

# Catlins Freshwater Management Unit

## Economic Snapshot

### Summary

The Catlins Freshwater Management Unit ('FMU') is located on the south coast of the Otago region. The FMU generally has a more temperate climate than inland Otago. The FMU has high and reliable annual rainfall, which usually provides ample water supply. The FMU comprises extensive conservation land and rainforests, which attract visitors to the Catlins. The Catlins is also a stopping point on a longer journey touring Otago or Southland.

Water resources are essential to the Catlins local community and economy. The agriculture sector provides over half of all jobs in the Catlins. Five food manufacturing plants are located within 100 km from the centre of the Catlins and are supplied by production from the Catlins. The Catlins' tourism sector is also sizeable, providing just under one-fifth of the local employment.



*Image 1. Countryside, the Catlins*

*Source: Emma Moran*

In 2018, the Catlins FMU was home to around 1,600 residents. In the 12 years between 2006 and 2018, there was a 4% decrease of population in the Catlins, which is in contrast to that of the Otago region (+16%) and New Zealand as a whole (+17%). Most Catlins residents live in rural areas of the FMU while nearly 40% of the population live in either one of the three townships – Owaka, Kaka Point, or Pounawea. These towns are dependent on agriculture and tourism. The town population tends to be slightly older than the population in the rural area; with relatively more retirees living in these towns.

Compared with Otago average, a lower proportion of the population in the Catlins have higher formal qualifications. Most Catlins residents are likely to be working in the agriculture or tourism sector, which are closely tied to the area's natural resources, such as biodiversity, landscapes, fresh water and soil.

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 cooperating with Aukaha<sup>1</sup> to develop a comprehensive overview of Kāi Tahu history and economy. This work will be included in the policy impact assessment.

## Geography and Climate

The Catlins Freshwater Management Unit (FMU)<sup>2</sup> is located to the south of Coastal Otago; it lies between the Clutha/Mata-Au River to the north-east and the Maitai River to the west. The Catlins is characterised by native forest remnants, with several water bodies, such as the MacLennan and Tautuku Rivers, in largely unmodified natural states<sup>3</sup>. It also includes Kuramea (Lake Catlins) and its adjoining wetland and estuary, which provide for a diverse range of native species and habitats<sup>3</sup>. The FMU also includes the Catlins Conservation Park, which provides various walking/tramping tracks and waterfalls.

The Catlins FMU consists of four main surface water catchments (the Owaka, Catlins, Puerua, and Tahakopa Rivers) plus some smaller catchments that drain directly to the coast<sup>3</sup>. The Owaka and Catlins river catchments, like many within the FMU, are small to moderate in size, with reliable flows. Figure 1 below provides a map of the Catlins FMU with its major water bodies and topography.

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<sup>1</sup> 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/>

<sup>2</sup> 'An FMU is a water body or multiple water bodies that ORC believe is the appropriate scale for managing water, including the setting of freshwater objectives and limits. This can be a river catchment, part of a catchment, or a group of catchments.' <https://www.orc.govt.nz/plans-policies-reports/regional-plans-and-policies/water/freshwater-management-units>

<sup>3</sup> <https://www.orc.govt.nz/media/9239/final-catlins-fmu-snapshot.pdf>

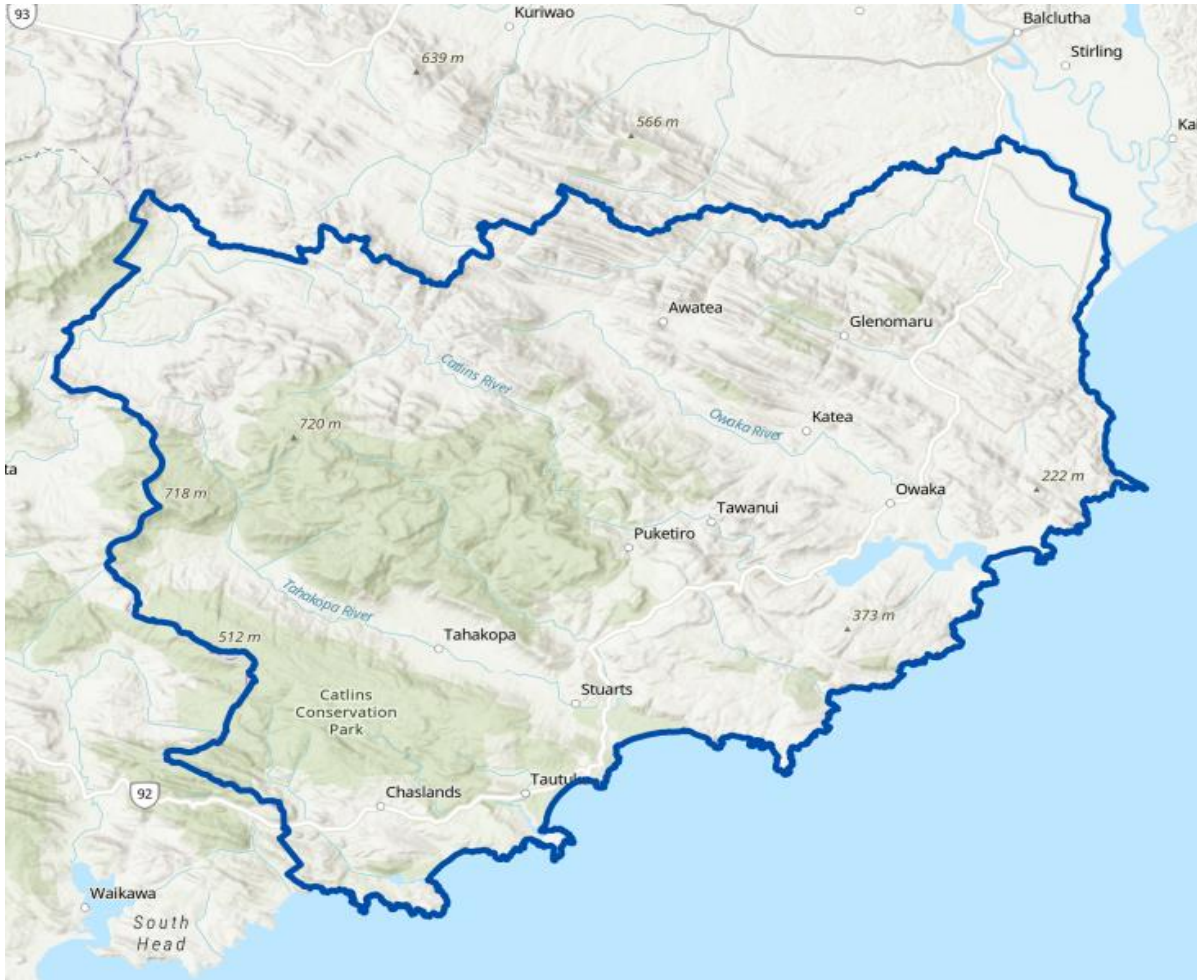


Figure 1. Map of the Catlins FMU

In total, the Catlins FMU has a land area of around 145,000 hectares (or roughly 5% of the Otago region). It is the second smallest FMU by land area out of the five FMUs in Otago. The largest FMU being the Clutha Mata-Au FMU (or 65% of the region) while the smallest is the Dunedin Coast FMU (or 3% of the region).

Due to its coastal location, the Catlins generally has temperate climate compared to inland Otago. In summer, the temperatures generally range around 16-24 degrees Celsius while winter temperatures are in the 8-13 degree range. There might occasionally be some hot days in summer with temperatures exceeding 30 degrees and in winter temperatures can dip to -5 degrees<sup>4</sup>.

The Catlins is wetter than most parts of Otago, except for the west boundaries of the region<sup>5</sup>. The FMU has an average annual rainfall of about 1300 mm per annum and is fairly consistent throughout the year. This reliable rainfall is beneficial to the local agricultural industry and maintaining the Catlins rainforests.

<sup>4</sup> <https://www.catlins.org.nz/explore/about-the-catlins/climate/>

<sup>5</sup> <https://docs.niwa.co.nz/library/public/NIWAsts67.pdf>

## Socio-economic Background

### Land use

Within the Catlins FMU, there are roughly 53,000 hectares (36% of the FMU's land area) of public conservation land to the south-west of the FMU, the largest proportion amongst Otago's five FMUs. Where this conservation land is at the top of a river catchment it protects headwaters, and where it is further down a catchment, it helps to buffer the effects on water quality from developed land. Less than 60% of the land in the FMU is used for agriculture (the lowest proportion amongst the five FMUs), and this agriculture land is largely located in the north and east of the FMU. The agricultural land consists mostly of drystock and dairy properties with some dairy support, which is also quite concentrated in the north-east of the FMU. The urban area covers around 3,000 hectares (2%). Table 1 gives estimates of the extent of the main land use activities. Figure 2 below shows the distribution of these land uses within the FMU.

*Table 1. The extend of Land use in the Catlins FMU  
Source: Otago Land Use Map (Great South, 2021)*

<u>Land use in the Catlins FMU</u>	<u>Total land in this FMU (ha)</u>	<u>Share of land use in this FMU</u>	<u>Share of land use in Otago that is present in this FMU</u>
<b>Total land use</b>	<b>145,321</b>	<b>100%</b>	<b>5%</b>
<b>Agriculture-use</b>	<b>84,275</b>	<b>58%</b>	<b>4%</b>
Sheep and beef	49,505	34%	4%
Dairy (incl. support and Other livestock)	10,388	7%	7%
Plantation Forest	7,951	5%	6%
Mixed Livestock (incl. support)	7,490	5%	3%
Sheep	4,179	3%	3%
Other Agriculture use (incl. other animals and grazing pasture)	1,979	1%	2%
Deer (incl. specialised and majority deer and mixed stock)	1,685	1%	3%
Beef	1,094	1%	3%
Horticulture (incl. flower and bulb growers and nurseries, orchards, and vineyards)	3	0%	0%
Arable	0	0%	0%
<b>Urban-use</b>	<b>3,386</b>	<b>2%</b>	<b>3%</b>
<b>Other (incl. conservation and nature)</b>	<b>57,661</b>	<b>40%</b>	<b>7%</b>

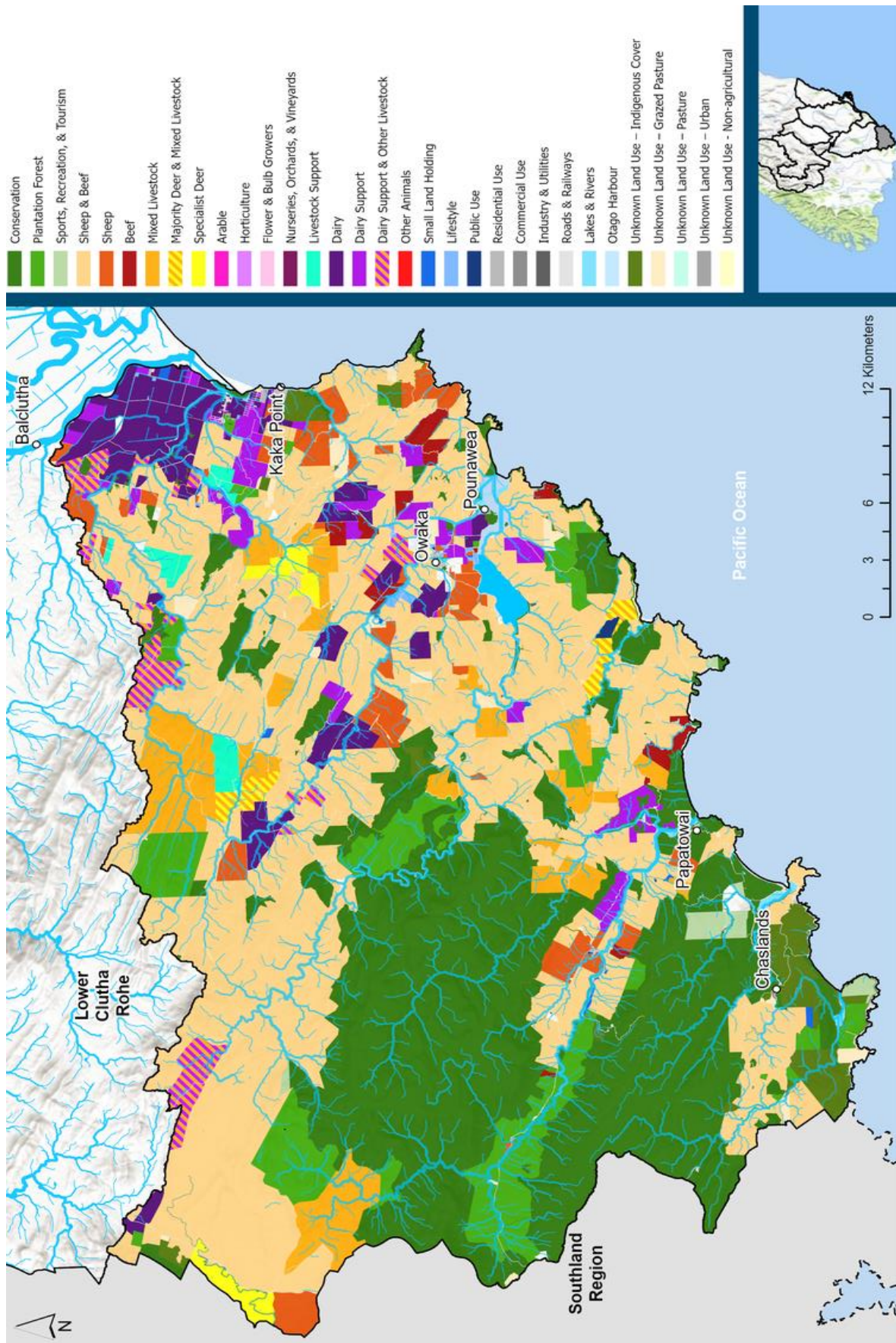


Figure 2. Land uses within the Catlins FMU  
 Source: Otago Land Use Map (Great south, 2021)

## The People and the economy<sup>6</sup>

The Catlins FMU lies entirely within the Clutha District and borders the Southland region. The towns and settlements are focal points for the surrounding local communities and include Kaka Point, Owaka and Pounaweia. Owaka is the main centre in the North Catlins area, it provides services to the local farming community and visitors. The township accommodates the Catlins Area School, Playcentre, Medical Centre and volunteer first response units (fire, ambulance and Search and Rescue)<sup>7</sup>. Kaka Point and Pounaweia are important areas for recreational and customary fishing activities. Shellfish (e.g., paua, cockles, and crayfish) and finfish (e.g., blue cod, flatfish, sea perch) are both gathered in these areas. Kaka Point is also an important area for commercial fishing for a range of species including paua, crayfish and a mixed trawl fishery that targets flatfish off the Nugget Point and Kaka Point area. Most fishing occurs within 4 nautical miles of the coast, although some is within 2 nautical miles and some out to 12 nautical miles (G Jay<sup>8</sup>, pers. comm., Oct, 2021).

Besides Kaka Point and Owaka, two major townships – Gore (Southland) and Balclutha (Clutha District, Otago) are within an hour’s drive from the centre of the Catlins FMU (around Wisp Hill).



*Image 2. Owaka River*

*Source: Emma Moran*

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<sup>6</sup> Most data in this section are based on the 2018 NZ Census.

<sup>7</sup> <https://www.catlins.org.nz/plan/captivating-activities/scenic-highlights/other-places/our-communities-2/owaka/>

<sup>8</sup> MPI's regional fisheries compliance manager

As of 2018, there were roughly 1,600 residents (or 0.7% of the region and less than 1 person/km<sup>2</sup>). There has been a small fluctuation of population with a decreasing trend in the Catlins from 1,668 residents in 2006 to 1,551 in 2013 and 1,608 in 2018 (-4% between 2006 and 2018). The stability of the population in the Catlins is in contrast to that of the Otago region (+16%) and New Zealand as a whole (+17%). Figure 3 below shows the population in Kaka Point (20 minutes' drive from Balclutha) has grown over the years. In contrast, Owaka, Pounawea and rural Catlins' population fluctuated with a decreasing trend between 2006 and 2018.

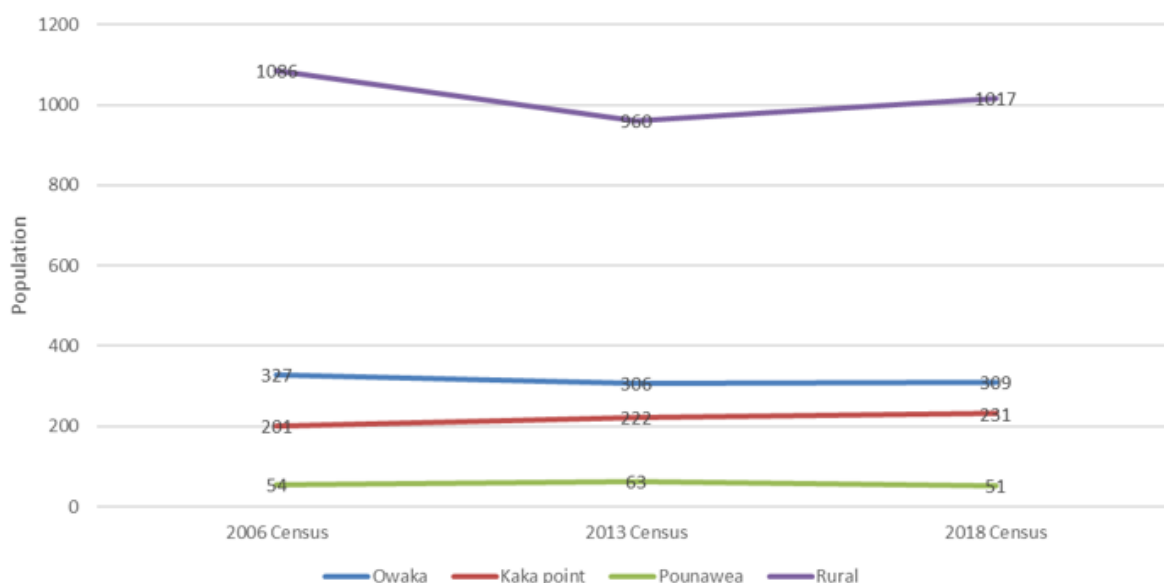


Figure 3. Catlins townships and rural population 2006 – 2018

Source: Stats NZ Census 2018

Overall, people who live in the rural areas and Owaka tend to be younger, while those who live in the townships of Pounawea and Kaka Point are older. For example, around 30% of the rural and Owaka residents are under 30 years of age, compared to under 20% of people living in Kaka Point and Pounawea. Also, a smaller proportion (around 20%) of population aged 65+ lives in Owaka and the rural area of the Catlins, compared to those living in Kaka Point and Pounawea (close to 30%). Figure 4 shows the population in the towns and rural area by selected age categories.

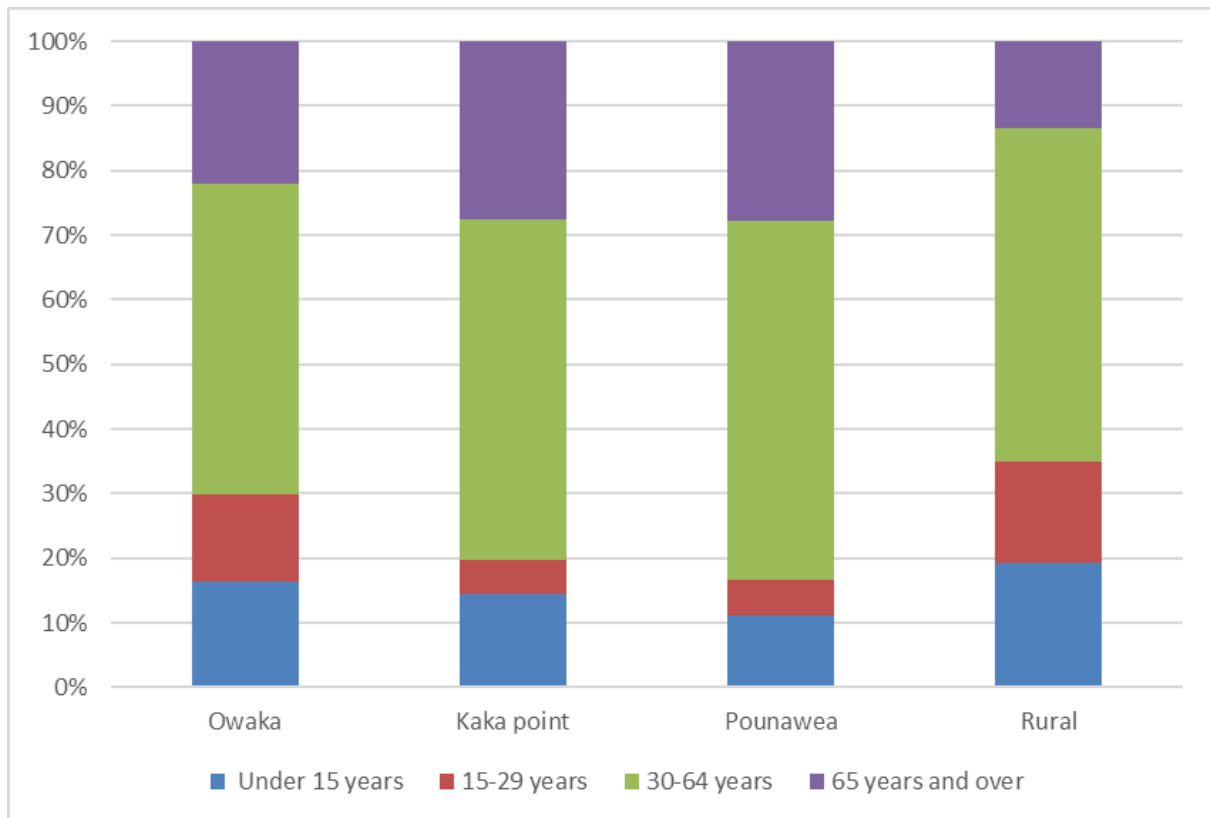


Figure 4. Catlins Population distribution by age group, 2018

Source: Stats NZ Census 2018

As at 2018, 9% of the population in the Catlins FMU identified themselves as Māori. This proportion has not changed significantly since 2006 (9%) and 2013 (7%); it is also on par with the Māori population proportion in Otago (9%) in 2018. However, the Māori population proportion has been increasing steadily in Otago since 2006, when it was 6%, then 7% in 2013.

People who live in the Catlins tend to stay longer in the area compared with the Otago average. In 2018, 73% of the population in the Catlins FMU stayed in the same residence as one year ago, compared to Otago average of 65%. Roughly 1% of the population were from overseas, which is lower than the Otago average of 3%.

The Catlins local economy is based around agriculture (incl. forestry) and tourism<sup>9</sup>. Although the Catlins does not comprise manufacturing facilities within the FMU, five food manufacturing plants are located within 100 km from the centre of the Catlins and are supplied by production from the Catlins. They are Fonterra's Edendale milk processing facility (Edendale, Southland), Fonterra's Stirling cheese factory (Stirling, South Otago), Silver Fern Farms' Finegand meat processing plant (Finegand, South Otago), Alliance Group's meat processing plant (Mataura, Southland), and Duncan Venison processing plant (Mosgiel, Dunedin).

<sup>9</sup> Tourism is represented by a range of industries including (but not limited to) accommodation, cafes and restaurants, and scenic and sightseeing transport.



In 2020, the total business activity in the Catlins accounts for 260 “jobs” (measured by employment counts, which does not include working proprietors<sup>10</sup>), which is likely to have understated the number of income earners in the FMU. This is because 20% of all jobs in New Zealand are as working proprietor and this proportion increases to 36% in primary industries<sup>11</sup>.

The largest industries by employment (using ANZSIC 2006<sup>12</sup>) in the Catlins FMU were Sheep, Beef Cattle and Grain farming (61%), Cafes, Restaurants and Takeaway Food Services (15%), and Road Freight Transport (12%). Together, these industries account for 74% of employment in the FMU. It is worth noting however, agriculture and tourism related jobs (Retail, Accommodation and Food services, Arts and Recreation services) are amongst the lower paid occupations. In 2019, the average median earnings of agriculture and tourism related jobs were around \$34,000 and \$29,000 per annum, respectively, while the average median earnings of all jobs in New Zealand were around \$48,000 per annum<sup>13</sup>.

In terms of tourism, the Catlins is a popular short holiday destination for Otago residents, it is also part of the Southern Scenic Route running through the coastal part of the Catlins and into Southland. Some of the local attractions include the iconic Nugget Point (near Kaka Point), the Purakaunui Falls Scenic Reserve, Surat Bay, Jack’s Bay and Jack’s Blowhole (all near Owaka).



*Image 3. Purakaunui Fall, the Catlins*

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<sup>10</sup> 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’).

<sup>11</sup> 2019 numbers according to Stats NZ Linked employer-employee data  
<http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7240#>

<sup>12</sup> 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.

<sup>13</sup> <http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7108#>

Most of the working age (15 – 65 years) population in the Catlins FMU is likely to be earning a work-related income. In 2018, 3% (36 people) in the Catlins FMU had no source of income, which was less than the Otago average of 5%; and 13% (141 people) were receiving some type of government benefit<sup>14</sup>, which was lower than the Otago average of 15%.

A higher proportion of the population in the Catlins FMU receives pension income. In 2018, 25% (276 people) were receiving superannuation or veteran’s pension, which was higher than the Otago average of 21%; and 1% (9 people) were receiving student allowance, which is lower than the Otago average of 4%. The Otago average is partly influenced by the University of Otago, which is located in the Dunedin Coast FMU.

Figure 5 below shows that, compared to the Otago average, the Catlins FMU has 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) than the Otago average. Telford<sup>15</sup> is the only tertiary institute located in the Catlins FMU, which provides agricultural training.

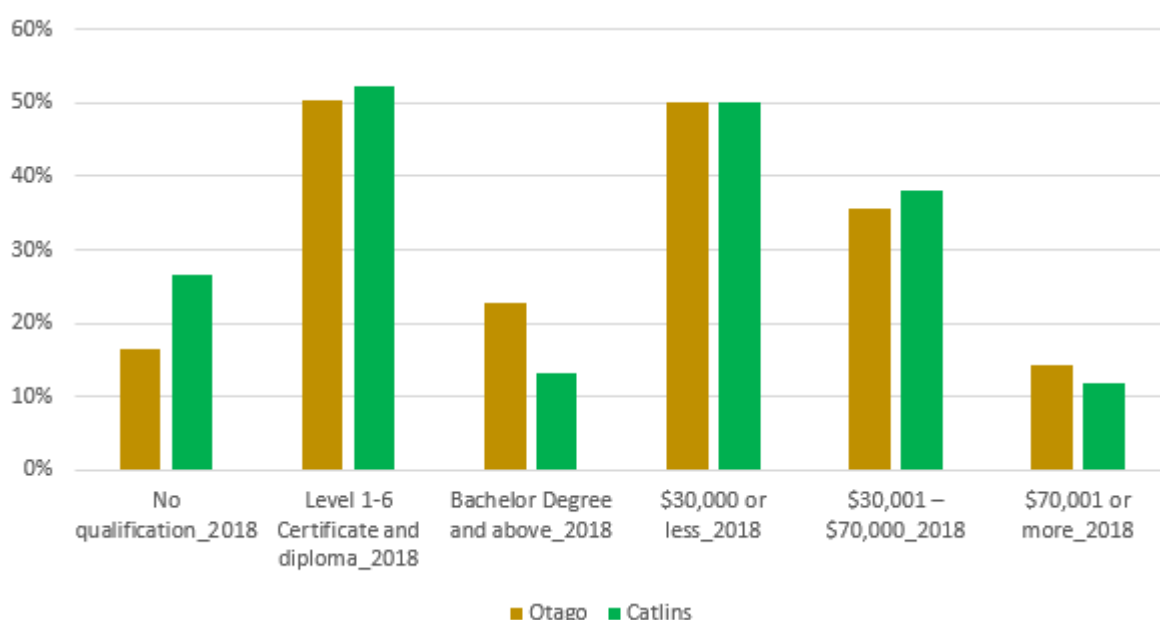


Figure 5. Academic qualification and personal annual income, Catlins vs Otago average, 2018  
Source: Stats NZ Census 2018

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 internet<sup>16</sup>. In the Deprivation Index, decile 1 represents areas with the least deprived scores while decile 10 represents areas with the most deprived scores.

<sup>14</sup> 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.

<sup>15</sup> In 2019, Telford became a campus of the Southern Institute of Technology;  
<https://www.sit.ac.nz/Campuses/Telford/Telford-History>

<sup>16</sup> <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)<sup>17</sup> in the Catlins FMU. The map only shows Census SA1 for agriculture and urban land developed land; conservation land and plantation forestry are shaded green because no communities are living in these areas.

Figure 6 shows the rural areas of the Catlins FMU generally have a deprivation score of 5 and below. Similarly, Kaka Point (Figure 6.1) has a score of 5; and Pounaweia (Figure 6.2) has a score of 3. Owaka (also Figure 6.2), on the other hand, received a deprivation score of 8.

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<sup>17</sup> 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>

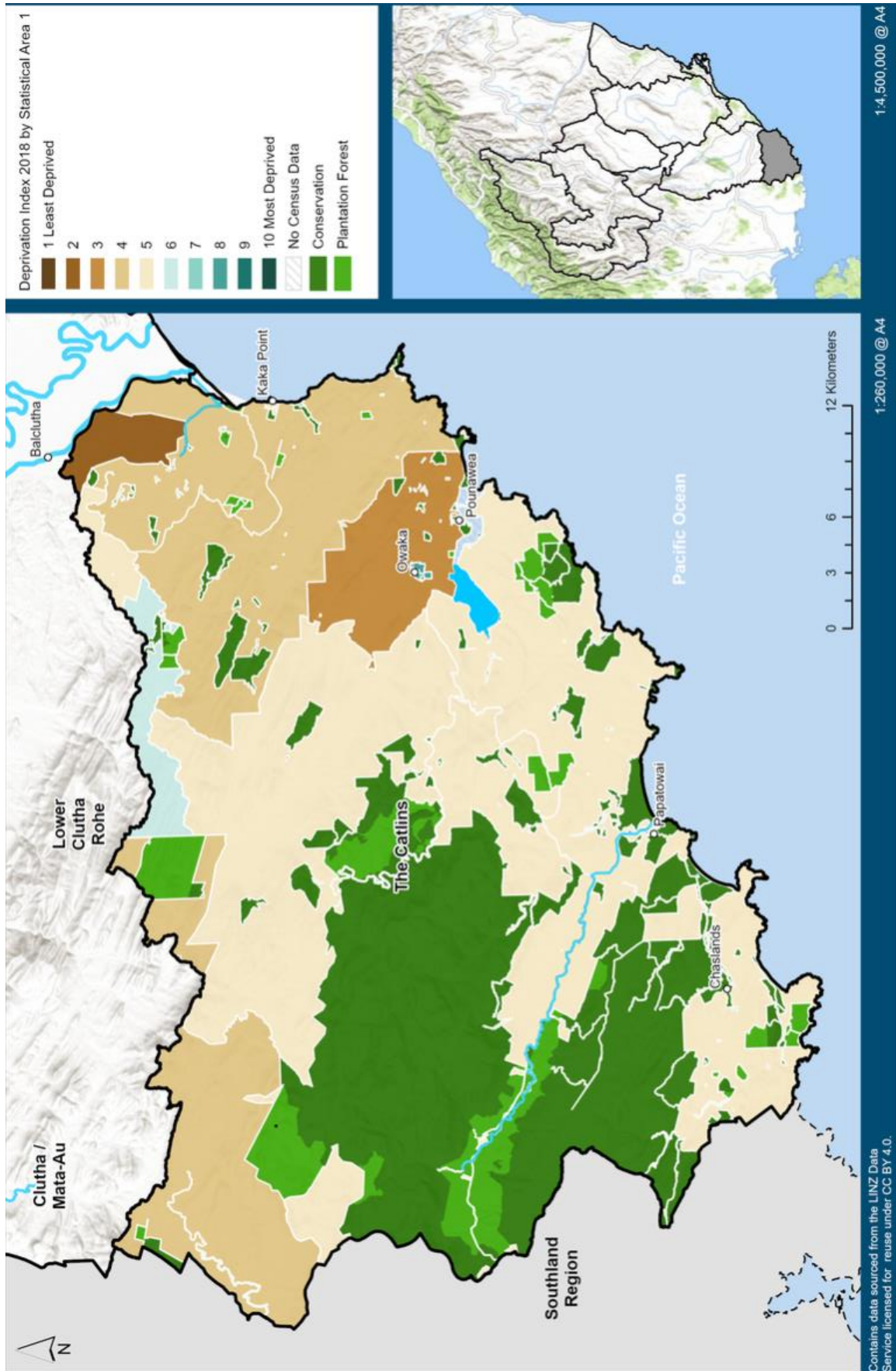


Figure 6. Deprivation Index (by SA1) for the Catlins FMU

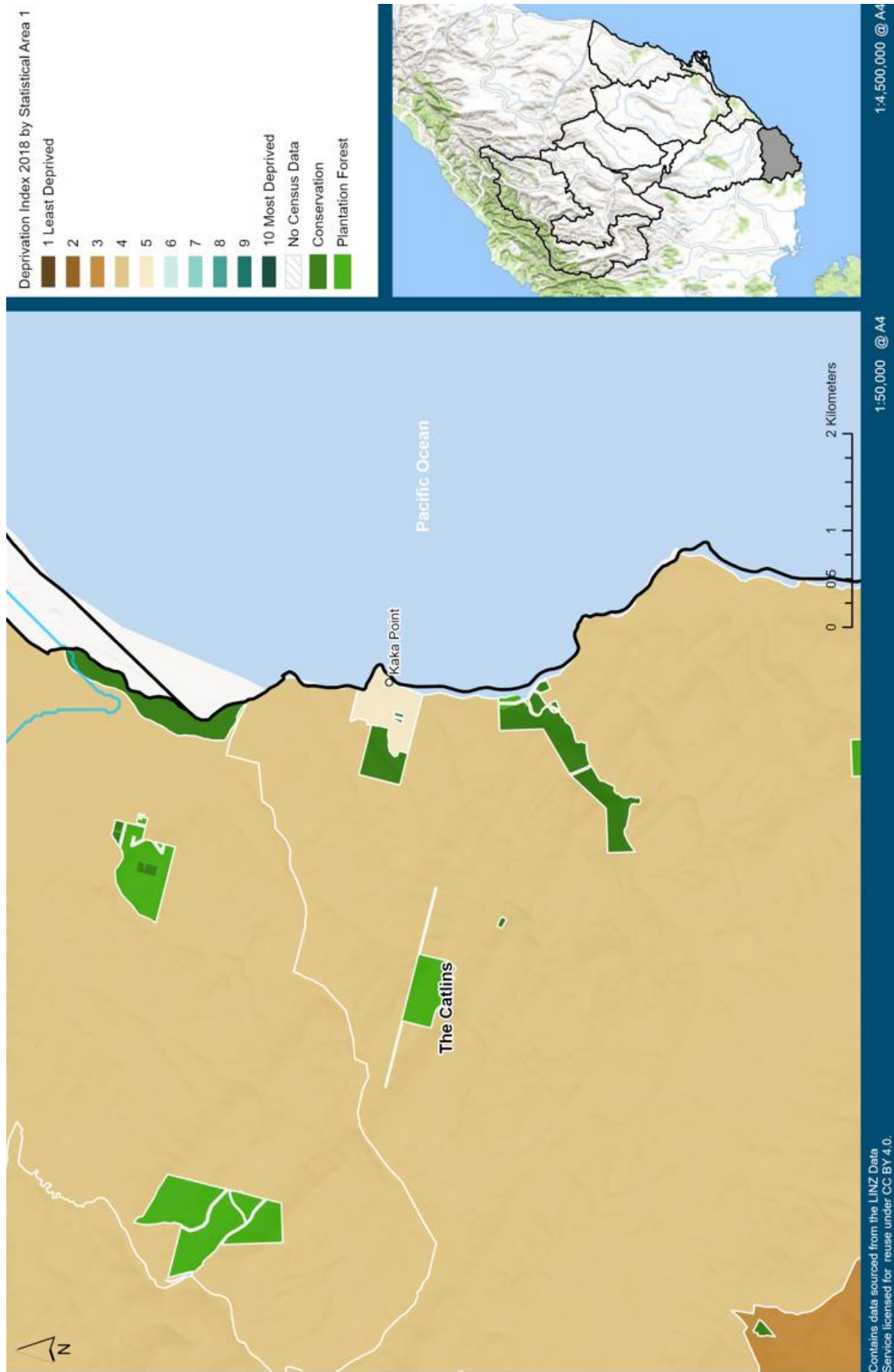


Figure 7.1. Deprivation Index (by SA1), Kaka Point

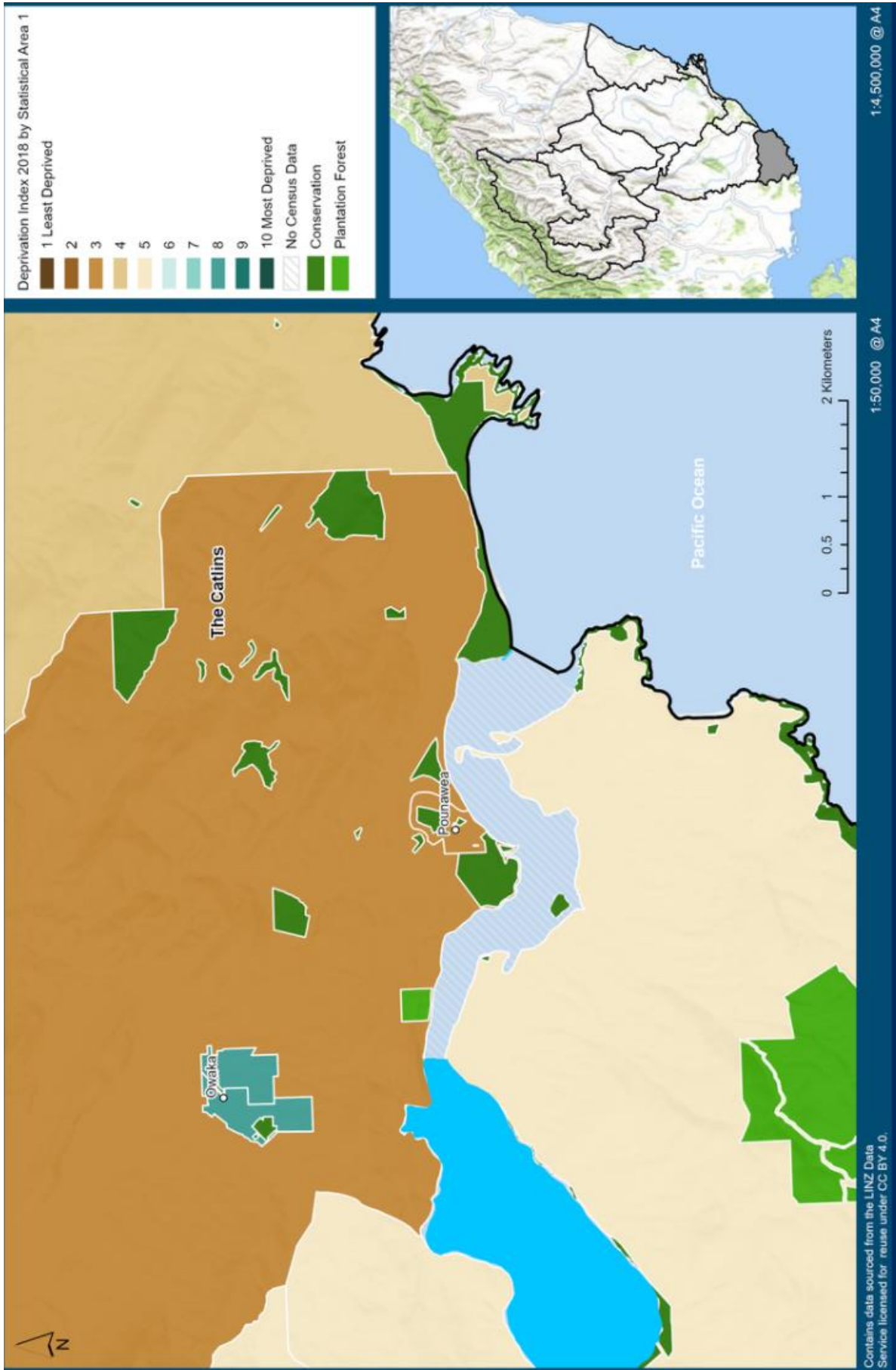


Figure 8.2. Deprivation Index (by SA1), Owaka and Pounaweia