



This home was designed and constructed by New Zealand's leading supplier of quality, eco-friendly, council compliant Container Homes; IQ Container Homes Ltd

IQ Container Homes are constructed in NZ from new (single trip) corten steel shipping containers. They are solid, safe, transportable and incredibly durable; being fire, earthquake and hurricane resistant.

This Home User Guide provides details on this home including warranty details of the fixtures and fittings and instructions on the various components.

Overview:

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This home was completed and issued Code of Compliance from the Auckland Council on 3rd November 2015

About IQ Container Homes

IQ Container Homes is a NZ based company established in 2012 out of a passion and desire to provide affordable, quality, sustainable small homes.

By incorporating features such as solar panels and rainwater harvesting, in addition to the positive impact this has on the environment by utilising renewable natural resources and minimising carbon footprint, it makes economic sense too, resulting in reduced running costs and substantial savings over the life of the home.

IQ Container Homes are fitted out with superior insulation, levels that exceed building code requirements by approximately 50% at time of build. Unlike older homes, this ensures your home is cooler in summer and warmer in winter, minimising the need for heating and cooling.

Environmentally friendly materials such as low VOC paints and anti-bacterial flooring have additional health benefits. Great for asthmatics or those with poor immune systems.



Inbuilt rainwater harvesting system collects water from the roof for reuse in toilet and laundry, saving around 45% of your water costs.



Integrated photovoltaic (solar) system reduces electricity cost and can potentially even earn you money in times of low usage.



Eco friendly materials & construction methods minimise waste and ensure your IQ home is good for the planet and for your health.



Double glazed UPVC windows, superior insulation and careful design ensure a comfortable temperature can be maintained year round with little need for additional heating and cooling.



Homestar rating

Homestar is New Zealand's environmental and energy efficiency rating for both new and existing homes.

It has been designed to create an easy-to-understand rating system for homes, a bit like the Energy Star one for appliances.

This IQ Container home has undergone an official build assessment and been awarded a prestigious and seldom achieved 8 on the Homestar rating scale.



What does this mean?

A Homestar 8 rating signifies a world-leading, high-performance home that significantly surpasses the New Zealand building code in health, warmth, and energy efficiency. These homes are designed to international best practices, costing less to run, using fewer resources, and offering superior comfort and air quality compared to a typical new home

How does this IQ Container Home achieve this?

Health & Comfort

- Superior insulation whose R-value exceeds building code requirements by approximately 50% (at time of construction)
- UPVC double glazed windows and doors delivering an R value 60% higher than traditional aluminium double glazing
- Extractor fan connected to kitchen and bathroom which is vented outside to remove moisture. Bathroom fan on a timer to remain on for 10minutes post showering
- Use of environmental choice and Low VOC products such as Resene paint & Mammoth Insulation
- Composite decking made from recycled plastic and ethically sourced FSC Certified Timber

Energy

- All lighting and bulbs are energy saving LED
- Recessed Downlights are ICF rated allowing insulation to abut them
- A 2kw grid tied photovoltaic (solar) system is included to generate renewable energy
- Use of energy star appliances

Water

- 1000l rainwater tank collects water from the roof for reuse in toilet and laundry (greywater recycling)
- 4* WELS rated dual flush toilet
- Shower, basin and sink mixer are all 3*+ WELS rated, using less than 9l/min
- Dishdrawer 4* WELS rated

Waste

- Bins provided for both rubbish and recycling
- Careful design and responsible building minimised waste during construction

Management

- Provision of Home User Guide to provide information on your home, design features, manuals, product warranties
- Exterior security lighting fitted with daylight sensor and motion detector
- Multi-lock UPVC windows and doors

Site

- Exterior clothesline so washing can be dried outside
- Onsite food production via vege patch and fruit trees
- Abundance of native trees
- Stormwater management via rainwater retention tank



Utilities

This home has a built-in utilities cupboard located at the end of the container accessed externally through the main container doors.

This cupboard contains:

(A)	1000l water tank which collects rain from the roof. This is plumbed to recycle this water for reuse in the toilet and laundry
(B)	Pump for distributing recycled water
(C)	Instantaneous gas water heater <i>NB Replaced since photo taken, now external</i>
(D)	Storage for 2x9kg LPG gas bottles (accessed through an exterior hatch on the side of the container)
(E)	Fuse box
(F)	Inverter and controller for photovoltaic (solar) system
(G)	Additional storage



Rainwater Harvesting

IQ Container homes feature a built in 1000l Water tank which collects rainwater from the roof and recycles it for use in toilet flushing and laundry washing, which account for approximately 45% of household water use. This means a reduced water bill for you!

In times of drought mains water is used to top up the tank so you will never run out.

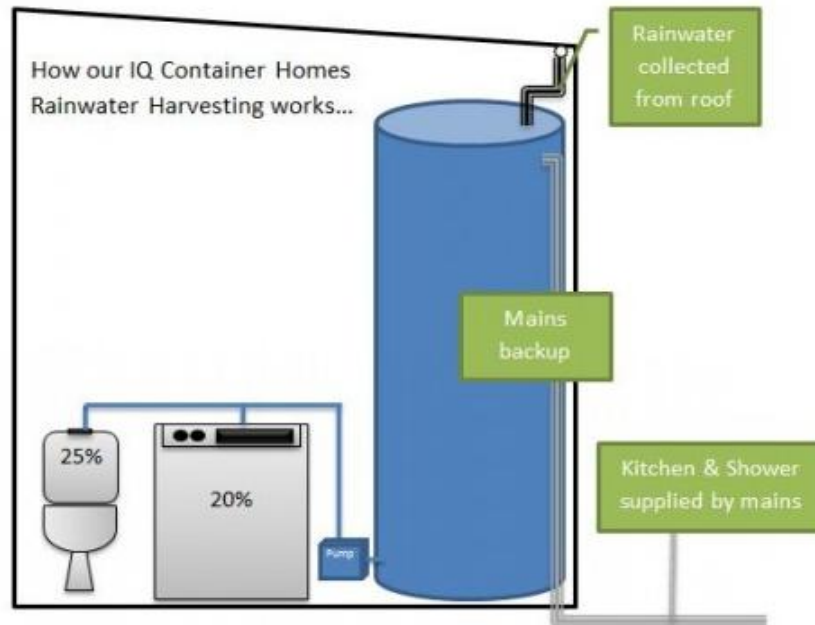
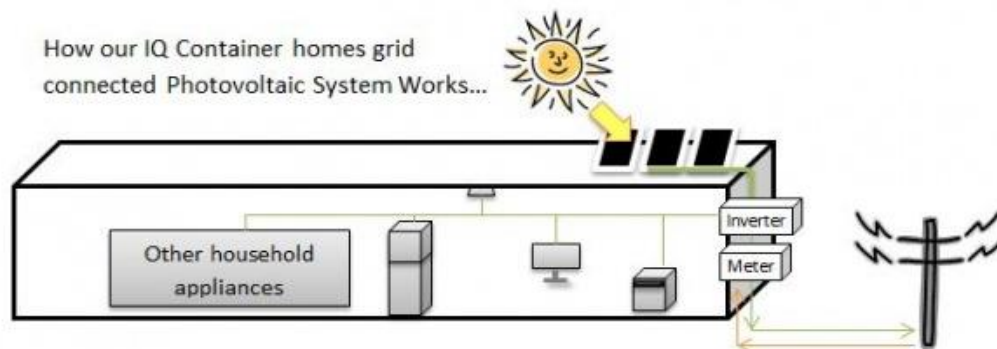


Photo-voltaic Systems

Solar panels are attached to the roof to capture sunlight and turn it into energy. A grid connected system allows you to sell back excess energy to your electricity supplier and draw from them in times of low light, minimising your bill while ensuring you never run out of power



Wastewater

This home is equipped with a 'Simple Wastewater Solutions' wastewater system. This is an environmentally friendly vermiculture (worm) based treatment system with secondary plant filters that uses natural processes to breakdown grey and black water. This system requires no electricity and very little maintenance.

Solid Waste Digester

The Solid Waste Digester is a vermacomposting bin built from rotomould plastic. It has been developed over a ten year period and is well proven. All the solids from the toilet and kitchen sink are trapped on a bark filter where the worms turn it to compost.

For a normal household of four people it will need to have compost removed every two years which is a very simple task. It is specially designed with a round ball to spread solid material evenly in the centre enabling the worms to work from the dry outside, into the moist centre.

There is no smell and the liquid is drained into a series of plant filters for treatment.



Plant Filters

The plant filters have been designed as a method of secondary treating primary treated waste water. In the conventional on site waste water treatment systems aeration is achieved by electric air pumps forcing air into water. This is both inefficient and expensive with mixed results.

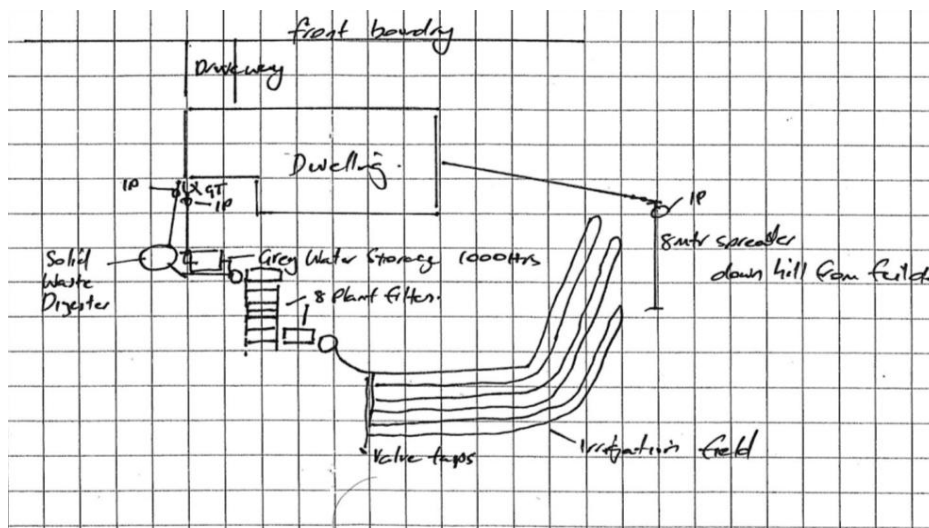
Simple Waste Water Solutions plant filters enable the primary treated waste water to be filtered and returned to an aerobic state by using natural processes. The filtration medium of bark and sawdust also remove nitrogen and the root systems of the plants harbour good bacteria. This is all achieved in enclosed bins in a modular form so as it can be added to if needed, shifted to new sites, and at the same time protecting the environment.

A variety of native plants are used depending on the site. *Carex Virgata* for shaded areas, *Alacurus Acuta* for full sunlight, and a variety of other plants with special characteristics.

Once the plants are established there is very little maintenance with weeding and the occasional pruning the only tasks. The plant filters can be connected to any primary treatment system and can be retrofitted to aerated systems to eliminate air pumps.



As Built Plan



Maintenance Agreement

Contact Anita Grant for maintenance & inspections Ph: 0274621339 swwsnz.co.nz

SIMPLE WASTE WATER SOLUTIONS LTD

MAINTENANCE AGREEMENT;

Owner; *Brenda Kelly*
Site Address; *19 Rauhua Cres. Parau*
DP Number; *LOT 1 DP 356475*
ABA number; *ABA-2014-2104*

Simple Waste Water Solution's Responsibility's;

[1] Year one ,Monthly inspections for the first six months then every three months for the remainder of the first year.

[2] Pump maintenance for the first year.

Home Owners Responsibility's;

[3] After year one; Ongoing six monthly inspections and maintenance. This includes cleaning of primary filter pipes every six months.

[4] Clean out 20mm pipes annually or as required.

[5] Replacement of bark or sawdust as required and appropriate disposal of waste.

[7] Must have signed maintenance contract in place at all times.

[8] Notify maintenance provider of any problems in a timely manner.

[9] Keep plant filters and surrounding area weed free.

[10] Homeowner must agree to ongoing inspection/monitoring by Auckland Council

Signed by SWWS

Signed by homeowner

General Maintenance guidelines

Important information about the maintenance of your building



New Zealand is one of the few countries in the world that requires buildings and building components to last for specified minimum periods as part of legislation. It is therefore important that normal maintenance is carried out on buildings to ensure they meet legislative requirements.

Normal maintenance is defined as work that is necessary to achieve the expected durability periods for each building component. The frequency and nature of that maintenance will depend on the material or system, its geographical location and position within the building, and may involve the replacement of some components, which are subject to accelerated wear.

The Building Code (B2/AS1, clause 2) states that it is the responsibility of the person specifying (designing) the building elements to determine normal maintenance requirements. This information is usually contained within the specifications attached to your building consent. Maintenance requirements are often based on manufacturer's recommendations and may include the periodic inspection of elements that are not readily visible without special effort (e.g. access to the roof or sub-floor spaces).

Normal maintenance tasks include, but are not limited to:

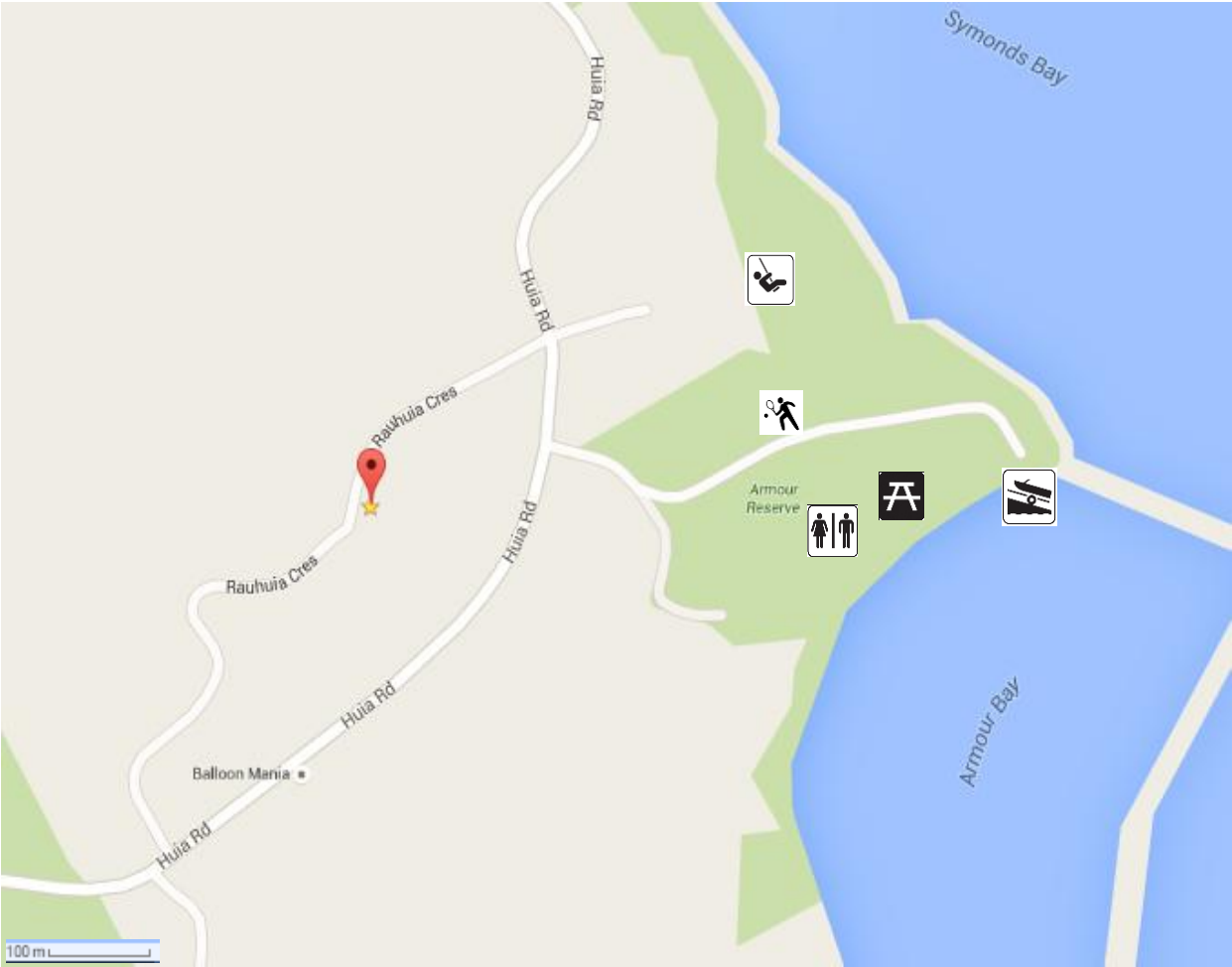
- Regularly washing down external surfaces, especially those subject to wind driven salt spray
- Regularly cleaning internal surfaces, especially those subject to moisture (bathrooms, laundries, etc)
- Ensure your home / building is well-ventilated; open windows and clean air-extraction systems
 - Dampness encourages mould and mildew which can harm your health
- Ensure ground levels are maintained around the building and kept well below the cladding
 - Don't block subfloor ventilators or weep holes in brick veneer, they are there for a reason
 - Remove all moss, dirt, overgrown vegetation and obstacles
- Removing and cleaning water traps in showers to remove hair and other foreign matter
- Re-coating or painting interior and exterior surface finishes
- Replacing sealant, seals and gaskets in joints
- Replacing valves, washers and similar high-wearing components in service equipment and other building elements
- Cleaning and replacing filters in building services
- Cleaning out gutters and spouting
- Cleaning out cess pits and cut-off drains
- Regular servicing of boilers, cooling towers, lifts, escalators, emergency lighting and fire protection equipment
- Regular servicing of heating, ventilation and air-conditioning systems
- Cleaning and maintaining signs for access, escape routes, emergency equipment and hazardous areas

Maintenance does not include replacing or upgrading building elements to meet the demands of new technology or to increase the environmental expectations of users.

For more information about maintenance, please refer to the Consumer build website at <http://www.consumerbuild.org.nz/publish/maintenance.php>

Local Area

Armour Bay beach and reserve with playground, tennis court, picnic facilities and boat ramp are a short 5min stroll away. Titirangi town centre is a mere 10min drive



Schools around Parau, Auckland

School	Type	Decile	Zone
Laingholm School Victory Road, Laingholm, Auckland	Contributing (Year 1-6)	10	Zone not specified
Green Bay High School 143-161 Godley Road, Green Bay, Auckland	Secondary (Year 9-15)	8	In Zone

Rubbish collection:

The cost of rubbish collection is now covered by your rates
Rubbish is to be placed in the big green bin with the yellow lid & placed roadside by letterbox before 7am on collection day. Rubbish is currently collected every Wednesday morning

Recycling Collection:

Plastics and glass to be placed in blue council bin provided. Cardboard to be kept separate. Please leave at roadside by letterbox. Recycling is currently collected every 2nd Wednesday

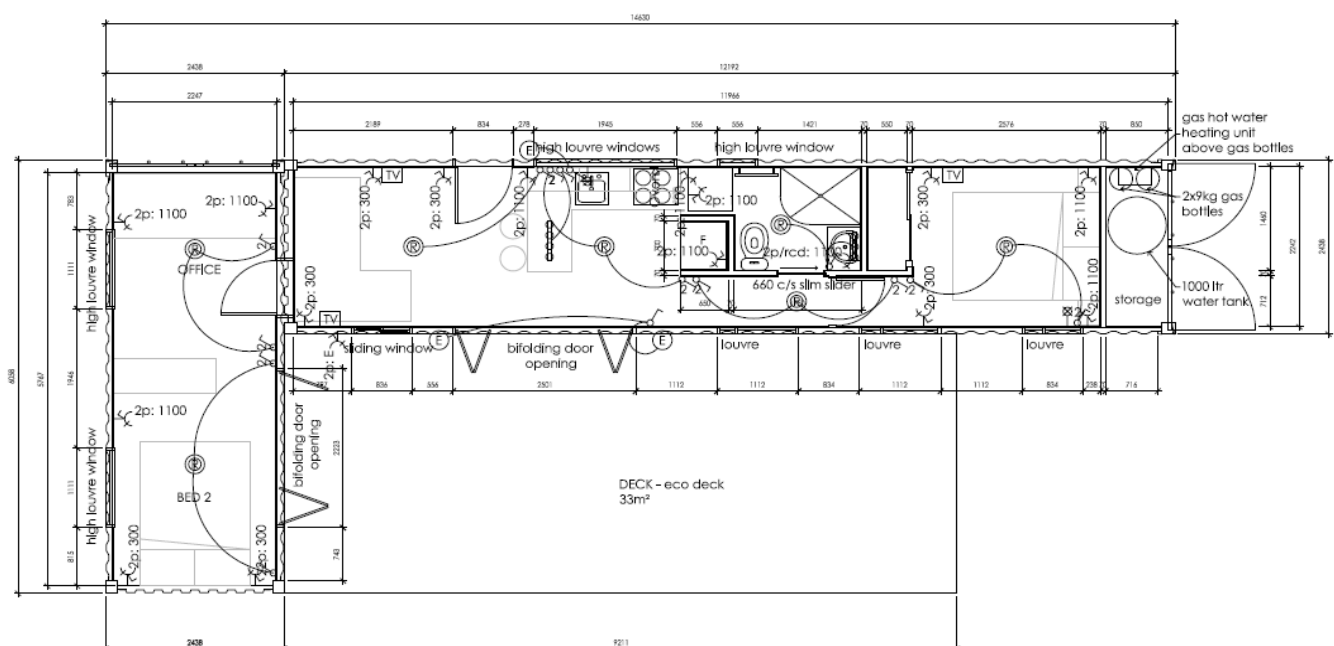
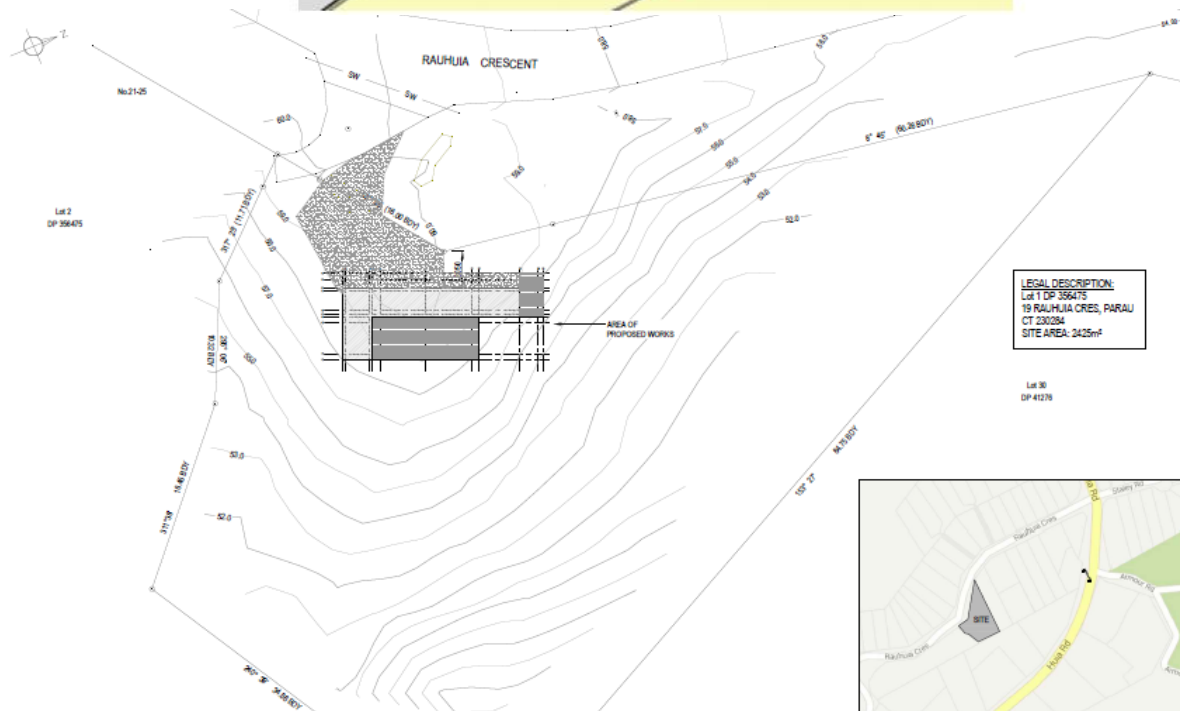
Plans

Land area: 2425 m²

Property ID (QPID): 2435817

Suburb: Parau

Territorial Authority: Auckland



Product and Warranties

<u>Product</u>	<u>Energy/water rating</u>	<u>Warranty</u>	<u>Description</u>
Bathroom & Laundry			
Shower		3 years	RS04-100*80-L Curved shower
Mirror Cabinet			MPE-600
Toilet	Wels 4* (4.5/3l)	3 years	Wels rated, S-Pan
Vanity		5 years	600 Torana 2 dwr w 80mm polymarble top
Shower slide & basin mixer	Wells 3-4* 7.5l/m	2yr & 5yr respectively	Esprea 3pc ESP41 (0249788)
Towel Rail		2 years	Concerto 60cm double (4821513)
Toilet Holder		2 years	Concerto (4821520)
Fan/light			Goldair silver GHL200 (171630)
Washer dryer	Wells 4*, Energy 3.5*	2 Years	Electrolux EWF14742 FL (126331)
Kitchen			
Kitchen cabinetry		5 years	ExSpace
Engineered stone benchtop			ExSpace
F&P Oven		2 years	OB60NLMX2
F&P Cooktop		2 years	CE302CBX1
F&P Rangehood		2 years	HS60CSX2
F&P Dishdrawer	3.5* energy, 4.5*wels	2 years	DD60SCX7
Sink Mixer	Wels 4* 7.5l/m	5 years	Mondell (0170325)
Splashback		10 years	Vistelle - Acrylic
Fridge Freezer	3.5* energy	2 years	Samsung SR255MLS
Other			
Interior Paint	Dulux Environ choice certified		Wash & Wear
Underfloor insulation	R1.9 Environ choice certified	50years	Insulpro Mammoth R1.9 Multi
UPVC Windows & doors	R0.41	15yrs joinery, 10yrs glass, 5yrs hardware	Warm Windows. Various sizes
Wall & Ceiling Insulation	R3.2 walls R4.6 ceiling	Limited Lifetime	NZAS. Heatlok soy polyurethane foam. 70mm walls, 100mm ceiling
Flooring	Eurofins Gold certified	Limited Lifetime	SmartPlank vinyl SP320 Matakana
LED dimable down lights			DETA 4x15w, 1x18w, 1x12w
Panasonic Heat Pump	4.9kw, 3star	6 years	Model: CS/CU-E12PKR
32" TV	5* energy		Sony Bravia
Black our roller blinds		1 year	Spotlight
Water Tank	1000l	10yrs	Aqua tank Slimline 1000
Pump			Ecojet 500pc
Gas Hot Water system			
Solar King PV System	2kw grid connected, micro inverted	10 yr product, 25 yr energy production, 5 yr inverter	
Gas Bottles	2x9kg LPG		
Composite Decking		25yr limited	Dachshound Decking

Code compliance certificate

Section 95, Building Act 2004
(Form 7 – Building (Forms) Regulations 2004)

Auckland Council
Te Kaunihira o Tāmaki Makaurau



THE BUILDING

Building consent number:

ABA-2014-2104

Date building consent issued:

09-Jan-2015

Street Address of building:

19 Rauhuia Crescent, PARAU

Legal description of land where building is located:

LOT 1 DP 356475

Currently, lawfully established use:

Housing

Year first constructed:

2014

THE OWNER

Name of owner:

B M Kelly

Mailing address:

19 Rauhuia Crescent, PARAU

Street address/ registered office:

19 Rauhuia Crescent, PARAU

Phone Number: Landline:

N/A

Mobile:

021-1154553

Daytime:

N/A

After hours:

N/A

Facsimile No:

N/A

BUILDING WORK

The following building work is authorised by this building consent:

RBW - RES 1: New one single storey, including two bedrooms with a bathroom, a kitchen & living area, and new deck. New pile foundations to take proposed shipping container modification home, manufactured off site and then transported and placed on proposed foundations. Sanitary and storm water on site waste disposal systems, minor retaining walls.

CODE COMPLIANCE

The building consent authority named below is satisfied, on reasonable grounds, that:

☒ The building work complies with the building consent.

On behalf of Auckland Council:

Date issued:

03-Nov-2015

Print name:

Ian McCormick

Position:

General Manager Building Control

Auckland Council, Private Bag 92300, Auckland 1142