

# 4 April 2023 – Notes of 4th Aotearoa Property Data Network online meeting

Present: 72 participants joined the meeting

## Welcome

Ben Reilly (Customer Relationship Manager for Property + Spatial Data at LINZ (Land Information New Zealand)) welcomed everyone to the 4<sup>th</sup> quarterly Aotearoa Property Data Network webinar, hosted by Toitū Te Whenua | Land Information New Zealand (LINZ).

The purpose of this network is to bring people together from across the public sector and various private sector industries. The aim is to:

- foster dialogue about property data, and the property data information system,
- share news and case studies,
- get design input feedback on things like data improvements,
- explore new avenues for data and system improvements.

->Ben gave a welcome Karakia in te reo and english

## Agenda

Ben noted that the scheduled **Basemaps Demo** is deferred, and we will organise a special session to take place at a later date – stay posted on that!

## LINZ News & Updates

### NZ Addresses

- Trent Gulliver – Manager Addressing

#### NZ Addresses

- Released from pilot
- 135,000 additional addresses
- NZ Street Address only available until June 2023



#### 1. **NZ Street Address:**

The project has resolved 135,000 missing addresses.

We now provide an authoritative database called **NZ Street Address**.

### NZ Suburbs and Localities

- Simplified data structure
- Adopted official place names
- Publish before June 2023
- Change request process
- Review Panel members



### 2. NZ Suburbs and Localities:

This information will be published before June 2023 and is aligned with the NZ Gazetteer of official place names and territorial authorities.

[Road, address and places data | Teitū Te Whenua](#)

### 3. NZ Properties Hybrid Layer:

The **Property Data Management Framework** (PDMF), which covers 97% of NZ's territorial authorities (with only 2 out of 67 remaining to on-board for Notice of Change), will be releasing into a pilot phase in May 2023. At this stage, the data can only be shared with other NZ government organisations and is not publicly available.

### NZ Properties Hybrid Layer



## Key Datasets for Resilience

- Susan Shaw – Senior Resilience Advisor

Susan provided an overview of the **Key Data for Resilience** work programme. It involved four years of joint work involving a number of government agencies to produce 12 key datasets. The most improved data was focused on suburbs. Imagery was the most improved of the LINZ datasets. KiwiRail produced the most accessible dataset.

During the meeting we ran a poll to ask attendees at this meeting which order of priority they consider most important for resilience datasets. 37 people responded.

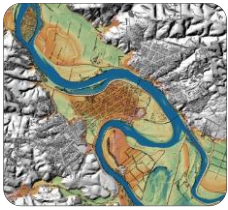
- Address and Suburbs were at the top of the list
- A point was raised about wanting more attributes to resolve duplicate addresses for properties.

### Key Data for Resilience

- ✓ Addressing highest priority improvement
- ✓ Suburbs most improved key dataset
- ✓ Imagery most improved LINZ key dataset
- ✓ Rail most fit for purpose for emergency management

**What's next?**

- Discuss with emergency management community
- Property boundaries restricted access
- Building outline attributes
- Closed roads in an emergency



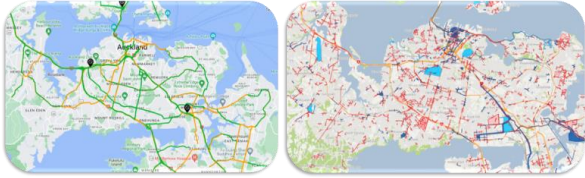
Toitū Te Whenua Land Information New Zealand



**Next steps:**

- We need to go back to the 67 Territorial Authorities and ask for their data to be made publicly available.
- For buildings we also need height and attributions.
- We also need better information about closed roads, especially in emergency situations. The current Waka Kotahi Journey Planner only shows main roads. The Auckland Transport maps show major and minor roads; however, it was designed for a different purpose (for upcoming maintenance projects) rather than emergencies.
- Ngaire Dutton (Auckland Council) and Denise Beazley (Wellington City Council) will have some further discussions with Susan about the 'closed roads in an emergency' work stream.

### Closed Roads in an emergency



Toitū Te Whenua Land Information New Zealand

There is interest from the network in setting up a sub-group to focus on Resilience Data Sets.

## LINZ Data Service (LDS)

- Victoria Lindsay – Manager Open Data and Reuse

Victoria showed slides and provided the following updates:

- User interface – the upcoming potential for people to create favourites and improvements to the search and filtering functions.
- Point cloud data – once we move to the new user interface, we will be able to support LiDAR (Light Detection and Ranging) and point cloud data (which is currently sitting on 'Open Topography')
- Property owner data – license is being reviewed after the 'what does my landlord own' website.
- Call for case studies – we are looking for case studies and good stories from you to show how you are using our data.


We have sent out a survey to review the use of data and update privacy information. If you have not received the survey yet, please contact [linzdataservice@linz.govt.nz](mailto:linzdataservice@linz.govt.nz)

## Other news

- *Skipped in meeting due to lack of time*

### Modernising Landonline

- Focus on conversion to New Landonline and 'burn-down' of Legacy.
- Survey App went live Friday 31 March
- New functions include overlaying georeferenced aerial imagery to help create irregular lines.




Tōiā Te Whenua  
Land Information  
New Zealand

The Ministry of Education  
New Zealand Government

### Overseas Investment dashboards

- Published to LINZ website in interactive, visual format
- Industry, region, worldwide views
- Information on investment pathways
- Links to:
  - [Overseas Investment information dashboards](#)
  - [Latest Pānui newsletter](#)



Tōiā Te Whenua  
Land Information  
New Zealand

The Ministry of Education  
New Zealand Government

Links to:

- [Overseas Investment information dashboards](#)
- [Latest Pānui newsletter](#)

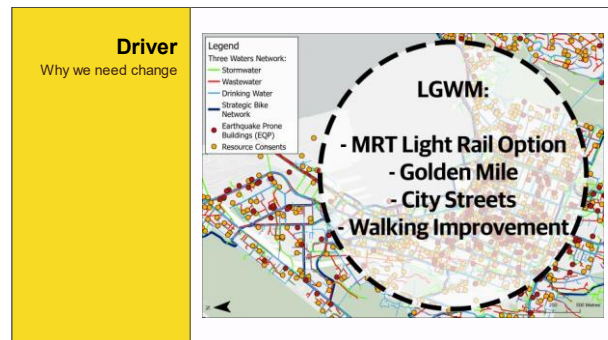
## Presentations from other agencies:

### Wellington Underground Asset Map Programme

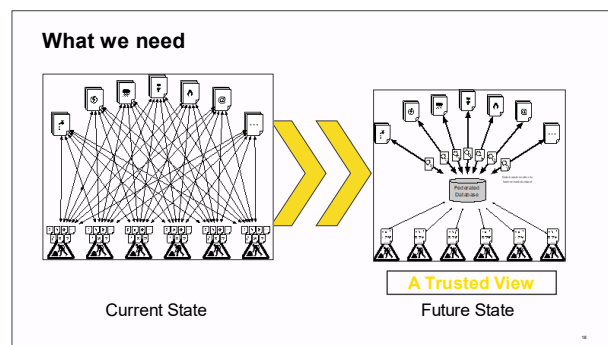
- Denise Beazley – Director of Sub Surface Mapping at Wellington City Council

The Wellington Underground Asset Map Programme is a 'market twin' (not a digital twin). We have:

- 600+ earthquake prone buildings
- Assets
- Light rail
- The 'golden mile'
- City streets



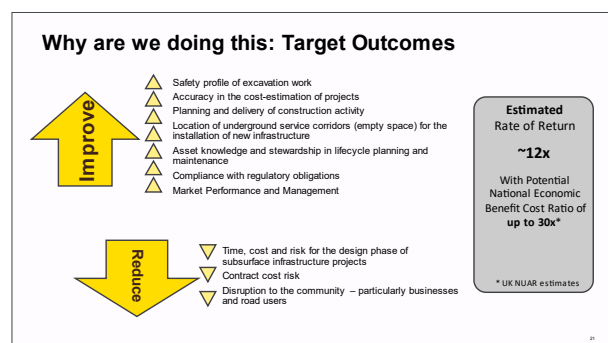
So, we need good information about what is going on underground. Our current state is a bit of a mess, and our future state is 'one source of truth' with map-based accurate information of what is going on underneath our city.



#### 1. Denise's slide on **target outcomes:**

Benefits include:

- Improved safety
- Greater accuracy of information which will help certainty of costs for projects such as light rail (e.g., Sydney light rail blew out costs by \$1.5billion due to poor sub surface information and mapping)



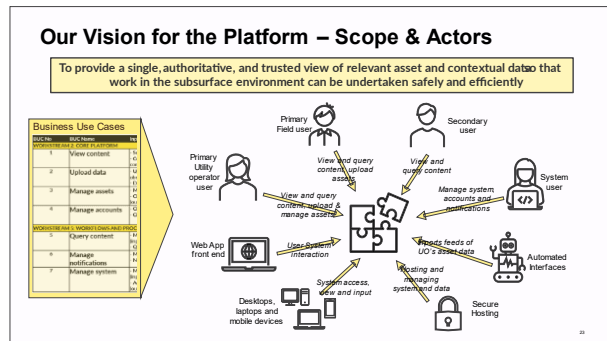
Denise and her team at WCC are working with Aaron Jordan and the Location Information team at LINZ on this mapping work.

We are learning from the approach and experiences of other jurisdictions e.g. UK National Underground Asset Register, Scotland, and Singapore.

2. Slide: **Who are the user groups?**

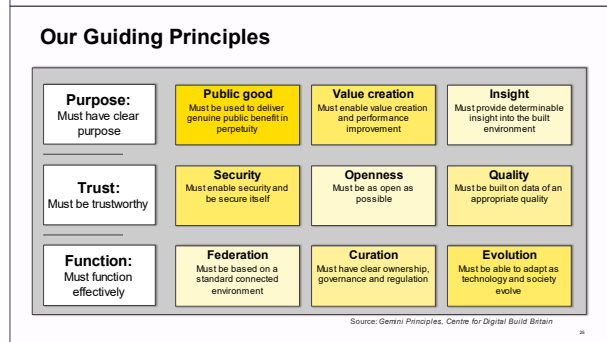
Scope and actors

We are aiming to provide one source of truth which can be updated on a regular basis.



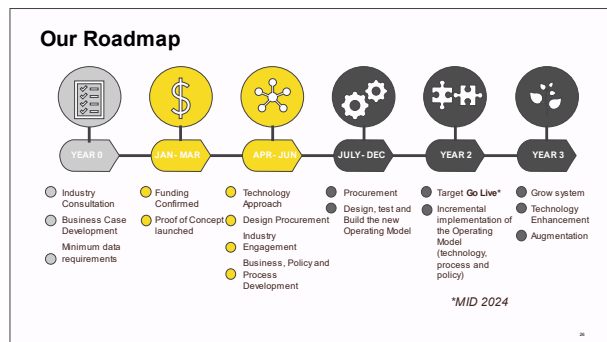
3. **Guiding Principles:**

Whatever we create is sustainable and available for public use in perpetuity.



4. **Funding:**

DIA has provided a few million dollars towards the costs of the programme.

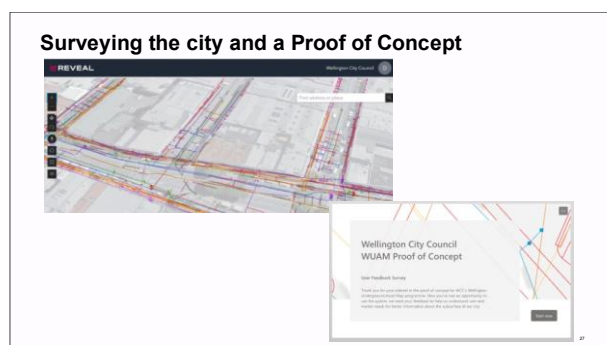


5. **Proof of concept:**

WCC is using a company called 'Reveal' to provide the proof of concept.

They are using data, cross-referenced with surveys to confirm the correct location.

57 participants are working on this proof of concept. We are focusing on key corridors, such as the golden mile.



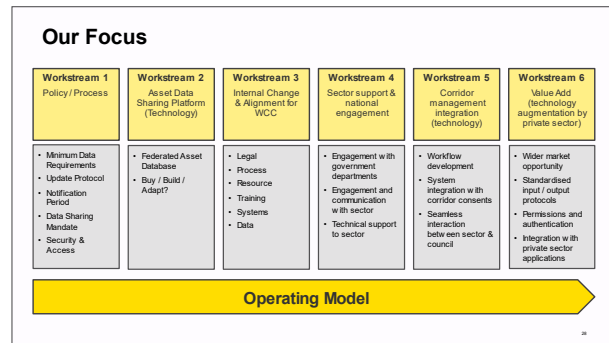
## 6. **Our focus and operating model:**

WCC will not set a data standard. Will provide key information about the location of key assets below the surface.

The data will be used to create an online, map-based library with data drawn from many sources.

We will API this information into the system.

Whatever we create has to be scalable to the rest of New Zealand.

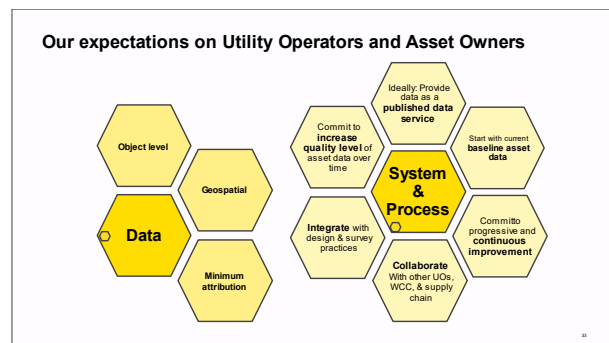


## 7. **Concept:**

Is to provide one source of truth which is instantly and easily accessible, covering information about:

- Who owns the asset? Owner information
- Utility information
- Specific object information

It will take time to make sure that the quality of information in the system is reliable and consistent (it will not be perfect immediately).



## 8. **Other questions and challenges include:**

- What should the future model look like?
- How do we keep the data current?



[WUAM@wcc.govt.nz](mailto:WUAM@wcc.govt.nz)



021 597 166 or 021 240 7243



Denise Beazley or Viv Winch



[Wellington City Council Web Page](#)

## LUCAS Land Use Map

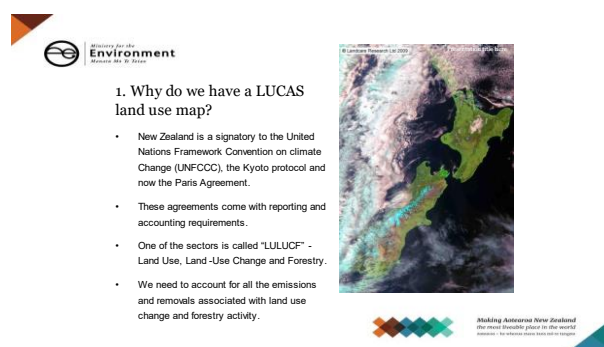
- Deb Burgess – Carbon Sequestration Team at Ministry for the Environment (MfE)

Deb showed slides and provided the following updates:

By far and away, the LUCAS Land Use Map is the most frequently downloaded and used dataset for MfE.

### Slide 1

- What is it?
- Why do we have it?
- What is it used for?
- Where to next?



**1. Why do we have a LUCAS land use map?**

- New Zealand is a signatory to the United Nations Framework Convention on climate Change (UNFCCC), the Kyoto protocol and now the Paris Agreement.
- These agreements come with reporting and accounting requirements.
- One of the sectors is called "LULUCF" - Land Use, Land-Use Change and Forestry.
- We need to account for all the emissions and removals associated with land use change and forestry activity.

Ministry for the Environment  
Te Kaitiaki Take Kōwhiri  
Kaupapa Take Kōwhiri

© Landcare Research Ltd 2017

Making Amoreus New Zealand  
the most beautiful place in the world  
© Crown copyright 2017. All rights reserved.

### LULUCF – Land Use, Land Use Change and Forestry:

National circumstances

- We have no national spatial forestry inventory
- Significant areas of 'post-1989' forest –which means that we can get credit for its' growth. Anything pre-1989 is included in our baseline. Lots of planting took place in the 1990s.
- We lacked administrative data on land use
- We have steep terrain
- We also need to consider what is the UN saying? There are 6 land use categories:
  - Forest land
  - Grassland
  - Crop land
  - Wetlands
  - Settlement
  - Other land
- Area changes do not have to be mapped – we can use a sample grid or admin data BUT the Kyoto protocol required mapping

### LUCUS LUM

- 12 land use classes



- Creating a National Land Use Map for New Zealand – a land use map, rather than a land cover map.

**Forest definitions:**

- At least 30% crown cover
- At least 5 metres in height at maturity (i.e., potential to reach 5m in height within a 30–40-year time frame)
- Natural forest – which means self-seeded, both indigenous and wilding
- Planted - which means intentionally planted exotic and indigenous

**2. LUCAS LUM – What is it?**

- 12 land use classes
- New Zealand mainland and Chatham Islands
- Minimum mapping unit: 1 hectare
- Minimum width: 30 metres
- 4 mapping dates aligned to commitment periods: 1990, 2008, 2012, 2016
- Interpolation and extrapolation used to derive annual change for entire reporting period (1990 to current year).

**Legend:**

- Pre-1990 natural forest
- Pre-1990 planted forest
- Post-1990 forest
- Grassland - with woody herbaceous
- Grassland - high producing
- Grassland - low producing
- Cropland - perennial
- Cropland - annual
- Wetland - open water
- Wetland - vegetated
- Settlements
- Other land

*Making Aotearoa New Zealand the most desirable place in the world means we must take care of our people.*

**Slide 3. How do we make a LUM?**

- Pre-1990 - The mapping used MfE data and Manaaki Whenua | Landcare NZ and MPI (Ministry for Primary Industries) data. Plus CP1 – CP2 from Kyoto Protocol
- Now moving to Paris Climate Agreement standards
- Grassland mapping using property data
  - It is extremely hard and unreliable to map high and low producing grasslands from a single satellite
  - Manaaki Whenua’s Innovative Data Analysis includes grassland mapping in put into data sets

**LUCAS Land Use Map series**

Timeline showing satellite data and mapping periods:

- Landsat 4/5 (Pre-CP1)
- SPOT 5 (Pre-CP1)
- SPOT 5 (CP1)
- Sentinel 2 (CP1)
- Sentinel 2 (CP2)
- LUM 1990 (Pre-CP1)
- LUM 2008 (CP1)
- LUM 2012 (CP1)
- LUM 2016 (CP2)
- LUM 2020 (CP2)

*Making Aotearoa New Zealand the most desirable place in the world means we must take care of our people.*

**Grassland mapping using property data**

- Mapping high and low -producing grassland from a single satellite image is unreliable
- Time series was not showing intensification (low to high-producing grassland change)
- Manaaki Whenua’s Innovative Data Analysis project offered solution for combine diverse input data sets to map probability of high - producing grassland
- It also allowed us to sub-class grassland into dairy, non-dairy and ungrazed grassland.

**High producing DoT 2016**

**Degree of truth**

- 0 - 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 0.9
- 0.9 - 1

*Making Aotearoa New Zealand the most desirable place in the world means we must take care of our people.*

**Slide 4. What is next?**

- MfE is currently making a 2020 Land Use Map (LUM) which is due to be released in April 2024
- LUCUS LUM data is available on the MfE Data Service portal
- Together with further information

A question was asked about whether LUCUS is audited? Deb replied that LUCUS is subject to an annual audit in Bonn, and the auditors sometimes visit MfE in New Zealand as well.

### **Accessing LUCAS LUM data**

- Available on the MfE Data Service (with reports)
  - [NZ](#)
  - [Chatham Islands](#)
  - [NZ Forest Clearing \(2008-2020\) data set](#)

### **Further information:**

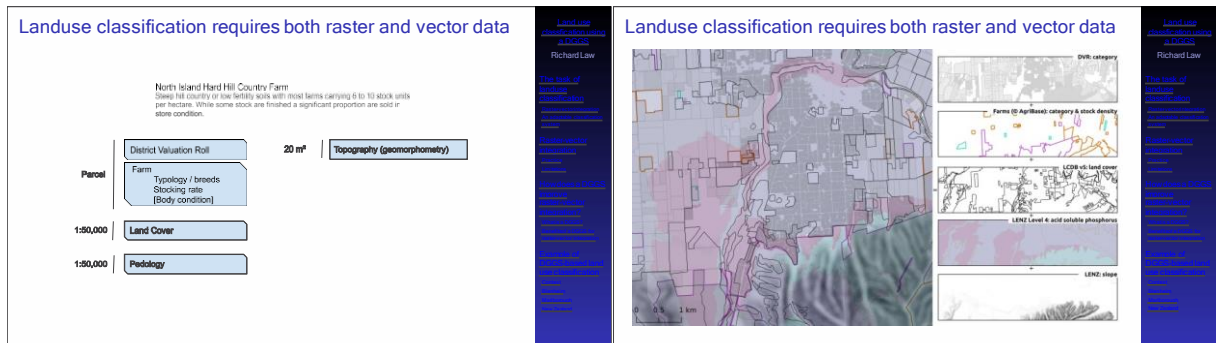
- [On the LUCAS mapping approach in New Zealand's Greenhouse Gas Inventory.](#)
- On LUCAS land use classification - [LUCAS Satellite Imagery Interpretation Guide for Land Use Classes.](#)

## Land Use Classification Using a Discrete Global Grid System (DGGS)

- Richard Law – GIS (Geographical Information Systems) specialist for Manaaki Whenua based in Palmerston North

Richard showed slides and provided the following updates:

- Tackling the task of land use classification
- Sheep and Beef NZ have 8 classes for identifying types of land use for sheep and beef farming, for example: 'North Island Hard Hill Country Farm'



Slide: An Adaptive System:

- There is no universal land use map
- We like to look at specific things when we are searching land use, for example, the LUCUS LUM provides maps for carbon accounting
- We have to update information continuously

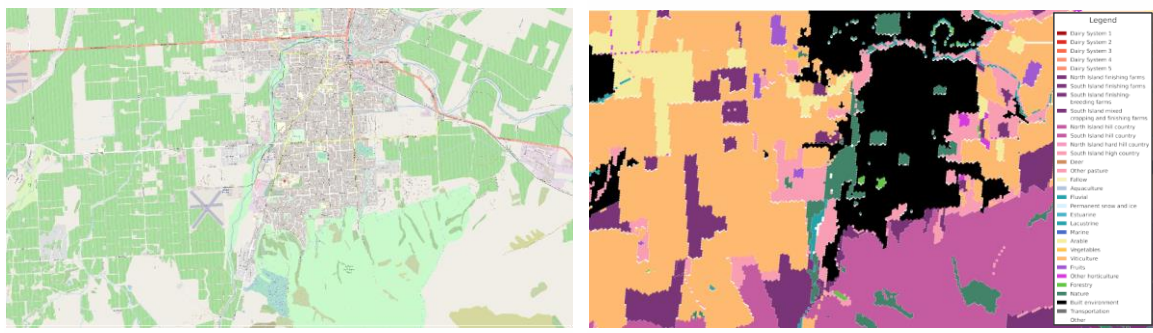
Slide:

- Raster-vector-integration: limitations

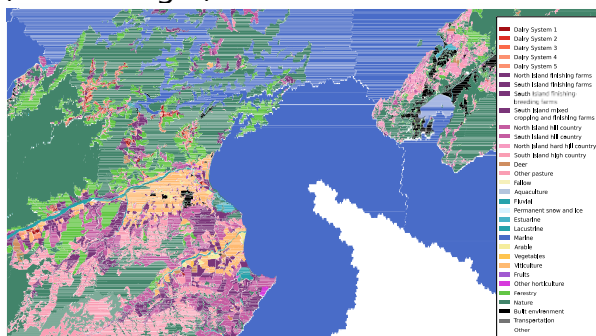
Slide:

- What is a DGGGS? It is a data model

Examples of DGGGS-based land use classification (Palmerston North)



(Cook Strait)



## LINZ Ratings Valuation Rules Review

- Andrew Freeth – Senior Advisor Operational Policy at Toitū Te Whenua | Land Information New Zealand (LINZ)

Andrew showed slides and provided the following updates:

- The Ratings Valuation Rules took effect in 2008, 15 years ago, so it is time for a review.
- Andrew outlined the objectives and purpose of the review.
  - Enable better use of technology
  - Improve data quality
  - Enable better connected property data (secondary benefit)
- LINZ are currently developing proposals for amendments, initially for District Valuation Roll (DVR).
- Targeted stakeholder consultation beginning shortly to refine these proposals into draft rules.
- After DVR we intend to also explore the following topics:
  - Establishment of a resource consent register,
  - the process of handover between valuation providers,
  - the objections process,
  - DVR roll maintenances,
  - the general revaluation process,
  - and the structure and usability of the Rules.
- Aiming to begin formal consultation on revised rules in **early 2024**. The consultation process is outlined in the Rating Valuation Act and includes giving interested persons a reasonable time to make submissions; and consulting with persons or groups representative of valuers, local authorities, and other interested persons.

## Closing the meeting

Ben thanked the presenters and participants.

->Ben gave a closing Karakia in te reo and english

->Closing comments

Feel free to contact us with your questions at any time.

We will send out the recording of the meeting, notes and slide pack with contact details.

Thank you all for your time and attention today, we really do appreciate it.

Ka kite!