

Lower Clutha Rohe Economic Snapshot

Summary

The Lower Clutha Rohe (area), located in the lower southern part of Otago Region, is one of the five Rohe within the Clutha/Mata-Au Freshwater Management Unit (FMU)¹. This Rohe includes the Pomahaka catchment and other catchments of the Bengier Burn and the Tuapeka, Waitahuna, Waiwera, Beaumont and Waitahuna rivers, and a few smaller tributaries.

In general, the Lower Clutha Rohe has a milder climate than Rohe located further upstream along the Clutha/Mata-Au. The Rohe experiences few extreme hot days with annual precipitation ranges between 600 and 1,400 mm (based on data between 1986 and 2005²); Balclutha, the main town in the Rohe, experiences fewer dry days on average than most monitored sites in Otago (e.g., Alexandra, Clyde, Dunedin, Oamaru, and Ranfurly).

As of 2018, there were approximately 12,000 residents in Lower Clutha Rohe (or 5% of the population in Otago and around 3 people/km²), which was an increase of around 200 people (or 1%) from 11,800 residents in 2006. The growth rate in the Lower CLutha Rohe is much lower than that of the Otago Region (+16%) and New Zealand (+17%). Just under half of the residents live in the rural area of the Rohe; around one in three people live in Balclutha; the rest of the population (approx. 20%) lives in four service centres of the Lower Clutha Rohe: Tapanui, Kaitangata, Benhar-Stirling and Lawrence.



Image 1. The Balclutha bridge - One of New Zealand's most distinctive bridges links the two parts of the town. Built in the 1930s, the six-span arched concrete bridge has a Historic Places Grade 1 listing.

Source: Clutha development <https://www.cluthanz.com/visit/places/balclutha/>;

<https://www.stuff.co.nz/travel/destinations/nz/southland/300551637/balclutha-more-than-a-gateway-to-the-catlins>

¹ The National Policy Statement for Freshwater Management 2020 (NPSFM) requires regional councils to identify Freshwater Management Units in the region. A freshwater management unit (FMU) is defined in the NPSFM as “all or any part of a water body or water bodies and their related catchments, that a regional council determines (under clause 3.8 in the NPSFM) is an appropriate unit for freshwater management purposes.

² <https://niwa.co.nz/sites/niwa.co.nz/files/Otago%20Climate%20book%20WEB%202021.pdf>

Compared to the Otago average, the Lower Clutha Rohe has a higher proportion of the population without a formal qualification. In addition, fewer people are in a higher personal income bracket (\$70,001 or more per annum) compared to the Otago average.

The local economy in the Lower Clutha Rohe is especially reliant on water resources for primary production and primary goods processing. In 2020, the largest industries by employment (using ANZSIC 2006³) in the Rohe were primary industries and associated food manufacturing industries. Together, these industries provided more than half of all jobs in the Rohe. Both food growing and food processing require water resource as input and as means for waste disposal. Tourism related industries⁴ (Retail trade (6% of all jobs), Accommodation and Food Services (4%), Arts and Recreation Services (0.4%)) are relatively small compared to other parts of Otago.

An understanding of Māori history and Māori economy is essential for policy development and policy impact assessment. Not only does pre-European Māori history help shape modern day New Zealand, but the Māori economy is also integral to the New Zealand economic system. ORC is partnering with Aukaha⁵ and Te Ao Marama⁶ to develop an overview of Kāi Tahu history and economy. This work will be included in the economic impact assessment for the Land and Water Regional Plan.

Geography and climate

The Lower Clutha Rohe (area) is one of the five Rohe within the Clutha/Mata-Au Freshwater Management Unit (FMU). It is located in the lower south part of Otago Region, and includes the Pomahaka catchment, a number of other catchments that feed the Clutha Mata-au, including those of the Benger Burn and Tuapeka, Waitahuna, Waiwera, Beaumont and Waitahuna rivers, and many smaller tributaries.

Figure 1 below provides a map of the current Lower Clutha Rohe with its topography.

³ Australian and New Zealand Standard Industrial Classification (ANZSIC) was jointly developed by Statistics New Zealand and the Australian Bureau of Statistics. ANZSIC system classifies entities based on their main business activity and is used to collect and analyse data across industries. The 2006 edition is arranged into 19 broad industry divisions and 96 industry subdivisions.

⁴ Tourism is represented by a range of industries including (but not limited to) accommodation, cafes and restaurants, and scenic and sightseeing transport.

⁵ Aukaha is 'a Rūnaka based consultancy service with Governance from five Rūnaka owners: Te Rūnanga o Waihao, Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou, Hokonui Rūnanga'
<https://aukaha.co.nz/about/>

⁶ Te Ao Mārama Inc represents Ngai Tahu ki Murihiku tangata whenua for resource management and local government purposes. <https://www.facebook.com/Te-Ao-Marama-INC-1669235646693199/>

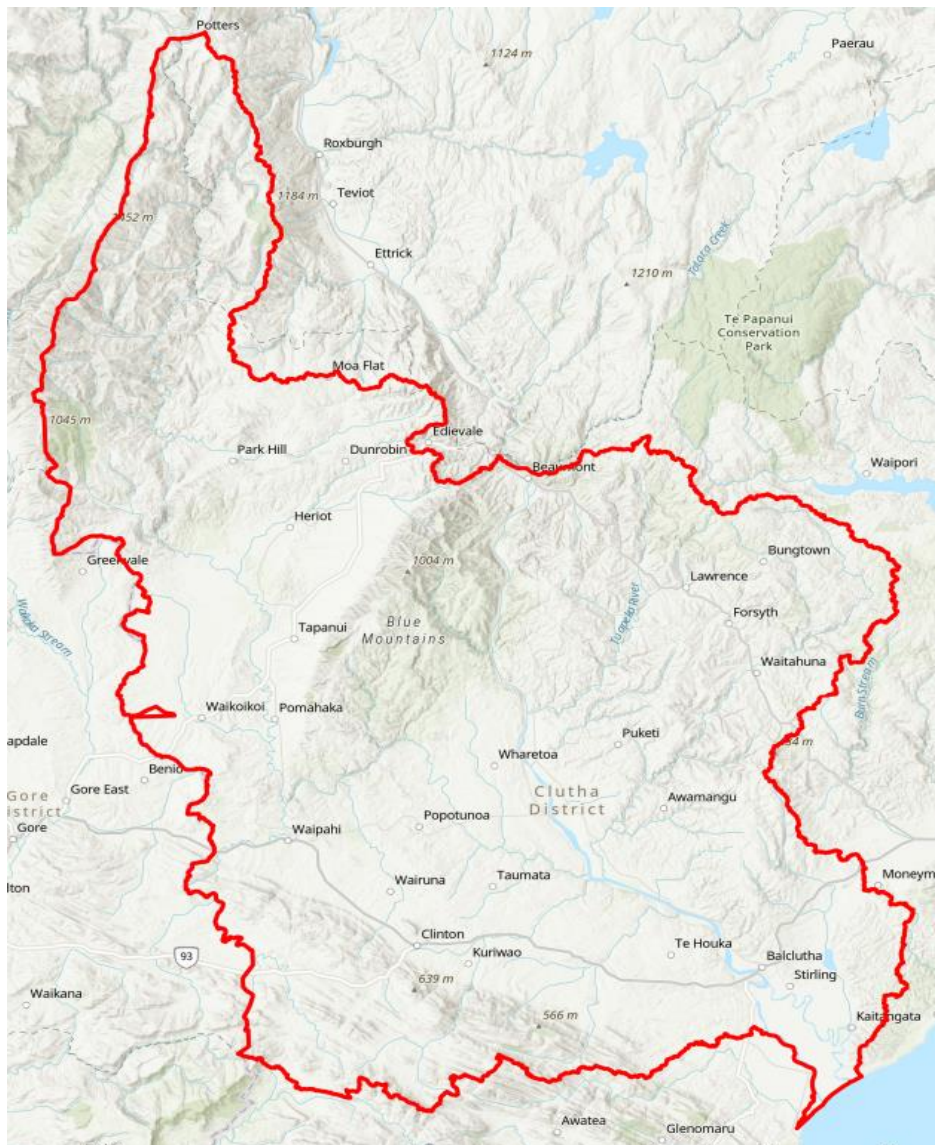


Figure 1. Topographic map of the Lower Clutha Rohe

In total, the Lower Clutha Rohe has a land area of around 380,000 hectares (or roughly 12% of the Otago Region), ranking it the third largest Rohe in the Clutha/Mata-Au FMU by land area (after Upper Lakes and Dunstan but before Manuherekia and Roxburgh). It is also larger than most FMUs in Otago (i.e., the North Otago, Catlins, and Dunedin & Coast FMUs) but smaller than the Taieri FMU.

In general, the Lower Clutha Rohe's climate is milder than further inland in Otago. The mean annual air temperature in this Rohe ranges from about 8°C to 12°C (based on data between 1986 and 2005), and experiences very few extreme hot days (less than 1 per year)⁷; annual precipitation ranges between 600 and 1400 mm⁸; Balclutha experiences fewer dry days⁹ on average than most monitored sites in Otago (e.g., Alexandra, Clyde, Dunedin, Oamaru, and Ranfurly)¹².

⁷ https://www.orc.govt.nz/media/7591/niwa_climatechangereport_2019_final.pdf

⁸ <https://docs.niwa.co.nz/library/public/NIWAs67.pdf>

⁹ A dry day considered here is when < 1 mm of rainfall is recorded

Socio-economic background

Land use

The Lower Clutha Rohe has roughly 340,000 hectares (or nearly 90% of the Rohe's land area) in primary production land use, the highest proportion amongst the five Rohe within the Clutha/Mata-Au FMU and comparable with the North Otago FMU, the highest of all five FMUs in Otago. The primary production land mostly consists of dry stock farming (nearly two thirds of the total primary production land use) and dairy farming (including dairy support) (just under one fifth of the total primary production land use). Other land uses, including conservation land, rivers and lakes, indigenous cover, and unknown pasture, cover around 33,000 hectares (or 9%). Table 1 gives estimates of the extent of the main land use activities, while Figure 2 shows the distribution of these land uses within the Rohe.

Table 1. The extend of Land use in the Lower Clutha Rohe
Source: Otago Land Use Map (Great South, 2021)

Land use in the Lower Clutha Rohe	Total land in this Rohe (ha)	Share of land use in this Rohe	Share of land use in Otago that is present in this Rohe
Total land use	380,706	100%	12%
Primary Production-use	338,596	89%	15%
Sheep and beef	155,202	41%	12%
Dairy (incl. support and other livestock)	63,207	17%	40%
Plantation Forest	35,118	9%	28%
Sheep	34,058	9%	20%
Mixed Livestock (incl. support)	31,568	8%	11%
Other Agriculture use (incl. other animals and grazing pasture)	8,602	2%	9%
Beef	6,383	2%	16%
Deer (incl. specialised and majority deer and mixed stock)	2,713	1%	5%
Arable	1,334	0%	17%
Horticulture (incl. flower and bulb growers and nurseries, orchards, and vineyards)	411	0%	4%
Urban use	8,738	2%	8%
Other (incl. conservation land, rivers, and lakes etc.)	33,372	9%	4%

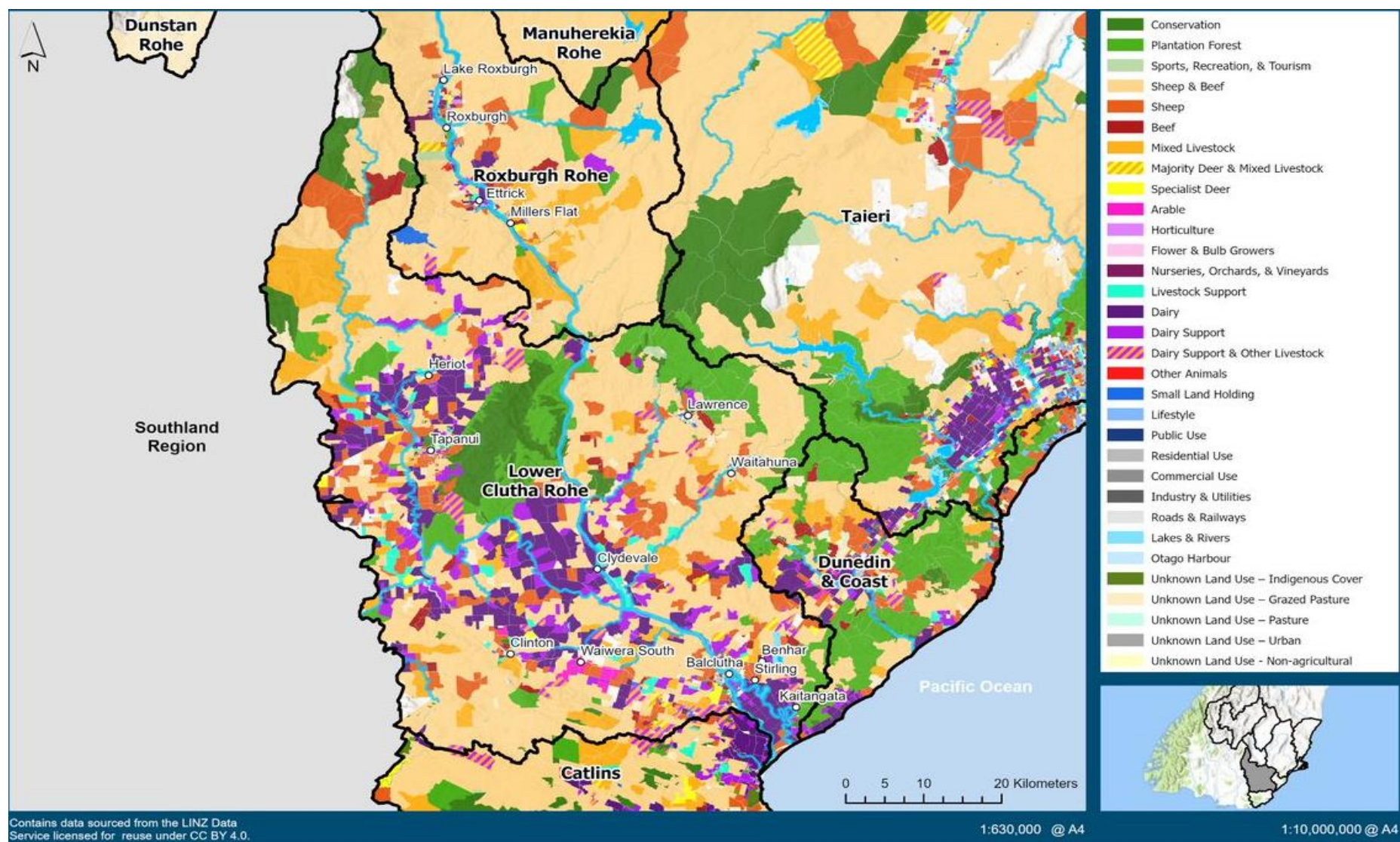


Figure 2. Land uses within the Lower Clutha
Source: Otago Land Use Map (Great south, 2021)

The people and the economy¹⁰

The Lower Clutha Rohe lies mostly in the Clutha District with a smaller area located within the lower part of Central Otago District. As of 2018, there were approximately 12,000 residents in the Lower Clutha Rohe (or 5% of the region) and a density of around 3 people/km². This population was an increase of around 200 people (or 1%) from 11,800 residents in 2006. This growth rate is lower than that of the Otago Region (+16%) and New Zealand (+17%). Just under half of the population live in the rural area of the Rohe, while around one in three people live in Balclutha. The rest of the population in the Lower Clutha Rohe (approx. 20%) lives in five other service centres of the Lower Clutha – Tapanui, Kaitangata, Benhar-Stirling, Lawrence, and Clinton.

Balclutha is the biggest town in the Lower Clutha Rohe and sits on the banks of the Clutha/Mata-Au River on the south-east side of the Rohe. The two parts of the town are connected by the Balclutha Bridge. It is the commercial centre of the Clutha District with a major supermarket, a range of other shops and recreational facilities (e.g., golf, swimming and the cross recreational centre)¹¹. Although located in the Clutha District, Balclutha is around one hour's drive from Dunedin City. The population in Balclutha has been stable at around 4,100 people since 2006.

There are five other rural service centres in Lower Clutha – Tapanui, Kaitangata, Benhar-Stirling and Lawrence. Tapanui (around one hour's drive from Balclutha) is located on west side of Otago at the foot of the Blue Mountain. As well as being a farming community, it is also popular for its outdoor activities such as hiking, hunting, and fishing in the Pomahaka River¹².

Kaitangata is located approximately 10km south of Balclutha. This area provides plenty opportunities for fishing, boating, white baiting, and bird watching (at nearby Lake Tuakitoto and the small island of Inch Clutha). Coal mining was traditionally the main industry of Kaitangata and there are still mining activities there currently¹³.

Clinton is a small rural service centre in South Otago situated around 40km inland (west) of Balclutha. Clinton is famous for its sculpture of five Clydesdale horses reflecting the area's rich agricultural history. The township continues to service the surrounding rural area that is centred around cattle, sheep and deer farming. Clinton also provides some of New Zealand's finest fly fishing¹⁴, which is reliant on good water quality.

¹⁰ Most data in this section are based on the 2018 NZ Census.

¹¹ <https://www.cluthanz.com/visit/places/>

¹² <https://www.tapanuiwestotago.net/>

¹³ <https://www.cluthanz.com/visit/places/kaitangata/>

¹⁴ <https://www.cluthanz.com/visit/places/clinton/>



Image 2. Clinton's Clydesdale horses

Source: <https://www.cluthanz.com/visit/places/clinton/>

Figure 3 below shows that the population and growth rate in the Lower Clutha Rohe have remained relatively stable over the period 2006 to 2018. The rural areas of the Lower Clutha Rohe, which accounts for just under half (or 42%) of the Rohe's population, experienced a population increase of around 7% over the period between 2006 and 2018. More than one in three residents (or 35%) lived in Balcultha; the residential population there had been stable at around 4,100 people since 2006.

About one in five residents (or 21%) lived in the five smaller service centres (Tapanui, Kaitangata, Benhar-Stirling, Lawrence, and Clinton). Tapanui (population 800) and Lawrence (population 450) experienced a slight increase of population at 6% and 4% respectively between 2006 and 2018. Benhar-Stirling (population 470) had not seen population growth. Clinton (population 290) and Kaitangata (population 750) experienced a population decrease of 1% and 7% between 2006 and 2018 respectively. Since 2016 a housing project aimed at attracting outsiders to Kaitangata has been underway that allows the houses to be sold at cost. To date, four houses were built and sold, a fifth was under construction, and the last 11 sections were secured for building at the beginning of 2022.

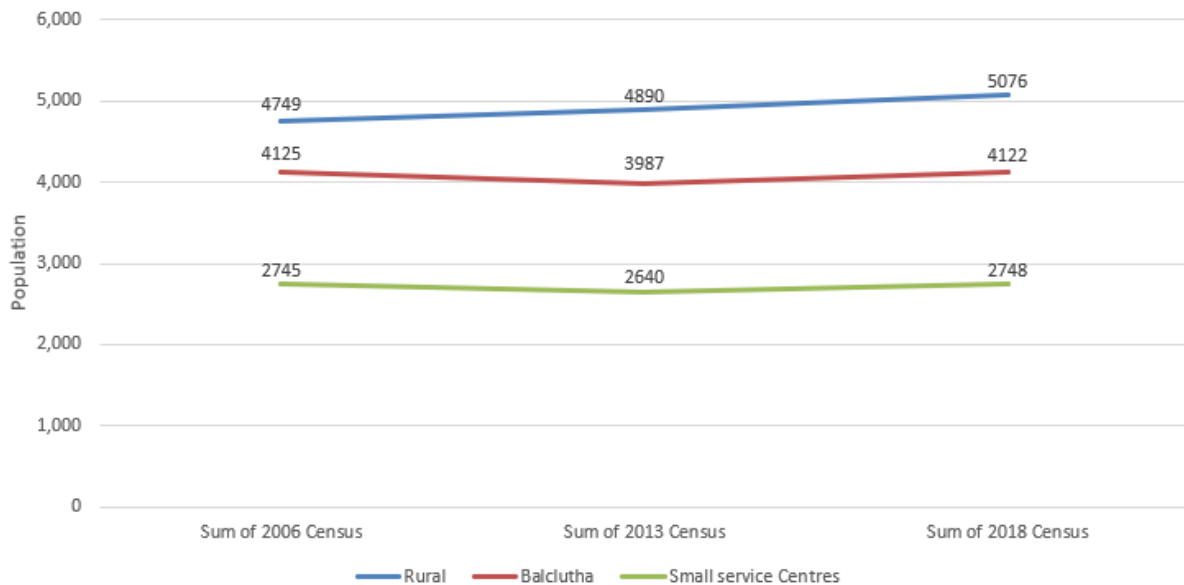


Figure 3. Lower Clutha population by selected group, 2006 – 2018

Source: Stats NZ Census 2018

Figure 4 below shows the population distribution in Balclutha, the smaller service centres, and rural area across selected age categories. Within the Rohe, residents in rural area tend to be younger than in the urban areas: around 40% of the population were under 30 years of age, and nearly 90% of population were under 65 years of age.

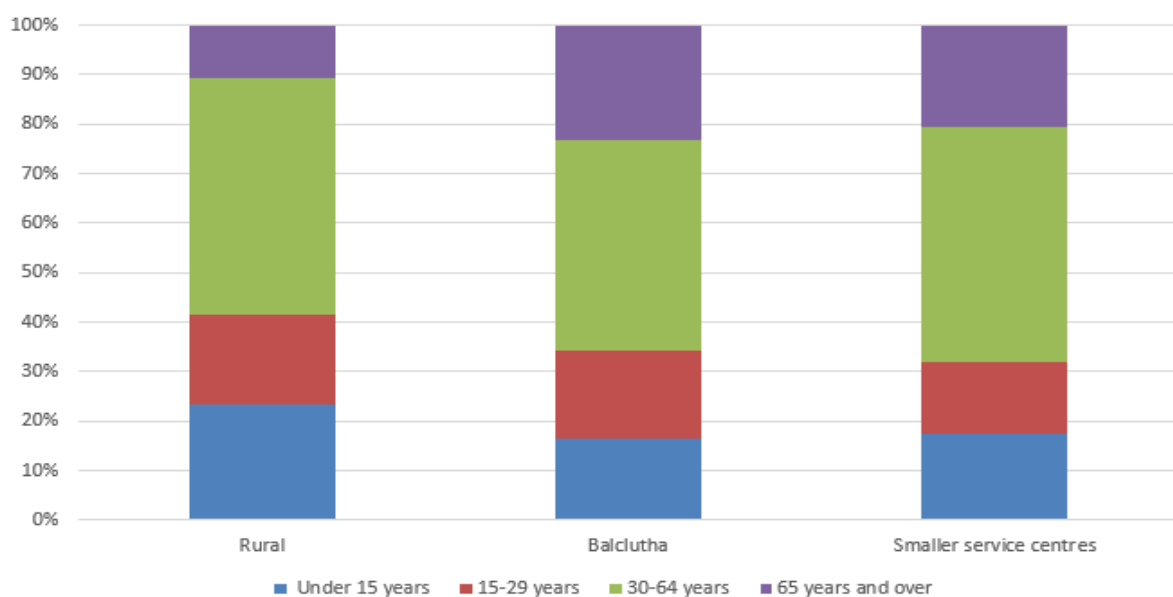


Figure 4. Lower Clutha Population distribution by age group, 2018

Source: Stats NZ Census 2018

As of 2018, 12% of the population in the Lower Clutha Rohe self-identified as Māori, which is slightly higher than the Otago average of 10%. This proportion is increasing over time (it was 7% in 2006 and 8% in 2013) and this increasing trend is reflected in Otago as a whole. Similarly, 72% of the population in this Rohe lived in the same residence as one year ago, which is higher than the Otago average of 65%; and roughly 1% of the population were from overseas, which is lower than the Otago average of 3%.

The total business activities in the Lower Clutha Rohe accounted for around 6,680 ‘jobs’ (measured by employment counts, which does not include working proprietors¹⁵). In New Zealand, approximately 20% of all jobs are working proprietors¹⁶. In 2020, the largest industry sector by employment (using ANZSIC 2006¹⁷) in the Lower Clutha Rohe was the Agriculture, Forestry and Fishing industry, which provided one in three jobs. Within this sector, Sheep, Beef Cattle and Grain Farming, Dairy Cattle Farming, and Agriculture, Forestry and Fishing Support Services were the top three sub-industries that provided more than 90% of all agriculture-related jobs.

Food Manufacturing is the second largest industry that provided one in five jobs in the Rohe. There are five food manufacturing plants located within Lower Clutha or within 100km from most places in the Rohe. They are Silver Fern Farms’ Finegand meat processing plant (Lower Clutha), Fonterra’s Stirling cheese factory (Lower Clutha), Duncan Venison processing plant (Mosgiel, Dunedin), Fonterra’s Edendale milk processing facility (Southland), and Alliance Group’s meat processing plant (Southland). Both food growing and food processing require water resources as an input into production and as means of disposing of waste products.



Image 3. Silver Fern Farms Finegand meat processing plant

Source: <https://www.stuff.co.nz/business/green-business/125690215/silver-fern-farms-to-move-out-of-coal-by-2030-embrace-regenerative-agriculture>

¹⁵ Employee Counts data are used by Stats NZ’s Business Frame. Employment Counts is a head count of salary and wage earners for a reference period. It includes most employees but does not capture all working proprietors –people who pay themselves a salary or wage (or ‘drawings’).

¹⁶ 2019 numbers according to Stats NZ Linked employer-employee data
<http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7240#>.

¹⁷ Australian and New Zealand Standard Industrial Classification (ANZSIC) was jointly developed by Statistics New Zealand and the Australian Bureau of Statistics. ANZSIC system classifies entities based on their main business activity and is used to collect and analyse data across industries. The 2006 edition is arranged into 19 broad industry divisions and 96 industry subdivisions.

Tourism Related industries¹⁸ (Retail trade (6%), Accommodation and Food Services (4%) and Arts and Recreation Services (0.4%)) are relatively small compared to other parts of Otago.

When considering different incomes sources in the Lower Clutha Rohe, the proportion (75%) of the working age population (15 – 65 years) that earned a work-related income was smaller than the Otago average (79%), while the proportion of the population (14%) that received some type of government benefit¹⁹ was also slightly smaller than the Otago average (15%). The proportion of residents that received a superannuation or veteran’s pension (20%) and had no source of income (4%) was similar to the Otago average. There was a lower proportion of the population which received a student allowance (1%) than the Otago average (4%).

Figure 5 below shows that, compared to the Otago average, Lower Clutha has a higher proportion of the population without a formal qualification. In addition, fewer people are in a higher personal income bracket (\$70,001 or more per annum) compared to the Otago average.

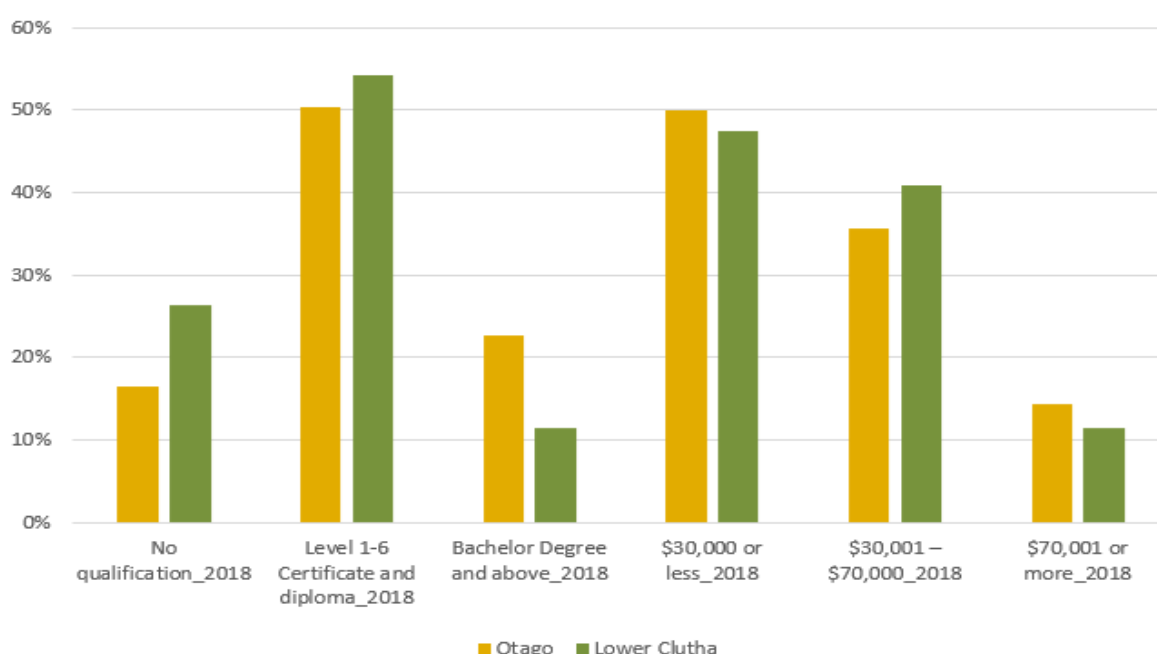


Figure 5. Academic qualification and personal annual income, Lower Clutha Rohe vs Otago average, 2018
Source: Stats NZ Census 2018

The University of Otago’s New Zealand Deprivation Index estimates the relative socio-economic deprivation of an area. The current version of the index is derived from 2018 census and combines census data relating to income, home ownership, employment, qualifications, family structure, housing, access to transport and communications, and access to internet²⁰. In the Deprivation Index, decile 1 represents areas with the least deprivation, while decile 10 represents areas with the most deprivation when measured using these factors.

¹⁸ Tourism is represented by a range of industries including (but not limited to) accommodation, cafes and restaurants, and scenic and sightseeing transport.

¹⁹ The type of benefits includes ACC or private work accident insurer, job seeker, sole parent support, supported living payment, other govt benefits, govt income support payments, war pensions or paid parental leave, other sources of income including support payments from people who do not live in my household.

²⁰ <https://www.otago.ac.nz/wellington/departments/publichealth/otago830998.html>

Figure 6 shows the relative deprivation in 2018 by Census Statistic Area 1 (SA1, which ideally ranges between 100 and 200 residents and a maximum of about 500)²¹ in the Lower Clutha Rohe. The map only shows Census SA1 for agriculture and urban land developed land. Conservation land and plantation forestry are shaded green because they are generally unpopulated.

Figure 6 along with Figure 6.1 – 6.4 show that, in general, rural areas tend to have deprivation scores between 2 and 5. Tapanui (Fig. 6.1) and Benhar-Stirling (Fig. 6.3) have mid-range deprivation scores between 3 and 7, while Lawrence (Fig. 6.2), Clutha, Kaitangata (Fig. 6.3), and Clinton (Fig. 6.4) have higher deprivation scores between 6 and 10.

²¹ SA1s were introduced as part of the Statistical Standard for Geographic Areas 2018 (SSGA18); <https://www.stats.govt.nz/assets/Uploads/Retirement-of-archive-website-project-files/Methods/Statistical-standard-for-geographic-areas-2018/statistical-standard-for-geographic-areas-2018.pdf>

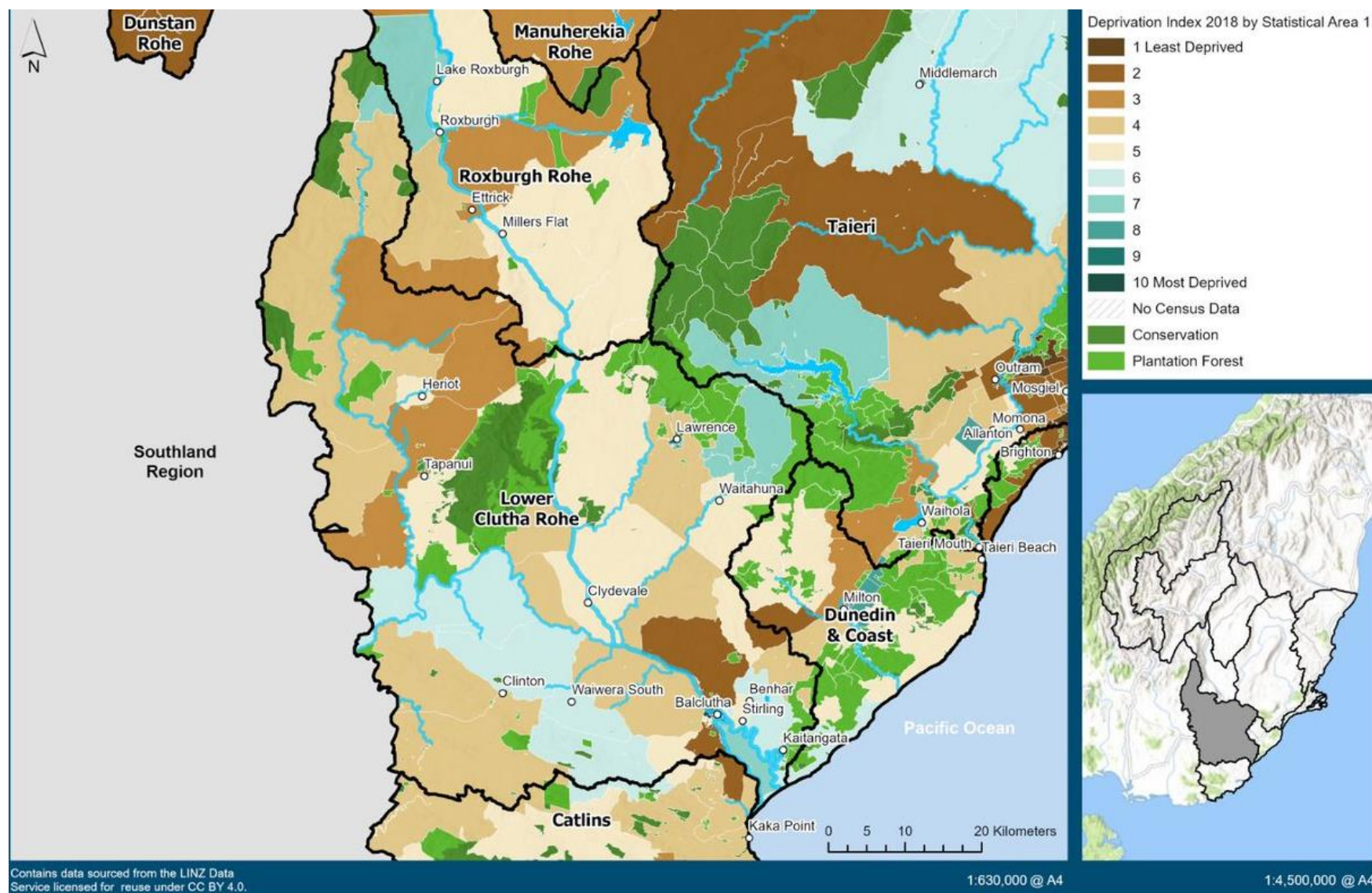


Figure 6. Deprivation Index (by SA1) for the Lower Clutha Rohe

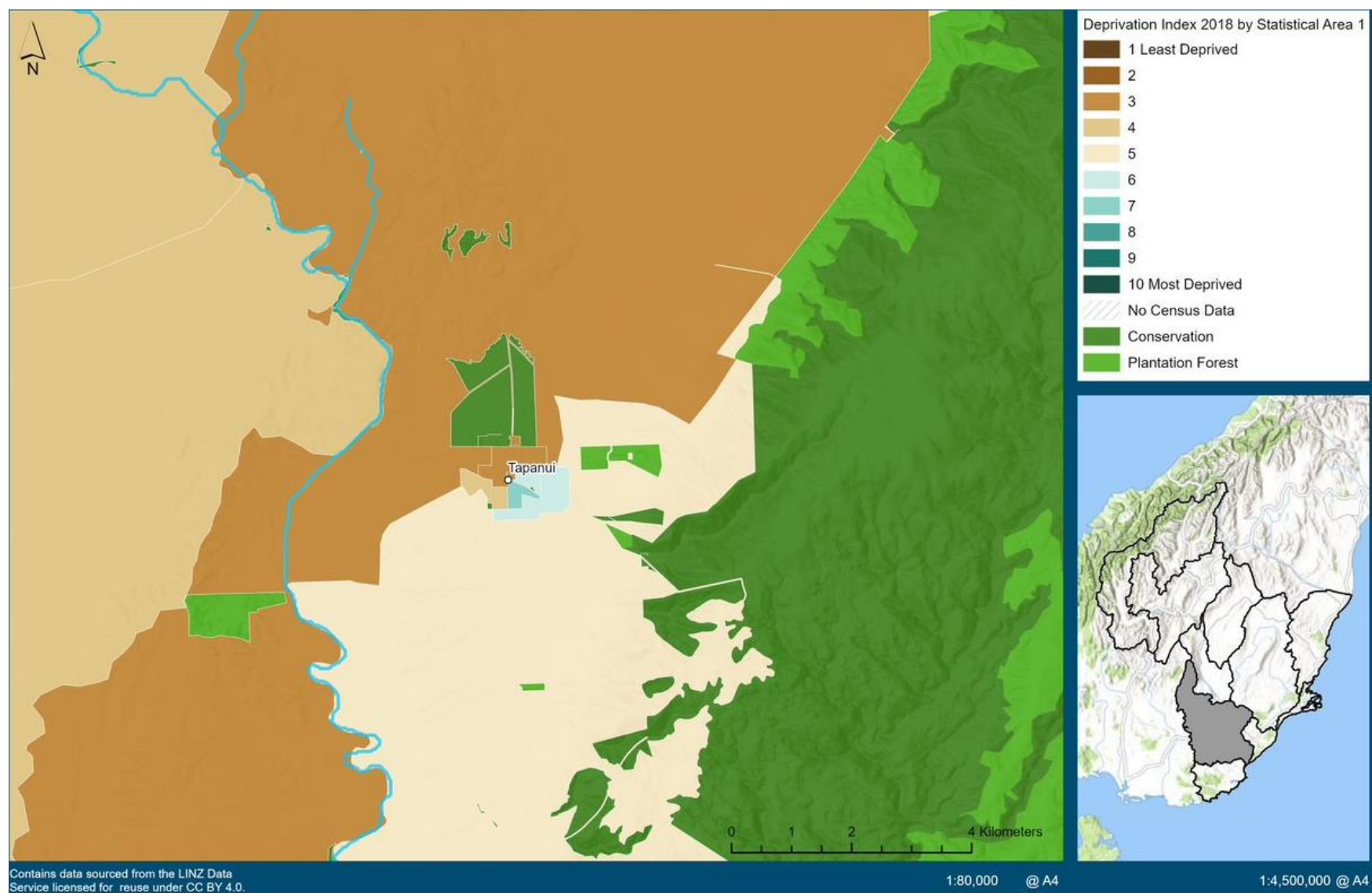


Figure 6.1. Deprivation Index (by SA1), Tapanui

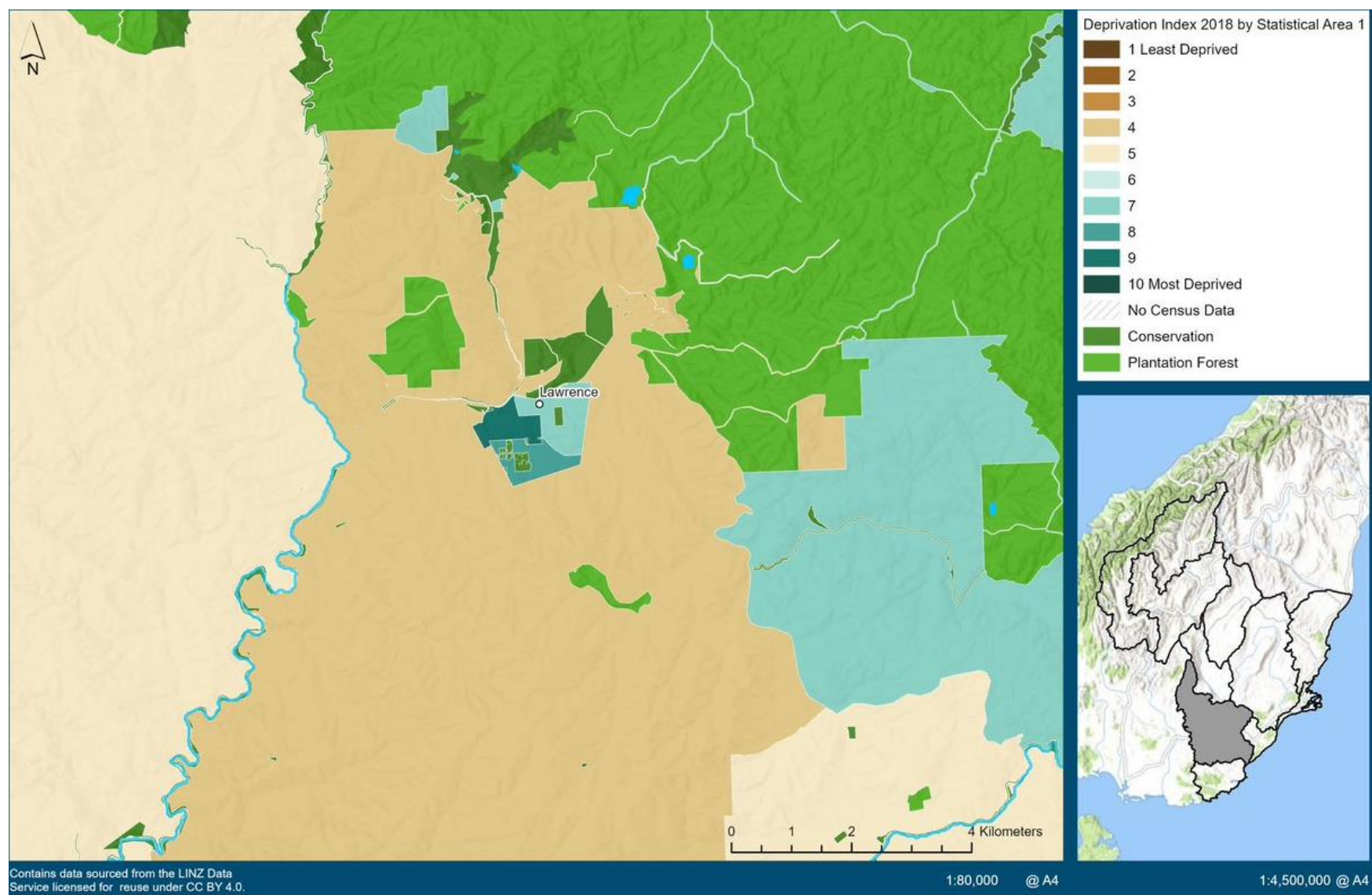


Figure 6.2. Deprivation Index (by SA1), Lawrence

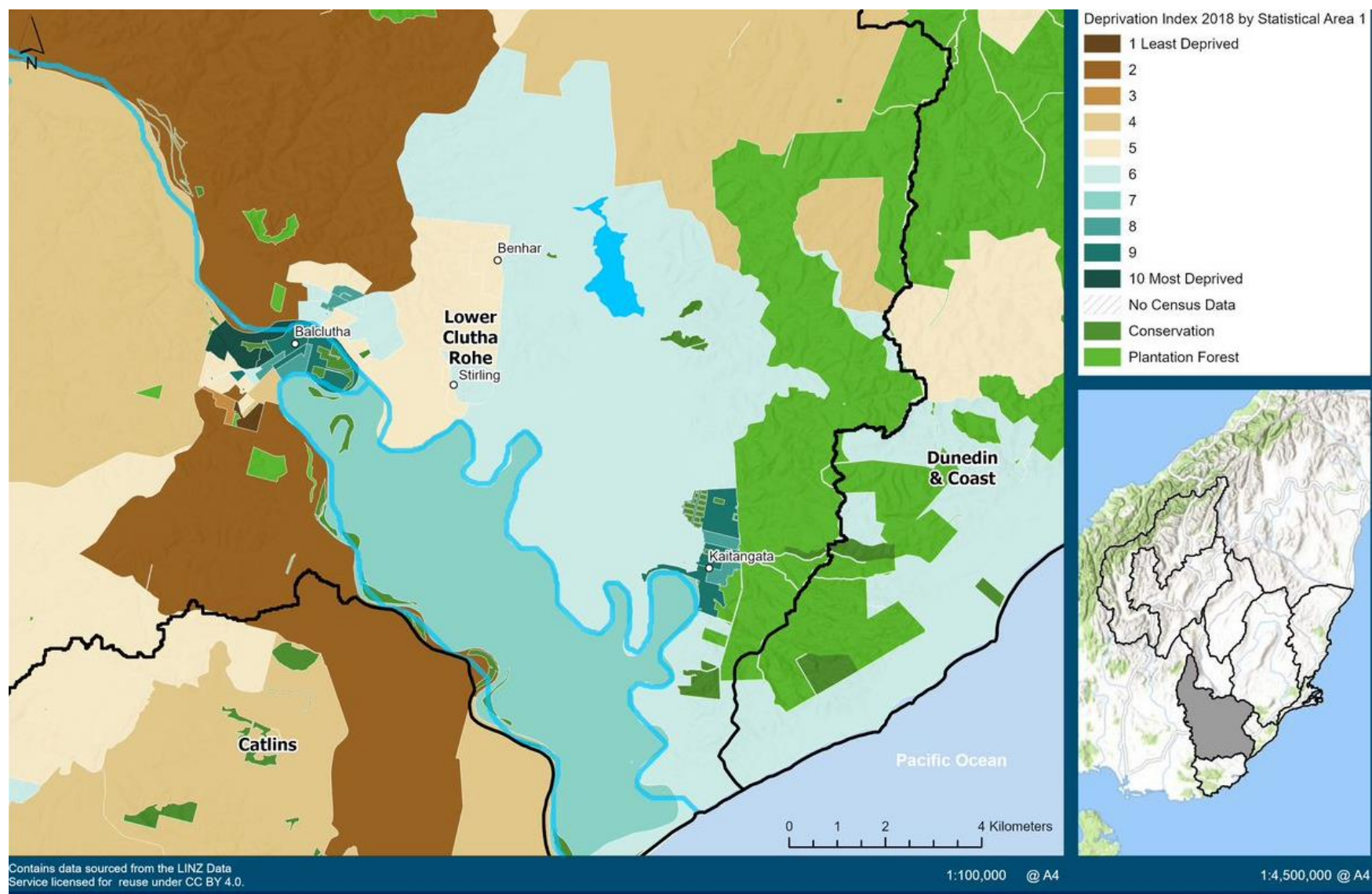


Figure 6.3. Deprivation Index (by SA1), Balclutha, Benhar-Stirling, and Kaitangata



Figure 6.4. Deprivation Index (by SA1), Clinton