



Residential Crown property and its relationship with market value

NZEUC 2018

Bryan Teahan
Senior Professional, Geospatial Developer
CoreLogic NZ



“Leave the beaten track behind occasionally and dive into the woods... You will be certain to find something you have never seen before.”

Alexander Graham Bell

Every time you dive into the data you will find something new.

An aerial photograph of a residential town in New Zealand. The town is densely packed with houses, many with grey roofs, and is surrounded by green fields and trees. In the background, there is a large blue lake and a range of mountains, some with snow-capped peaks under a blue sky with light clouds.

2 million properties in NZ

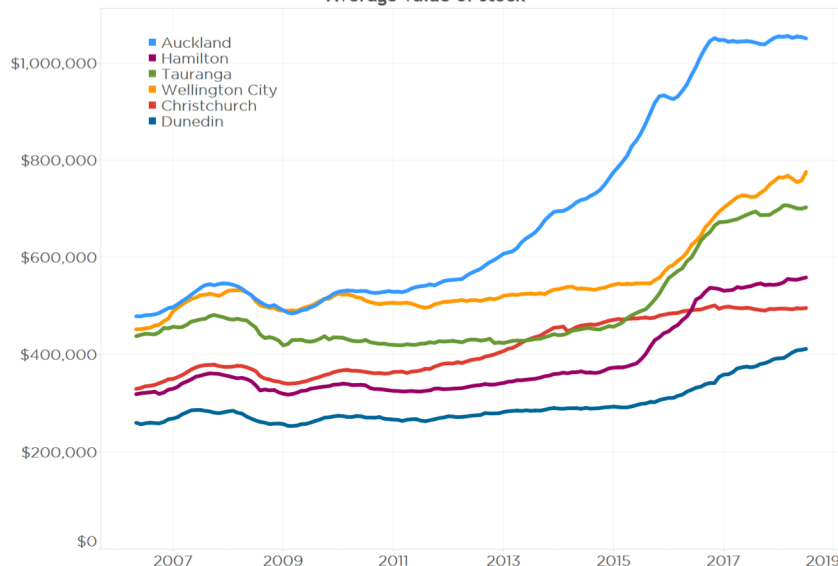
1.58 million are residential

Residential Property Values

NZ average value: **\$673,797**

Annual property value change: **5.1%**

Average value of stock



Hamilton

- Average \$558,615
- Annual property value change 3.3%

Auckland region

- Average \$1,050,778
- Annual property value change 0.6%

Tauranga

- Average \$702,850
- Annual property value change 1.7%

Wellington

- Average \$775,711
- Annual property value change 7.1%

Christchurch

- Average \$495,692
- Annual property value change 0.1%

Dunedin

- Average \$411,669
- Annual property value change 10.1%

Values as at Jul 31st 2018

What is the relationship between Crown owned housing and market value and what is the impact on Affordability?

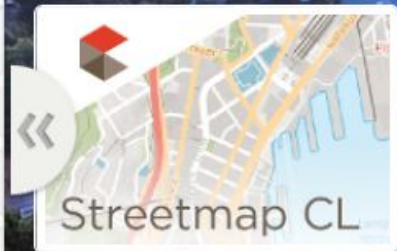
Visualisations:

1. Automated Valuation Model (AVM)
2. Crown Owned HNZ Properties
3. Retirement Homes
4. Historical Places
5. Recreational Crown Land

Tools and Layers

- Spatial Oracle
- ArcGIS Pro, Arc
- CoreLogic Basemaps

CoreLogic Home



Streetmap CL

CoreLogic Streetmap
CL



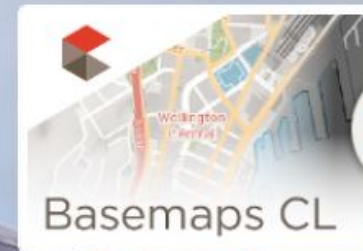
GreyLite CL

CoreLogic GreyLite CL



GreyDark CL

CoreLogic GreyDark
CL



Basemaps CL

Basemaps CL

Visualisation 1: Automated Valuation Model (AVM):

Affordability

Our AVM was the primary input



Machine Learning



Data Plasticity



Cloud based



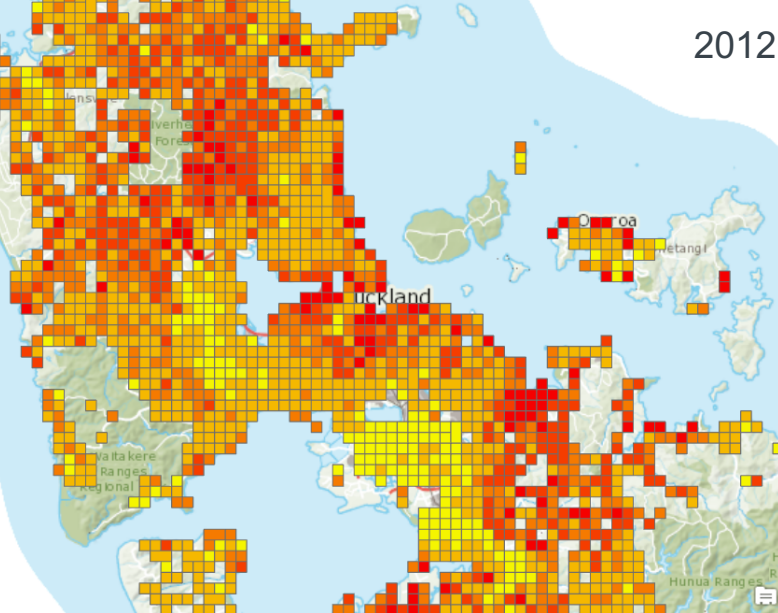
Model Monitoring included



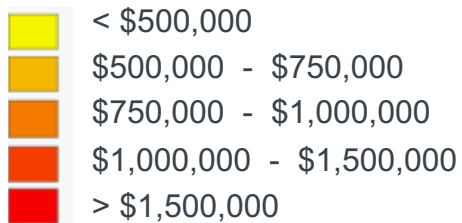
Adaptable to new markets

2012

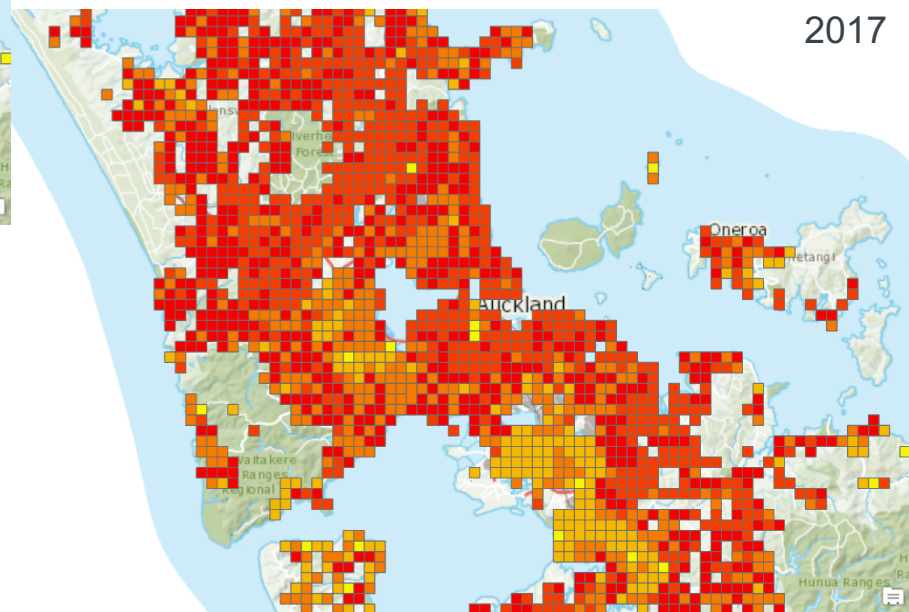
Auckland Change in AVM Property Values



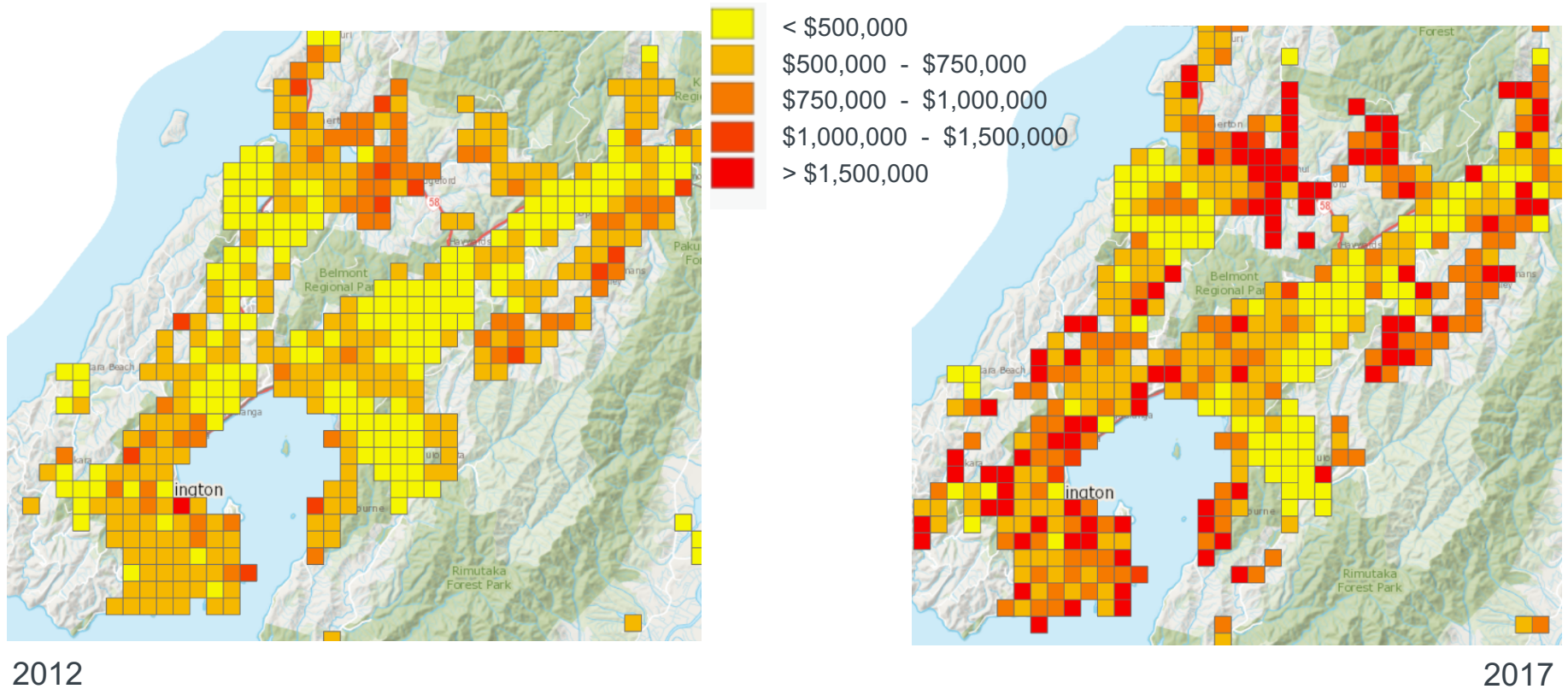
Property Values - Auckland



2017



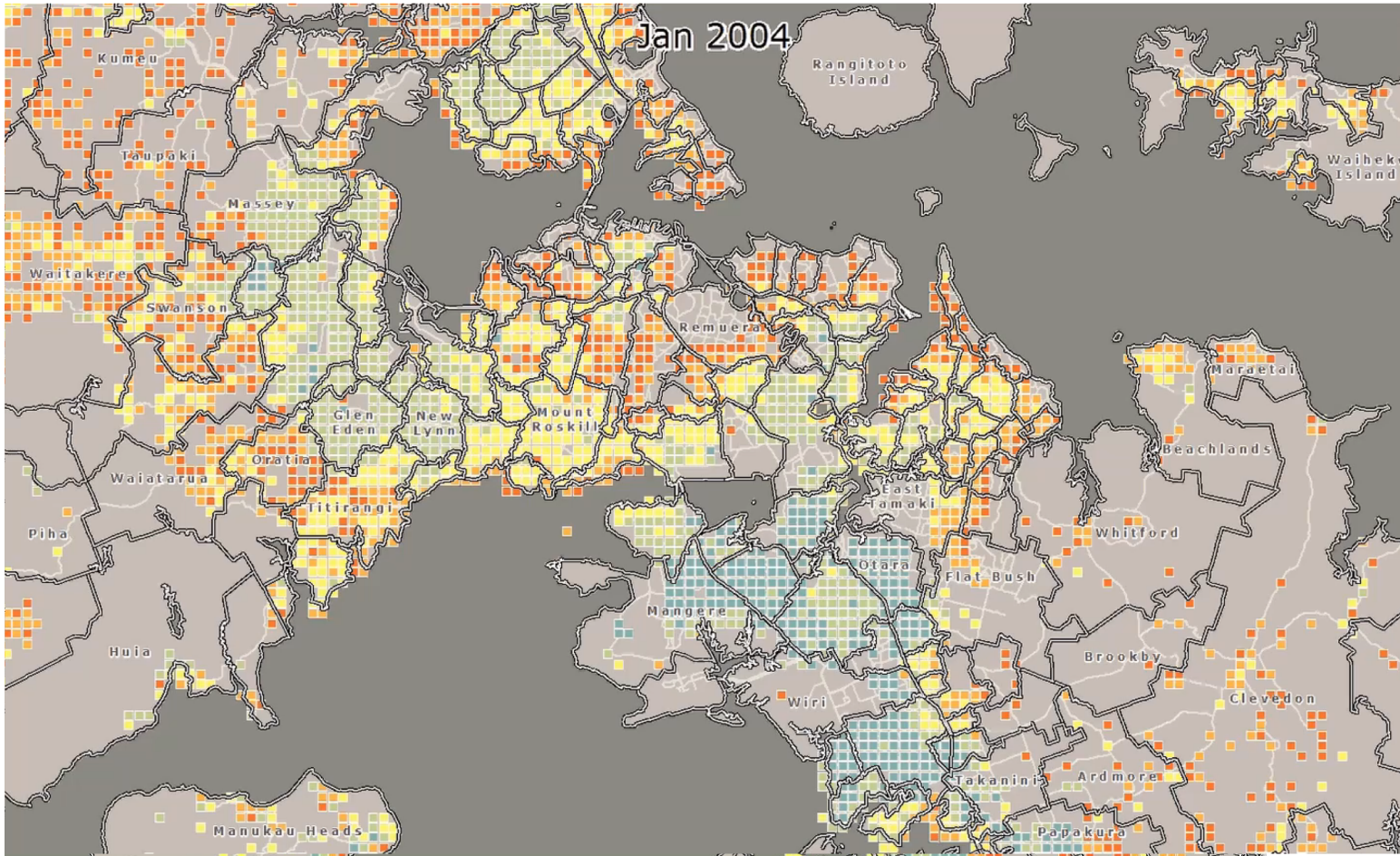
Wellington Change in AVM Property Values



2012

2017

Affordable Homes < \$650,000

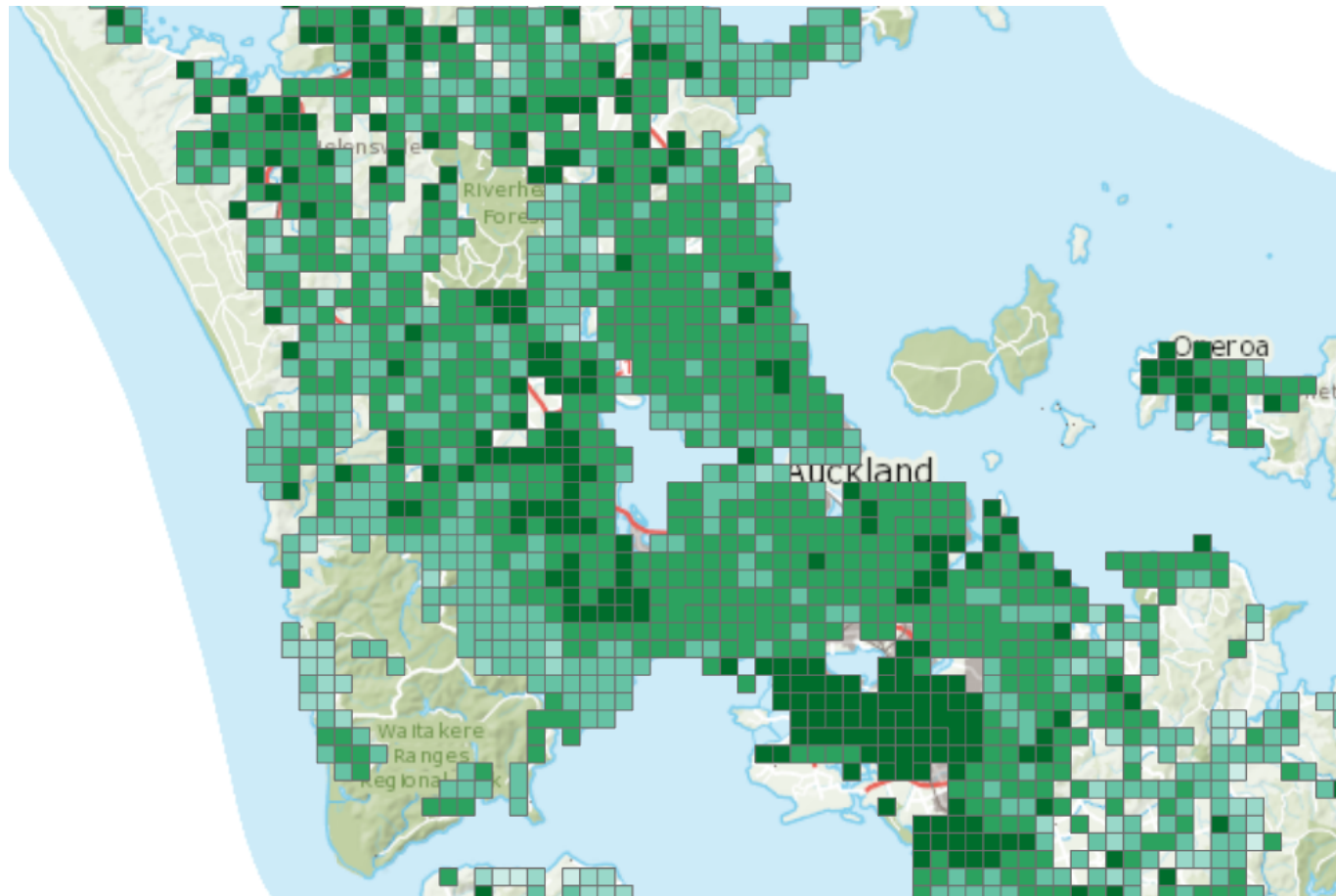
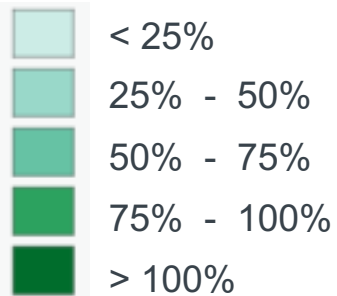


Auckland



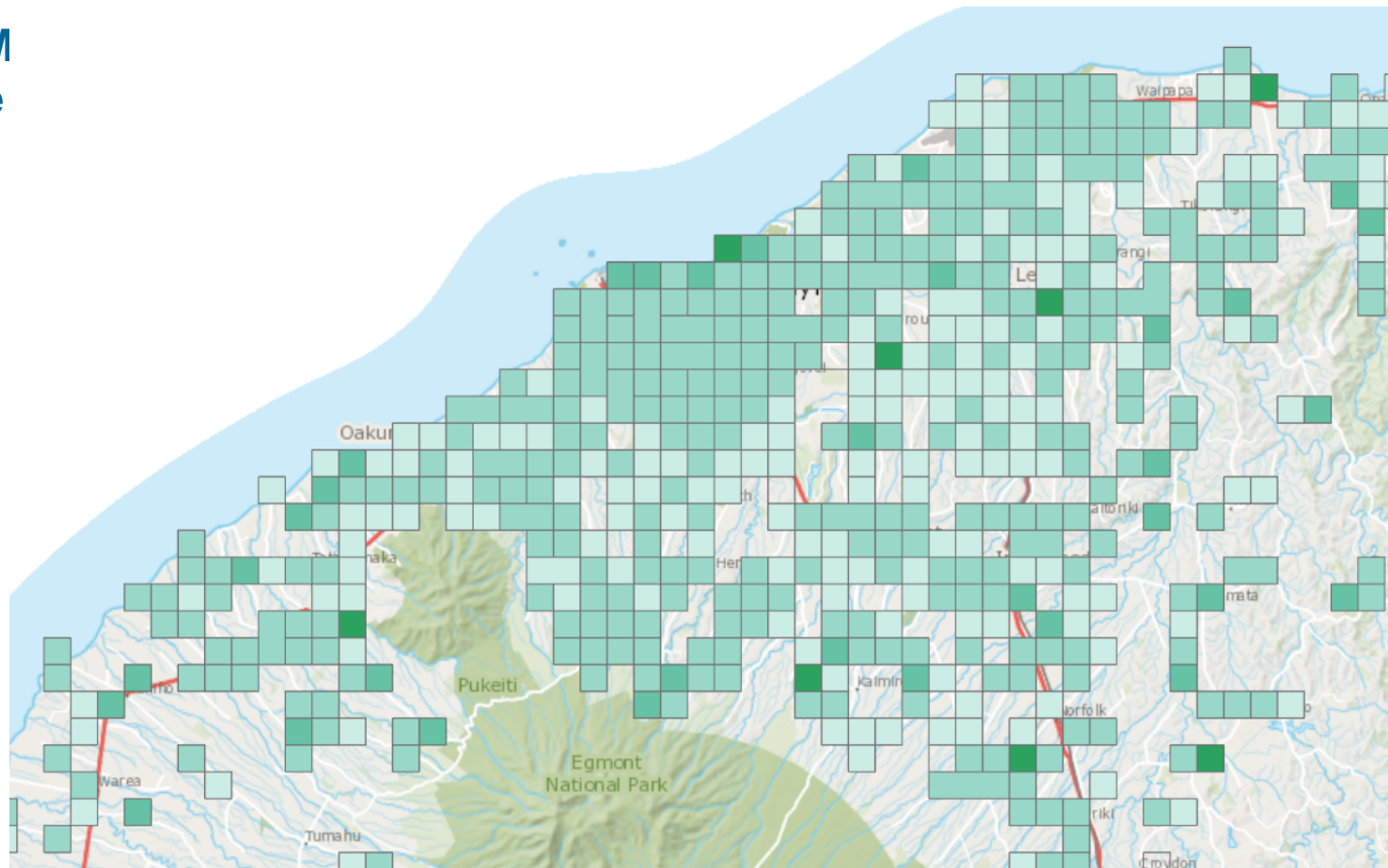
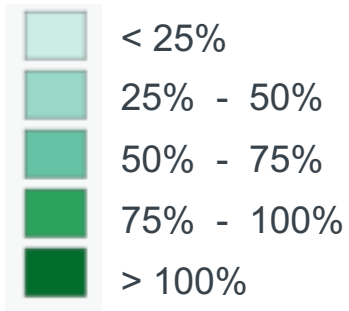
Change in AVM Property Value between 2012 and 2017

Auckland



Change in AVM Property Value between 2012 and 2017

New Plymouth

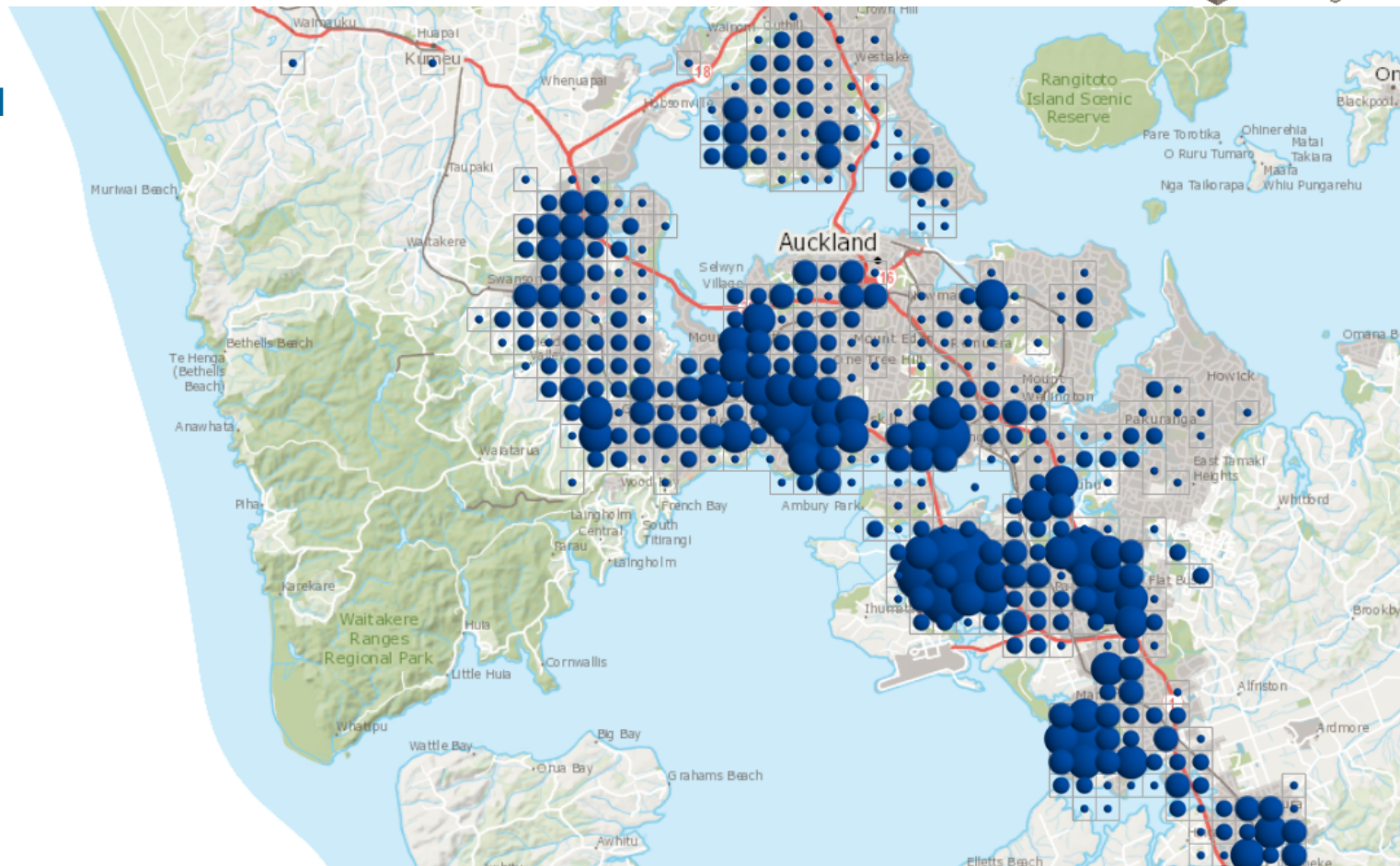
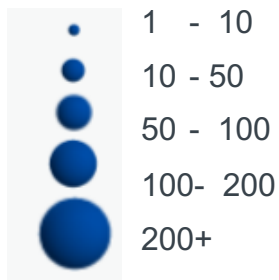


On average AVM property value rose by
85% across New Zealand between
December 2012 and December 2017

Visualisation 2: Crown Owned HNZ Properties

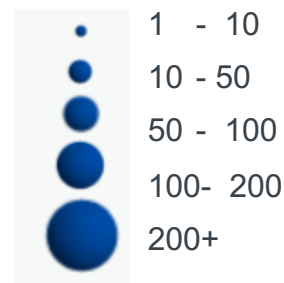
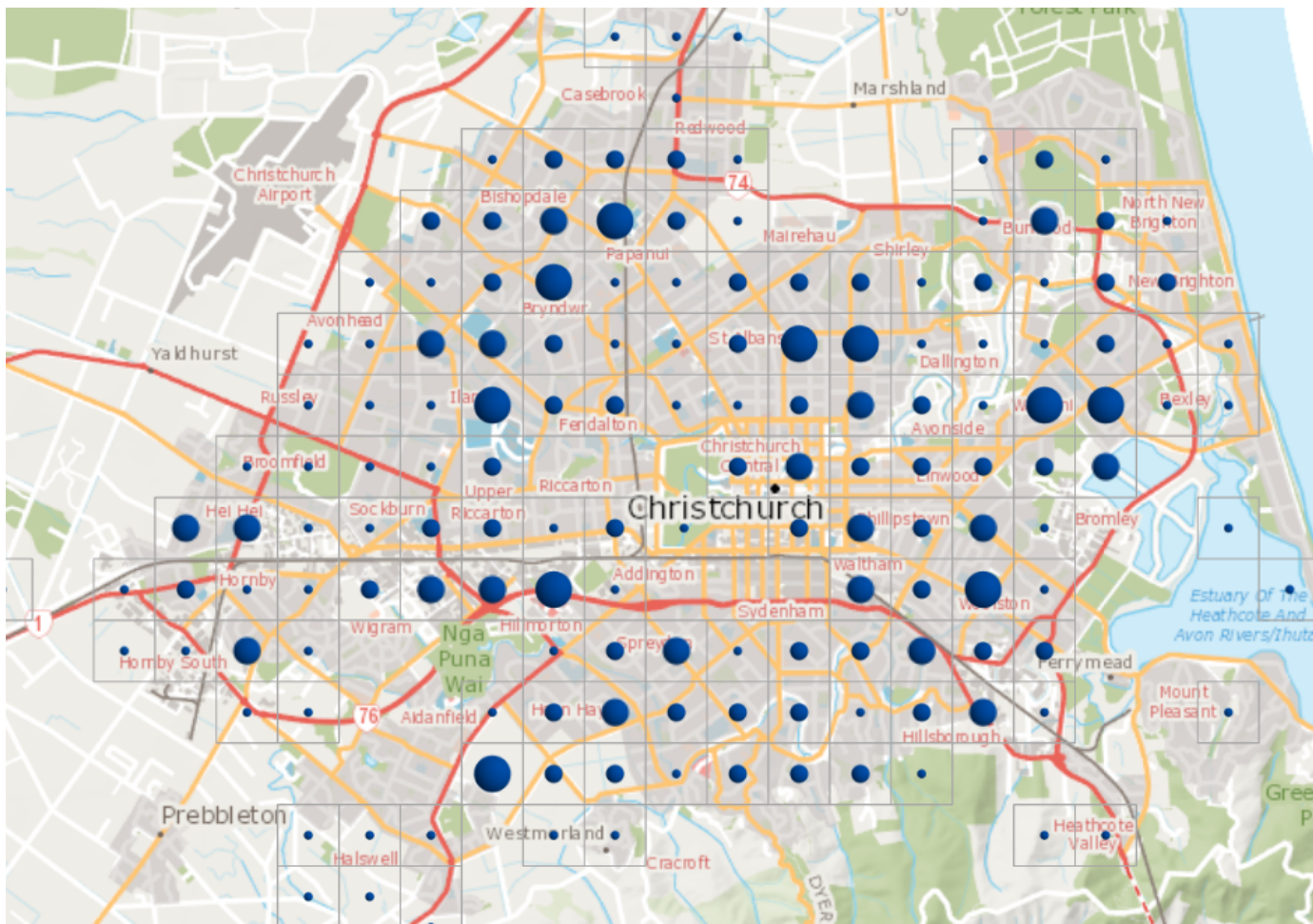
Crown owned HNZ Residential Housing Density

Auckland

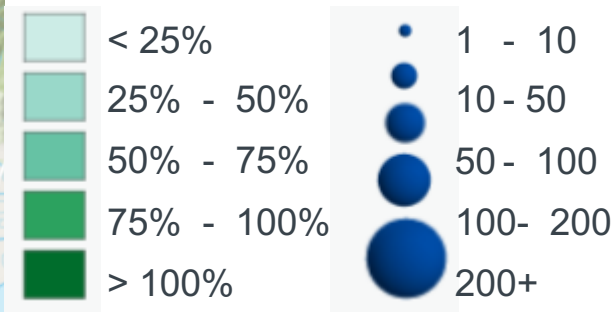
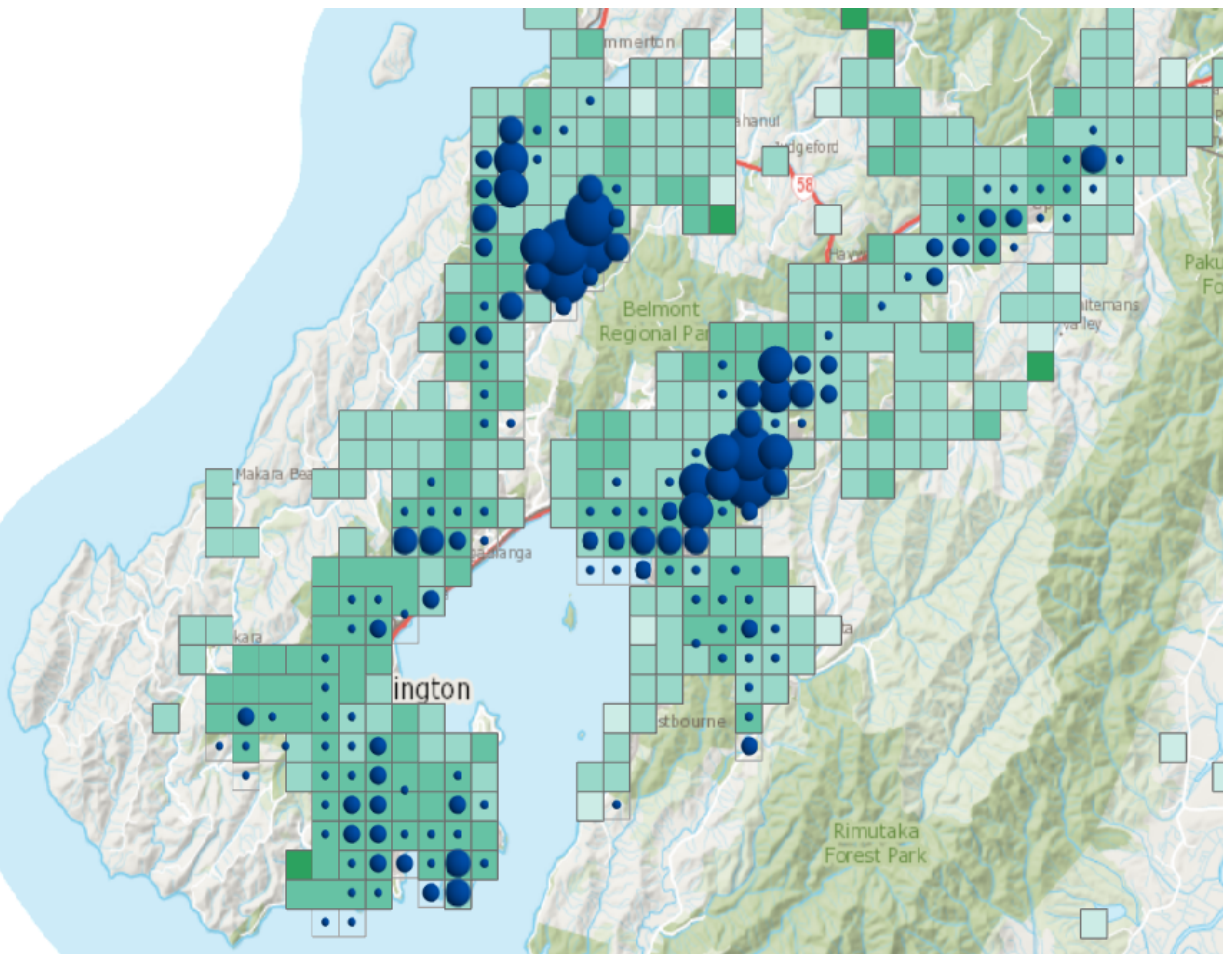


Crown owned HNZ Residential Housing Density Map

Christchurch

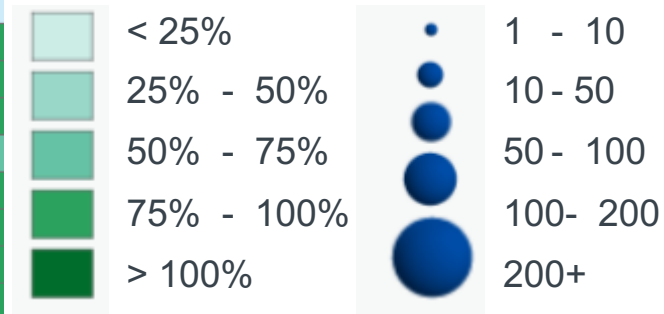
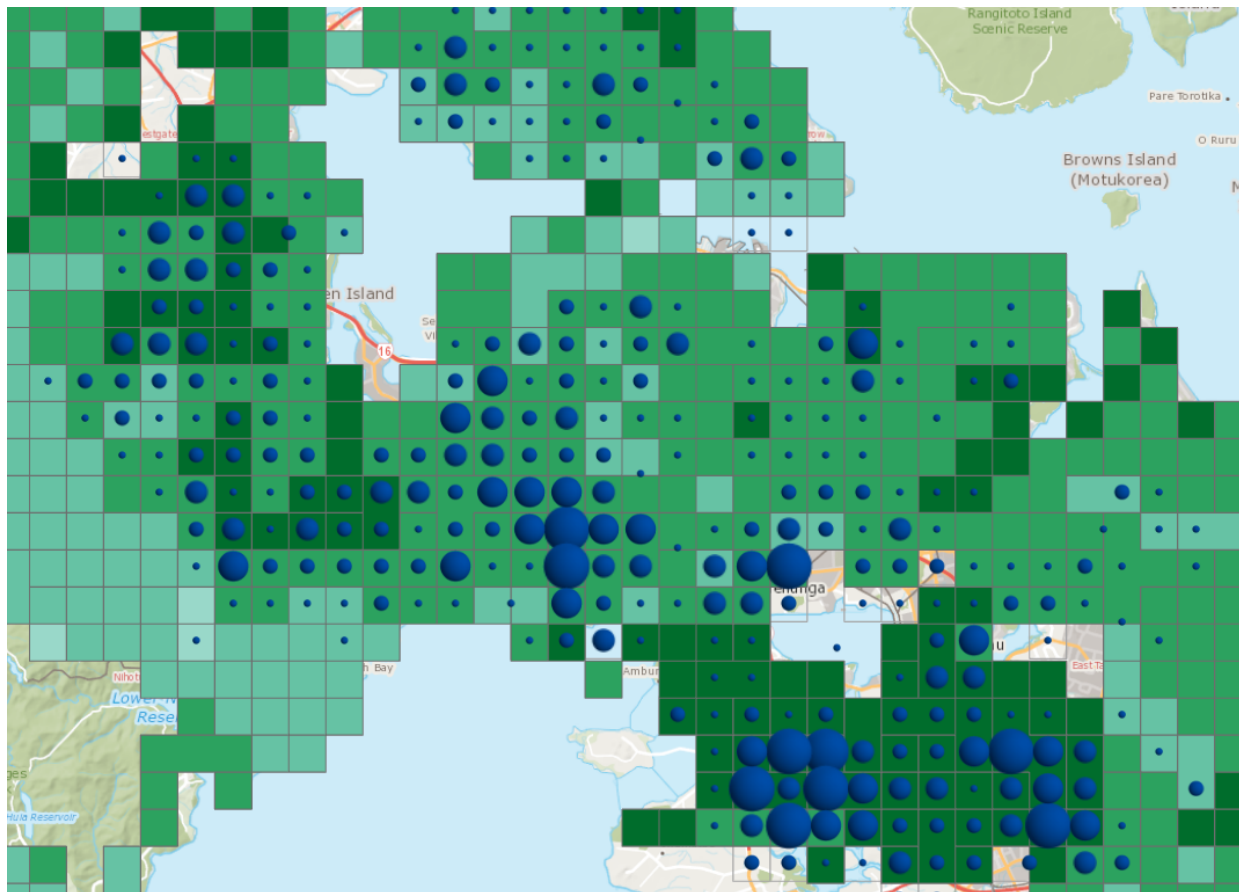


Relationship between property value change and Crown HNZ residential property



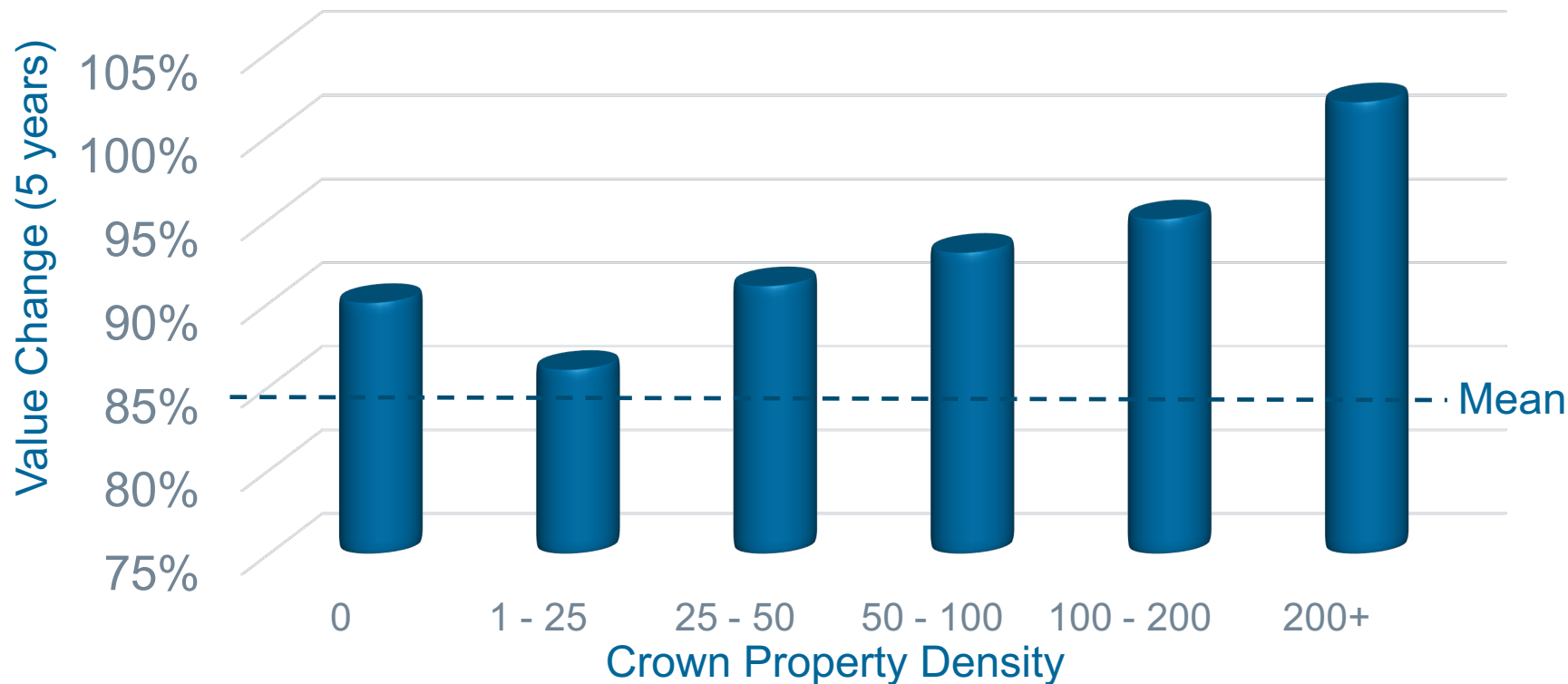
Wellington

Relationship between property value change and Crown HNZ residential property



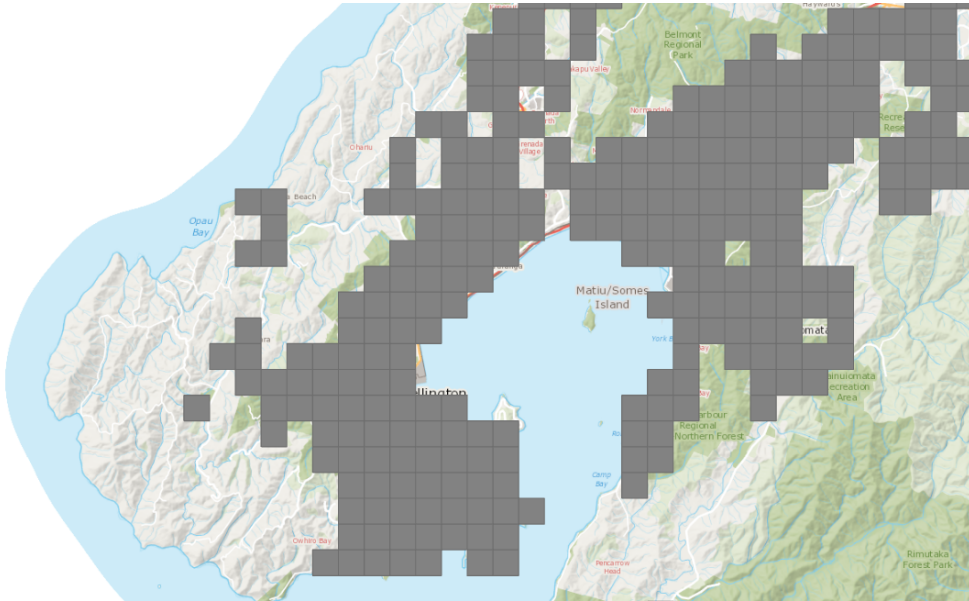
Auckland

Value Change in Auckland by Residential Crown Property Density



There is no correlation between the rate of change in property value and the density of Crown residential property across the country.

Lower priced suburbs have made greater gains as houses become less affordable.



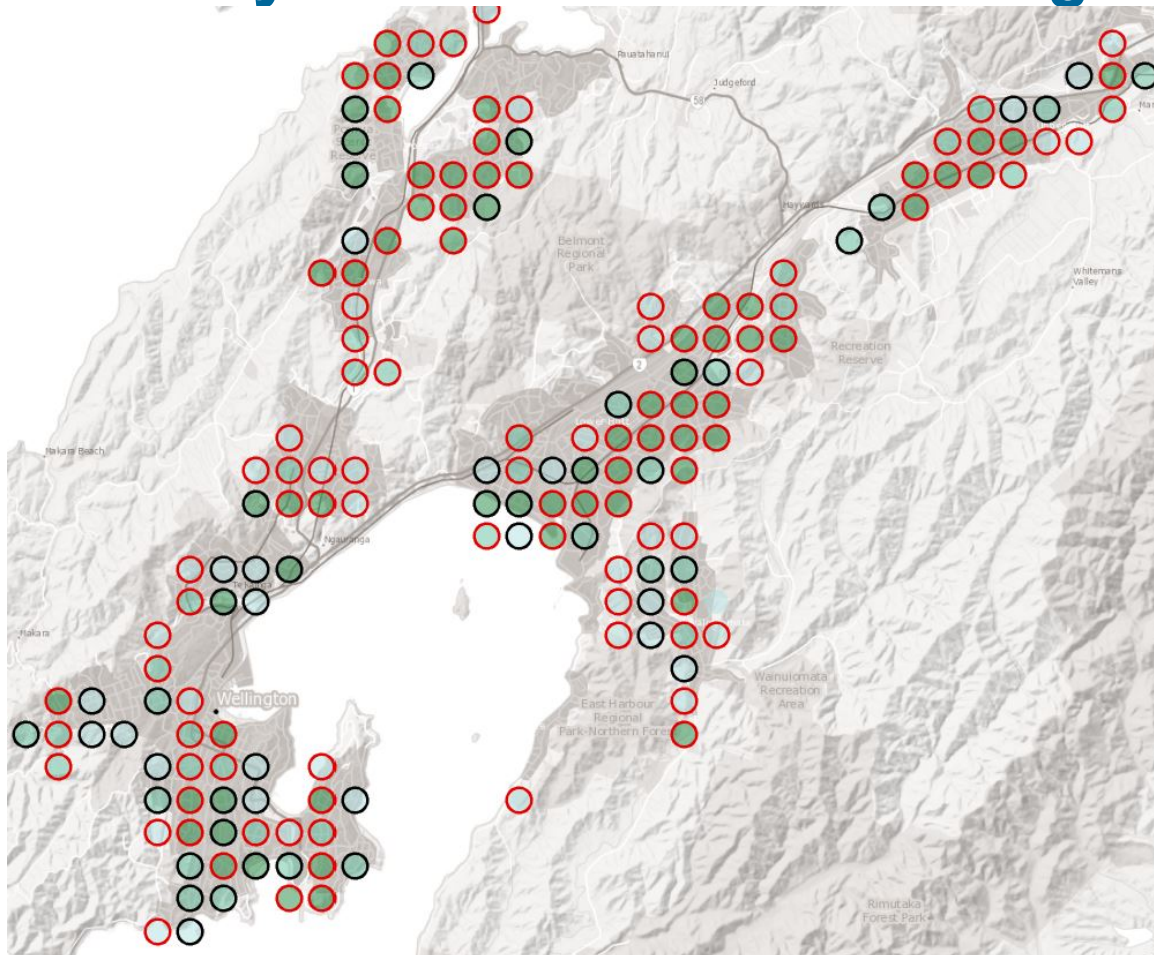
Geospatial Grid scheme: 1km x 1 km



Inputs:




- Current Market Value
- Housing NZ Density,
- Retirement Homes Density
- Historic Places Density

- Net Value Median Change
Between adjacent grids

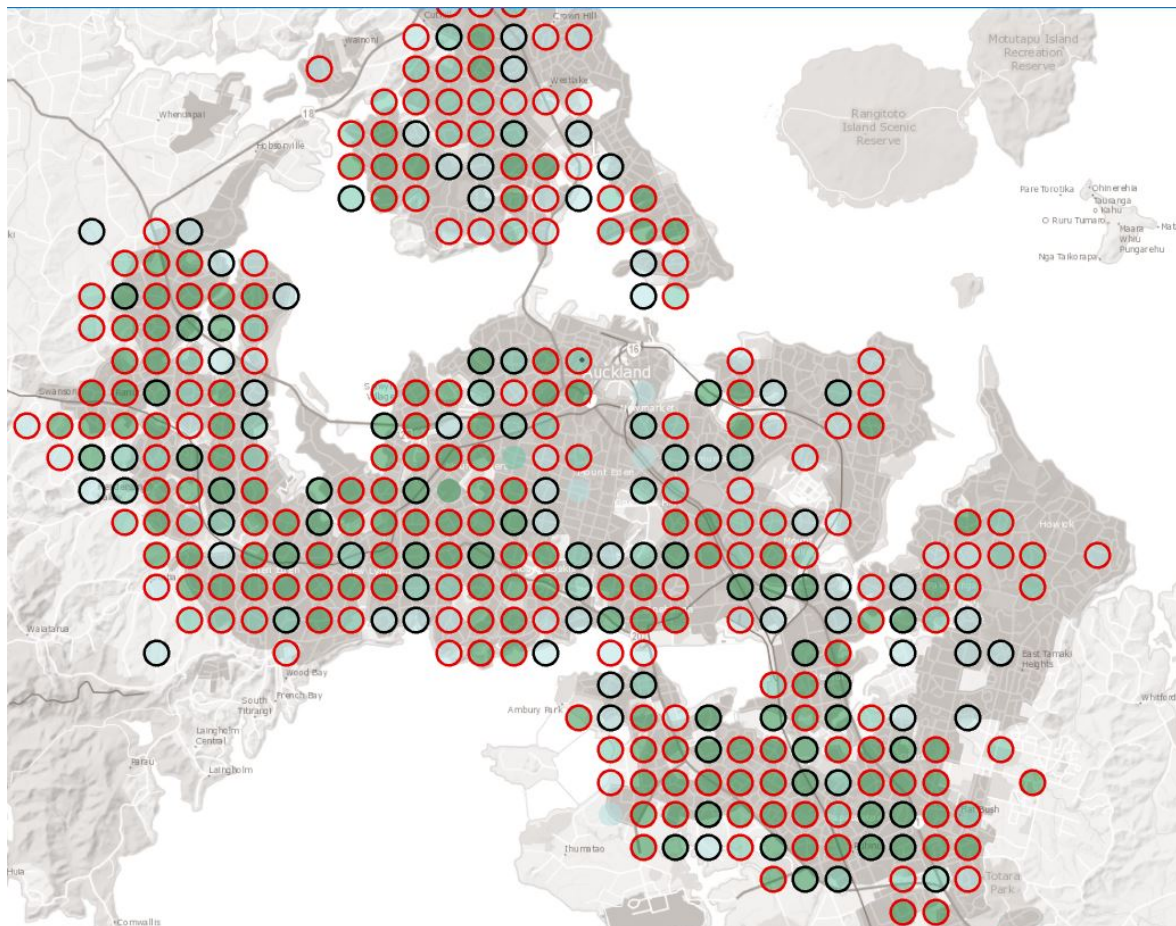
Proximity to HNZ homes - Wellington





-  Adjacent Areas Lower
-  Adjacent Areas Higher

-  < 5 HNZ properties
-  6-20 HNZ properties
-  > 20 HNZ properties

Proximity to HNZ homes - Auckland

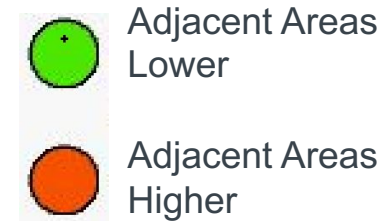
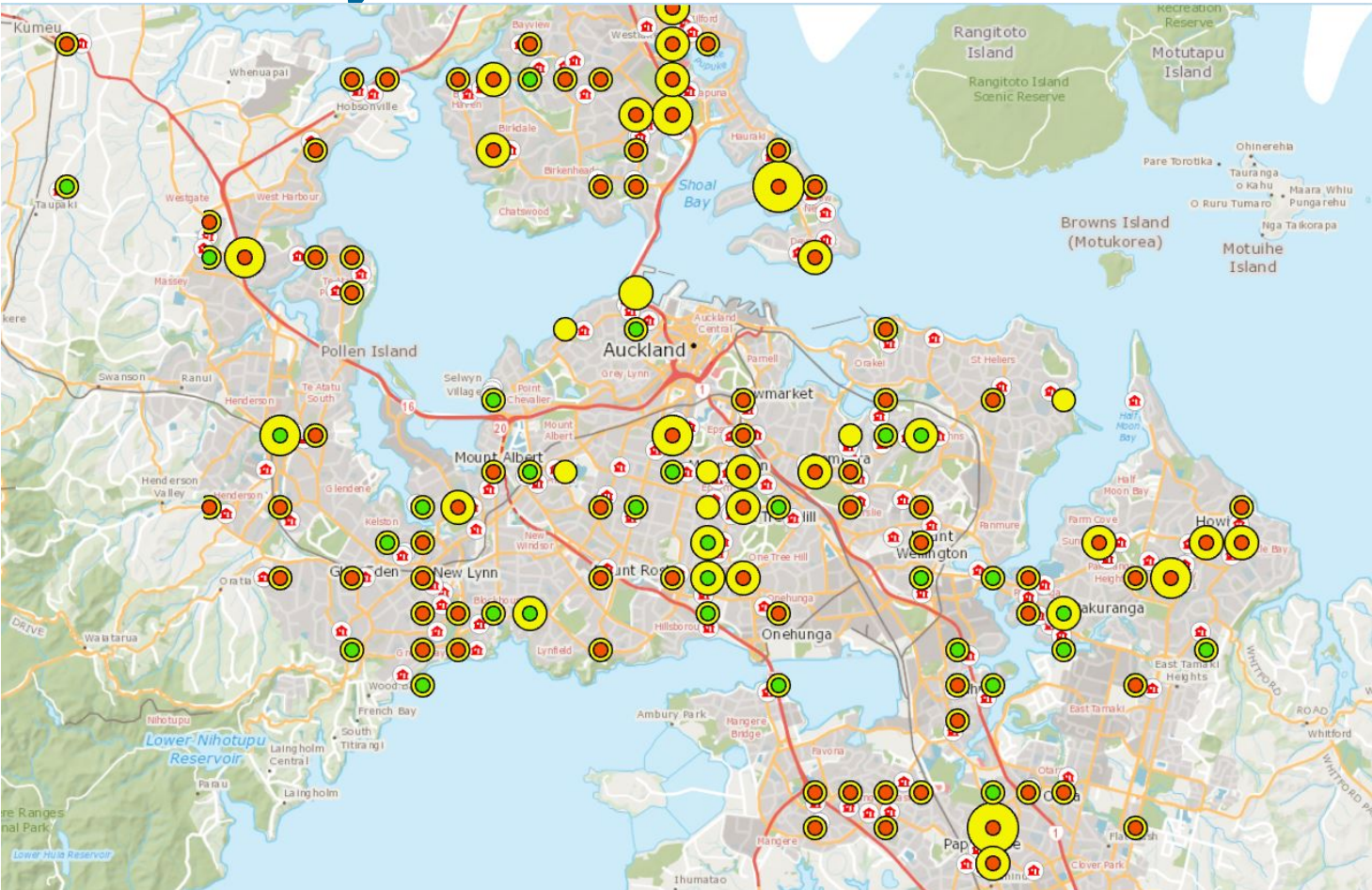


-  Adjacent Areas Lower
-  Adjacent Areas Higher

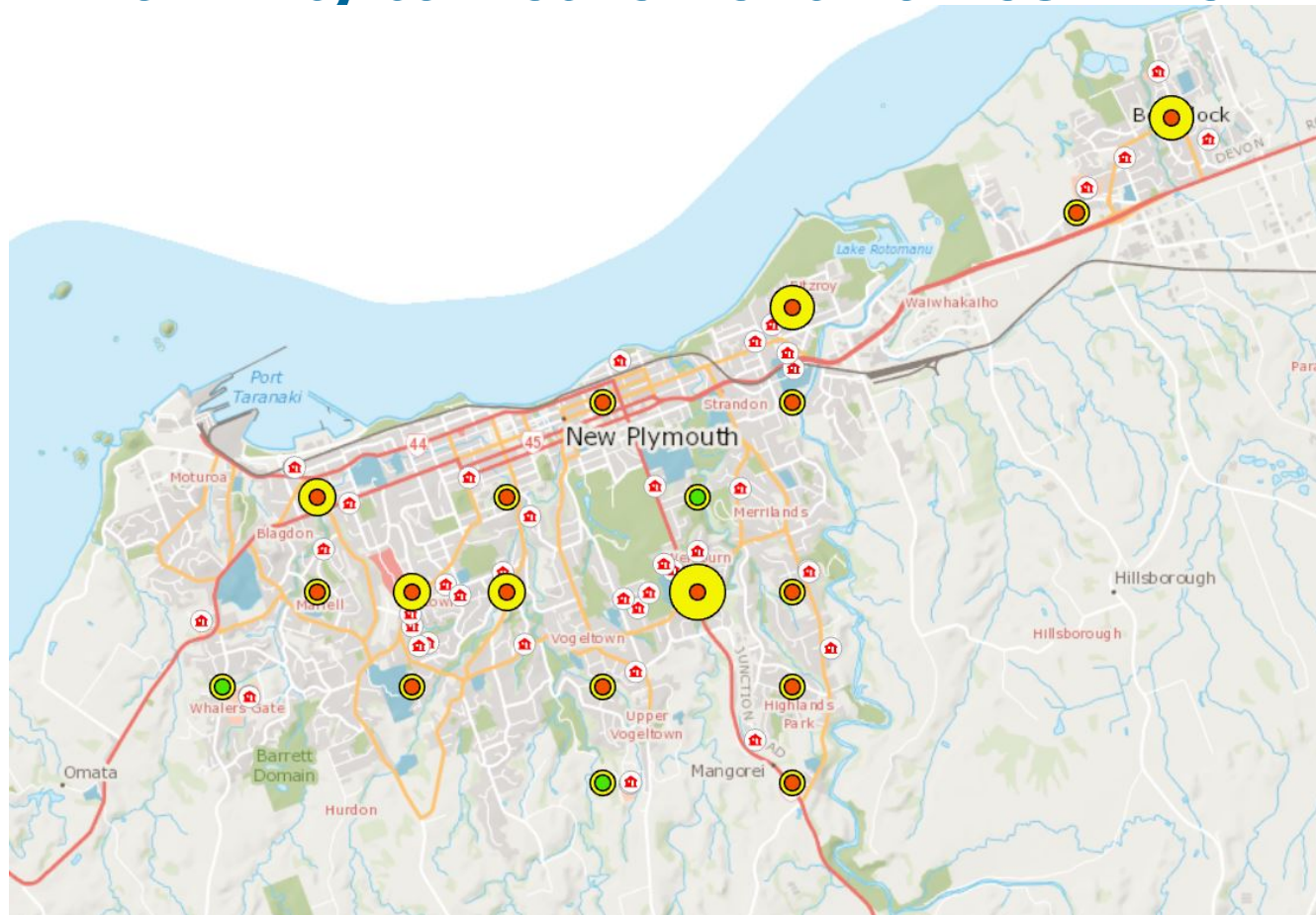
-  < 5 HNZ properties
-  6-20 HNZ properties
-  > 20 HNZ properties


Visualisation 3: Retirement Homes

Proximity to Retirement homes - Auckland



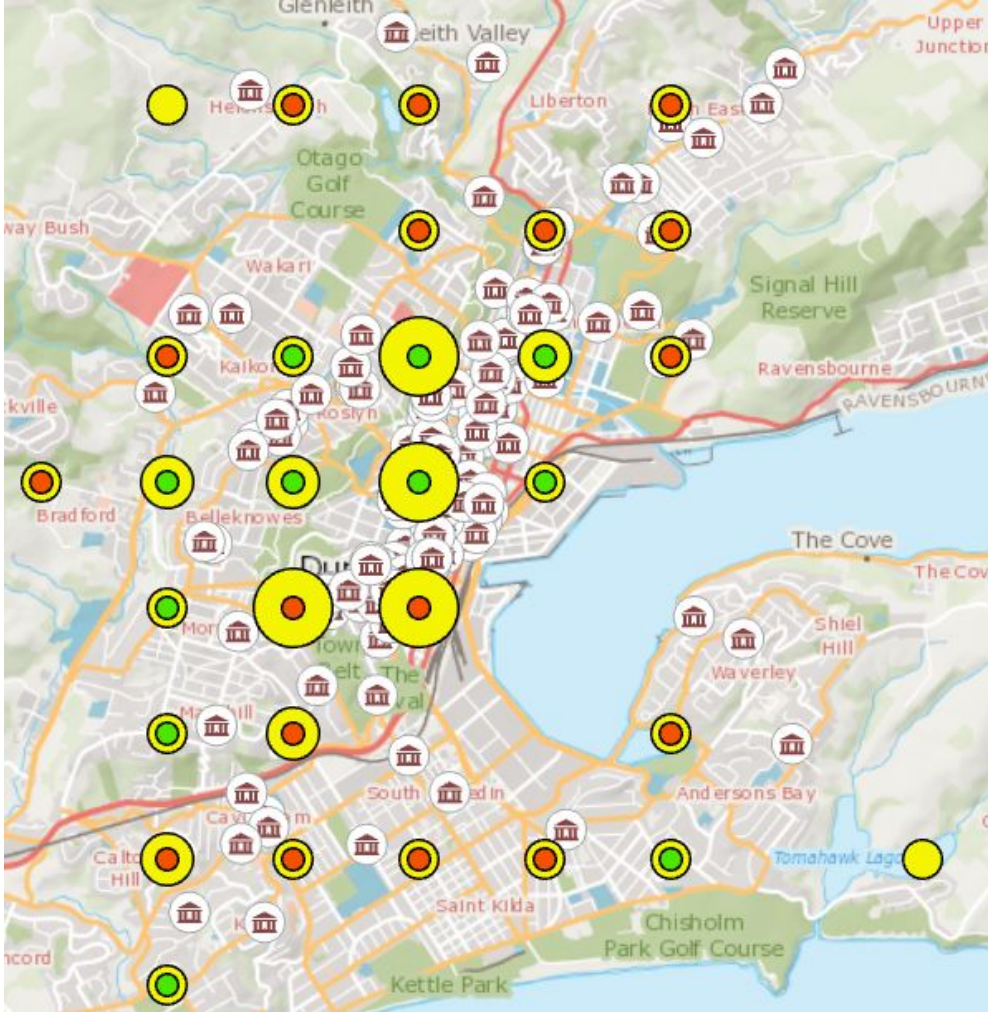
Proximity to Retirement homes – New Plymouth



-  Adjacent Areas Lower
-  Adjacent Areas Higher
-  1 Home
-  2 Homes
-  3 Homes
-  4 Homes
-  Location of Retirement home

Visualisation 4: Historic Places

Proximity to Historic Places – Dunedin



Adjacent Areas Lower



Adjacent Areas Higher



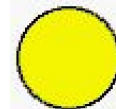
< 4 Historic Places



4-7 Historic Places



8-13 Historic Places

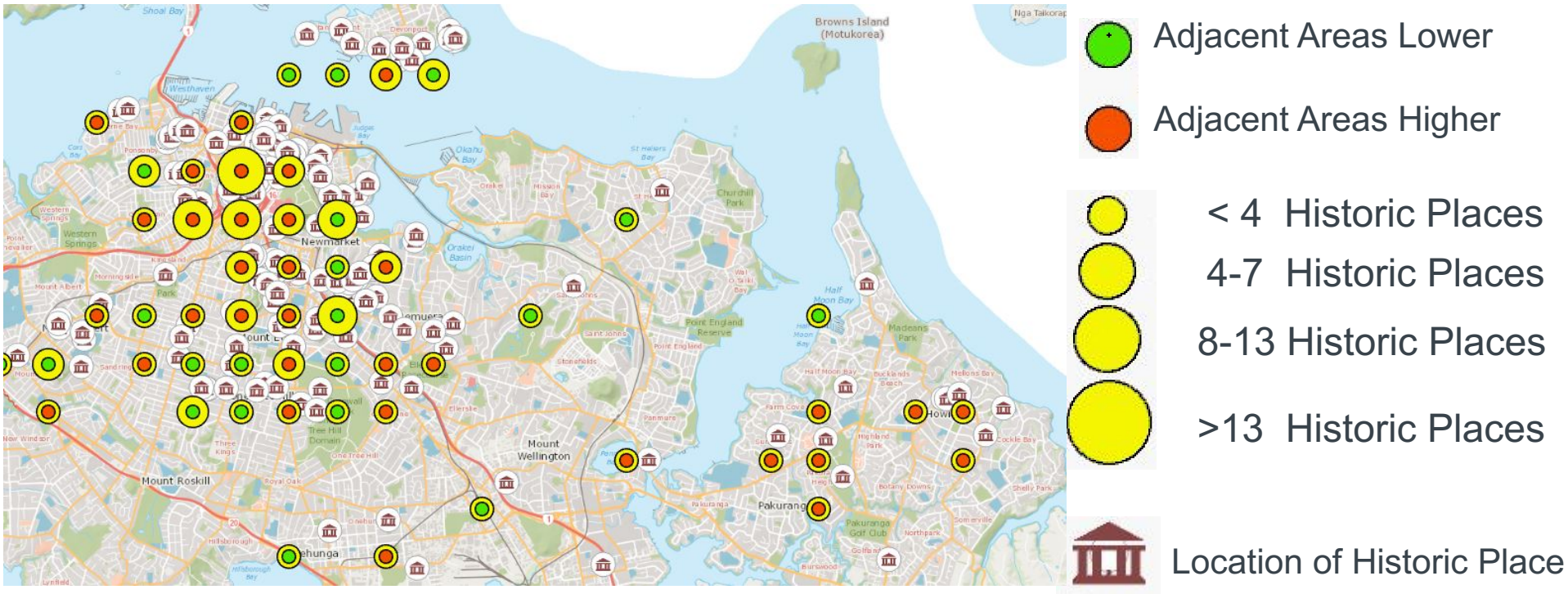


>13 Historic Places



Location of Historic Place

Proximity to Historic Places - Auckland



The value of properties closer to HNZ or Retirement homes or Historic Places are lower compared to adjacent areas.

Percentage of Grids Lower in Value:

HNZ Homes: 75%

Retirement Homes: 75%

Historic Places: 68%

Median Lower Value if you live close to:

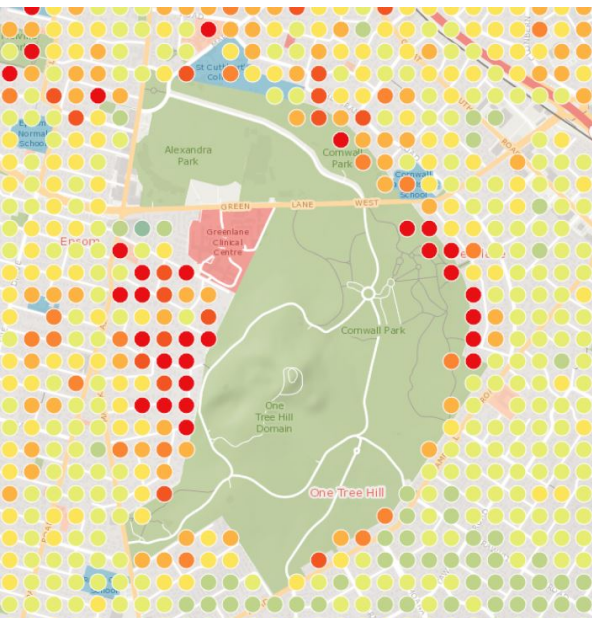
HNZ Homes: \$47k

Retirement Homes: \$42k

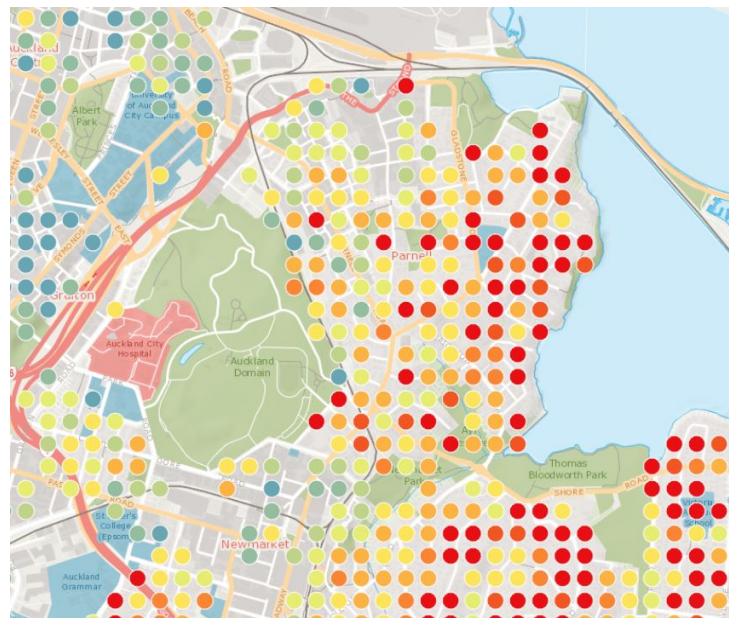
Historic Places: \$25k

Visualisation 5: Recreational Crown Land

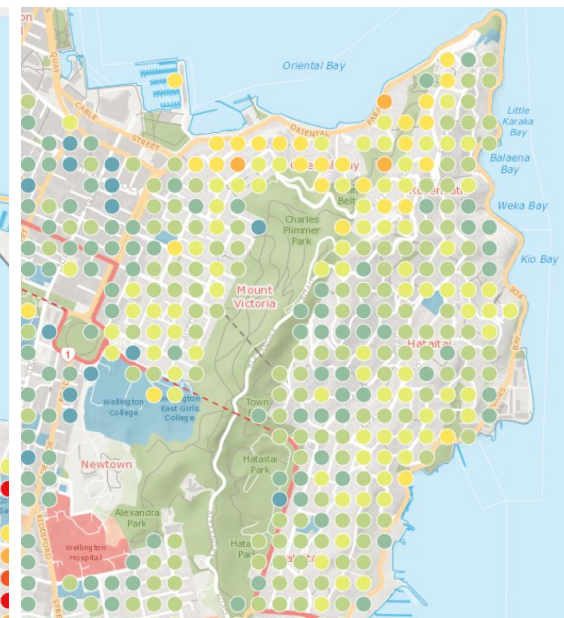
Adjacency to Parks, Coast (Queen's Chain)



Cornwall Park,
Auckland



Auckland Domain



Hataitai Park / Mt Vic,
Wellington

For proximity to recreational crown land, other factors like location determines market value.

Other factors such as location, affordability, desirability, school zoning and property condition are more influential on property value.

Thank You!

Special thanks to Matt Lythe,
Phil Woods and Sam Brown.

Come and see us at our
display.

Any questions?

Bryan Teahan
bryan.teahan@corelogic.co.nz



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