

# Geographic and property information Land Informatic



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# 1 Introduction

This briefing on geographic and property information supplements your initial briefing on the Land Information portfolio.

Providing geographic and property information is one of four regimes covered in supplementary briefings.

Figure 1: LINZ regimes covered in supplementary briefings

| Regimes                             | Main activities   | Main legislation   |
|-------------------------------------|---|--|
| Overseas<br>investment              | Ensure permitted investments in New Zealand's sensitive assets by overseas persons provide net benefits to New Zealand  | Overseas Investment Act 2005   |
| Property rights                     | Administer a state-guaranteed regime of property rights, restrictions and responsibilities over land and property in New Zealand  | Cadastral Survey Act 2002, Land<br>Transfer Act 2017   |
| Geographic and property information | Providing information that New Zealanders value when making land, sea and property-related decisions, as well as informing local and central government decision-making on issues like emergency response and climate change. | Valuers Act 1948, Rating<br>Valuations Act 1998, New<br>Zealand Geographic Board (Ngā<br>Pou Taunaha o Aotearoa) Act<br>2008 |
| Crown land                          | Administer Crown land, and the regime for acquiring and disposing of land in a way that balances both the public interest and private property rights   | Land Act 1948, Public Works Act<br>1981, Crown Pastoral Land Act<br>1998   |

#### This briefing discusses:

- your role in relation to geographic and property information
- activity in the geographic information regime
- activity in the property information regime
- the outlook for geographic and property information
- suggested next steps.

#### Facts at a glance



**2**,000+

authoritative geographic and property datasets, 480 topographic maps and 525 nautical charts produced for New Zealand, some Pacific Islands and the Ross Sea region of Antarctica.



4 100,000 +

registered users of the LINZ Data Service (which provides free online access to New Zealand's most upto-date land and seabed data).



**3** 80%

of New Zealand will be captured by 3D mapping as part of the national light detection and ranging (LiDAR) Releasedur



**160** 

Notices to Mariners were issued last year, providing updates to charts and advising navigational hazards.



key datasets created for the Resilience and Climate Change Key Dataset Improvement Programme.

## 2 Your role as Minister for Land Information

Your main roles in relation to geographic and property information are ensuring Toitū Te Whenua Land Information New Zealand (LINZ) maintains and improves geographic and property information, overseeing the delivery of SouthPAN, roles relating to Ngā Pou Taunaha o Aotearoa New Zealand Geographic Board, appointments to statutory boards and considering improvements to the valuation regime.

# 2.1 Ensuring LINZ maintains and improves geographic and property information

The geographic and property information held by LINZ is a valuable government asset that has been built up over a long period.

You have a role in ensuring that LINZ:

- promotes the use of LINZ's geographic and property data by central and local government to make informed decisions on policy, services and investment
- leads the management and amalgamation of geographic and property data across government (and continues to take a more formal role as functional lead across government, seeking efficiencies and consistency across agencies)
- identifies new opportunities to improve decision-making and services through the use of geographic and property information as you introduce new policies and priorities.

New Zealanders, businesses, communities, and government rely on and use geographic and property data every day (**Annex 1**). The data is used on its own and in combination with other data, supporting innovation and many economic, social, and environmental decisions:

- Waka Kotahi New Zealand Transport Agency (NZTA) and councils use geographic and property data to decide where to invest in roading infrastructure.
- Elections are supported by data on electoral boundaries.
- Farmers use detailed land information to inform their operations and practices.
- Mobile apps help the Ministry for Primary Industries, Department of Conservation, regional councils, community groups and businesses manage environmental resources, protect habitats and manage pests.
- Councils, government agencies and emergency response organisations use data to understand the scope of disasters and to inform real-time decision-making involving protection of people and property.

LINZ welcomes the opportunity to discuss areas of geographic and property information that are of particular interest to you.

LINZ can advise you on how geographic and property information can support the policies and services you wish to deliver.

LINZ will update you on any initiatives or issues as they arise.

## 2.2 Overseeing the delivery of SouthPAN

In partnership with Geoscience Australia, the Southern Positioning Augmentation Network (SouthPAN) is a new network of satellite and ground-based infrastructure.

SouthPAN will improve the accuracy of satellite positioning signals (such as the Global Positioning System) from 5 to 10 metres down to below a metre. In some cases, this will be as little as 10 centimetres. Higher-quality data can be used for improved data-driven decision making to improve resource allocation and land management, and reduce travel time and costs. These changes, in turn, increase productivity by streamlining operations and improving efficiency.

You are responsible for the delivery of SouthPAN alongside Hon Madeleine King, who is Australia's Minister for Resources and Minister for Northern Australia. LINZ and Geoscience Australia are the lead agencies in their respective countries.

You may need to engage with Ministerial colleagues as part of SouthPAN's delivery. For example, the Minister for Transport will have an interest in the progress of SouthPAN due to the significant transport sector benefits.

The previous Minister for Land Information provided a report to Cabinet on SouthPAN in May 2023. One of the recommendations of that report was that the Minister update Cabinet again in March 2024.

LINZ will report to you regularly on the progress of SouthPAN. This will include delivery against key milestones and budget, opportunities to promote the benefits of SouthPAN services, and advice relating to bilateral discussions with your counterparts in Australia.

LINZ will prepare the next six-monthly report for you to take to Cabinet in early 2024. LINZ is available to discuss with you and will liaise with you and your office about the content and timing of the paper.

# 2.3 Roles relating to Ngā Pou Taunaha o Aotearoa New Zealand Geographic Board

LINZ also supports Ngā Pou Taunaha o Aotearoa New Zealand Geographic Board (NZGB). The Surveyor-General, a statutory officer at LINZ, is Chair of the NZGB.

As the national place naming authority for New Zealand, the NZGB is responsible for official place names in New Zealand, New Zealand's continental shelf and offshore islands, and New Zealand's area of interest in Antarctica.

The NZGB makes most final decisions on place names but you will be asked to make final decisions when:

- there has been public consultation on a place name, and
- the NZGB has received submissions objecting to the proposed place name, and
- the NZGB does not uphold any or all of the objecting submissions.

Place name decisions do not tend to be considered by Cabinet, but you have the option to take such decisions to Cabinet if you wish. The Cabinet Manual's general rule is that 'Ministers should put before their colleagues the sorts of issues on which they themselves would wish to be consulted' (section 5.11 of the Cabinet Manual).

For place names proposed as part of Treaty negotiations, the Minister for Treaty of Waitangi Negotiations makes the final decisions. For Crown protected area names (such as reserves), where NZGB does not accept a name proposal, the Minister of Conservation makes the final decision.

You can expect to be asked to make decisions on about 10 place names each year. NZGB will provide you with advice and information to inform your decision making.

## 2.4 Appointing people to statutory boards

As the Minister for Land Information, you are responsible for the appointment of members to three statutory boards in the geographic and property information regime, including the NZGB, and for recommending the Chair of the Orton Bradley Park Board. **Annex 2** outlines the existing members of each board.

The terms of two members on the Valuers Registration Board have expired but the Valuers Act allows for members to continue to sit on the board until their replacements are appointed in 2024 (subject to LINZ discussion with you in late 2023).

Figure 2: The next scheduled appointment round for the boards you have a role in appointing

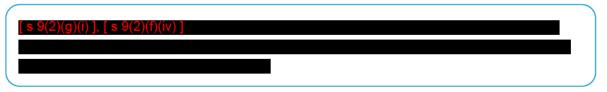
| Board   | Schedule |  |
|---|----------|--|
| <ul> <li>Valuers Registration Board</li> <li>Oversees the registration and professional discipline of valuers in<br/>New Zealand.</li> <li>Operates under the Valuers Act 1948.</li> </ul>  | 2023     |  |
| <ul> <li>Ngā Pou Taunaha o Aotearoa New Zealand Geographic Board</li> <li>Responsible for official place names in New Zealand.</li> <li>Operates under the New Zealand Geographic Board (Ngā Pou Taunaha o Aotearoa) Act 2008.</li> </ul>   | 2025     |  |
| <ul> <li>Orton Bradley Park Board</li> <li>Orton Bradley Park is a private rural property in Christchurch. The appointment of the Chair is made by the Governor-General on the recommendation of the Minister for Land Information.</li> <li>Operates under the R O Bradley Estate Act 1972.</li> </ul> |          |  |
| Cadastral Surveyors Licensing Board  • Licenses cadastral surveyors in New Zealand.  • Operates under the Cadastral Survey Act 2002.  | 2026     |  |

In late 2023, LINZ will seek your direction on the Valuers Registration Board appointments process.

# 2.5 Considering improvements to the valuation regime

You set the legislative programme under the geographic and property information regime, including for valuation. The Rating Valuations Act 1998 requires councils to undertake valuations of the properties in their area and use this information to set rates. Correct rating valuations are essential for councils to implement their rating policies.

Sections 4.2.3 and 4.2.4 provide advice on ways to improve the valuation regime and next steps in providing you with advice.



# 3 LINZ's activity in the geographic information regime

## 3.1 Collecting, managing and publishing information

LINZ produces over 2,000 authoritative geographic and property datasets, 480 topographic maps and 525 nautical charts for New Zealand, some Pacific Islands and the Ross Sea region of Antarctica.

The geographic and property information LINZ collects includes physical features of the land, depths of the seafloor, property boundaries, addresses and place names. LINZ makes this data and information open, accessible and available for reuse by the public to enable better decision making and facilitate innovation.

## 3.1.1 Holding accurate geographic information

Geographic information describes the names and locations of features above, below, or on the earth's surface.

LINZ is New Zealand's authoritative source for many national geographic datasets. These are freely available and include:

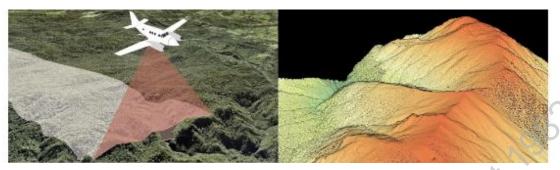
- aerial imagery of the earth's surface and the features on it
- elevation and depth data for creating three-dimensional maps
- sea-level data that can be used to predict tides and monitor impacts of climate change
- hydrographic data showing the features of the seabed
- topographic data that shows physical features of the land
- user-generated maps, created through the Basemaps web service that is powered by LINZ imagery.

# 3.1,2 Mapping New Zealand in 3D

LINZ provides 3D elevation data detailing the height and shape of the land and the things on it, such as buildings and vegetation.

The technology that collects this data is called light detection and ranging, or LiDAR. This uses lasers mounted on aircraft, with sensors measuring the time it takes for pulses of light to travel to the ground and back.

Figure 3: Aerial capture of LiDAR resulting in a 3D point cloud visualisation



The benefits of LiDAR over other techniques include:

- higher resolution
- accuracy to within centimetres
- large coverage areas
- ground detection in densely vegetated terrain.

To date, LINZ has published high-resolution 3D mapping data for Northland, Auckland, Waikato, Bay of Plenty, Taranaki, Hawke's Bay, Gisborne, Wellington, Marlborough, Tasman, West Coast, Canterbury, Otago and Southland.

Current LiDAR data coverage across the country sits at over 50 percent. This is set to increase to over 80 percent by the time work concludes in 2024.1

This 3D data can be used for:

- property and land development
- understanding and managing the impacts of natural hazards and climate change
- improving environmental management, including water resource planning
- forestry management and habitat protection
- providing farm-scale information to benefit the agriculture and forestry sectors.

In response to the North Island weather events in early 2023, LINZ is working with local and central government agencies to procure and publish aerial imagery and LiDAR data to support recovery activities in affected regions. This data will be collected and published over the next two years.

In late 2023, LINZ will update you on the LiDAR funding it received in Budget 2023 as part of the response to the North Island weather events.

<sup>&</sup>lt;sup>1</sup> There are some areas of New Zealand where accurate elevation data is not required (such as Fiordland). In addition, the programme was a time-limited co-funding collaboration with councils, and some chose not to participate at the time.

#### 3.1.3 Mapping New Zealand's coastline in 3D

Budget 2023 provided funding for LINZ to produce detailed coastal maps for climate change adaptation. This information would help identify coastal areas that are at significant risk of flooding, tsunami, or inundation.

If this project proceeds as planned, LINZ will use the data to create high-definition 3D models and images of 85 percent of New Zealand's coastline.

## 3.1.4 Hydrographic data for nautical charts

The New Zealand Hydrographic Authority is based within LINZ. The hydrographic data LINZ collects is used to produce the official nautical charts to aid safe navigation in New Zealand waters, parts of Antarctica, and parts of the south-west Pacific. New Zealand is the primary charting authority for the Cook Islands, Niue, Tokelau, Tonga and Samoa.

# 3.1.5 Connecting central and local government property data

Property information includes property boundaries, ownership, ratings, addresses, buildings and utilities. Property decisions are made every day and vary from transactional to strategic.

Transactional
Smaller and frequent

Property-specific information used

National/regional information that is connected with other information sets

Figure 4: Transactional and strategic property decisions

The property rights regime plays an essential role in creating the property information (boundary and ownership data) released through the LINZ Data Service. The property rights supplementary briefing provides more detail.

As well as maintaining boundary and ownership data, LINZ maintains a national addressing dataset. This is published on the LINZ Data Service. LINZ has also created a national dataset of the district valuation roll, which is collated from individual councils.

### 3.1.6 Publishing data on the LINZ Data Service

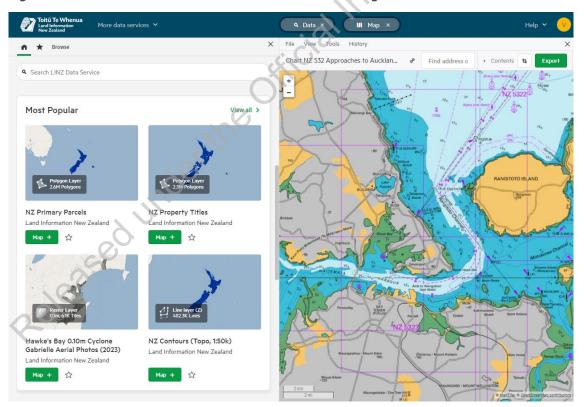
The LINZ Data Service provides free online access to New Zealand's most up-to-date land and seabed data. It has over 100,000 registered users who can access data related to:

- · aerial imagery
- elevation data
- topographic data
- property boundaries

- land title data
- place names
- street addresses
- road information.

Users can search, browse and download data, and can integrate LINZ data into their own applications. Most users are from engineering, surveying, geospatial/mapping, agriculture, or central and local government organisations. The Data Service has around 3,500 visitors per day – this has almost doubled since a new interface was released with very positive customer feedback.

Figure 5: Waitematā Harbour maritime chart accessed thorugh the LINZ Data Service



# 3.2 Maintaining New Zealand's positioning infrastructure

LINZ is responsible for maintaining New Zealand's positioning infrastructure. This provides the spatial reference framework needed to create maps and nautical charts, and to determine property boundaries. It also links New Zealand into the global positioning reference frame.

The positioning infrastructure includes:

- reference stations that collect satellite positioning data, and provide control points to ensure survey marks are accurate and account for tectonic plate movement
- survey marks, including trig stations, which support property and infrastructure development by helping determine property boundaries
- the Warkworth Radio Astronomical Observatory, which provides space-based measurements that are critical to the global positioning reference frame
- SouthPAN infrastructure and its data.

Figure 6: A trig station



## 3.3 SouthPAN project to improve positioning data

LINZ and Geoscience Australia are working together to deliver SouthPAN and improve positioning data.

SouthPAN is a satellite-based augmentation system (SBAS) made up of reference stations, telecommunications infrastructure, computing centres, uplink centres and satellites. Similar systems operate in North America, Europe, Japan, China and India. Other

countries, including the United Kingdom and South Korea, are also actively investing in SBAS technology.

#### 3.3.1 SouthPAN will deliver economic benefits

The improved accuracy of positioning information provided by SouthPAN will support innovation across transport, agriculture, construction, forestry and horticulture. The quantified economic benefits across multiple sectors are estimated to be \$864m over the next 20 years. This figure will grow as new technologies and innovations are developed to harness SouthPAN's possibilities.

SouthPAN signals will be available 'free-to-air' meaning they will be publicly available for a broad range of potential uses. Early SouthPAN signals are being delivered now, so benefits can be delivered from early in the project.

Stakeholders have been positive about the project and have identified critical benefits for their industries.

Figure 7: Stakeholder views of critical benefits of SouthPAN

#### **Primary production**

- "As a leading research and development organisation in this sector, we recognize the transformational potential of SouthPAN and its capabilities, which are closely aligned with our mission to advance the forestry sector. We are confident that its implementation will lead to more informed, efficient, and sustainable forestry practices." Scion
- SouthPAN will improve productivity and efficiency in the primary production sector.
   Virtual fencing allows precise monitoring and control of livestock, helping farmers optimise pastoral use. Sprays and fertilisers will be used more efficiently, especially when delivered by aerial units.

#### Aviation

- Aviation safety and operations will be significantly improved when aircraft (including air ambulance and air rescue services) are able to fly in adverse weather conditions, such as low cloud.
- "SouthPAN will benefit aviation by enabling improved instrument flight procedures to be developed allowing a wider range of aircraft to complete flights to more locations throughout NZ safely in poor weather conditions such as low cloud. This will be of particular benefit for air ambulance and air rescue services into regional and remote locations." - Airways International

#### Data-driven decision making

"SouthPAN presents an invaluable opportunity with its potential to enhance our ability
to make better data-driven decisions and improve the overall management of offenders
in our care. We are collaborating with LINZ and our technology partner to explore the
possibility of integration of SouthPAN with a future generation of monitoring devices." Department of Corrections

#### **Environment**

- More accurate and reliable positioning services will help support New Zealand's environmental targets. For example, real-time, precise positioning data will help in pest control and soil management.
- "The deployment of SouthPAN will enable us to significantly improve the spatial
  accuracy with which we record spatial data and validate complementary data sets.
   SouthPAN therefore has considerable application and benefits to our collective efforts
  and DOC intends to fully explore the use and integration of SouthPAN into our
  conservation toolkit." Department of Conservation

#### 3.3.2 New Zealand and Australia share decision-making

New Zealand and Australia have equal decision-making rights in relation to the delivery of SouthPAN. SouthPAN is primarily governed by a New Zealand-Australia Joint Governance Board. New Zealand provides 25 percent of the funding and Australia 75 percent.

The Governance Board is responsible for overseeing project delivery, finances and risk management. Members include LINZ and Geoscience Australia, as well as independent members nominated by each agency.

Geoscience Australia is the procurement lead for SouthPAN contracted services.

Procurement activities must comply with Commonwealth Procurement Rules, and be in alignment with New Zealand Government Procurement Rules.

Significant contracts that have been awarded to date include the 'prime' contract with Lockheed Martin Australia to build and operate the SouthPAN service for 19 years, and the contract with Inmarsat Navigation Ventures Ltd to provide satellite capability through new and existing satellite infrastructure.

Decisions on significant contracts are made jointly by the Chief Executives of each agency, on the recommendation of the Joint Governance Board.

Ministers are regularly informed of progress on contract activity (including decisions on contracts), and approval has previously been given by Ministers for the SouthPAN Implementation Business Case and award of the 'prime' contract.

## 3.3.3 SouthPAN is on track for delivery

As part of implementing SouthPAN, two new satellite payloads will be launched. The first was procured in May 2023, and a tender for the second is being led by Geoscience Australia. The tender offer period for the second satellite payload closes in January 2024.

Since committing to the delivery of SouthPAN in 2022, several milestones have been achieved:

- In September 2022, contracts were entered into and the formal delivery of SouthPAN commenced. This included an agreement between LINZ and Geoscience Australia for the supply of a satellite-based augmentation system, and Geoscience Australia entering into a contract with Lockheed Martin Australia for the provision of the SouthPAN service for 19 years.
- In March 2023, construction started on New Zealand's SouthPAN satellite uplink centre in Awarua, near Invercargill. Two 11-metre antennas are being built at the site. They will link to a control centre in Invercargill, monitored 24 hours a day.

• In May 2023, a new satellite service for SouthPAN was confirmed, with services to be broadcast for 15 years from a new Inmarsat I-8 satellite from 2027. The new SouthPAN satellite service on the Inmarsat I-8 satellite will replace the Inmarsat I 4F1 satellite, which was acquired as part of the SouthPAN test-bed trial.

Alongside the additional satellite capability, the SouthPAN network will be made up of more than 30 ground reference stations across New Zealand, Australia and further ashore including in Antarctica.

# 3.3.4 A five year establishment phase for SouthPAN is underway

Full operating capacity for SouthPAN is expected in the 2028/29 financial year, which will then be followed by a 14-year period of operations. The current life of the project is 19 years through to 2042. LINZ is in the five-year establishment phase to build the network, which will see capability of the network increased over this period.

IOC-99 5 introduction of new **Full Operating Capability** satellite The final satellite will be integrated into Additional infrastructure will be the SouthPAN system, providing the integrated into the SouthPAN system, maximum level of service availability. improving accuracy and availability. Open services and safety-of-life Open services only. services Late 2026 **Sept 2022** Late 2027 **Early 2028** Late 2028 IOC-99 9 with **Initial Operating** IOC-99.9 Safety-of-life services Capability - 95 Additional infrastructure will be Following a safety assessment, Commencement of integrated into the SouthPAN SouthPAN will be certified for early services using system, improving accuracy use in safety-of-life existing infrastructure applications and availability Open services only. Open services and safety-of-life Open services only

Figure 8: SouthPAN's delivery timeline

Some of SouthPAN's benefits can be delivered in the early stages of the project. For example, early open services have been available since September 2022. Further certification is needed, however, before the aviation sector can rely on SouthPAN signals for safety-of-life applications.

Figure 9: Major milestones in SouthPAN's delivery

| Date                      | Activity   |
|---------------------------|--|
| April 2024                | Construction completed at the Awarua uplink centre   |
| June 2024                 | Uplink centre operations commence  |
| Late 2024                 | Second satellite payload procured, and contract entered into   |
| Late 2025 – early<br>2026 | Ground reference station sites come online   |
| March 2026                | Uplink centre in Awarua fully contributes to the service   |
| Late 2027                 | First satellite payload comes online   |
| Mid 2028                  | Safety-of-life operations begin (initially with limited continuity)  |
| Late 2028                 | Second satellite payload comes online, full operational capability is achieved and continuity is assured for safety-of-life operations |

In early 2024, LINZ will update you on the procurement of the second satellite payload.

# 3.4 Administering Ngā Pou Taunaha o Aotearoa New Zealand Geographic Board

LINZ supports the NZGB, the national place naming authority for New Zealand, its offshore islands, undersea regions on the continental shelf, and the Ross Sea region of Antarctica.

The NZGB's purpose, functions and duties are described in the New Zealand Geographic Board (Ngā Pou Taunaha o Aotearoa) Act 2008. Its fundamental roles are to:

- give places and geographic features official names
- approve existing recorded place names that are unofficial
- change existing place names (for example, by correcting their spelling)
- alter district and region names of territorial authorities
- provide advice on place names that are part of cultural redress in Treaty of Waitangi claim settlements
- review names of Crown reserves managed by the Department of Conservation
- maintain the New Zealand Gazetteer (an online searchable tool with over 54,000 place names) which lists all place names.

Road names and the name of New Zealand are outside of the NZGB's jurisdiction.

Place names are integral to contextualising location and address, and supporting navigation. Place names also contribute to individual and national identity. Making place names official is important as it means there is one agreed and correct name for a place.

One of the NZGB's statutory functions is to encourage the use of original Māori names on official charts and official maps (section 11(e), New Zealand Geographic Board (Ngā Pou Taunaha o Aotearoa) Act 2008). Proposals for place names are predominantly Māori and submissions are increasingly in support of these proposals.

Place name proposals can result in strong views and the NZGB takes account of community views through public consultation. In these cases, final decisions may be referred to you. You may wish to meet with the Chair to discuss proposals and submissions received before making a decision. You may also choose to make any announcements to the media.

The NZGB has 10 board members (**Annex 2**). Two board members are ex-officio from LINZ and you appoint the remaining eight members. The Surveyor-General is the NZGB's Chair. The NZGB is supported by a secretariat within LINZ who provides administrative support, research, advice and project delivery.

Figure 10: Surveyor-General



Surveyor-General: Anselm Haanen

- Sets standards for the cadastral and geodetic survey regimes, and monitors and audits compliance with those
- Administers place naming as ex-officio Chairperson of Ngā Pou Taunaha o Aotearoa New Zealand Geographic Board.
- Supports the setting of electoral boundaries by the Electoral Commission.

# 3.5 Improving New Zealand's preparation and response to emergency events

New Zealand needs accessible and accurate geographic and property data to prepare for and respond to emergencies and climate change events. LINZ coordinates and uses these datasets to support organisations before and in the aftermath of emergency events, and to help prepare for the impacts of climate change.

#### 3.5.1 Providing data to assist emergency responses

LINZ works with central and local government agencies to ensure their emergency management data needs are met, including coordinating the procurement of additional data of affected areas.

Figure 11: LINZ data provision to agencies for emergency response

| LINZ coordinates the procurement of key data                     |  |  |  |
|--|--|--|--|
| Satellite imagery  | LiDAR elevation data   |  |  |
| Aerial imagery   | Hydrographic data (detailed sea-bed mapping)                         |  |  |
| Organisations that use LINZ data during an emergency event       |  |  |  |
| National Emergency Management<br>Agency                          | Civil Defence emergency management groups                            |  |  |
| Emergency response agencies (Fire, Police, and NZ Defence Force) | GNS Science, National Institute of Water and<br>Atmospheric Research |  |  |
| Businesses involved in emergency responses                       | Voluntary groups and individuals involved in emergency responses     |  |  |
| NZTA, KiwiRail   | Councils   |  |  |

A wide range of organisations use LINZ data to coordinate response activities, analyse and record the scale of damage, and assess impacts such as the extent of a flood or the loss of farmland after a fire.

The value of LINZ's national datasets was demonstrated in the aftermath of Cyclone Gabrielle. Address and population data helped ensure isolated communities were accounted for, and KiwiRail used imagery to assess damage to railway bridges and supporting infrastructure. LINZ acquired high-resolution satellite and aerial imagery showing the Hawke's Bay, Gisborne and Tararua districts immediately after the cyclone hit, and provided this to agencies to support their response.

LINZ can work with you on policies to improve government data procurement and sharing.

## 3.5.2 Improving data for emergency response

LINZ has been leading the improvement of datasets that are critical to emergency management decision-makers. This has been guided by customer insights from the Civil Defence emergency management community.

These datasets play a role in decision making in the context of emergency management including risk reduction, readiness, response and recovery.

Figure 12: Key datasets critical to emergency management decision-making



- Addresses
- Suburbs and localities



- Roads
- Rail



- Property
- Population



- Aerial imagery
- Topographic maps
- Elevation
- Coastline
- Place names



Rivers and catchments

This continuing data improvement programme involves collaborating with data holders such as KiwiRail, the Ministry for Business, Innovation and Employment, the National Institute of Water and Atmosphere, Stats NZ and NZTA.

LINZ can provide advice to you on further opportunities to use LINZ data in emergency responses, and how to improve this.

# 3.6 Preparing for a transformation to fully digital maritime navigation

New Zealand is an active member of the International Hydrographic Organisation (IHO). The IHO is responsible for ensuring all the world's seas, oceans and navigable waters are surveyed and charted to consistent standards.

The IHO has developed new global data standards which will transform international maritime navigation, and LINZ is responsible for their implementation in New Zealand's areas of charting responsibilities.

Known as the S-100 Universal Data Model, the standards will support autonomous shipping, improve safety at sea, reduce emissions and increase supply chain efficiencies. Mariners will be able to send and receive information about the physical environment, such as tides, weather and hazards such as ice. They will also be able to share information about berthing and landside services, maximising the efficiency of ports, ships and landside transport providers.

Using the new standards, LINZ is responsible for introducing new electronic navigation charts as well as bathymetric and water level products from 2026. This transformation is an international obligation that will require investment.

LINZ is engaging with Maritime New Zealand, the regulator for navigational safety in New Zealand waters, to explore opportunities to work together on introducing the standards.

LINZ will update you on work to introduce the new international data standards.

LINZ is also available to discuss how the new digital standards for hydrography link to several areas of government policy, including the freight and supply chain. strategy and emissions reduction policy. LINZ will provide advice on this as policy Released under the Official Information of the Principal Information of th develops in the transport and environment portfolios.

# 4 LINZ's activity in the property information regime

## 4.1 Property information

Property information is the essential information about land parcels and ownership that enables accurate land management, valuation, transacting and decision-making.

Property information is created by many local and central government agencies through their regulatory regimes and operational processes. For example, the Building Act 2004 (administered by the Ministry of Business, Innovation and Employment) requires building consent information to be created, and then councils provide this information to the public.

LINZ also creates important property information through its regulatory responsibilities and operational processes. This includes survey and title data created through the LINZ property rights regulatory regime. LINZ is also responsible for, or has responsibilities in, other regulatory regimes that contribute to the creation of property data.

## 4.2 Administering the valuation regime

You are responsible for administering the Rating Valuations Act 1998 and the Valuers Act 1948, the key legislation for the valuation regime.

Figure 13: Valuation regime

#### Valuers Act 1948 Rating Valuations Act 1998 • This Act establishes the role of the Valuer-• This Act sets the rules on who can undertake General and the regulatory regime property valuations in New Zealand. determining valuations for rating • It creates bodies and regulatory power to purposes. determine which professional bodies will • It creates timeframes and obligations to manage professional obligations and set rules ensure the rating regime has sound basis for valuers. in valuation. • It sets up an objection process so that people can dispute their valuations.

Local authorities undertake valuations of the properties in their area and use this information to set rates. The Valuer-General at LINZ is responsible for regulating the rating valuations industry under the Rating Valuations Act 1998. LINZ administers the

overall rating valuations regime to ensure it is credible and enables territorial authorities to set rates fairly.

Valuation services must be undertaken by a registered valuer or an approved person or body and must comply with rules under the Rating Valuations Act 1998. Valuations occur at least every three years and are recorded in the district valuation roll, which feeds into the property information regime.

The Rating Valuations Act 1998 also sets a requirement for territorial authorities to comply with rules set by the Valuer-General.

#### 4.2.1 The Valuer-General

The Valuer-General regulates the rating valuation regime and provides technical advice to the government on valuation issues.

Figure 14: The Valuer-General is responsible for the rating valuation regime



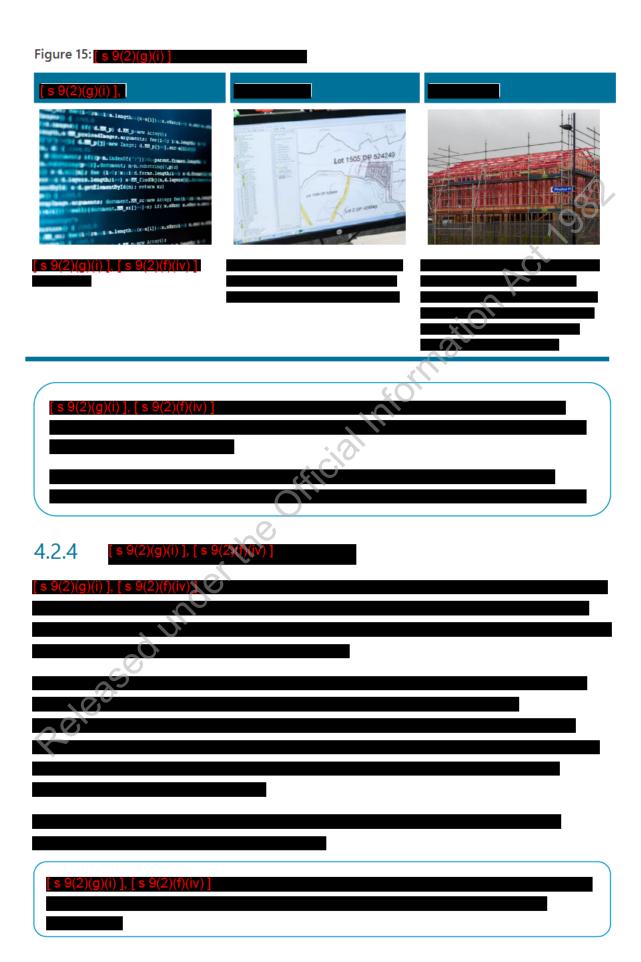
Valuer-General Neill Sullivan

- The statutory officer responsible for regulating the rating valuation regime.
- Plays a key role in the property information regime by providing technical advice to the government on valuation issues, setting standards for the district valuation role, and ensuring those standards are met.
- May make rules setting requirements in relation to valuations and district valuation rolls and require information to be provided to the Valuer-General or to any other person.
- Audits rating valuations carried out or commissioned by local authorities to ensure they comply with the rules and must give their approval before a general revaluation can be implemented.
- Administers the Valuers Registration Board, which is responsible for occupational regulation of registered valuers and issues practising certificates.

The rating valuation regime is critical for local government functions. New Zealand's territorial authorities rely on rates to generate over \$5.8 billion, approximately 59 percent of their total operating income. Correct rating valuations are essential for territorial authorities to implement their rating policies.

Accurate rating valuations and supporting property data are also used for lending, insurance and private purchase purposes.

| 4.2.2         | [ s 9(2)(g)(i) ], [ s 9(2)(f)(iv) ]   |     |
|---------------|---------------------------------------|-----|
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| [ s 9(2)(     | ?)(g)(i) ], [s 9( <b>2\(i)\(iv</b> )] |     |
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# 5 Outlook for geographic and property information

Currently, a range of geographic and property information is produced and collected by many national and local government agencies but no one agency is the contact for or coordinator of geospatial data. This was an issue after Cyclone Gabrielle as local councils and agencies sought to find the information they needed for the response effort. LINZ stepped into this leadership space, coordinating across government and providing imagery that, combined with data provided by councils, was used by response and recovery personnel to help them undertake effective action.

The Government Chief Data Steward (the Chief Executive of Stats NZ) is the functional leader for data, setting the strategic direction, leading the response to emerging data issues and facilitating a joined-up approach to data across government. The Government Chief Data Steward supports delegating responsibility for geospatial data leadership to the Chief Executive of LINZ, providing the sector with a dedicated coordination point for government geospatial data. LINZ will discuss further with you the ways in which this role could be performed and opportunities it will bring for wider public and private use of our data.

# 6 Next steps

LINZ is ready to respond to your direction on priorities for the geographic and property advice government gove information regime as part of your Land Information portfolio responsibilities. LINZ can develop advice and options for issues of importance to you. LINZ will also provide advice

# Annex 1 Critical relationships

The critical relationships in the geographic and property information regime are with other Ministers, the public, Māori, geospatial and property professionals and businesses, and central and local government.

| Other Ministers  |  |
|--|--|
| Minister of Finance,<br>Minister of Transport                        | The Minister of Finance and Minister of Transport are key stakeholders in SouthPAN due to its significant transport sector benefits.   |
| Other Ministers  | <ul> <li>You are likely to work closely on policy development with a<br/>range of Ministers including the Minister for the Environment<br/>and the Minister of Conservation.</li> </ul>  |
| Australian Minister for<br>SouthPAN                                  | <ul> <li>You and Hon Madeleine King, the Australian Minister for<br/>Resources and Minister for Northern Australia, are jointly<br/>responsible for the delivery of SouthPAN.</li> </ul>   |
| Māori  |  |
| Mãori  | <ul> <li>Māori are a key stakeholder in place names and correct spelling,<br/>due to their tangata whenua status over the land. The NZGB has<br/>a function to collect and encourage the use of original Māori<br/>place names on official maps and charts.</li> </ul>   |
| New Zealanders and   | New Zealand businesses   |
| Individuals, businesses, communities                                 | <ul> <li>Individuals, businesses and communities use geographic and<br/>property information data as part of day-to-day economic and<br/>social decision making. You can expect to receive<br/>correspondence from many of these individuals and businesses.<br/>You may also be invited to meet with industry organisations.<br/>Officials can provide advice and information to assist you in any<br/>meetings.</li> </ul> |
| Central and local gov  | vernment   |
| Ministry for the<br>Environment and<br>Department of<br>Conservation | LINZ works with the Ministry for the Environment on<br>environmental data and climate change. The agencies have<br>shared priorities for the cross-agency Climate Change and<br>Sustainability Chief Executives agenda. LINZ works with DOC on<br>biodiversity monitoring and land management.   |
| Emergency Management<br>Sector                                       | LINZ provides information to the sector (including the National Emergency Management Agency, Police, Defence, Fire and Emergency NZ and the Earthquake Commission) to support emergencies and build resilience. This includes the location, terrain and conditions of hazardous areas.   |

#### Other government LINZ partners with Te Arawhiti – Office for Māori Crown agencies Relations on engaging with Māori and ensuring the fulfilment of Treaty commitments relating to place names. LINZ works with Stats NZ and the Government Chief Data Steward to ensure the supply of geographic and property information to New Zealand's wider data ecosystem. Local government LINZ works with local government for the provision of geographic and property information. It also connects property information and environmental data sets and managing the Crown estate, especially around rivers and lakebeds. LINZ provides data and knowledge to support local government's decision making and management of infrastructure, water, pests, damaged land and visitors. Statutory officers and boards Valuer-General, Neill The Valuer-General is responsible for regulating the rating Sullivan valuation regime. The Valuer-General plays a key role in the property information regime by providing technical advice to the government on valuation issues, setting standards for the district valuation role, and ensuring those standards are met. The Valuer-General is the ex-officio Chair of the Valuers Registration Board. The Surveyor-General is responsible for setting the standards for Surveyor-General, Anselm Haanen the cadastral and geodetic regimes, and monitoring and auditing compliance with those standards. The Surveyor-General also administers the naming of places and supports the Electoral Commission's setting of electoral boundaries. The Surveyor-General is the ex-officio Chair of the NZGB, and an ex-officio member of the Cadastral Surveyors Licensing Board. **Valuers Registration** The Valuers Registration Board is responsible for the Board occupational regulation of registered valuers and issuing practicing certificates. You are responsible for appointing the members of the Board. Cadastral Surveyors The primary function of the Cadastral Surveyors Licensing Board Licensing Board is the licensing of cadastral surveyors competent to conduct cadastral surveys. You are responsible for appointing the members of the Board. Ngā Pou Taunaha o The role of the NZGB is to give places and features official Aotearoa New Zealand names, approve place names that are unofficial, change place Geographic Board names, for example by correcting spelling, and review Crown reserve names. The Board maintains the New Zealand Gazetteer and provides advice on place names that are part of cultural redress in Treaty of Waitangi claim settlements. You are responsible for appointing the members of the Board.

# Annex 2 Board membership

| Name   | Date of original appointment | Expiry date of present term |
|--|------------------------------|-----------------------------|
| New Zealand Geographic Board                       |                              |                             |
| HAANEN, Anselm (Chairperson)                       | 2018                         | Ex Officio                  |
| GREENLAND, Adam                                    | 2011                         | Ex Officio                  |
| BARNETT, Shaun Christopher                         | 2020                         | 24 Feb 2025                 |
| KAUMOANA, Cadence                                  | 2023                         | 10 Jul 2026                 |
| TOKA, Emmanuel Mahana                              | 2023                         | 10 Jul 2026                 |
| KEARNS, Professor Robin Affric                     | 2023                         | 10 Jul 2026                 |
| KAWHARU, Professor Merata                          | 2013                         | 24 Feb 2025                 |
| VERNON, Jennifer Anne                              | 2010                         | 24 Feb 2025                 |
| ELLIFFE, Paulette Joan                             | 2016                         | 24 Feb 2025                 |
| CRANWELL, Iaean                                    | 2023                         | 10 Jul 2026                 |
| Valuers Registration Board                         | 10%                          |                             |
| SULLIVAN, Neill Anthony (Chairperson)              | 2004                         | Ex Officio                  |
| GAMBY, Michael Evan Leigh                          | 1991                         | 22 Dec 2025                 |
| CURNOW, Phillip Allen                              | 2007                         | 12 Aug 2023                 |
| MURDOCH, Victoria Louise                           | 2016                         | 22 Dec 2025                 |
| TAYLOR, Kenneth Ross                               | 2007                         | 12 Aug 2023                 |
| Cadastral Surveyors Licensing Board                |                              |                             |
| FAULKNER, Neale Charles Thomas                     | 2010                         | 12 Oct 2026                 |
| HAANEN, Anselm                                     | 2018                         | Ex Officio                  |
| COLL MCLAUGHLIN, Laura Becker                      | 2023                         | 12 Oct 2026                 |
| DAGGUBATI, Sundeep Chowdary                        | 2023                         | 12 Oct 2026                 |
| JIANG, Pengbo                                      | 2023                         | 12 Oct 2026                 |
| MCELWAIN, Colin Robert                             | 2019                         | 12 Oct 2026                 |
| MCINNES, Craig Kenneth                             | 2016                         | 12 Oct 2026                 |
| TOLAN, Clare Elizabeth                             | 2023                         | 12 Oct 2026                 |
| Orton Bradley Park Board                           |                              |                             |
| FERGUSON, Francis David (Chairperson) <sup>2</sup> | 2022                         | 11 Oct 2025                 |

<sup>&</sup>lt;sup>2</sup> Under the R O Bradley Estate Act 1972 the Chairman of the Orton Bradley Park Board is appointed by the Governor General on the advice of the Minister for Land Information.