provided.3. The following are not permitted:<ol style="list-style-type: none">a. Access or swipe-cards.b. Intruder detection systems.c. Wireless CCTV and intercom systems and connection to the telephone system.d. Analogue signal-type CCTV systems.e. Door entry-systems connected to CCTV systems.f. Entry-door alert functions.g. Connection to the electronic access system.
--	--------------------------	---

1C – PRODUCTS

Products procured by Kāinga Ora – Homes and Communities are quality products that have been researched and identified as meeting specific requirements set by Kāinga Ora. These requirements meet customers' needs and required durability and environmental considerations.

While products listed are *optional* for re-developments and new build projects, using these specific products will align with future maintenance work.

The products listed herein meet specific performance criteria; these are listed below.

- Products meet New Zealand building controls and relevant legislation.
- Products meet all relevant measurable criteria for dry, warm, safe, and essential amenities.
- Products are supported by evidence-based analysis or research and appraisal from an accredited organisation.
- Products demonstrate reliability over time, both in terms of use and in the marketplace.
- Products and parts have a minimum 5-year guarantee of supply.
- Products are supported by guarantees and warranties, and conditions that may void the guarantee.
- Products are supported by information that details the complexity and frequency of monitoring and maintenance requirements.

In addition, the following optional requirements apply:

- Access for repair or replacement.
- Impact on the environment, the building structure, and, in the event of product failure, repair, or replacement, the customer.

For additional information, refer to the current edition of the *M-217: Building Materials Procurement Schedule*; other products in this schedule can, where appropriate, be used.

If you have questions regarding the suitability of alternative products, please contact the Quality Homes Advisory Team at QualityHomesQueries@kaingaora.govt.nz.

1		PROPERTY EXTERIOR	HOUSING – TYPICAL PRODUCTS
Building Element		Measurable Criteria	
1.1	Storage	Item: Garden Master sheds (including the floor): a. 2909996 : GARDEN M/SHED Z/A 1.53 x 1.08m GM1511AZ Box. b. 2910037 : G/M COLOUR SHED 1.53 x 1.08m GM1511-CR Box. c. 2910038 : G/M COLOUR SHED 1.53 x 1.08m GM1511-CR Box Karaka. d. 2910039 : G/M COLOUR SHED 1.53 x 1.08m GM1511-CR Box G/Grey. e. 2910040 : GARDEN M/SHED 1.83 x 1.53m GM1815 Box Z/A. f. 2910041 : GARDEN M/SHED 1.83 x 1.53M GM1815 Box; Karaka. g. 2910042 : GARDEN M/SHED 1.83 x 1.53m GM1815 Box; Grey.	
1.2	Clothes-lines	Item: Austral™ clothes-line a. 3590200 : 'RetractAway' 40; "Woodland Grey" KOHC b. 3590199 : Standard 28; fold-down; 2.4 x 1.5m WG KOHC c. 3590198 : Compact; fold-down; 2.4 x 0.94m WG KOHC Item: Holdfast clothes-line d. 4690303 : Heavy-duty clothes-line cord, 12m Item: Tasman clothes-lines e. 3590218 : T-bar, heavy-duty f. 3590219 : Clothes-line wire, 42m, heavy-duty g. 3590201: Rotary, galvanised	

2		BUILDING ENVELOPE	HOUSING – TYPICAL PRODUCTS
Building Element		Measurable Criteria	
2.1	Rain-water	Item: Marley® spouting a. MT1-3 : Typhoon® unpainted, uPVC; effective cross-sectional area of 6100mm ² ; 87l/min flow-capacity; rounded-profile; 3m-long. Item: Marley® down-pipes b. RP-80 : RP80® uPVC; 80mm ^Ø	
2.2	Thermal Insulation	Item: Mammoth™ insulation a. 3402162 : R2.9 Ceiling Blanket 870mm, 15m ² . b. 2910057 : R3.3 Ceiling Blanket 870mm-wide (15m ² pack). c. 3402163 : R3.2 Ceiling Blanket 870mm, 15m ² . d. 3402164 : R3.6 Ceiling Blanket 870mm, 13m ² . e. 3401314 : R2.5 Wall Sections, 560W. f. 3401165 : R1.9 Polyester Multi, 370mm, 6.75m ² . g. 3401166 : R1.9 Polyester Multi, 425mm, 7.75m ² . h. 3401167 : R1.9 Polyester Multi, 475mm, 7.58m ² .	

	Thermal Insulation (contd.)	i. 3401168: R1.9 Polyester Multi, 580mm, 7.93m ² .
2.3	Entry Door Hardware	<p>Item: Dead-latches</p> <p>a. 4582533: Lockwood 002-1L1SP; single-cylinder dead-latch; suitable for 'open-in', 30-45mm-thick, timber frame doors; satin-chrome finish.</p> <p>b. 2910052: Lockwood 002-4L1SP; single-cylinder dead-latch; suitable for 'open-out', 30-45mm-thick, metal- or timber-framed doors; satin-chrome finish.</p> <p>Item: Door-viewer</p> <p>c. 4612412: Yale® Securi-viewer, polished brass (MC96PB); suitable for timber, uPVC, or aluminium, 35-60mm-thick doors.</p> <p>d. 4612404: Yale® Securi-viewer, satin-chrome (MC96SC); suitable for timber, uPVC, or aluminium, 35-60mm-thick doors.</p>
2.4	Paint	<p>Item: Resene® exterior and interior premium-quality paint</p> <p>a. Interior colours as per <i>M-248: Colour Choices – Interior</i>.</p> <p>b. Exterior colours must be approved by Kāinga Ora and meet requirements of the relevant local authority.</p> <p>Notes</p> <p>1. The following are not permitted:</p> <p>a. Paint on interior hinges or hardware.</p> <p>b. Paint applied to new concrete floors and stairs.</p> <p>c. Clear finishes on the exterior.</p>

3 INTERIOR FINISHES		HOUSING – TYPICAL PRODUCTS
Building Element	Measurable Criteria	
3.1	Vinyl Flooring: Bathrooms; Laundries; Toilets	<p>Bathrooms</p> <p>Item: Polyflor™ Polysafe Standard PUR</p> <p>a. PS 2mm safety-sheet; Autumn Beige (4140)</p> <p>Laundries / Separate Toilets</p> <p>Item: Polyflor™ XLPUR</p> <p>a. 4021 2mm homogenous-sheet with PUR top-surface</p> <p>i. Colours: Porcelain (3880); Flint (3720); Sablee Beige (3900)</p> <p>Notes</p> <p>1. See Section 2C (3.1) for additional requirements.</p>
3.2	Vinyl Flooring: Kitchens; Dining-areas; Entries	<p>Item: Polyflor™ XLPUR</p> <p>a. 4021 2mm homogenous-sheet with PUR top-surface</p> <p>i. Colours: Porcelain (3880); Flint (3720); Sablee Beige (3900)</p>

3.3	Carpet	<p>Item: Godfrey Hirst carpet</p> <p>a. 44810: Tucson Graphics; 100% solution-dyed nylon loop-pile, 712g/m²; colours: Oxide (750) or Jade (970).</p> <p>Item: Godfrey Hirst carpet underlay</p> <p>b. 374018: 8mm, 69kg/m³, 1.8 x 15m rolls; colour: red.</p>
3.4	Doors	<p>Item: Superior doors</p> <p>a. 2910082: 1980 x 460 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>b. 2910083: 1980 x 510 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>c. 2910084: 1980 x 560 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>d. 2910085: 1980 x 610 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>e. 2910086: 1980 x 660 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>f. 2910087: 1980 x 710 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>g. 2910088: 1980 x 760 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>h. 2910089: 1980 x 810 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>i. 2910090: 1980 x 860 x 38 SOLID EPS PP 4mm SKIN KOHC.</p> <p>j. 2910091: 1980 x 910 x 38 SOLID EPS PP 4mm SKIN KOHC.</p>
3.5	Curtains	<p>Item: Harvey Furnishing curtains</p> <p>a. KOC01: Flat, triple-woven, 250g/m²; 100% polyester.</p> <p>Item: Harvey Furnishing ‘SuperFit’ curtain tracks</p> <p>b. KOFFT1: Curtain tracks with glides and caps.</p>
3.6	Shower Curtains	<p>Item: Shower curtains</p> <p>a. 3670424: Cloud9® 1200 x 1800mm; white; weighted.</p> <p>b. 3670425: Cloud9® 1800 x 1900mm; white; weighted.</p> <p>c. 2910056: Watertight 2200 x 2200mm; weighted.</p> <p>d. 3671230: Cloud9® shower curtain hooks pack of 12.</p>

4 INTERIOR HOUSING – TYPICAL PRODUCTS HARDWARE

Building Element	Measurable Criteria
4.1	<p>Door Handle</p> <p>Item: Schlage Medio Series – ‘Centra’</p> <p>a. Rose diameter = 57mm; back-set = 60mm.</p> <p>b. Satin-chrome finish.</p> <p>c. Suitable for door-thicknesses of 30-50mm (passage set) or 30-42mm (privacy set).</p> <p>d. Functions: furniture (4551683); passage set (4551684); privacy set (4551686); and dummy trim (4551687).</p>

4.2	Door Closer: Wardrobes & Cupboards	Item: Miles Nelson® Door Magnet a. 4556374 : 332CP single-pack door magnet; 22mm [∅]
4.3	Bathroom Fixtures	Item: Rail-ends (towel- and curtain-rails) a. 3699345 : 19mm rail-end brackets for towel-rails; chrome. b. 3699303 : 19mm rail-end flanges for shower-rails; chrome. Item: Tubing (towel- and curtain-rails) a. 3692639 : 19mm aluminium tube-rail; 1.8m; chrome. b. 3692621 : 19mm aluminium tube-rail; 1.2m; chrome. c. 3692613 : 19mm aluminium tube-rail; 900mm; chrome.

5 INTERIOR JOINERY HOUSING – TYPICAL PRODUCTS		
Building Element	Measurable Criteria	
5.1	Bathroom Vanity	Item: Wall-hung vanities a. 11001/01 : 600 (W) x 400mm (D); Zintec; stainless-steel on HDPE waste; no over-flow or storage. b. 10601-STM : 750 (W) x 460mm (D); Zintec; stainless-steel on HDPE waste; no over-flow or storage. c. 11101/01 : 900 (W) x 460mm (D); Zintec; stainless-steel on HDPE waste; no over-flow or storage. Item: Floor vanities a. 30401/01 : KOHC 600mm foil-wrapped; grade-304 stainless-steel plinth; melamine white; includes over-flow waste. b. 30501/01 : KOHC 750mm foil-wrapped; grade-304 stainless-steel plinth; melamine white; includes over-flow waste. c. 30601/01 : KOHC 900mm foil-wrapped; grade-304 stainless-steel plinth; melamine white; includes over-flow waste.
5.2	Shaving / Medicine Cabinet	Item: Cabinet a. 942.0 : cabinet with mirror glued to solid-backing. i. 400 (W) x 730 (H) x 115mm (D) ii. Includes x2 shelves
5.3	Laundry Tub Cabinet	Item: Robinhood® laundry tubs a. ST3101KOHC : Standard laundry tub and storage i. 560 (W) x 562 (D) x 900mm (H) ii. Includes: Full-width storage with reversible door; stainless-steel 30L bowl with over-flow outlet; and single-lever mixer tap. iii. Satin-white, powder-coated galvanised steel. b. STSLIMTAPKOHC : Slim-line laundry tub and storage i. 350 (W) x 560 (D) x 900mm (H) ii. Includes: Full-width storage with reversible door; stainless-steel 24L bowl with over-flow outlet; and single-lever mixer. iii. Satin-white, powder-coated galvanised steel.

6 BUILDING SERVICES		HOUSING – TYPICAL PRODUCTS
Building Element	Measurable Criteria	
6.1	Hot Water Cylinder	<p>Item: Low-pressure hot water cylinders</p> <p>a. 14818013T: VE; 180L; 488 x 1720mm (H); 2kW; triple-inlet.</p> <p>b. 14818015T: VE; 180L; 488 x 1720mm (H); 3kW; triple-inlet.</p> <p>c. 15818015T: VE; 180L; 580 x 1166mm (H); 3kW; triple-inlet.</p> <p>d. 14T18013: 180L; 560 x 1224mm (H); 2kW; side-entry.</p> <p>e. 14T18015: 180L; 560 x 1224mm (H); 3kW; side-entry.</p> <p>f. 54T13513: 135L; 540 x 1030mm (H); 2kW.</p> <p>i. South Island only.</p> <p>g. 54T18013: 180L; 540 x 1350mm (H); 2kW.</p> <p>i. South Island only.</p> <p>h. 54T18015: 180L; 540 x 1350mm (H); 3kW.</p> <p>i. South Island only.</p> <p>i. 16513513: 135L; 510 x 1145mm (H); BCRL; 2kW; wet-back.</p> <p>j. 12518015: 180L; 610 x 1020mm (H); BCRL; 3kW; wet-back.</p> <p>Item: Mains-pressure hot water cylinders</p> <p>k. 31213513: 135L; 488 x 1335mm (H); 2kW; side-entry.</p> <p>l. 31213515: 135L; 488 x 1335mm (H); 3kW; side-entry.</p> <p>m. 32213515: 135L; 580 x 935mm (H); 3kW; side-entry.</p> <p>n. 31218015: 180L; 488 x 1720mm (H); 2kW; side-entry.</p> <p>o. 31218013: 180L; 488 x 1720mm (H); 3kW; side-entry.</p> <p>p. 32218015: 180L; 580 x 1166mm (H); 3kW; side-entry.</p> <p>Item: Plastic safe-tray with 40mm plastic-waste</p> <p>q. KOHCTRAY450: 450 x 450mm</p> <p>r. KOHCTRAY540: 540 x 540mm</p> <p>s. KOHCTRAY640: 640 x 640mm</p>
6.2	Bathtub	<p>Item: High-lip bathtub with over-flow, plug, and stainless-steel on HDPE waste</p> <p>a. 01HC000016WH: 1525mm (L) – includes bath-frame.</p> <p>b. CLTPBP15-NF: 1525mm (L) – no bath-frame.</p> <p>c. 01HC000006WH: 1675mm (L) – includes bath-frame.</p> <p>d. 01HC0000061: 1675mm (L) – no bath-frame.</p>

6.3	Shower	<p>Item: Shower trays, threshold-steps, and wastes</p> <ol style="list-style-type: none"> BP151127: KOHC H4 shower tray + threshold-step + waste. BP151129: Stainless-steel, 925 x 925mm shower tray with threshold. BP151121: Single threshold-step for H4 shower tray. 812831: Waste; easy-clean, PVC trap; 40mm CP (for shower floors). <p>Notes</p> <ol style="list-style-type: none"> See Section 2C (6.3) for additional requirements.
6.4	Toilet Suite	<p>Item: Toilet suites</p> <ol style="list-style-type: none"> LEVUTAHS: LeVivi 4.5/3L; vitreous china; S-trap suite. TOT-DISSET-WH: Toto® Valdes Care, 4.5/3L; S-trap suite. <p>Notes</p> <ol style="list-style-type: none"> See Section 2C (6.4) for additional requirements.
6.5	Basin	<p>Item: Toto® ‘Sintra’ basin</p> <ol style="list-style-type: none"> KOHC-SINBASPED-W: vitreous china wall-basin with semi-pedestal; 500 (W) x 350mm (D); includes waste. <p>Item: Caroma® compact basin</p> <ol style="list-style-type: none"> CRMCOMPWB-WH1: vitreous china hand-basin; wall-hung; 560 (W) x 230mm (D); chrome over-flow and waste.
6.6	Kitchen Sink Mixer	<p>Item: Methven® pro-mix</p> <ol style="list-style-type: none"> PRSLs’CP: Sink mixer; chrome finish; A/P KOHC.
6.7	Bathroom Basin Mixer	<p>Item: Methven® pro-mix</p> <ol style="list-style-type: none"> PRBKOHC: Basin mixer; chrome finish; A/P KOHC.
6.8	Separate Basin Mixer	<p>Item: Methven® pro-mix</p> <ol style="list-style-type: none"> PRBM’CP: Mini basin mixer; chrome finish; A/P KOHC.
6.9	Shower-rose Mixer	<p>Item: Felton® ‘Designer’ pack</p> <ol style="list-style-type: none"> FNTKOHCU: Complete shower mixer pack; KOHC <p>Notes</p> <ol style="list-style-type: none"> See Section 2C (6.9) for additional requirements.
6.10	Bath Tap	<p>Item: Methven® AWA bath tap</p> <ol style="list-style-type: none"> MTHAWA493 20’CP: 20mm CP tap.
6.11	Laundry Tap	<p>Item: Methven® AWA tap</p> <ol style="list-style-type: none"> AW413FWM: Awa washing machine/laundry tap (single).
6.12	Smoke Alarm	<p>Item: FireHawk smoke alarm</p> <ol style="list-style-type: none"> 141402C: FHB10 10-year, sealed smoke alarm.

6.13	Heater	<p>Item: Goldair® panel heaters</p> <p>a. GPH350: 1.5kW; white; 410 (H) x 620 (W) x 120mm (D); adjustable thermostat.</p> <p>b. GPH450: 2kW; white; 410 (H) x 780 (W) x 120mm (D); adjustable thermostat.</p> <p>Item: Serene® ‘Roma’ wall-heater</p> <p>c. S2044: 2.2kW; wall-mounted; fan-forced; IP24-rating 430 (H) x 270 (W) x 135mm (D)</p> <p>Item: Haier® ‘Flexis’ heat-pumps</p> <p>d. AS35FBBHRA: 3.4kW (cooling) / 3.8kW (heating); high-wall; white; 301 (H) x 870 (W) x 196mm (D); 10.1kg.</p> <p>e. AS53FEBHRA: 5.1kW (cooling) / 5.7kW (heating); high-wall; white; 337 (H) x 1115 (W) x 230 (D); 13kg.</p> <p>f. AS71FEBHRA: 7.1kW (cooling) / 7.6kW (heating); high-wall; white; 337 (H) x 1115 (W) x 230 (D); 13kg.</p> <p>g. AS82FFAHRA: 8.2kW (cooling) / 9.0kW (heating); high-wall; white; 365 (H) x 1342 (W) x 275 (D); 21kg.</p> <p>h. AS302MNERA: 9.0kW (cooling) / 10.0kW (heating); high-wall; white; 365 (H) x 1316 (W) x 270mm (D); 22kg.</p> <p>Notes</p> <p>1. See Section 2C (6.13) for additional requirements.</p>
6.14	Stove	<p>Item: Westinghouse® stoves</p> <p>a. WLE522WA: 540mm (W); white; free-standing cooker with conventional oven. Includes 60-minute timer; and electric hob with x4 coil-elements.</p> <p>b. WLE622WA: 600mm (W); white; free-standing cooker with conventional oven. Includes: 2-hour timer; oven light; storage drawer; and electric hob with x4-coil elements.</p>
6.15	Extraction: Kitchen	<p>Item: Westinghouse® range-hood</p> <p>a. WRC604WC: white, wall-mounted canopy; 600mm.</p> <p>i. 680m³/hr air-flow; high-speed noise level of 60dB; LED lighting; push-button controls.</p> <p>Item: HomeTech® range-hoods</p> <p>b. RH-FILPAN-TR: externally-vented kitchen exhaust system with remote in-line fan and removable filter.</p> <p>i. 700m³/hr air-flow including forming openings, ducting, and roof-penetrations.</p> <p>c. RH-BOXWHT-90-TW: externally-vented kitchen fan-box with centrifugal fan and range-hood filter.</p> <p>Item: Unilux™ ducting kit</p> <p>d. ULX150: range-hood ducting kit, suitable for 125 and 150mm^Ø outlets for wall and eave installations.</p>

6.16	Extraction: Bathroom and Laundry	<p>Item: HomeTech® extraction fans</p> <ul style="list-style-type: none"> a. EX2ILTRHFT: Roof-mounted in-line fan system vented through single roof-flashing; services two rooms back-to-back. <ul style="list-style-type: none"> i. System extracts 338.4m³/h at each diffuser for x2 150mm[∅] flexible duct-lengths up to 3m. b. EXBUCKMTRHFT: Fan system that provides extract ventilation through roof-flashing via a fan mounted on the roof. <ul style="list-style-type: none"> i. System extracts 316.8m³/h at a diffuser for 200mm[∅] flexible duct-lengths up to 3m. c. EXILTRHFT: Roof-mounted, in-line fan system vented through the roof-flashing. <ul style="list-style-type: none"> i. System uses a 15-minute run-on timer; extracts 270m³/h at a diffuser for 150mm flexible duct-lengths up to 5m. d. EXSURMTWHFT: Wall-mounted, 150mm mechanical ventilation fan that vents directly through the exterior wall-cowl. <ul style="list-style-type: none"> i. System extracts 252m³/h.
6.17	Lighting	<p>Item: Simx® flood-lights</p> <ul style="list-style-type: none"> a. LHT0269 (black) / LHT0270 (white): Sensor LED; 2 x 8W <ul style="list-style-type: none"> i. 140° detection; 8m-range; 1200lm; IP-55 ii. 144 (H) x 146 (W) x 95mm (D); wall- or ceiling-mounted <p>Item: Ambius® ceiling-lights</p> <ul style="list-style-type: none"> b. ACL25W-3T: 25W; 2300lm; 3K, 4K, 5K; IP-54 c. ACL25W-3TMIC: 25W; 2300lm; 3K, 4K, 5K; PIR; IP-54 <p>Item: Ambius® lamps</p> <ul style="list-style-type: none"> d. ALAE1230: 12W; 3K; A60 LED globe; 1055lm; Edison screw e. ALAB1230: 12W; 3K; A60 LED globe; 1055lm; Bayonet cap f. ALPAR38LHL: 15W; 4K; PAR38 LED lamp; 1500lm; IP-44



2. HOUSING: DIVERSE

*Standards for Full universal design, Accessible, and
Community- group Housing*



Introduction

Kāinga Ora – Homes and Communities recognises its customers' needs cannot all be met using elements of “typical” housing design described [above](#).

As customers' requirements are diverse and wide-ranging, this section includes items that are additional to, or a variation of, [typical or standard requirements](#).

While this section focusses on specialised typologies, there are a number of design elements or components that will be specifically-required to meet individual or bespoke needs.

Such elements will be included in the *Project Brief* or, where appropriate, an assessment report completed by a trained professional (for example, an Occupational Therapist), for a given project.

Consequently, when designing a new dwelling it is **essential** project managers/leads use this resource alongside the specific *Project Brief*.

Diverse categories⁵

Full universal design

Housing classified as ‘full universal design’ provides homes for a range of customers, with the aim of providing housing:

“that is, or can be, fit for purpose for most customers, whether or not they have a disability [and which is] more liveable for the entire population, including (but not limited to) young and growing families, people of all ages who experience temporary injury or illness, those with mobility, visual or cognitive impairments, and the growing ageing population [sic]”⁶.

While ‘typical’ or ‘standard’ Kāinga Ora homes include many features of universal design, ‘full universal design’ homes take this further by aiming “to be usable and safe for people of all ages and stages.”⁷

Accessible

Accessible homes include the features found in ‘full universal design’ **and** provide additional modifications beyond this to meet customers' needs.

These homes are designed for those living with a medium- or long-term acquired and/or developmental disability that presents as a sensory, physical, neurological, intellectual, or psychological impairment (or combination thereof).

The design of accessible homes is such that anyone living with an impairment and disability enjoys the same level of amenity and functionality as those customers who do not.

In addition, customers may require be-spoke or customised modifications to meet specific individual needs.

⁵ To align with the Kāinga Ora *Accessibility Policy: 2019-2022* (2019), the previously-used categories of “accessible”, “older persons' housing”, and “community group housing” have been replaced by those presented herein.

⁶ Silver, J. (14 May 2020; p2). *Kāinga Ora's Accessibility Policy: Defining what meets the target of 15% new builds meeting universal design standards – 101 Factsheet*. Internal paper presented to the Construction Leadership Group; Kāinga Ora – Homes and Communities.

⁷ Ibid, p.4

Community-group housing (CGH)

Those residing in Community-group Housing (CGH) may have high and/or specialised needs in the context of a supported-living environment.

CGH developments often include community groups such as:

- Those living with a long-term mental health disability.
- People with intellectual and/or physical disabilities.
- Women needing refuge.
- At-risk youth.
- Families needing emergency housing.

Such developments may be complex, multi-unit developments that include larger 5-6 bedroom-dwellings, single-level access, wheelchair-accessible units, and common or shared spaces that are suitable for a wide range of needs.

As noted above, CGH developments may have be-spoke requirements that are in addition to, or a variation of, the requirements described herein; project managers should refer to the specific *Project Brief*.

2A – SPACE

Please note

Specific requirements provided below **should be, unless stated otherwise, treated as in addition to** requirements provided in the *Housing: Typical* section of this resource.

Similarly, unless stated otherwise, requirements for ‘Accessible’ properties should be treated as **in addition to** requirements for ‘Full Universal Design’ properties.

1 DRY HOUSING – DIVERSE		
Built outcomes		Measurable Criteria
1.1	Weather-tight and Durable	Full Universal Design AND Accessible AND CGH a. See Section 1A (1) .
1.2	Moisture Reduction	Full Universal Design AND Accessible AND CGH a. See Section 1A (1) .

2 WARM HOUSING: DIVERSE		
Built Outcomes		Measurable Criteria
2.1	Heating	Full Universal Design a. As per Section 1A (2.1) .
		Accessible b. There is a fixed heating source in the accessible bathroom, with the base of the heater mounted at least 1.6m above the FFL. c. All other heating is as per Section 1A (2.1) .
		CGH d. As per Section 1A (2.1) .
2.2	Thermal Performance	Full Universal Design AND Accessible AND CGH a. See Section 1A (2.2) .

3 SAFE HOUSING – DIVERSE		
Built Outcomes		Measurable Criteria
3.1	Security	Full Universal Design AND Accessible a. Letterboxes are accessible and functional for use by those with reduced or impaired mobility and/or upper limb function.

		<p>CGH</p> <p>b. Where required, there is ‘safety fencing’ to meet the needs of specific user groups.</p> <p>Notes</p> <p>1. Refer to the specific <i>Project Brief</i> for additional requirements.</p>
3.2	Driveway safety	<p>Full Universal Design</p> <p>a. There is at least one standard carpark that is level, firm, and slip-resistant and which can be adapted to be at least 3.5m-wide.</p> <p>Notes</p> <p>1. See also: Section 1A (3.2).</p>
		<p>Accessible</p> <p>b. There is a covered drop-off zone or a car park adjacent to the entry.</p> <p>c. The driveway can accommodate wheelchair-accessible vehicles.</p> <p>d. Each unit has an accessible car park.</p> <p>i. 3.5 (W) x 5.0m (L).</p> <p>ii. Maximum slope of 1:20 and a maximum cross-fall of 1:50.</p>
		<p>CGH</p> <p>e. There is a covered drop-off zone or a car park adjacent to the entry.</p> <p>f. The driveway can accommodate wheelchair-accessible vehicles.</p>
3.3	Early Fire Warning	<p>Full Universal Design</p> <p>a. As per Section 1A (3.3).</p> <p>b. Smoke alarm systems can be adapted to include audio and visual warnings.</p>
		<p>Accessible AND CGH</p> <p>c. A Fire Engineer will either complete the individual Specific Fire Design, or will peer review that provided by an external provider.</p> <p>i. This is to assess additional fire protection requirements for residents with cognitive, physical, and/or sensory impairments that may affect their ability to independently evacuate.</p> <p>d. Fire services’ access panels and/or equipment are located to maintain the quality and amenity of the local environment.</p> <p>e. Smoke alarm systems can be adapted to include audio and visual warnings.</p> <p>Notes</p> <p>1. Refer to the specific <i>Project Brief</i> for additional requirements.</p>
3.4	Injury Reduction	<p>Full Universal Design</p> <p>a. As per Section 1A (3.4).</p> <p>b. All access-ways can be easily adapted to be step-free if required.</p>

Injury Reduction (contd.)	<p>Accessible</p> <p>c. As per Section 1A (3.4).</p> <p>d. All interior and exterior steps/stairs and ramps include at least one ‘graspable’ hand-rail.</p> <p>e. Include a wheel-stop on pathways and/or ramps with a fall-height greater than 20mm to a lower-level.</p> <p>Notes</p> <p>1. Hand-rail profiles must comply with Section 3 of MBIE’s D1/AS and VM resource.</p>
	<p>CGH</p> <p>f. As per Section 1A (3.4).</p> <p>Notes</p> <p>2. Refer to the specific <i>Project Brief</i> for additional requirements.</p>

4 ESSENTIAL AMENITY		HOUSING – DIVERSE
Built Outcomes		Measurable Criteria
4.1	Health	<p>Full Universal Design</p> <p>a. All paths from car-parking areas and the street are, wherever possible, step-free, and/or have the ability to install a ramp in the future if required.</p> <p>b. All service-areas (including clothes-lines and rubbish/recycling areas) are accessible and functional for use by those with reduced and/or impaired mobility and/or upper limb function.</p> <p>c. Where required, there is secure, weather-proof storage provided for a mobility scooter or wheelchair that is easily-accessible and which (if for a mobility scooter) includes covered access from the dwelling and an ‘accessible’ route to the street.</p> <p>d. Kitchens are designed so that:</p> <ul style="list-style-type: none"> i. There is at least 1.2m clearance in front of all benches and appliances. ii. There is 300mm between internal corners and the opening-edge of appliances. iii. The dining table is located adjacent to the kitchen bench. iv. Under-bench storage is comprised solely of drawers. <p>Notes</p> <p>1. Refer to the specific <i>Project Brief</i> for additional requirements.</p>

**Health
(contd.)****Accessible**

- e. There is secure, weather-proof storage provided for a mobility scooter or wheelchair that is easily-accessible and which (if for a mobility scooter) includes covered access from the dwelling and an 'accessible' route to the street.
- f. Bedrooms have a **minimum** floor-area of 12m² with a minimum dimension of 3.2m in **any** direction.
- g. Service areas (including washing lines and rubbish and recycling areas) are accessible and functional for use by those with reduced and/or impaired mobility and/or upper limb function.
- h. Kitchens are designed so that:
 - i. They are functional for a person with a mobility aid (e.g. a walking frame or stick) and/or upper limb weakness.
 - ii. Kitchen benching is continuous (rather than 'galley' style).
 - iii. The layout minimises the need to reach or bend down (a separate bench-top wall oven and hob is acceptable).
 - iv. There is at least 1.5m clearance in front of all benches and appliances.
 - v. There is 300mm between internal corners and the opening-edge of appliances.
 - vi. The dining table is located adjacent to the kitchen bench.
 - vii. Under-bench storage is comprised solely of drawers.
- i. Each unit has an accessible bathroom.
- j. Units with 3 or more bedrooms have one bathroom with a bath suitable for the installation of a hoist.

Notes

- 2. An accessible kitchen should **only** be provided where purpose-designed or altered to suit the needs of a specific customer; refer to the *Project Brief*.
- 3. Refer to the specific *Project Brief* to ascertain requirements for additional bedrooms for carers or similar professionals.

CGH

- k. Deck/patio areas have a **minimum** area of 20m² and are **at least** 4m-wide.
- l. The number of occupants should be **x1 per bedroom**.
- m. Bedrooms have acoustically-insulated internal walls.
- n. All internal doors are **at least** 910mm-wide.
- o. Hallway access-areas to bedrooms and bathrooms have a 1.5m[∅] turning-circle.

	<p>Health (contd.)</p>	<p>p. Dwellings with 3 or more bedrooms have x3 toilets.</p> <ul style="list-style-type: none"> i. Dwellings with 4 or more bedrooms have x2 bathrooms and an additional separate toilet. <p>q. All bathrooms are accessible and each building has x1 accessible bathroom with a level-access shower with a minimum floor-area of 1.2 x 2m.</p> <p>r. In each building, there is at least:</p> <ul style="list-style-type: none"> i. One accessible bathroom with a toilet with a right-hand grab-rail. ii. One additional accessible bathroom with a toilet with a left- hand grab-rail. <p>s. One bathroom is sized to facilitate accessibility but includes a standard-design toilet.</p> <p>t. Kitchens have an accessible bench located between the kitchen and dining-area.</p> <p>u. Each building has x2 180L hot water cylinders.</p> <p>Notes</p> <p>4. Where units need to include a bath, refer to the specific <i>Project Brief</i>.</p>
<p>4.2</p>	<p>Lifetime Design</p>	<p>Full Universal Design</p> <ul style="list-style-type: none"> a. The entry door has a level-access that conforms to Section 1A (4.2a) and which has a non-slip landing with a maximum cross-fall of 1:50. b. All other doors have a level threshold. c. There are access routes from the main-entry to the street, car- park (and/or drop-off zone) and from the building to any/all communal- and service-areas which: <ul style="list-style-type: none"> i. Conform to – as a minimum – the requirements of Section 1A (4.2(d)). ii. Can be, where required, converted to ‘accessible routes’ in the future. d. The entry lobby is at least 1.2m². e. All circulation routes are at least 1.05m-wide and provide at least 800mm-clearance between items of furniture. f. There is a bathroom (with toilet) on the main living-level that, if required, can be converted to a fully-accessible space. g. There is a 12m² bedroom on the main living-level that is suitable for a Queen-sized bed and which includes light switches on either side of the bed. h. Bedrooms: <ul style="list-style-type: none"> i. Are suitable for a 1.35 x 1.9m double bed. ii. Have 900mm clear-space around both sides and the foot of the bed and a 900mm path to the door. i. Laundries include at least 1.05m clearances in front of all fitting and appliances.

	<p>Lifetime Design (contd.)</p>	<p>j. All bench-tops and cabinetry use contrasting colours.</p> <p>k. All walls and doors use contrasting colours.</p> <p>l. In apartment buildings, there is lift access to dwellings located above the ground floor.</p> <p>Notes</p> <ol style="list-style-type: none"> 1. Wherever possible, developments with a shared single entry for multiple users should be step-free or have the ability to install a ramp in the future. 2. All common areas to be accessible as defined in the <i>New Zealand Building Code</i> (1992). 3. “Accessible routes” are defined as being at least 1.2m-wide, with a maximum slope of 1:20, and a maximum cross-fall of 1:50. <hr/> <p>Accessible AND CGH</p> <p>m. Ramps with gradients above 1:20 are deemed “accessible” with a maximum slope of 1:12 and at least one accessible, graspable hand-rail.</p> <p>n. All interior circulation routes are at least 1.2m-wide and include at least 900mm-clearance between items of furniture.</p> <p>o. All interior spaces are suitable for individuals using a wheelchair or other mobility-aid.</p> <ol style="list-style-type: none"> i. All rooms have a turning-circle that is at least 1.5m[∅]. <p>p. On primary living-levels, there is a 300mm return-wall provided on the door-handle edge of all doorways (when the door swings <i>toward</i> the user).</p> <p>q. Window sills in the main living-area and in bedrooms are placed at a maximum height of 1m above the FFL.</p> <p>r. There is a bathroom that is suitable for wheelchair users provided on the main living-level.</p> <p>s. Accessible bathrooms are at least 2.1m in any direction and have:</p> <ol style="list-style-type: none"> i. A 1.2 x 1.2m level-access shower. ii. An accessible basin. <p>t. Laundries in accessible dwellings include 1.2m-clearance in front of all fittings and appliances.</p> <p>u. Where provided, the garage or carport:</p> <ol style="list-style-type: none"> i. Has at least a 2.5m clear-height from floor to ceiling (including under the garage door) ii. Is 3.5 (W) x 6m (L). iii. Is suitable for exiting and entering the vehicle from the rear. <p>Notes</p> <ol style="list-style-type: none"> 4. Refer to <i>M-215a: Standard Detail Drawings</i>. 5. Stairs and lifts are not permitted.
--	--	---

2B – BUILDING SYSTEMS AND MATERIALS

Please note

Unless directed otherwise, the systems described below should be used as substitutes for those described in [Section 1B: Housing: Typical Systems](#).

1 PROPERTY EXTERIOR		HOUSING – DIVERSE SYSTEMS
Building Element		Measurable Criteria
1.1	Driveways	Full Universal Design AND Accessible AND CGH a. As per Section 1B (1.1) .
1.2	Paving	Full Universal Design a. As per Section 1B (1.2) .
		Accessible b. A wheel-stop is required for pathways and ramps with a fall greater than 20mm to a lower-level.
		CGH c. As per Section 1B (1.2) .
1.3	Retaining Walls	Full Universal Design AND Accessible AND CGH a. As per Section 1B (1.3) .
1.4	Fencing	Full Universal Design AND Accessible AND CGH a. As per Section 1B (1.4).
1.5	Decks, Patios, and Steps	Full Universal Design AND Accessible AND CGH a. As per Section 1B (1.5) .
1.6	Storage	Full Universal Design AND Accessible AND CGH a. As per Section 1B (1.6) .
1.7	Refuse	Full Universal Design AND Accessible AND CGH a. As per Section 1B (1.7) .
1.8	Clothes-lines	Full Universal Design a. As per Section 1B (1.8) .
		Accessible AND CGH b. Retractable and drop-down lines are not permitted .
1.9	Planting	Full Universal Design AND Accessible AND CGH a. As per Section 1B (1.9) .
1.10	Letterbox	Full Universal Design a. As per Section 1B (1.10) .

	Letterbox (contd.)	Accessible b. The letterbox is accessible and easy-to-operate by those with reduced mobility and/or upper-limb function. c. The letterbox is accessible via hard surfaces appropriate for wheelchair users.
		CGH d. As per Section 1B (1.10) .

2 BUILDING ENVELOPE HOUSING – DIVERSE SYSTEMS		
Building Element		Measurable Criteria
2.1	Roofing	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.1) .
2.2	Rain-water	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.2) .
2.3	Cladding	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.3) .
2.4	Sub-floor	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.4) .
2.5	Floor	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.5) .
2.6	Thermal Insulation	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.6) .
2.7	Slab Insulation	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.7) .
2.8	Entry Porch	Full Universal Design AND Accessible AND CGH a. As per Section 1B (2.8) .
2.9	Entry Door	Full Universal Design AND Accessible AND CGH a. All exterior doors have a level-access and a flush-sill.
2.10	Entry Door Hardware	Full Universal Design AND Accessible AND CGH a. As per Section B (2.10) – Housing: Typical .
2.11	Windows and Glazing	Full Universal Design a. As per Section B (2.11) – Housing: Typical .
		Accessible AND CGH b. Window controls must be: i. Lever-type that can be easily-operated with one hand. ii. Set at no more than 1.2m above the FFL.

3 INTERIOR FINISHES HOUSING – DIVERSE SYSTEMS		
Building Element	Measurable Criteria	
3.1	Flooring: Entries; Kitchens; Dining-areas; Bathrooms; & Laundries	<p>Full Universal Design</p> <p>a. As per Section 1B (3.1).</p>
		<p>Accessible AND CGH</p> <p>b. Entry / Kitchen / Dining:</p> <ul style="list-style-type: none"> i. High-wear vinyl; 2mm commercial-grade sheet-flooring system with 0.7mm wear layer. ii. Complete with matching vinyl welding rod and aluminium threshold strips. <p>c. All bathrooms:</p> <ul style="list-style-type: none"> i. Has a slip-resistance equivalent to “wet in normal use” as defined in Table 2 of D1/AS1. <p>d. Accessible bathrooms:</p> <ul style="list-style-type: none"> i. Safety vinyl; 2mm commercial-grade non-slip sheet flooring system with 150mm high coving to all walls. ii. Recess the coving behind the wet-wall lining to create a drip edge. iii. Bevel-edge tile reducer is indicated under vinyl to form wet flooring well at bathroom entry. iv. The entire bathroom floor falls to the floor-drain with a fall of no less than: <ul style="list-style-type: none"> • 1:50 in the shower; and • 1:100 to the balance of the bathroom floor. <p>Notes</p> <ol style="list-style-type: none"> 1. Refer to <i>M-215a: Standard Detail Drawings</i>. 2. Specialist flooring finishes such as ceramic tiles are not permitted. 3. Refer to Section 2C (Diverse Products).
3.2	Flooring: (Living-areas; Bedrooms; Hallways; & Stairs)	<p>Full Universal Design</p> <p>a. As per Section 1B (3.2).</p> <p>Accessible AND CGH</p> <p>b. Carpet and underlay is double-direct-fixed and has high-wear resistance to equipment damage (i.e. suitable for casters).</p> <p>Notes</p> <ol style="list-style-type: none"> 1. Refer to Section 2C (Diverse Products).
3.3	Wall-linings	<p>Full Universal Design</p> <p>a. As per Section 1B (3.3).</p>
		<p>Accessible</p> <p>b. Hallways have impact-resistant wall-lining and corner-protection.</p> <p>Notes</p> <ol style="list-style-type: none"> 1. Refer to Section 2C (Diverse Products).

		<p>CGH</p> <p>c. All bedroom walls have x2 layers of 10mm plaster-board.</p> <p>d. Hallways have 10mm “Toughline” Gib® board and corner-protection.</p> <p>Notes</p> <p>1. Refer to Section 2C (Diverse Products).</p>
3.4	Wet-wall-linings	<p>Full Universal Design</p> <p>a. As per Section 1B (3.4).</p>
		<p>Accessible</p> <p>b. All walls have smooth pre-finished fibre cement sheet glued to CCA-treated H3.2 17mm (minimum) plywood.</p>
		<p>CGH</p> <p>c. As per Section 1B (3.4).</p>
3.5	Ceiling-linings	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (3.5).</p>
3.6	Interior Doors	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (3.6).</p>
3.7	Trims	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (3.7).</p>
3.8	Curtains	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (3.8).</p>
3.9	Shower Curtains	<p>Full Universal Design</p> <p>a. As per Section 1B (3.9).</p>
		<p>Accessible</p> <p>b. 100% polyester, commercial-quality curtain with weighted bottom seams.</p>
		<p>CGH</p> <p>c. As per Section 1B (3.9).</p>

4 INTERIOR HARDWARE		HOUSING – DIVERSE SYSTEMS
Building Element	Measurable Criteria	
4.1	Hardware	<p>Full Universal Design AND Accessible</p> <p>a. The entry door has a coat hook on the adjacent wall, located at 1.2m above the FFL.</p>
		<p>CGH</p> <p>b. As per Section 1B (4.1).</p>

4.2	Wardrobe Rails	Full Universal Design a. As per Section 1B (4.2) .
		Accessible AND CGH b. Rails have an adjustable height of 1.0-1.65m above the FFL.
4.3	Bathroom Fixtures	Full Universal Design a. As per Section 1B (4.3) .
		Accessible b. Curtain Rails <ol style="list-style-type: none"> Fixed at a height to ensure the shower curtain touches the floor and is located 200mm inside the perimeter of the sloping shower area. c. Mirror (separate to shaving/medicine cabinet) <ol style="list-style-type: none"> Located above the basin, 1.0m above the FFL to the lower edge. d. Grab-rails <ol style="list-style-type: none"> Peened finish; at least 30mm[∅] Wall-mounted beside the shower and toilet. Load capacity to support at least 200kgs in any direction. Notes <ol style="list-style-type: none"> Fixed shower-seats are not permitted. Refer to <i>M-215a: Standard Detail Drawings</i>. Refer to Section 2C (Diverse Products).
		CGH e. As per Section 1B (4.3) .

5 INTERIOR JOINERY HOUSING – DIVERSE SYSTEMS		
Building Element	Measurable Criteria	
5.1	Kitchen Benching and Cabinetry	Full Universal Design a. As per Section 1B (5.1) .
		Accessible AND CGH b. As per Section 1B (5.1) . Notes 1. Kitchen design must allow for the possibility of conversion to a “fully-accessible” kitchen (that includes a 250mm-high toe-kick, a side-opening wall oven, and separate hob) in the future if required.
5.2	Vanity Cabinet	Full Universal Design a. As per Section 1B (5.2) .
		Accessible b. Vanities are not provided in accessible bathrooms.

	Vanity Cabinet (contd.)	<p>Notes</p> <p>1. The amount of storage typically provided in a bathroom must not be reduced (i.e. storage amenity normally provided by a vanity must be provided via other means).</p> <hr/> <p>CGH</p> <p>c. As per Section 1B (5.2).</p>
5.3	Shaving / Medicine Cabinet	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (5.3).</p>
5.4	Laundry Tub Cabinet	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (5.4).</p>
5.5	Wardrobe Shelving	<p>Full Universal Design</p> <p>a. As per Section 1B (5.5).</p> <hr/> <p>Accessible AND CGH</p> <p>b. Shelving has an adjustable height of 1.0-1.65m above the FFL.</p>
5.6	Linen Cupboard Shelving	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (5.6).</p>
5.7	General Cupboard Shelving	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (5.7).</p>
5.8	HWC Cupboard Shelving	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (5.8).</p>

6 BUILDING SERVICES HOUSING – DIVERSE SYSTEMS		
Building Element		Measurable Criteria
6.1	Main Supply & Distribution	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.1) – Housing: Typical.</p>
6.2	External Taps	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.2).</p>
6.3	HWC	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.3).</p>
6.4	Bathtub	<p>Full Universal Design</p> <p>a. As per Section 1B (6.4).</p>

		<p>Accessible</p> <p>b. Where provided, baths in accessible bathrooms (only):</p> <ol style="list-style-type: none"> i. Have an integral over-flow. ii. Are mounted on a plinth with a 200mm-high toe-kick and a clear depth to allow fitment of a mobile hoist. iii. Have a height of 750mm above the FFL.
		<p>CGH</p> <p>c. As per Section 1B (6.4).</p>
6.5	Shower Tray	<p>Full Universal Design</p> <p>a. As per Section 1B (6.5).</p>
		<p>Accessible AND CGH</p> <p>b. Level-access shower with non-slip vinyl flooring.</p>
6.6	Toilet Suite	<p>Full Universal Design</p> <p>a. As per Section 1B (6.6).</p>
		<p>Accessible</p> <p>b. Toilets in accessible bathrooms (only):</p> <ol style="list-style-type: none"> i. Vitrified clay, close-coupled accessible suites with matching dual-flush cistern and rigid heavy-duty plastic seat. ii. Installed so the front of the seat is 750mm from the wall and 450mm from the side-wall to the centre-line of the pan. <p>Notes</p> <p>1. Refer to <i>M-215a: Standard Detail Drawings</i>.</p>
		<p>CGH</p> <p>c. As per Section 1B (6.6).</p>
6.7	Basin	<p>Full Universal Design</p> <p>a. As per Section 1B (6.7).</p>
		<p>Accessible</p> <p>b. Basins in accessible bathrooms (only):</p> <ol style="list-style-type: none"> i. Vitreous china; single tap-hole; integral over-flow. ii. Wall-mounted with base at 675mm above the FFL. iii. Waste-pipe must discharge through the wall. iv. Basin trap to include insulation to protect the user from burns. <p>Notes</p> <p>1. Vanity cabinets are not permitted in accessible bathrooms (see also Section 2B (5.2)).</p>
		<p>CGH</p> <p>c. As per Section 1B (6.7).</p>

6.8	Floor Waste	<p>Full Universal Design</p> <p>a. As per Section 1B (6.8).</p>
		<p>Accessible</p> <p>b. Showers in accessible bathrooms (only) include a floor-mounted, easy-to-clean trap that must be:</p> <ol style="list-style-type: none"> i. Centrally-located. ii. Fitted with a clamp to hold the safety vinyl in place. <p>Notes</p> <p>1. Refer to Section 2C (Diverse Products).</p>
		<p>CGH</p> <p>c. As per Section 1B (6.8).</p>
6.9	Kitchen Sink	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.9).</p>
6.10	Kitchen Sink Mixers	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.10).</p>
6.11	Basin Mixers	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.11).</p>
6.12	Shower-rose Mixer	<p>Full Universal Design</p> <p>a. As per Section 1B (6.12).</p>
		<p>Accessible</p> <p>b. Shower has:</p> <ol style="list-style-type: none"> i. A single-spray slide-hose hand piece. ii. A separate mixer. <p>Notes</p> <p>1. Refer to <i>M-215a: Standard Detail Drawings</i>.</p> <p>2. Placing the mixer so the shower-spray is directed towards the door is not permitted.</p> <p>3. Refer to Section 2C (Diverse Products).</p>
		<p>CGH</p> <p>c. As per Section 1B (6.12).</p>
6.13	Bath Taps	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.13).</p>
6.14	Laundry Taps	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.14).</p>
6.15	Smoke Alarms	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. Refer to the Specific Fire Design for information on fire protection systems.</p> <p>Notes</p> <p>1. Refer to Section 1B (6.15).</p>

6.16	Heater	Full Universal Design a. As per Section 1B (6.16) .
		Accessible b. As per Section 1B (6.16) . c. Bathrooms include a 2kW convection heater with a separate circuit and easy-to-read and –operate controls.
		Notes 1. Refer to Housing: Diverse Products
		CGH d. As per Section 1B (6.16) .
6.17	Stove	Full Universal Design a. As per Section 1B (6.17) .
		Accessible b. A securely-fixed, electric wall oven with: a reversible, side- opening door; 65L capacity; and an independent circuit. c. Electric bench-top hobs with an independent circuit.
		Notes 1. Refer to Section 2C (Diverse Products) .
		CGH d. As per Section 1B (6.17) .
6.18	Extraction: Kitchens	Full Universal Design AND Accessible AND CGH a. As per Section 1B (6.18) .
6.19	Extraction: Bathrooms & Laundries	Full Universal Design AND Accessible AND CGH a. As per Section 1B (6.19) .
6.20	Lighting	Full Universal Design a. Interior lighting eliminates strong contrasting patterns of light and dark.
		Accessible AND CGH b. Interior lighting eliminates strong contrasting patterns of light and dark. c. Task lighting is 300lx for kitchen work areas and the bathroom basin. d. Bedrooms have 2-way switching that is adjacent to the door and bed-head for the ceiling fitting.
6.21	Power	Full Universal Design a. As per Section 1B (6.21) .

	Power (contd.)	<p>Accessible</p> <p>b. An RCD-protected socket is located adjacent to the toilet.</p> <p>c. An RCD-protected socket is located adjacent to the bath (where provided) for the mobile hoist.</p> <p>d. A power-outlet is provided for the charging of electric wheelchairs and/or scooters.</p> <p>CGH</p> <p>e. There is at least one socket provided in the laundry that is suitable for a commercial washing machine.</p> <p>f. A power-outlet is provided for the charging of electric wheelchairs and/or scooters.</p>
6.22	Data, Phone, & TV Outlets	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.22).</p>
6.23	Aerials, Dishes, & MATV	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.23).</p>
6.24	Security	<p>Full Universal Design AND Accessible AND CGH</p> <p>a. As per Section 1B (6.24).</p>

2C – PRODUCTS

Please note

Products listed are optional for homes/properties falling within the *Housing: Diverse* category to meet the performance criteria used by Kāinga Ora.

The products listed below apply to all full universal design, accessible, and CGH properties and, where appropriate, should be substituted for those listed in [Section 2C: Housing: Typical \(Products\)](#).

1 PROPERTY EXTERIOR		HOUSING – DIVERSE PRODUCTS
Building Element	Measurable Criteria	
1.1 – 1.2	a. Refer to Section 1C (1) .	

2 BUILDING ENVELOPE		HOUSING – DIVERSE PRODUCTS
Building Element	Measurable Criteria	
2.1 – 2.3	a. Refer to Section 1C (2) .	

3 INTERIOR FINISHES		HOUSING – DIVERSE PRODUCTS
Building Element	Measurable Criteria	
3.1	Vinyl Flooring: Bathrooms; Laundries; Toilets	<p><u>Bathrooms and Separate Toilets (Accessible)</u> Item: Polyflor™ Polysafe Standard PUR a. PS 2mm safety-sheet; Autumn Beige (4140)</p> <p><u>Bathrooms (Full Universal Design / CGH)</u> b. Refer to Section 1C (3.1a).</p> <p><u>Separate Toilets (Full Universal Design / CGH)</u> c. Refer to Section 1C (3.1b).</p> <p><u>Laundries (All Diverse)</u> d. Refer to Section 1C (3.1b).</p>
3.2	Vinyl Flooring: Kitchens; Dining-areas; Entries	a. Refer to Section 1C (3.2) .

3.3	Carpet	<p>Full Universal Design / CGH</p> <p>a. Refer to Section 1C (3.3).</p> <p>Accessible</p> <p>Item: Godfrey Hirst carpet</p> <p>b. 44810: Tucson Graphics; 100% solution-dyed nylon loop-pile, 712g/m²; colours: Oxide (750) or Jade (970).</p> <p>Item: Simlay carpet underlay</p> <p>c. 4.7mm underlay (double-stick)</p> <p>Item: Gilt Industries carpet-reducer</p> <p>d. 3754 alloy carpet reducer with anti-slip insert threshold strip</p>
3.4	Doors	a. Refer to Section 1C (3.4) .
3.5	Curtains	a. Refer to Section 1C (3.5) .
3.6	Corner Guards	<p>Item: Koroseal® Corner guard</p> <p>a. G815: Korogard 1½" (3.81cm) extruded vinyl guard.</p>

4 INTERIOR HARDWARE HOUSING – DIVERSE PRODUCTS		
Building Element		Measurable Criteria
4.1	Door Handle	a. Refer to Section 1C (4.1) .
4.2	Door Closers	a. Refer to Section 1C (4.2) .
4.3	Bathroom Fixtures	<p>Item: Grab-rails</p> <p>a. 7726221: 'Classic' grab-rail; 300mm; knurled</p> <p>b. 7726227: 'Classic' L-rail; 750 x 750mm; knurled</p>

5 INTERIOR JOINERY HOUSING – DIVERSE PRODUCTS		
Building Element		Measurable Criteria
5.1 – 5.3		a. Refer to Section 1C (5) .

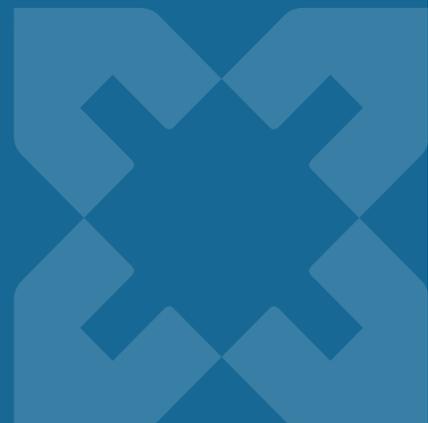
6 BUILDING SERVICES HOUSING – DIVERSE PRODUCTS		
Building Element		Measurable Criteria
6.1	Hot Water Cylinder	a. Refer to Section 1C (6.1) .
6.2	Bathtub	a. Refer to Section 1C (6.2) .

6.3	Shower	<p>Full Universal Design</p> <p>a. Refer to Section 1C (6.3).</p> <p>Accessible AND CGH</p> <p>b. Refer to Section 1C (6.5b).</p>
6.4	Toilet Suite	a. Item: Accessible - Caroma cosmo sovereign care suite with Avalon seat.
6.5	Basin	a. Refer to Section 1C (6.5) .
6.6	Kitchen Sink Mixer	a. Refer to Section 1C (6.6) .
6.7	Bathroom Basin Mixer	a. Refer to Section 1C (6.7) .
6.8	Separate Basin Mixer	a. Refer to Section 1C (6.8) .
6.9	Shower-rose Mixer	<p>Item: Felton® Shower-set</p> <p>a. DHSKCSR: Single-spray, slide-shower; chrome finish.</p> <p>i. Includes: hose; hand-piece; slide and wall-rail (690mm); soap dish; brackets.</p> <p>Item: Felton® Shower-set parts</p> <p>b. FNFSHCLB15'CP: 1.5m slide; flexi shower-hose; 10.5mm large-bore vinyl CP.</p> <p>c. FNPDSHC'CP: single-spray hand-piece, WH.</p>
6.10	Bath Tap	<p>Item: Methven® pro-mix</p> <p>a. PRBKOHC: Basin mixer; chrome finish; A/P KOHC.</p>
6.11	Laundry Tap	<p>Item: Methven® pro-mix</p> <p>a. PRSL5'CP: Sink mixer; chrome finish; A/P KOHC.</p>
6.12	Smoke Alarm	a. Refer to Section 1C (6.13) .
6.13	Heater	<p>Item: Serene® wall-mounted bathroom heater</p> <p>a. S2044: 'Roma' 2.2kW heater; 430 (H) x 270 (W) x 135mm (D); 3kg; IP-24</p>
6.14	Stove	a. Refer to Section 1C (6.14) .
6.15	Extraction: Kitchen	a. Refer to Section 1C (6.15) .
6.16	Extraction: Bathroom and Laundry	a. Refer to Section 1C (6.16) .
6.17	Lighting	a. Refer to Section 1C (6.17) .



APPENDICES

Supporting information for 'Typical' and 'Diverse' standards



Appendix A: Provisioning Tables

These **minimum** requirements are needed to achieve properties' quality outcome objectives for specific occupant groups.

Table 1: Minimum floor-areas and sanitary fixtures

DWELLING-SIZE BY BEDROOM-NUMBER (AND OCCUPANTS)						
	1 (2)	2 (4)	3 (6)	4 (8)	5 (10)	6 (12)
Single-storey	50m ²	70m ²	95m ²	118m ²	143m ²	160m ²
Double-storey	N/A	82m ²	107m ²	130m ²	155m ²	175m ²
Kitchen-Dining-Living	27m ²	36m ²	46m ²	52m ²	61m ²	67m ²
	Sink	Sink	Sink	Sink	Sink	Sink
Bedrooms ¹	x1 10m ²	x1 10m ² x1 9m ²	x1 10m ² x2 9m ²	x1 10m ² x3 9m ²	x2 10m ² x3 9m ²	x2 10m ² x4 9m ²
Storage ²	2m ²		3m ²	5m ²	7m ²	9m ²
Laundries ³	May be in the bathroom or a cupboard		May be separate or in a garage: 3m ²		Separate: 5m ²	
	Tub (350mm (W))		Tub (560mm (W))			
Bathrooms	x1 (Vanity ⁴ ; Shower; WC)		x1 (Vanity ⁴ ; Bath ⁵ ; Shower ⁹); x1-2 WCs ^{6, 7}	x1 (Vanity ⁴ ; Bath ⁵ ; Shower ⁹); x2 WCs ^{6, 7}	x2 Vanities ⁴ ; Bath ⁵ ; x2 Showers ⁹ ; x2 WCs ⁶	

Notes

1. Minimum floor-area excludes wardrobes.
2. Minimum wardrobe width of 1.2m; all cupboards are 600-800mm deep.
3. Minimum floor-area includes space for clothes dryer, tub, and washing machine (minimum space: 850 (W) x 700mm (D)).
4. Bathroom vanities have a minimum width of 900mm; showers are at least 900 x 900mm.
5. Baths are at least 1.65m long and should be located on the upper level (where provided).
6. WCs may be located in a bathroom; separate WCs must include a 500mm (W) vanity; 3-5 bedroom homes have x1 WC per floor-level.
7. Single-storey 3-bedroom homes only require x1 WC that must be provided in a separate room; two-storey 3-bedroom homes require x2 WCs, the second may be included in a bathroom.
8. One bathroom should include a bath and the second should include the shower.
9. Showers should be provided on the same level as the majority of bedrooms; homes with 3+ bedrooms should have a shower on each floor that has bedrooms.

With regard to Table 1, please note:

- Gross floor-areas are to the exterior of the building framing and centreline of inter-tenancy walls; they **do not** include decks, patios, or garaging.
- Internal room-areas are exclusive of wall-framing.
- Additional requirements for outdoor areas are provided in [Table 3](#).

Table 2: Minimum kitchen space requirements

DWELLING-SIZE BY BEDROOM-NUMBER				
	1-2	3	4	5-6
Wet bench ^{1, 2} (L)	1.25m	1.65m		1.8m
Dry bench ² (L)	1.4m	2.4m	3.0m	3.6m
Pantry ² (W x H)	450mm x 2m	600mm x 2m		900mm x 2m
Drawers ³	x1 Bank	x2 Banks		x2 Banks
Fridge (W)	750mm ⁴	850mm ⁴		850mm ⁴

Notes

1 – Wet bench includes x1 sink

2 – Minimum depth = 600mm

3 – Drawers include x4 drawers per bank, with one drawer including a cutlery insert; all drawers are 600mm-wide

4 – Minimum depth = 700mm; minimum clear-height = 2m

Table 3: Minimum outdoor living requirements

DWELLING-SIZE					
Outdoor Elements	1	2	3	4	5-6
Outdoor living area ¹	20m ²		35m ²	35m ²	50m ²
Washing line length	28m		40m	40m	40m
Minimum storage	1.5m (W) x 1.8m (L) x 1.98m (H)				
Deck or Patio	8m ² 2m (W)	10m ² 2m (W)	10m ² 2.5m (W)	12m ² 3m (W)	12m ² 3m (W)

Notes

1 – Area includes deck or patio area, washing line, refuse service area, and a storage area.

Table 4: Hot water (HW) requirements

DWELLING-SIZE BY BEDROOM-NUMBER						
	1	2	3	4	5	6
Storage ¹	90L	135L	180L	180L	270L	x2 180L
HW Energy	2kW	3kW	3kW	3kW	3kW	x2 3kW

Notes

1 – These sizes are based on x2 occupants per bedroom.

Table 5: Minimum R-values for thermal comfort¹

CLIMATE ZONES		BUILDING ELEMENT R-VALUES ²			
		ROOF	WALL	FLOOR	WINDOWS & GLAZING
Zone 1	Northland, Auckland, Franklin District, and the Coromandel Peninsula	3.6	2.1	1.3	0.26
Zone 2	Rest of the North Island, excluding the Central Plateau	3.8	2.2	1.8	0.32
Zone 3a	North Island's Central Plateau and all of the South Island (excluding Zone 3b)	4.1	2.2	2.3	0.43
Zone 3b	Queenstown Lakes, Mackenzie, Western Waitaki, and Central Otago regions	4.9	2.9	3.0	0.43

Notes

1. Adapted from Table 2 of New Zealand Green Building Council (2020, p37). "Homestar® Technical Manual (4th Edition; v4.1)". Wellington, New Zealand: New Zealand.
2. R-values are calculated for the building element considering the fraction of timber and insulation or other materials as per "NZS 4214:2006 – Methods for Determining the Total Thermal Resistance of Parts of Buildings". These are not insulation (product) R-values

Appendix B: Housing risk matrix

Table 6: External moisture risk matrix

	LOW	MEDIUM	HIGH	VERY HIGH
A: Wind Zone	LOW = 0 NZS 3604 limit 32m/s	MEDIUM = 0 NZS 3604 limit 37m/s	HIGH = 1 NZS 3604 limit 44m/s	VERY HIGH = 2 NZS 3604 limit 50m/s EXTRA HIGH = 2 NZS 3604 limit 55m/s
B: Storey #	LOW = 0 1 storey	MEDIUM = 1 2 storeys in part	HIGH = 2 2 storeys	VERY HIGH = 4 2 storeys +
C: Roof/Wall Intersection Design	LOW = 0 Fully-protected roof-to-wall (e.g. hip and gable roof with eaves)	MEDIUM = 1 Partly exposed roof-to-wall (e.g. hip and gable roof with no eaves)	HIGH = 3 Fully exposed roof-to-wall intersection (e.g. enclosed balustrades)	VERY HIGH = 5 Roof elements finishing within the boundaries formed by the exterior walls (e.g. chimneys)
D: Eaves Width	LOW = 0 >600mm for 1 storey	MEDIUM = 1 451-600mm for 1 storey; or >600mm for 2 storeys	HIGH = 2 101-450mm for 1 storey; or 451- 600mm for 2 storeys; or >600mm for 2+ storeys	VERY HIGH = 5 0-100mm for 1 storey; or 0- 450mm for 2 storeys; or <600 mm for 2+ storeys
E: Envelope Complexity	LOW = 0 Simple rectangular, L, T, or boomerang shape with a single cladding type	MEDIUM = 1 Moderately complex, angular or curved shapes (e.g. Y) with no more than 2 cladding types	HIGH = 3 Complex, angular, or curved shapes (e.g. arrowhead) shapes with multiple cladding types	VERY HIGH = 6 As for High risk, but with junctions not covered in C or F of this table (e.g., box windows or pergolas)
F: Deck-design	LOW = 0 None, timber slat deck or porch at ground-floor level	MEDIUM = 2 Fully covered in plan by roof, or timber slat deck attached at first- or second-floor level	HIGH = 4 Enclosed deck exposed in plan or cantilevered at first- floor level	VERY HIGH = 6 Enclosed deck exposed in plan or cantilevered at second-floor level or above
KEY	 Acceptable	 Discretionary	 Not Acceptable	

Notes

1 – Refer to MBIE (2019). [Verification Methods E2/VM1 and Acceptable Solutions E2/AS1, E2/AS2, and E2/AS3 for New Zealand Building Code Clause E2: External Moisture](#). Wellington, New Zealand: Ministry of Business, Innovation, and Employment.

2 – Refer to MBIE (2013). [External moisture: A Guide to Using the Risk Matrix](#). Wellington, New Zealand: Ministry of Business, Innovation, and Employment.

Appendix C: Reference documents

The list below identifies key reference documents that should be read alongside this standard.

Legislative resources

- [Building Act](#) (2004); Ministry of Justice.
- [Building Regulations](#) (1992) [Schedule 1 – New Zealand Building Code]; Ministry of Justice.
- [Residential Tenancies \(Healthy Homes Standards\) Regulations](#) (2019); Ministry of Justice.

Internal Kāinga Ora resources

- [Accessibility Policy: 2019-2022](#) (2019); Kāinga Ora – Homes and Communities.
- [ACM-200: Amenity Condition Manual](#) (2020); Kāinga Ora – Homes and Communities.
- [Ki Te Hau Kāinga – New Perspectives on Māori Housing Solutions](#) (2002); Housing New Zealand.
- [M-215: Maintenance and Programmed Work Specification](#) (2020); Kāinga Ora – Homes and Communities.
- [M-215a: Standard Detail Drawings](#); Kāinga Ora – Homes and Communities.
- [M-217: Building Materials Procurement Schedule](#) (2020); Kāinga Ora – Homes and Communities.
- [M-218: Schedule of Rates](#) (2020); Kāinga Ora – Homes and Communities.
- [Pacific Housing Design Guide: The Beginning](#) (2002); Housing New Zealand.
- [Simple Guide to Urban Design and Development](#) (2015); Housing New Zealand.
- [The Landscaping Design Guide for State Houses](#) (2020); Kāinga Ora – Homes and Communities.

Externally-produced resources

- [A Guide to Driveway Safety for Property Owners](#) (2013); Housing New Zealand, Safekids Aotearoa, New Zealand Transport Agency, New Zealand Police, and Roadsafe Nelson Bays.
- [Homes without Barriers: A Guide to Accessible Houses](#) (2001); Building Research Association of New Zealand.
- [Homestar® Technical Manual \(Version 4\)](#) (2018); New Zealand Green Building Council.
- [Lifemark Design Standards Handbook](#) (2012); Lifetime Design Limited.
- [National Guidelines for Crime Prevention through Environmental Design in New Zealand: Part 1 – Seven Qualities of Safer Places](#) (2005); Ministry of Justice.
- [Safe as Houses: Recommendations for Child-safe Rental Properties in New Zealand](#) (2018); Safekids Aotearoa.

Appendix D: Document version change register

Please note

The changes listed on the table **do not** include changes in formatting and/or layout, and grammatical and spelling corrections.

Table 7: Resource change register - Whole document

SECTION	CHANGES	CATEGORY
General	Updated table of contents	Updated
	Updated and expanded copyright statement	Updated (New Detail)
Introduction	Dwelling-types updated: <ul style="list-style-type: none"> V4: Stand-alone; multi-unit; complex V5: Single- and multi-storey stand-alone; single- and multi-storey terraced; apartments; multi-unit developments 	Updated (Replaced)
	Dwelling-categories updated (“older persons’ housing” removed; “full universal design” added).	

Table 8: Resource change register - Typical

SECTION	CHANGES	CATEGORY	
Space	1.1 Weather-tight and Durable	New items (see items 1.1(d) and 1.1(e)) added to align with <i>Healthy Homes Standards</i> .	Added
		Relocated content (Note 1(d)) from <i>Section A (2.2: Thermal Performance)</i> to this section.	Moved
	1.2: Moisture Reduction	All content updated to align with <i>Healthy Homes Standards</i> (and <i>New Zealand Building Code</i>)	Updated (Replaced)
	2.1: Heating	Content updated to align with requirements of the <i>Healthy Homes Standards</i> and the <i>Kāinga Ora Whole-of-house Heating Policy</i>	Updated (Replaced)
	2.2: Thermal Performance	Detail added (see item 2.2(c)) to align with <i>Healthy Homes Standards</i> .	Added
		Content relocated to <i>Section A (1.1: Weather-tight and Durable)</i> [See above]	Moved

Space	3.1: Security	Detail (lighting efficacy) added to item 3.1 (e)	Updated (New detail)
		New items (see item 3.1(f)) added to align with <i>National Supply Agreements</i>	Added
		Side- and rear-boundary fencing updated (from 1.2m to 1.8m) to align with <i>The Landscape Guide for State Housing</i>	Updated (Replaced)
		Clothes-line screening updated from “or” to “and” (see item 3.1(p)).	Updated
	3.3: Early Fire Warning	Content on fire service access panels and equipment (item 3.3(e)) moved from <i>Section B (3.3) – Housing: Diverse</i> to <i>Housing: Typical</i> .	Moved
3.4: Injury Reduction	Content (see item 3.4(b)) updated to remove redundancy in existing item [NB: this does not affect outcomes]	Updated	
	Content added (see item 3.4(n)) to align with <i>National Supply Agreements</i>	Added	
4.1: Health	Content around window-areas in external walls (see item 4.1(b)) added to align with 6-Homestar® requirements.	Added	
Systems	1.5: Decks, Patios, & Steps	Correction made to detail around laying of timber decking (see item 1.5(c)).	Updated
	1.6: Storage	Content updated (see Note 1) to reference the correct resource.	Updated
	1.9: Planting	Content update (see Note 2) to include reference to <i>The Landscape Guide for State Housing</i> .	Updated
	1.10: Letterboxes	Content updated (see Note 2) to reference the correct resource.	Updated
	2.2: Rain-water	Content added (see item 2.2(a)) to clarify spouting requirements.	Added
	2.6: Thermal Insulation	Content around R-values (see item 2.6 (b)) updated to align with 6-Homestar® requirements.	Updated
	2.10: Entry Door Hardware	Requirement for “sidelights...to be fixed lights only [sic]” has been removed.	Removed
	2.11: Windows and Glazing	Content has been updated (see item 2.11(g)) to remove brand-name reference.	Updated
	3.1: Flooring	Content added (see item 3.1(b)) to align with 6-Homestar® requirements	Added
		Content has been updated (see item 3.1(d)) to remove brand-name reference.	Removed
Slip resistance for kitchens (see item 3.1e) and laundries (see item 3.1f) clarified.		Updated	

Systems	3.2: Flooring	Content updated (see item 3.2(a)) to align with <i>National Supply Agreements</i> .	Updated
		Content added (see item 3.2(b)) to align with 6-Homestar® requirements	Added
	3.3: Wall-linings	Content added (see item 3.3(b)) to align with 6-Homestar® requirements	Added
	3.5: Ceiling-linings	Content added (see item 3.5(b)) to align with 6-Homestar® requirements	Added
	5.2: Vanity Cabinets	Content updated (see item 5.2(b)) to remove brand-name reference.	Updated
		Content updated (see item 5.2(c)) to align with <i>National Supply Agreements</i> (NSAs).	Updated
	5.3: Bathroom Cabinets	Item name has been updated to include “Shaving/Medicine” to align with NSAs.	Updated
	6.1: Mains Supply & Distribution	Content updated (see item 6.1(b)) to ensure electrical meters are protected from the weather and to allow for the option of placing meters in a utilities and service room (where appropriate for the dwelling-type).	Updated (New detail)
		Content removed (the previous requirement to use Meridian Energy as the sole power supplier) to allow for variations in power supply.	Removed
		Content added (see item 6.1(i)) to clarify requirements for common electrical services.	Added
	6.3: Hot Water Cylinder	Content updated (see item 6.3(a)) – “3kW” removed – to correct low-pressure requirements.	Updated
		Content updated (see Note 1) to refer resource users to the relevant Table.	Updated (New detail)
	6.10: Kitchen Sink Mixers	Content updated (flow-rate – see item 6.10(a)) and re-named to align with 6-Homestar® requirements.	Updated (Replaced)
	6.11: Basin Mixers	Content updated (flow-rate – see item 6.11(a)) and re-named to align with 6-Homestar® requirements.	Updated (Replaced)
	6.12: Shower-rose Mixers	Content updated (flow-rate – see item 6.12(c)) to align with 6-Homestar® requirements.	Updated (Replaced)
6.16: Heaters	Content added (see item 6.16(a)) to refer resource users to legislative requirements set-out in <i>Section A (2.1)</i> .	Added	
	Content added (see Note 1) to align with requirements under the <i>Healthy Homes Standards</i> .	Added	

Systems	6.16: Heaters	Content updated (see Note 2 and Note 3) to update circuit requirements for heat pumps and electric-resistance heaters.	Updated
		Content moved (see Note 4) from <i>Section B – Housing: Diverse</i> to reflect the need for this requirement in all properties (irrespective of dwelling-category).	Moved
	6.18: Extraction - Kitchens	Content updated (see item 6.18(b)) by changing measurement (from “650m ³ /hr” to “50L/s”), aligning with 6-Homestar [®] requirements.	Updated (Replaced)
	6.19: Extraction – Bathrooms and Laundries	Content updated (see item 6.19(a)) by changing measurement (from “223m ³ /hr” to “25L/s”), aligning with 6-Homestar [®] requirements.	Updated (Replaced)
	6.20: Lighting	Exterior content updated (see item 6.20(b)), replacing colour temperature with lighting efficacy.	Updated (Replaced)
		Interior content updated (see item 6.20(g)), replacing energy-use and colour temperature with lighting efficacy.	Updated (Replaced)
	6.21: Power	Content updated (see item 6.21(e)), re-iterating need for RCD-protection, to align with National Supply Agreements.	Updated (New detail)
	6.22: Data, Phone, TV	Content updated (changing “the” to “any” – see item 6.22(b)) to allow for different dwelling-types.	Updated (Replaced)
	6.24: Security	Material re-organised and sub-headings added for clarity [NB: this does not affect content].	Updated (Re-ordered)
		Content updated (see Note 1) that reiterates the need for a CPTED audit.	Updated (New detail)
Products	1.1: Storage	Product options updated to align with NSAs and M-217.	Updated (Replaced)
	1.2: Clothes-lines	Product options updated to align with NSAs and M-217.	Updated (Replaced)
	2.1: Rain-water	Product details added (see item 2.1(a)) to existing product.	Updated (New details)
		Recommended product for down-pipes (see item 2.1(b)) to align with NSAs and M-217.	Added
	2.2: Thermal Insulation	Recommended insulation products added to align with NSAs and M-217.	Added
	2.3: Entry Door Hardware	Product options updated to align with NSAs and M-217.	Updated (New details)

Products	2.4: Paint	Product updated to align with NSAs and M-217.	Updated (Replaced)
		Content corrected by removing reference to <i>Colour Choices – Exterior</i> and <i>M-240: Exterior Paint Scoping Guide</i> resources.	Removed
	3.1: Vinyl Flooring	Reference to <i>Colour Choices – Interior</i> replaced by colour-specific info that aligns with NSAs and M-217.	Updated (Replaced)
		Content updated so that product info for bathrooms is separated from that for laundries and separate toilets to align with NSAs and M-217.	Updated (New details)
	3.2: Vinyl Flooring	Content updated to align with NSAs and M-217; includes additional details (i.e. colours).	Updated (New details)
	3.3: Carpet	Content updated with additional details for carpet underlay to align with NSAs and M-217.	Updated (New details)
		Reference to <i>Colour Choices – Interior</i> replaced by colour-specific info that aligns with NSAs and M-217.	Updated (Replaced)
	3.4: Doors	Content updated to include full range of door-sizes to align with NSAs and M-217.	Updated (New details)
	3.5: Curtains	Content corrected by removing reference to <i>Colour Choices – Interior</i> .	Removed
		Content update with additional detail (see item 3.5(b)) that aligns with NSAs and M-217.	Updated (New details)
	3.6: Shower Curtains	Content added that specifies product info that aligns with NSAs and M-217	Added
	4.1: Door Handle	Content updated with additional detail that aligns with NSAs and M-217.	Updated (New details)
	4.2: Door Closer:	Content updated to include additional detail that aligns with NSAs and M-217.	Updated (New details)
	4.3: Bathroom Fixtures	Content updated to include additional detail for shower-rails and different tube-lengths that aligns with NSAs and M-217.	Updated (New details)
	5.1: Bathroom Vanity	Item name updated (“cabinet” removed)	Updated (Replaced)
	Content updated to include additional detail for wall-hung vanities (see items 5.1(a-c)) that aligns with NSAs and M-217.	Updated (New details)	
	Content added for floor vanities (see items 5.1(d-f)) that aligns with NSAs and M-217.	Added	
5.2: Toilet Room Vanity	Item removed to align with NSAs and M-217.	Removed	

Products	5.2: Shaving / Medicine Cabinet	Item name updated to align with NSAs and M-217.	Updated (Replaced)
		Content updated with additional detail (see item 5.2(a(ii))) that aligns with NSAs and M-217.	Updated (New details)
	5.3: Laundry Tub Cabinet	Content updated with additional detail that aligns with NSAs and M-217.	Updated (New details)
	6.1: Hot Water Cylinder	Additional product options added for low-pressure (x6) and mains-pressure (x2) cylinders and for safe-trays (x1); content aligns with NSAs and M-217.	Added
	6.2: Bathtub	Additional product options (x3) added for different-length bathtubs; content aligns with NSAs and M-217.	Added
	6.3: Shower	Additional detail included for individual components (see items 6.3(b-d)); content aligns with NSAs and M-217.	Updated (New details)
	6.4: Toilet Suite	Existing content replaced with new product selections to align with NSAs and M-217.	Updated (Replaced)
	6.5: Basin	Additional detail added to existing products; content aligns with NSAs and M-217.	Updated (New details)
	6.6: Kitchen Sink Mixer	Additional detail added to existing product ; content aligns with NSAs and M-217.	Updated (New details)
	6.7: Bathroom Basin Mixer	Additional detail added to existing product ; content aligns with NSAs and M-217.	Updated (New details)
	6.8: Separate Basin Mixer	Additional detail added to existing product ; content aligns with NSAs and M-217.	Updated (New details)
	6.9: Shower-rose Mixer	Additional detail added to existing product ; content aligns with NSAs and M-217.	Updated (New details)
	6.10: Bath Tap	Additional detail added to existing product ; content aligns with NSAs and M-217.	Updated (New details)
	6.11: Laundry Tap	Item name change (“Washing Machine Taps” to “Laundry Tap”) Additional detail added to existing product ; content aligns with NSAs and M-217.	Updated (Replaced) Updated (New details)
	6.12: Smoke Alarm	Existing content (FireAngel alarm) replaced with new product (FireHawk) to align with NSAs and M-217.	Updated (Replaced)
	6.13: Heater	Existing content (Serene™ panel heaters) replaced with new products (Goldair™ and Serene™ heaters) to align with NSAs and M-217.	Updated (Replaced)
	Product options for heat pumps added (see items 6.13(d-h)).	Added	

Systems	6.14: Stove	Existing content replaced with new product selections to align with NSAs and M-217.	Updated (Replaced)
	6.15: Extraction: Kitchen	Existing content replaced with new product selection to align with NSAs and M-217.	Updated (Replaced)
		Additional product options (see items 6.15(b-d)) included to align with NSAs and M-217.	Added
	6.16: Extraction: Bathroom and Laundry	Existing content replaced with new product selections to align with NSAs and M-217.	Updated (Replaced)
6.17: Lighting	Existing content (interior and exterior lighting) combined and additional details added to align with NSAs and M-217.	Updated (New details)	
	Additional product options (see items 6.17(b-f)) included to align with NSAs and M-217.	Added	

Table 9: Resource change register - Diverse

SECTION	CHANGES	CATEGORY	
Introduction	Information on dwelling-categories updated to align with <i>Accessibility Policy: 2019-2022</i> [also see general introduction update].	Updated	
	Information on new category (“ Full Universal Design ”) added.	Added	
Space	General	Note added that highlights requirements as being in addition to “Typical” requirements and that ‘Accessible’ requirements include those for ‘Full Universal Design’.	Added
		Applicability of requirements clarified .	Updated (New details)
	1.1: Weather- tight and Durable	Applicability of requirements clarified .	Updated (New details)
	1.2: Moisture Reduction	Requirement for Full Universal Design dwellings (see item 2.1(a)) added.	Added
	2.1: Heating	Message intent for Accessible dwellings corrected (see item 2.1(b)).	Updated
		Requirement for Community-group Housing (CGH) (see item 2.1(d)) replaced with reference to “Typical” requirements.	Updated (Replaced)
		Applicability of requirements clarified .	Updated (New details)
	2.2: Thermal Performance	Applicability of existing Accessible requirements (see item 3.1(a)) clarified.	Updated (New details)
	3.2: Driveway Safety	Requirement for Full Universal Design dwellings (see item 3.2(a)) added.	Added
	3.3: Early Fire Warning	Requirement for Full Universal Design dwellings (see item 3.3(a)) added.	Added
Applicability of existing requirements (see item 3.3(c)) clarified.		Updated (New details)	

Space		Requirement for adaptable smoke alarms (see item 3.3e) added.	Added
	3.4: Injury Reduction	Requirements for Full Universal Design (see item 3.4(a)) and CGH (see item 3.4(d)) added.	Added
	4.1: Health	Requirements for Full Universal Design (see items 4.1(a-f) and Note 1) added.	Added
		Requirements for mobility scooter storage expanded (see item 4.1(g)).	Updated
		Clearance requirements in Accessible kitchens (see item 4.1(j)) updated.	Updated (New detail)
		Requirement for inclusion of a ‘standard’ toilet in CGH dwellings (see item 4.1(w)) clarified.	Updated
	4.2: Lifetime Design	Requirements for Full Universal Design (see items 4.2(a-l) and Notes 1-3) added.	Added
		Applicability of Full Universal Design requirements to Accessible and CGH dwellings (see item 4.2(j)) added.	Added
		Specification for hallway- and stairway-widths and clearances (see item 4.2(o)) added.	Added
		Requirement for inclusion of turning-circles (see item 4.2(p)) added.	Added
Requirement for return-wall with interior doors (see item 4.2(q)) clarified.		Updated	
Requirement for a wheelchair-accessible bathroom on the main living-level (see item 4.2(r)) added.		Added	
Systems	General	Introductory note updated to remove contradictory element.	Updated
	1.1: Driveways	Applicability of existing requirements clarified.	Updated
	1.2: Paving	Requirements for Full Universal Design (see item 1.2(a)) and CGH (see item 1.2(c)) added.	Added
	1.3: Retaining Walls	Applicability of existing requirements clarified.	Updated
	1.4: Fencing	Applicability of existing requirements clarified.	Updated
	1.5: Decks, Patios and Steps	Applicability of existing requirements clarified.	Updated
	1.6: Storage	Applicability of existing requirements clarified.	Updated
	1.7: Refuse	Applicability of existing requirements clarified.	Updated
	1.8: Clothes-lines	Item name changed (from “Washing Lines”) for internal consistency.	Updated (Replaced)

		Requirements for Full Universal Design (see item 1.8(a)) added.	Added	
Systems	1.9: Planting	Applicability of existing requirements clarified.	Updated	
	1.10: Letterbox	Requirements for Full Universal Design (see item 1.10(a)) and CGH (see item 1.10(d)) added.	Added	
	2.1: Roofing	Applicability of existing requirements clarified.	Updated	
	2.2: Rain-water	Applicability of existing requirements clarified.	Updated	
	2.3: Cladding	Applicability of existing requirements clarified.	Updated	
	2.4: Sub-floor	Applicability of existing requirements clarified.	Updated	
	2.5: Floor	Applicability of existing requirements clarified.	Updated	
	2.6: Thermal Insulation	Applicability of existing requirements clarified.	Updated	
	2.7: Slab Insulation	Applicability of existing requirements clarified.	Updated	
	2.8: Entry Porch	Applicability of existing requirements clarified.	Updated	
	2.9: Entry Door	Applicability of existing requirements clarified.	Updated	
	2.10: Entry Door Hardware	Applicability of existing requirements clarified.	Updated	
	2.11: Windows and Glazing		Requirements for Full Universal Design (see item 2.11(a)) added.	Added
			Applicability of existing requirements (see items 2.11(b-c)) clarified.	Updated
	3.1: Flooring		Requirements for Full Universal Design (see item 3.1(a)) added.	Added
			Applicability of existing requirements (see items 3.1(b-c)) clarified.	Updated
	3.2: Flooring		Requirements for Full Universal Design (see item 3.2(a)) added.	Added
	3.3: Wall-linings		Requirements for Full Universal Design (see item 3.3(a)) added.	Added
			Requirement for Accessible dwelling updated (see item 3.3(b)) to remove brand- reference.	Updated
	3.4: Wet-wall- linings		Requirements for Full Universal Design (see item 3.4(a)) and CGH (see item 3.4(c)) added.	Added
3.5: Ceiling-linings		Applicability of existing requirements clarified.	Updated	
3.6: Interior Doors		Applicability of existing requirements clarified.	Updated	
3.7: Trims		Applicability of existing requirements clarified.	Updated	

Systems	3.8: Curtains	Applicability of existing requirements clarified.	Updated
	3.9: Shower Curtains	Requirements for Full Universal Design (see item 3.9(a)) and CGH (see item 3.9(c)) added.	Added
	4.1: Hardware	Applicability of existing requirement clarified.	Updated
		Existing requirement's positioning (see item 4.1(a)) corrected.	Updated (Replacement)
		Requirements for CGH (see item 4.1(b)) added.	Added
	4.2: Wardrobe Rail	Requirements for Full Universal Design (see item 4.2(a)) added.	Added
		Applicability of existing requirement (see item 4.2(b)) clarified.	Updated
	4.3: Bathroom Fixtures	Requirements for Full Universal Design (see item 4.3(a)) and CGH (see item 4.3(e)) added.	Added
		Component name (see item 4.3(c)) updated to align with NSAs.	Updated
	5.1: Kitchen Benching and Cabinetry	Requirements for Full Universal Design (see item 5.1(a)) added.	Added
		Applicability of existing requirement (see item 5.1(b)) clarified and requirements updated to align with 'Typical'.	Updated (Replacement)
		Existing content (see Note 1) replaced to allow for future conversion; definition clarified.	Updated (Replacement)
	5.2: Vanity Cabinet	Requirements for Full Universal Design (see item 5.2(a)) and CGH (see item 5.2(c)) added.	Added
		Existing requirement for Accessible dwellings (see item 5.2(b)) updated; need for maintaining storage amenities (see Note 1) clarified.	Updated (Replacement)
	5.3: Shaving / Medicine Cabinet	Item name updated to align with NSAs and M-217.	Updated (Replaced)
		Applicability of existing requirement clarified.	Updated
	5.4: Laundry Tub Cabinet	Applicability of existing requirement clarified.	Updated
	5.5: Wardrobe Shelving	Requirement for Full Universal Design (see item 5.5(a)) added.	Added
		Applicability of existing requirement (see item 5.5(b)) clarified.	Updated
	5.6: Linen Cupboard Shelving	Applicability of existing requirement clarified.	Updated
5.7: General Cupboard Shelving	Applicability of existing requirement clarified.	Updated	
5.8: HWC Cupboard Shelving	Applicability of existing requirement clarified.	Updated	
6.1: Main Supply & Distribution	Applicability of existing requirement clarified.	Updated	

Systems	6.2: External Taps	Applicability of existing requirement clarified.	Updated
	6.3: HWC	Applicability of existing requirement clarified.	Updated
	6.4: Bathtub	Requirements for Full Universal Design (see item 6.4(a)) and CGH (see item 6.4(c)) added.	Added
	6.5: Shower Tray	Applicability of existing requirement (see item 6.5(a)) clarified.	Updated
		Requirement for Accessible and CGH (see item 6.5(b)) added.	Added
	6.6: Toilet Suite	Requirements for Full Universal Design (see item 6.6(a)) and CGH (see item 6.6(c)) added.	Added
	6.7: Basin	Requirements for Full Universal Design (see item 6.7(a)) and CGH (see item 6.7(c)) added.	Added
	6.8: Floor Waste	Requirements for Full Universal Design (see item 6.8(a)) and CGH (see item 6.8(c)) added.	Added
	6.9: Kitchen Sink	Applicability of existing requirement clarified.	Updated
	6.10: Kitchen Sink Mixers	Applicability of existing requirement clarified.	Updated
	6.11: Basin Mixers	Item separated from “Kitchen Sink Mixers” for internal consistency.	Moved
		Applicability of existing requirement clarified.	Updated
	6.12: Shower- rose Mixers	Requirements for Full Universal Design (see item 6.12(a)) and CGH (see item 6.12(c)) added.	Added
	6.13: Bath Taps	Applicability of existing requirement clarified.	Updated
	6.14: Laundry Taps	Item name changed (from “Washing Machine Taps”) for internal consistency.	Updated
		Applicability of existing requirement clarified.	Updated
	6.15: Smoke Alarms	Applicability of existing requirement clarified.	Updated
		Reference to ‘Typical’ product removed for clarity; replaced by reference to Section B – Housing: Typical (see Note 1).	Updated (Replaced)
	6.16: Heaters	Requirement for Full Universal Design (see item 6.16(a)) added.	Added
		Existing notes moved to Section B (6.16(Note 4)) – Housing: Typical.	Moved
Requirements for CGH updated to align with ‘Typical’ requirements (see item 6.16(d)).		Updated (Replaced)	
6.17: Stove	Requirements for Full Universal Design (see item 6.17(a)) added.	Added	
	Updated Accessible requirements: adding reference to ‘Typical’ (see item 6.17(b)) and clarifying applicability of existing requirements (see item 6.17(c)).	Updated (New Details)	
	Replaced requirements for CGH with reference to ‘Typical’ (see item 6.17(d)).	Updated (Replaced)	

Systems	6.18: Extraction - Kitchens	Applicability of existing requirement clarified.	Updated
	6.19: Extraction - Bathrooms & Laundries	Applicability of existing requirement clarified.	Updated
	6.20: Lighting	Requirements for Full Universal Design (see item 6.20(a)) added.	Added
		Applicability of existing requirement clarified.	Updated
	6.21: Power	Requirements for Full Universal Design (see item 6.21(a)) added.	Added
		Applicability of existing requirements clarified (see items 6.21(b-f)).	Updated
	6.22: Data, Phone, & TV Outlets	Applicability of existing requirement clarified.	Updated
6.23: Aerials, Dishes, & MATV	Applicability of existing requirement clarified.	Updated	
6.24: Security	Applicability of existing requirement clarified.	Updated	
Products	3.1: Vinyl Flooring	Requirements for Full Universal Design and CGH bathrooms (see item 3.1(b)), Full Universal Design and CGH separate toilets (see item 3.1(c)), and all diverse laundries (see item 3.1(d)) added.	Added
		Applicability of existing requirement (see item 3.1(a)) added.	Added
	3.2: Vinyl Flooring	Existing requirement replaced (with reference to 'Typical') to align with NSAs.	Updated (Replaced)
	3.3: Carpet	Existing requirement replaced (with reference to 'Typical') to align with NSAs.	Updated (Replaced)
	3.6: Corner Guards	Item name changed (from "Wall Lining") to align with content.	Updated (Replaced)
	6.3: Shower	Requirement for Full Universal Design (see item 6.3(b)) added.	Added
		Applicability of existing requirement added.	Added
		Updated existing requirement to refer to Section B (which aligns with existing content).	Updated (Replacement)
	6.5: Basin	Updated existing requirement to align with NSAs and M-217.	Updated (Replacement)
	6.9: Shower-rose Mixer	Additional product components (see item 6.9(b-c)) added.	Added
	6.10: Bath Tap	Product option added to align with NSAs and M-217.	Updated (Replacement)
	6.11: Laundry Tap	Item name changed (from "Washing Machine Taps") for internal consistency.	Updated
Product option added to align with NSAs and M-217.		Updated (Replacement)	
6.12: Smoke Alarm	Product updated to 'Typical' option to align with NSAs and M-217.	Updated (Replacement)	

	6.13: Heater	Product updated (from Goldair™ to Serene® model) to align with NSAs and M-217.	Updated (Replacement)
	6.14: Stove	Product updated to 'Typical' option to align with NSAs and M-217.	Updated (Replacement)

Table 10: Resource change register - Appendices

A	Table 1	Requirement for separate laundries in 3- and 4-bedroom homes to be on the ground floor removed.	Removed
		Space needed for washing machine relocated to notes (see Note 3).	Moved
		Requirement for toilets in 3-bedroom homes updated to align with table notes.	Updated
		Space requirement for showers corrected (see Note 4).	Updated
		Differences (toilets) for single- and multi-storey 3-bedroom homes clarified (see Note 7).	Added
	Existing supporting information (previously: Notes A-C) moved to body-text for clarity.	Moved	
	Table 2	Depth of benches and pantries moved to notes (see Note 2).	Moved
		Requirement for a sink with wet-benches added (see Note 1).	Added
		Drawer-banks' width moved (see Note 3).	Moved
		Height and depth space requirements for fridges moved (see Note 4).	Moved
Table 3	Note for minimum requirements (previously Note 2) incorporated into title .	Moved	
Table 5	New table added for minimum R-values.	Added	
B	Table 6	Table number updated to accommodate new table.	Updated
		Content for "High" risks for "F: Deck Design" corrected (from "3" to "4").	Updated
C	General	Appendix title corrected (from "D" to "C").	Updated
		Content re-ordered via the use of category sub-headings.	Updated
D	Tables 7 - 10	Document change tables with itemised updates (v4 to v5) added.	Added