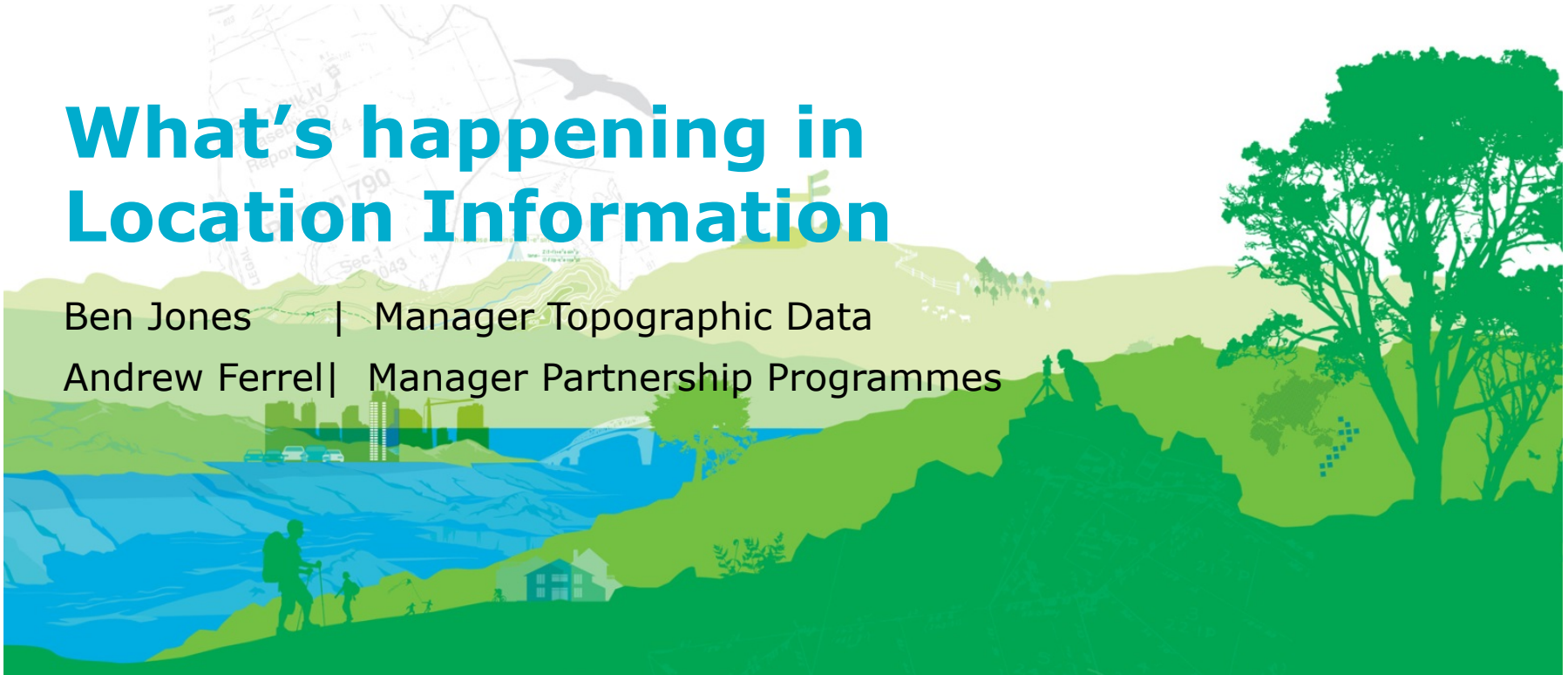


What's happening in Location Information

Ben Jones | Manager Topographic Data

Andrew Ferrell | Manager Partnership Programmes





Location Information



Building Outlines

Building Outlines ~~Pilot~~

LDS 2016

1,087,187 Buildings

3 Regions

LDS 2017

1,657,655 Buildings

8 Regions

LDS 2018

2,841,491 Buildings

12 Regions



Building Outlines ~~Pilot~~

New Layer

- **Unique building identifier**
- **Building Outline linked to the aerial imagery**
- **Additional QA checks**
- **New schema has been developed**
- **Data Dictionary available now**





Road Centreline

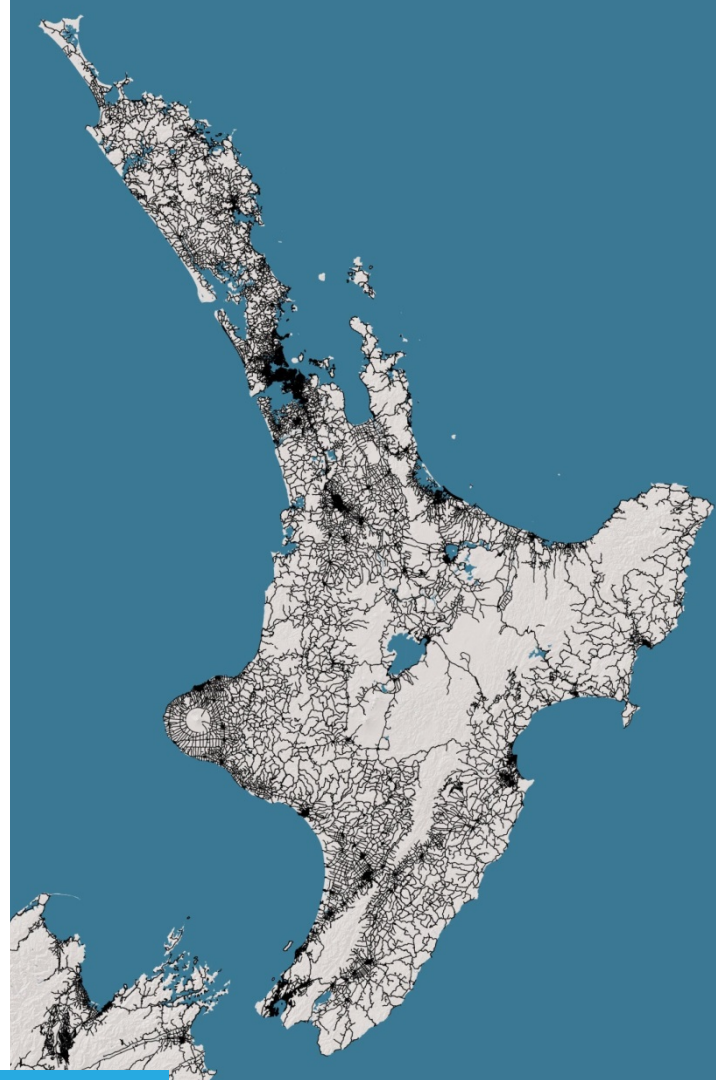
Roads Progress

Topo Roads

- **Focus on accuracy improvements**

Future Roads work

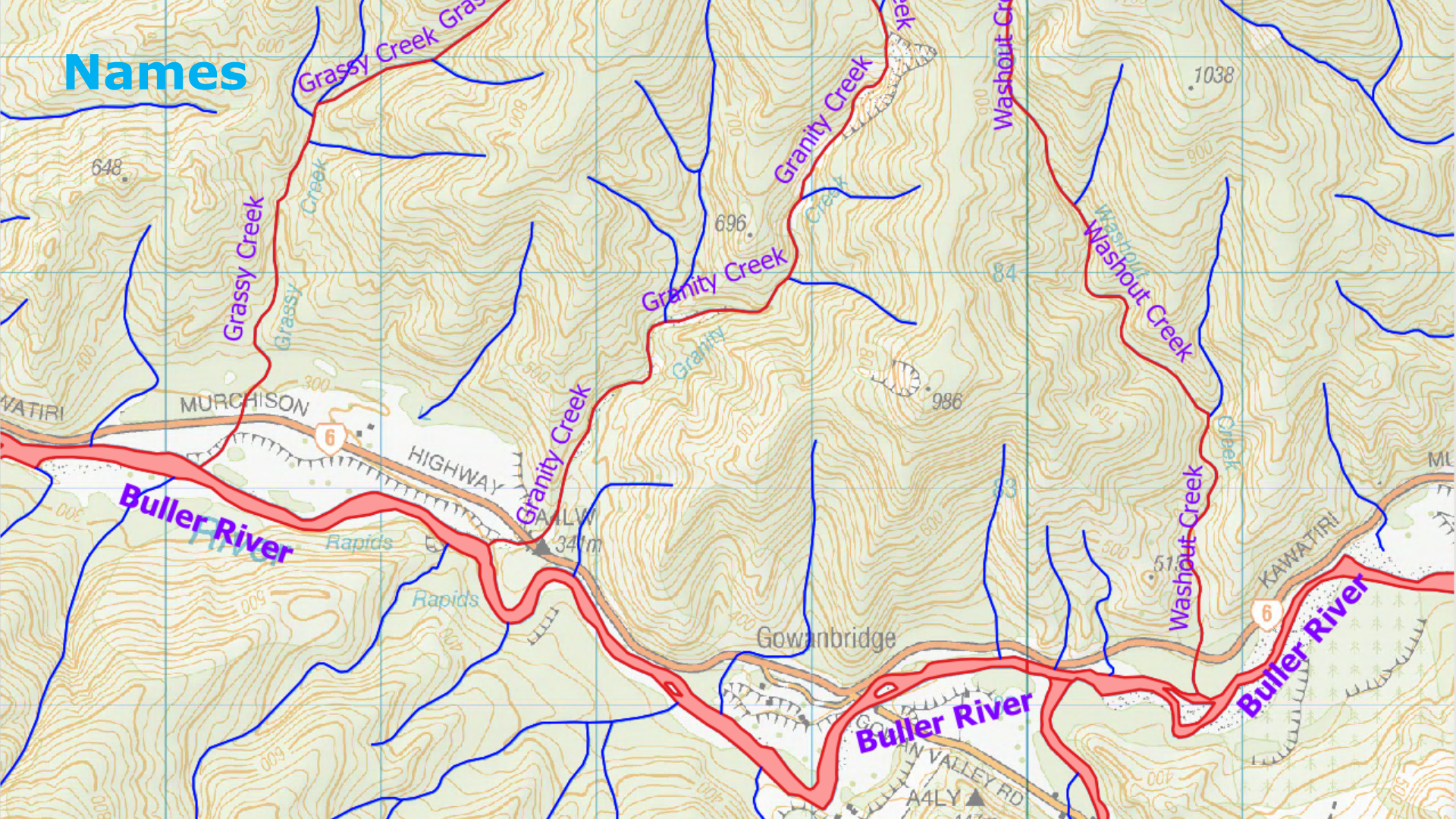
- **Conflate addressing and topo roads**
- **Combined workflow for road management**
- **Improve attribution**



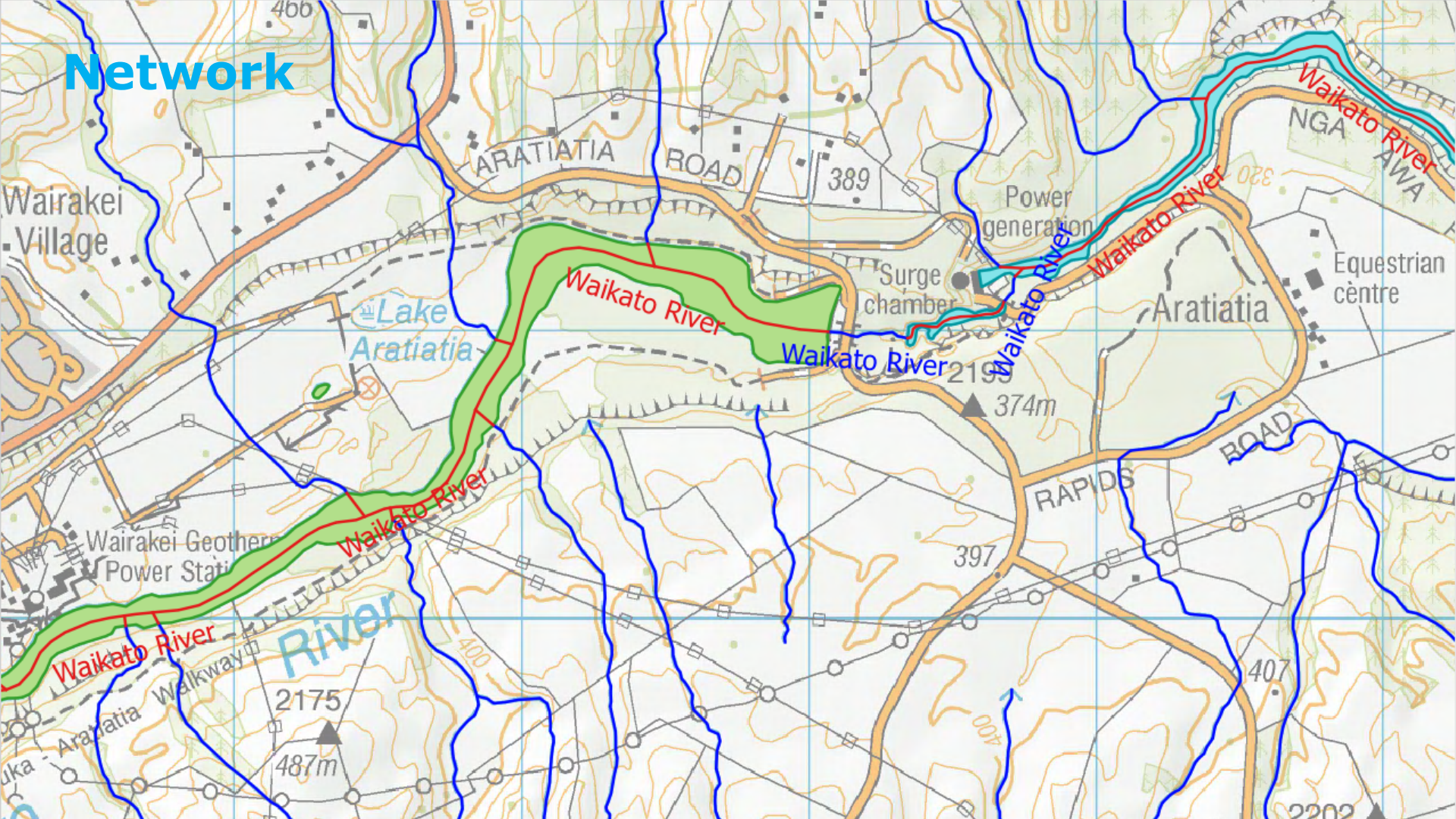


Rivers

Names



Network





National Imagery

Regional Aerial Imagery

- Work in Regional Consortium
 - Regional Councils
 - Territorial Authorities
- Central Government
 - MPI
 - DOC
 - LINZ
- Creative Commons License
- Resolution ~ 30 cm
- Accuracy ~ 1m accuracy
- Available on the LINZ Data Service

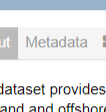


Urban Aerial Imagery

Territorial Authorities

- Creative Commons License
- Resolution $\sim 5 - 10$ cm
- Accuracy ~ 30 cm accuracy
- Available on the LINZ Data Service








NZ 10m Satellite Imagery (2017)

LINZ / National Imagery

—

⋮

 Licence
  7648
  819

Added
22 Feb 2018

About

Metadata

Tiles Table

Analytics

History

Services

Comments (0)

This dataset provides a seamless cloud-free 10m resolution satellite imagery layer of the New Zealand mainland and offshore islands.

The imagery was captured by the European Space Agency Sentinel-2 satellites between December 2016 - December 2017.

We want your feedback
 Data has been made available by LINZ on a pilot basis to help LINZ assess the value of ongoing release of satellite imagery.

Use the data, then [send us your feedback](#)

Currency
 This data will be updated once a year, during the term of the 2-year pilot.

Technical specifications
 It comprises 450 x ortho-rectified RGB GeoTIFF images in NZTM projection, tiled into the LINZ Standard 1:50,000 tile layout.


- Satellite sensors: ESA Sentinel-2A and Sentinel-2B
- Acquisition dates: December 2016 - December 2017
- Spectral resolution: R, G, B
- Spatial resolution: 10 meters
- Radiometric resolution: 8-bits (downsampled from 12-bits)


This is a visual product only. The data has been downsampled from 12-bits to 8-bits, and the original values of the images have been modified for visualisation purposes.

If you require the 12-bit imagery (R, G, B, NIR bands), send your request to eo@linz.govt.nz

Licence

Creative Commons Attribution 4.0 International

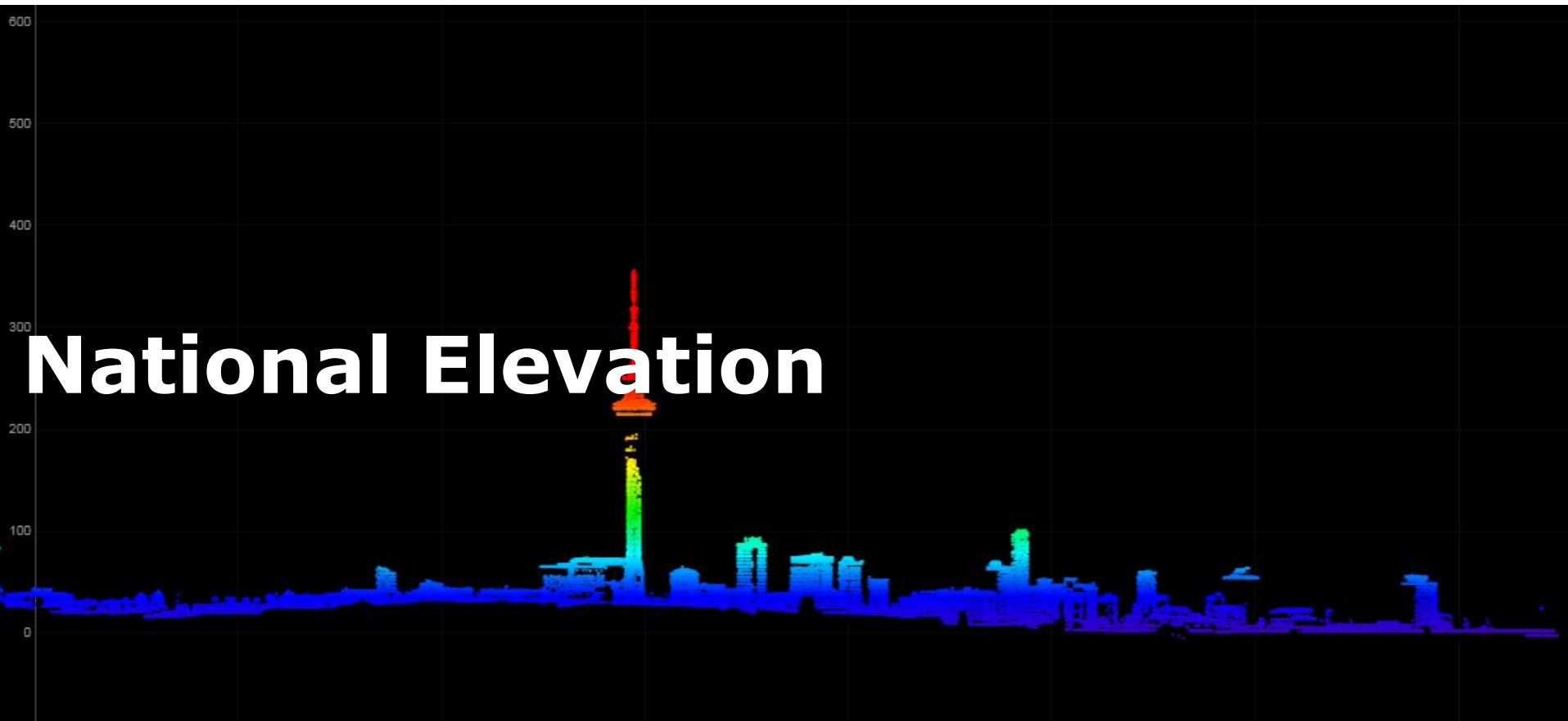
 You may use this work for commercial purposes.

 You must attribute the creator in your own works.

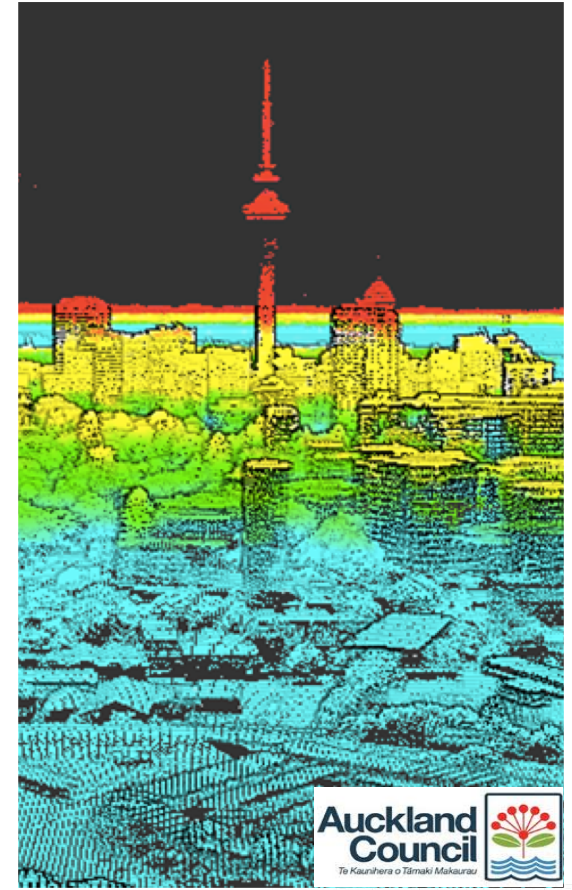
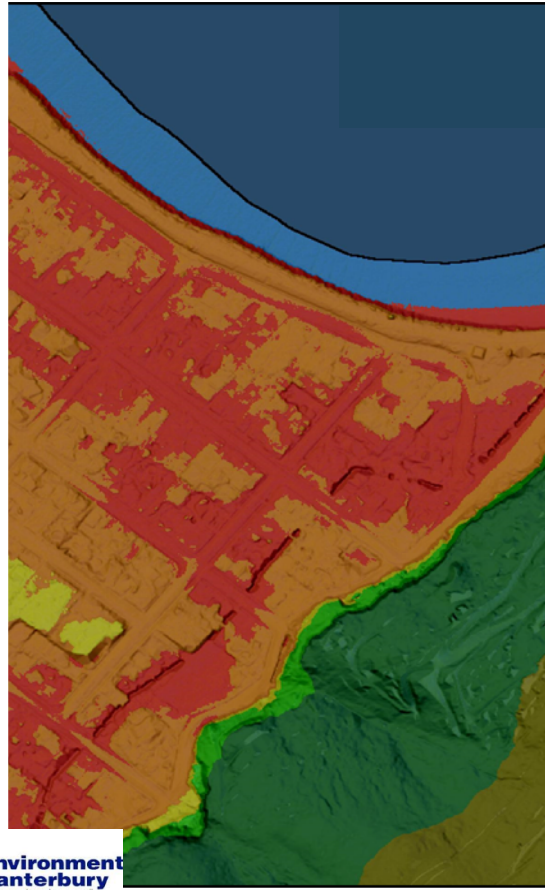
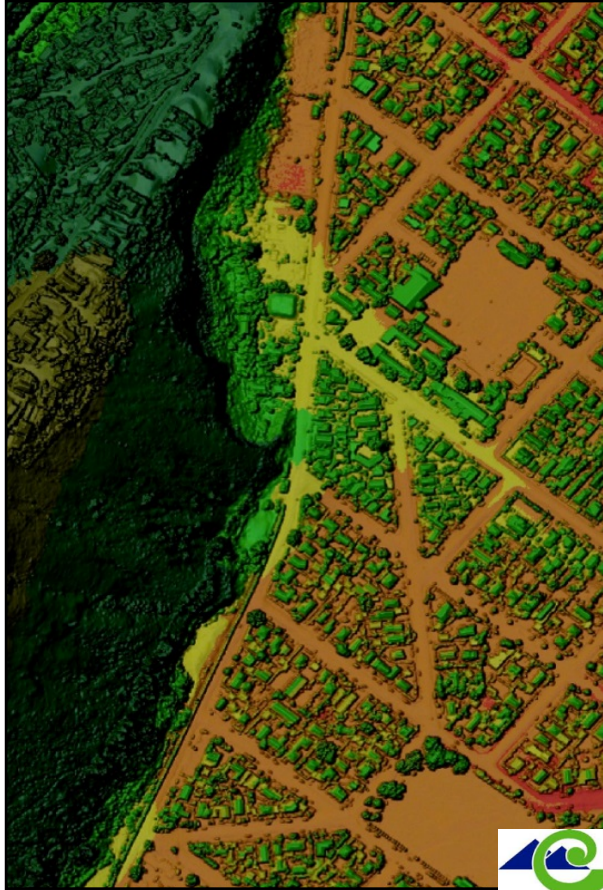
Information

Category	Aerial Photos
Tags	New Zealand
Regions	New Zealand
Metadata	ISO 19115/19139, Dublin Core

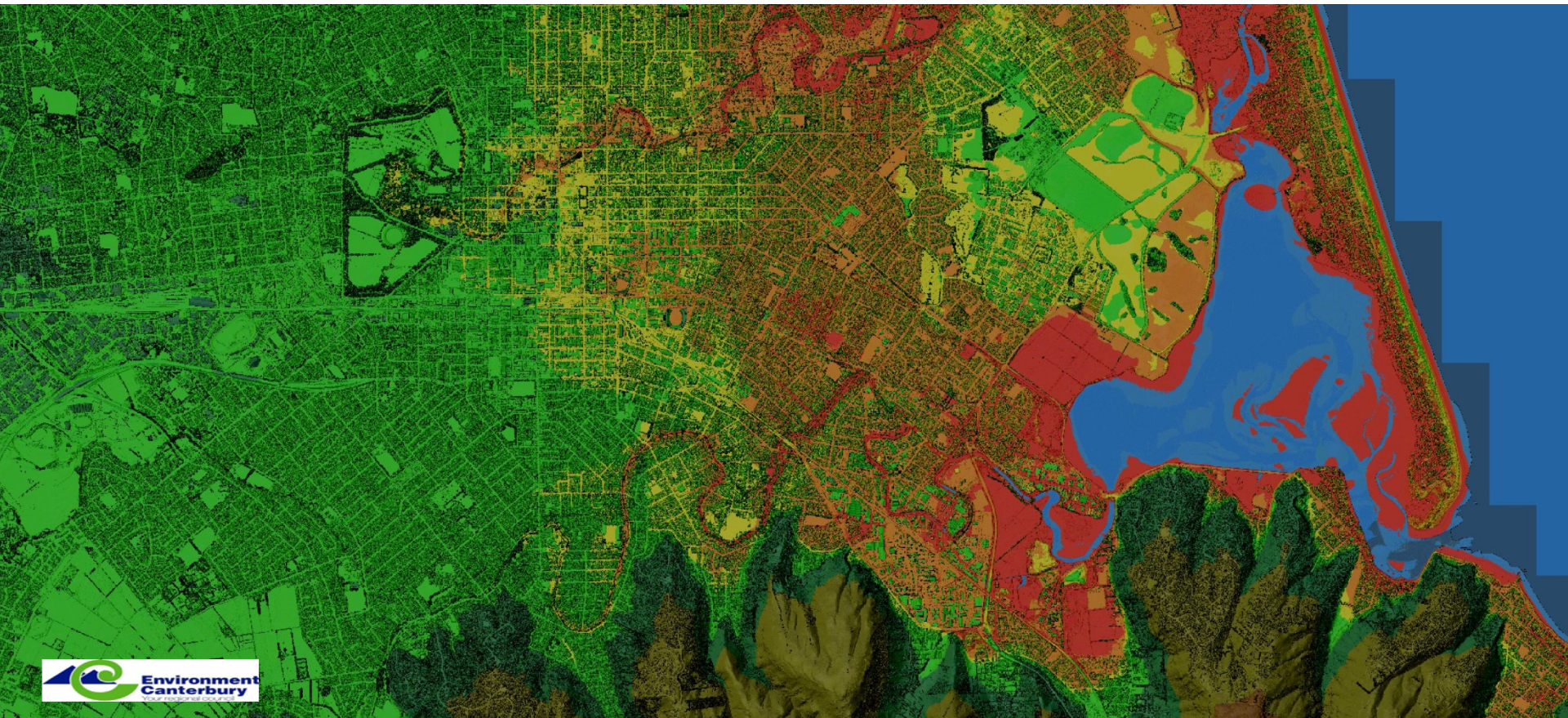
The screenshot displays a web-based map of New Zealand. At the top, there is a search bar with a dropdown menu currently set to 'Streets'. To the right of the search bar, a dropdown menu is set to 'NZ 10m Satellite Imagery (2017)'. On the left side of the map, there is a zoom control with '+' and '-' buttons. The map itself shows the two main islands of New Zealand, with satellite imagery. Major cities are labeled: Auckland, Hamilton, New Plymouth, Palmerston North, Greymouth, Hokitika, Christchurch, and Dunedin. At the bottom left, there is a scale bar showing 100 km and 100 miles. At the bottom right, there is a copyright notice: 'Base Map © Mapbox © OpenStreetMap'.



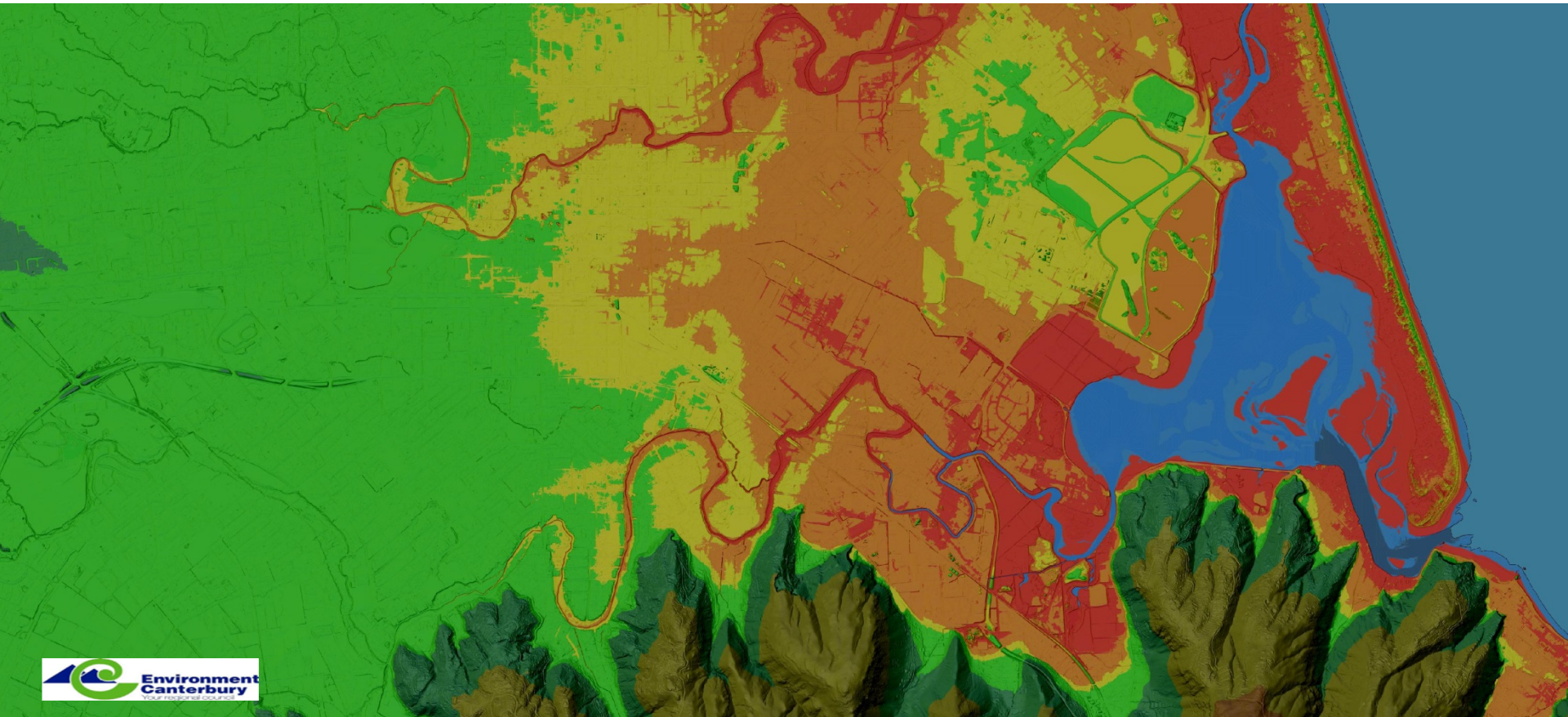
LiDAR based elevation data products



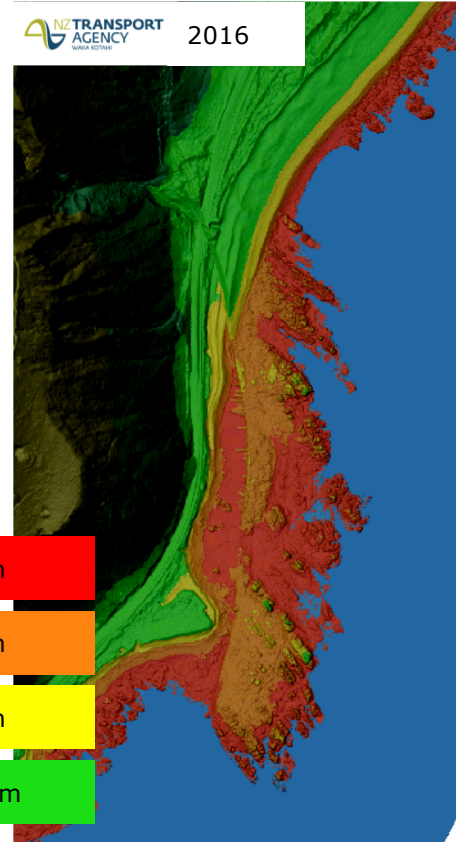
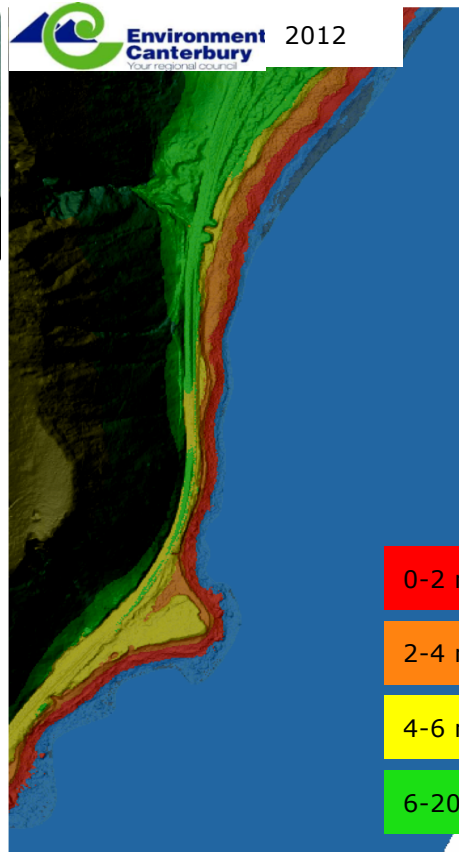
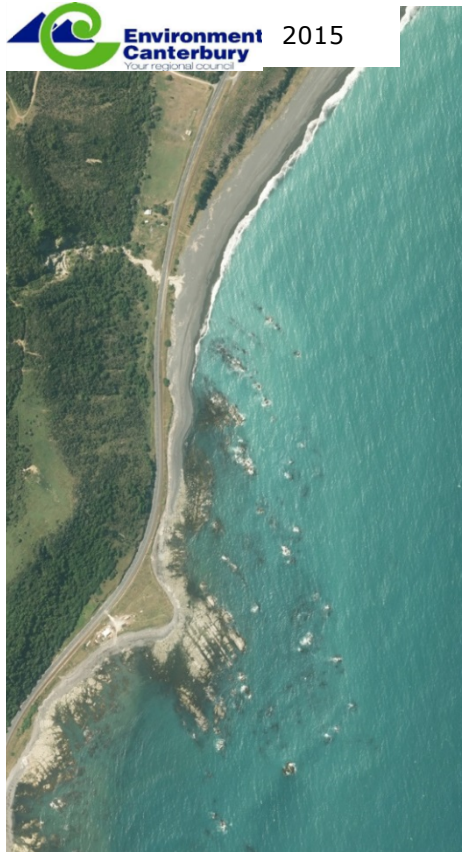
Digital surface model



Bare earth DEM



Kaikoura



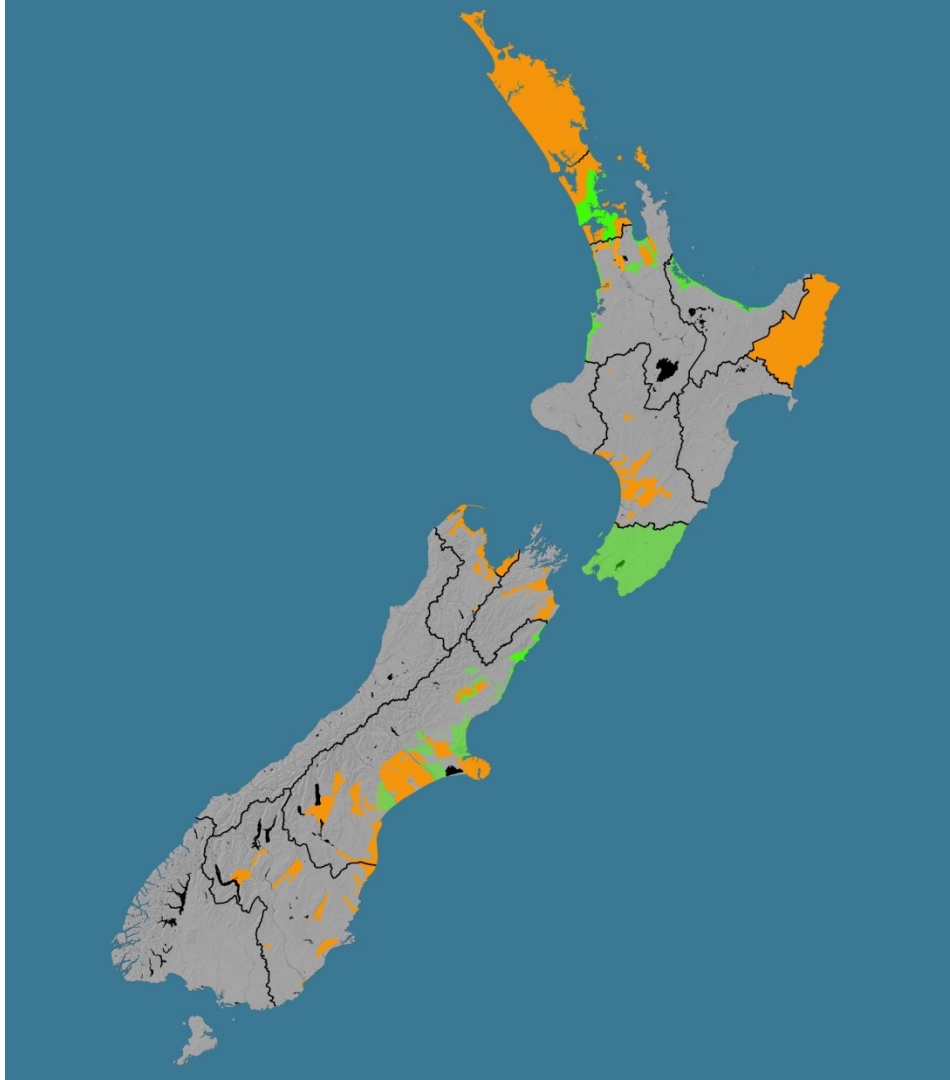
LiDAR Coverage

LDS Now

– 16,000 km²

In Progress

– 20,000 km²



DATA TYPE

All 57

Layers 55


Sets 2

▶ CATEGORY

▶ GROUP

▶ REGION

57 results for 'dem'



Wellington LiDAR 1m DEM (2013)

LINZ / National Elevation

—

⋮


Licence

7657

1124

Added

06 Jun 2017



Canterbury - Rangiora LiDAR 1m DEM (2014)

LINZ / National Elevation

—

⋮


Licence

1441

125

Added

10 Jan 2017



Canterbury - Kaikoura LiDAR 1m DEM (2012)

LINZ / National Elevation

—

⋮


Licence

1436

121

Added

04 Jan 2017



Canterbury - Timaru Rivers LiDAR 1m DEM (2014)

LINZ / National Elevation

—

⋮


Licence

1155

68

Added

10 Jan 2017



Canterbury - Hurunui Rivers LiDAR 1m DEM (2013)

LINZ / National Elevation

—

⋮

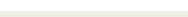
Licence

1187

71

Added

09 Mar 2017



Canterbury - Amberley LiDAR 1m DEM (2013)

1 2 3 4 5 6

Results 1 to 10 of 57

🔍

Streets

Find address or place.

+

-

New Zealand

Whangarei

Auckland

Hamilton

Gisborne

Napier

Palmerston North

Nelson

Blenheim

Christchurch

Timaru

Ashburton

Oamaru

Dunedin

Invercargill

Greymouth

Hokitika

Queenstown

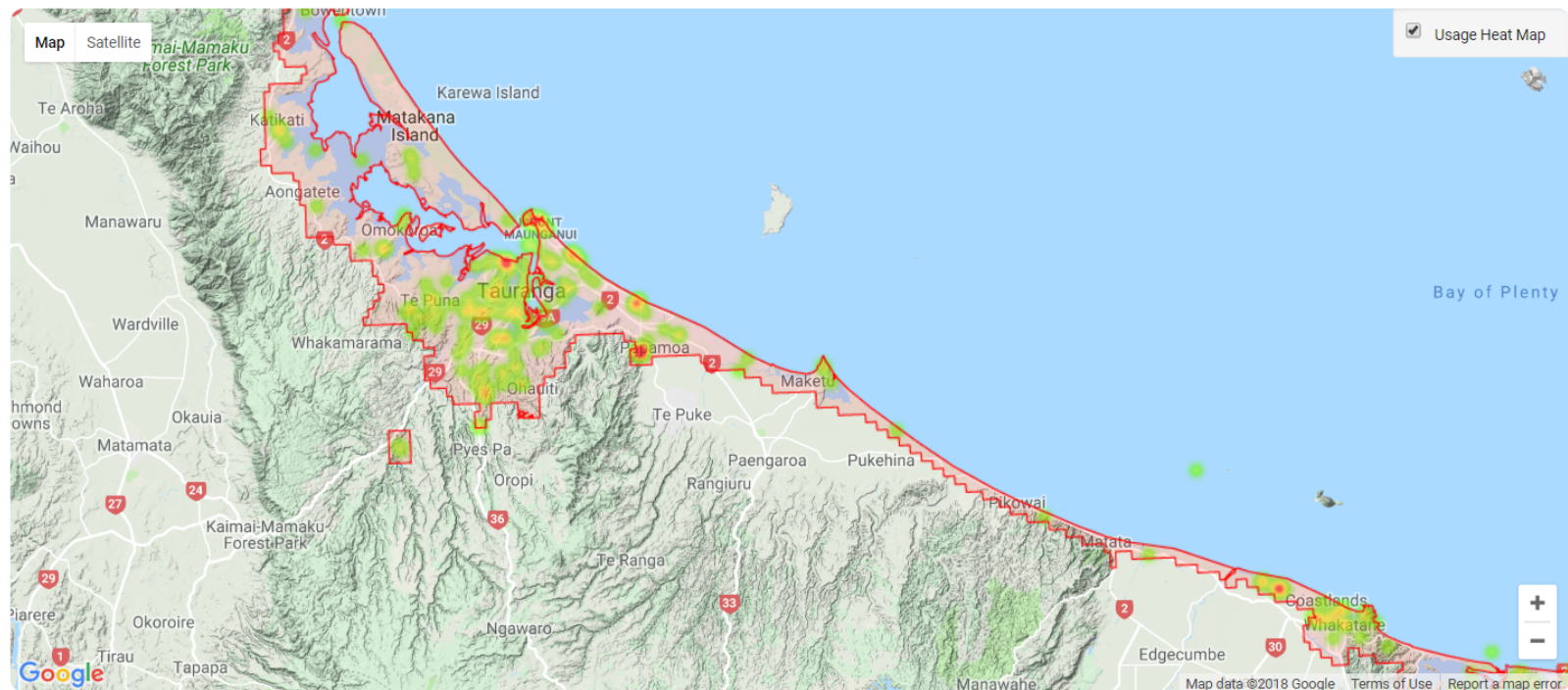
100 km

100 mi

Base Map © Mapbox © OpenStreetMap

Dataset Extent in KMZ format: [Download](#)

Dataset Spatial Bounds: North: -37.3869576357895° South: -38.0514180072127° East: 177.442201467822° West: 175.902493456046°



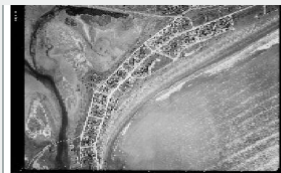


Historic Imagery

- 12 of 16 regions being scanned in partnership with the regions
- 400,000+ scanned negatives
 - Completed - Auckland, BOP and Gisborne
- 100+ Terabytes of data
- Looking at demand for old NZAM archive
~150,000 negatives



227 images found [add all](#) | [remove all](#) | [download\(0\)](#)



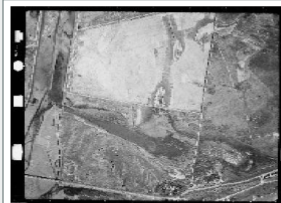
28/09/1950

☐ add



28/09/1950

☐ add



28/09/1950

☐ add



28/09/1950

☐ add



28/09/1950

☐ add



Hydrography

- Realising the value of marine geospatial data - not only for safety of navigation but for a thriving blue economy – which includes sustainability of the marine environment
- working collaboratively / partnering with others in data collection
- collect once , use many times



Resilience

Key Datasets for Resilience & Climate Change



Address
Buildings
Property
Population



Road Network
Rail Network



Aerial Photography
Topographic Map
Elevation
Coastline



River Network
Water Catchments



High-value geographic
and property information



Resilience and
climate change

Positioning

Modernising height data – NZVD2016

- NZVD2016 provides a nationally consistent height surface.
- NZVD2016 supersedes traditional sea level datums.
- NZVD2016 is available in ERSI products .
- NZVD2016 is GPS/GNSS friendly.



Nelson City and Tasman District example

- Two independent height datums
- One building site within Nelson had services supplied via Tasman
- Adopted NZVD2016 in 2017
- NZVD2016 is now the standard for all new height data



Wide Area Cadastral Adjustments

Three year programme to realign the survey accurate cadastral mapping dataset in urban areas

Priority areas

- Where there are large discrepancies between geodetic and cadastral coordinates
- Areas where significant development has occurred
- Areas that have a high seismic risk

Some key benefits

- Better support for automation of cadastral datasets
- Efficiencies for surveyors in undertaking and lodging cadastral surveys
- Accurate coordinates in place before a natural disaster so ground movement assessment can be done
- Improved accuracy relative to the other high precision datasets e.g. utility datasets

SBAS Improved Positioning Accuracy for NZ

- SBAS technology is being evaluated across Australasia
- Improves consumer GNSS accuracy to sub-metre
- High integrity enables use in safety critical applications
- LINZ and MoT working on business case for operational service



Questions?

