



A SMALL AREA ASSESSMENT OF NEW ZEALAND HOUSING

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NEW ZEALAND



WELLBEING

NEW ZEALAND
HOUSING



WELLBEING

We need to start measuring the
impact of housing on the wellbeing of
our community.

THE THREE GAPS

1
COMPREHENSIVE

2
DYNAMIC

3
ACTIONABLE

THE NEED

To develop a **comprehensive** measure of housing quality, using **dynamic** data, to enable targeted **action**.

COMPREHENSIVE

- 1 Physical
- 2 Environmental
- 3 Social
- 4 Emotional

DYNAMIC DATA

- 1 Robust
- 2 Transparent
- 3 Frequently updated
- 4 Accessible

THAT IS ACTIONABLE

- 1 Right place
- 2 Right time

SOME TERMINOLOGY



MESHBLOCK
(MB)



AREA UNIT
(AU)



TERRITORIAL AUTHORITY
(TA)

WHAT DOES QUALITY HOUSING LOOK LIKE?



D **o** **T**

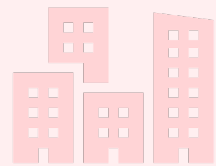
The image features the letters 'D', 'o', and 'T' in a light red, sans-serif font. The letter 'o' is replaced by a light red circle containing a bold red dollar sign (\$). The letters are spaced out horizontally.

AFFORDABLE

HOUSING AFFORDABILITY

“ The pressures of high-cost housing can have a detrimental flow on effect to the entire family, as basic needs may be foregone. ”

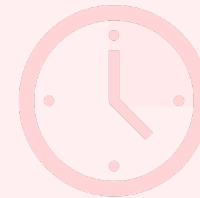
Stats NZ 2018



MBIE



TERRITORIAL
AUTHORITY



QUARTERLY

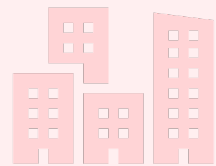
D O T

UNCROWDED

LIVING DENSITY

“ People living in a crowded house were more likely to experience lower life-satisfaction. ”

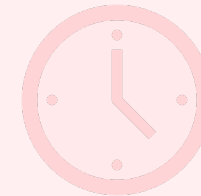
General Social Survey 2016



STATS NZ



AREA
UNIT



ANNUALLY

QUANTIFYING LIVING DENSITY



Number of bedrooms available
per area unit



Number of bedrooms required
per area unit

$$a_i = \sum_{j=1}^8 ((x_{ij} \times j) + \bar{x}_i z_i)$$

x_{ij} = number of dwellings with j bedrooms in area unit i

\bar{x}_i = is the average number of bedrooms in area unit i

z_i = the number of nonresponses in area unit i

$$r_i = s_i + (0.5 \times p_i) + (0.5 \times s_i)$$

s_i = the number of single adults in area unit i

p_i = the number of partnered adults in area unit i

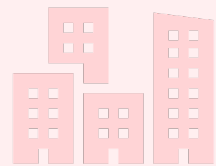
DOT

HEALTHY

HOME HEALTH

“ If a home is not dry, warm and well ventilated, residents risk compromising their health and consequently their wellbeing. ”

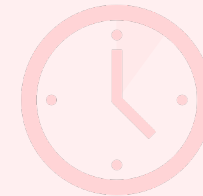
Housing New Zealand 2018



REAL ESTATE
LISTINGS



MESHBLOCK



MONTHLY

DOT

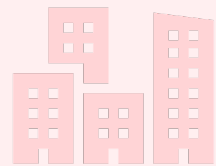


SAFE

SAFETY

“ Community safety is not just about injury prevention and crime prevention; it is about increasing well-being and building strong, cohesive, vibrant communities. ”

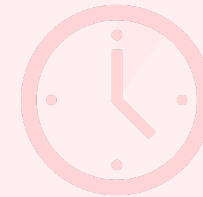
Safe Communities NZ 2019



NZ POLICE



MESHBLOCK



MONTHLY

BRINGING IT ALL TOGETHER



CONSTRUCTING THE INDEX

1

EQUALLY WEIGHTED
LINEAR COMBINATION

2

UNEQUALLY WEIGHTED
LINEAR COMBINATION

3

PRINCIPLE COMPONENT
ANALYSIS

CONSTRUCTING THE INDEX

1

EQUALLY WEIGHTED
LINEAR COMBINATION

~~2~~

~~UNEQUALLY WEIGHTED
LINEAR COMBINATION~~

~~3~~

~~PRINCIPLE COMPONENT
ANALYSIS~~

DOT

WHAT DID WE FIND

FINDINGS



FINDINGS



We need to start measuring the
impact of housing on the wellbeing of
our community.

D O T
THANK
YOU