

Overview of Mackenzie District

Economic activity in Mackenzie grew 3.4% over the year to December 2021, according to Infometrics provisional estimates. This lags national growth of 5.5%, and reflects the ongoing hole in the district's economy without international tourists. Employment of Mackenzie residents is down 0.6% on an annual basis, however the level of employment stabilised towards the end of 2021. Employment in construction and education has grown, however, accommodation and food services has continued to decline as international tourists remain elusive. The number of Jobseeker Support recipients in Mackenzie has eased 1.5% over the past year, but remains elevated on pre-COVID levels.

Consumer spending in Mackenzie was down 9.5% over the year to December 2021, reflecting the lack of international tourists and weakening domestic tourism. December 2021 domestic tourist electronic spending in the Mackenzie was down 6% on December 2020, reflecting a weakening domestic tourism surge and the effect of Aucklanders being locked down for 120 days.

Continued strength in global dairy prices mean Mackenzie farmers are expected to net \$9m more this dairy season, compared to 2020/21. Much of this is likely to go towards debt repayment or environmental upgrades, so any flow-on effect is likely to be limited.

Mackenzie's housing market has been soft overall, with house values growing 17.4%pa in the December 2021 quarter, nearly half the Canterbury average of 29.5%. Sales volumes in the Mackenzie fell 15.3% in the December 2021 year, counter to a regional and national trend of rising sales. Consents for new dwellings have eased slightly over the past year, with 21 consents issued in the December 2021 quarter, well down on pre-COVID highs.

Non-residential building activity remains at moderate levels, with \$9.6m consented in the year to December 2021, beneath the district's long-term average of \$12.0m.

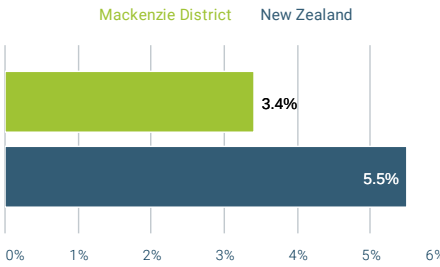
Indicator	Mackenzie District	Canterbury Region	New Zealand
Annual Average % change			
Gross domestic product (provisional)	3.4 % ▲	7.2 % ▲	5.5 % ▲
Traffic flow	-3.1 % ▼	12.0 % ▲	3.5 % ▲
Consumer spending	-9.5 % ▼	8.1 % ▲	5.0 % ▲
Employment (place of residence)	-0.6 % ▼	1.3 % ▲	1.7 % ▲
Jobseeker Support recipients	-1.5 % ▼	2.5 % ▲	1.9 % ▲
Tourism expenditure	-13.5 % ▼	8.6 % ▲	3.9 % ▲
Health enrolments	2.3 % ▲	2.3 % ▲	0.9 % ▲
Residential consents	-1.0 % ▼	30.8 % ▲	24.0 % ▲
Non-residential consents	26.3 % ▲	48.0 % ▲	16.2 % ▲
House values *	17.4 % ▲	29.5 % ▲	27.3 % ▲
House sales	-15.3 % ▼	8.1 % ▲	3.5 % ▲
Car registrations	20.8 % ▲	25.6 % ▲	20.2 % ▲
Commercial vehicle registrations	46.2 % ▲	34.5 % ▲	25.4 % ▲
Level			
Unemployment rate	1.7 %	3.8 %	3.8 %

* Annual percentage change (latest quarter compared to a year earlier)

Gross domestic product

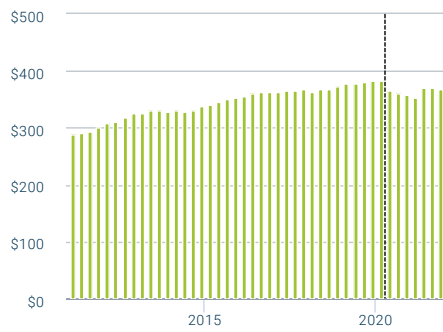
Gross domestic product growth (provisional)

Annual average % change December 2020 - December 2021



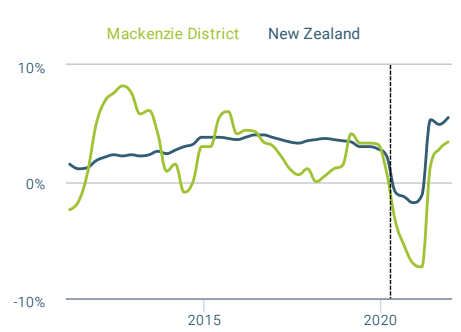
Gross domestic product (\$m)

Annual level, Mackenzie District



Gross domestic product growth

Annual average % change



Highlights for Mackenzie District

- GDP in Mackenzie District was provisionally up 3.4% for the year to December 2021 compared to a year earlier. Growth was lower than in New Zealand (5.5%).
- Provisional GDP was \$369 million in Mackenzie District for the year to December 2021 (2021 prices).
- Annual GDP growth in Mackenzie District peaked at 8.2% in the year to September 2012.

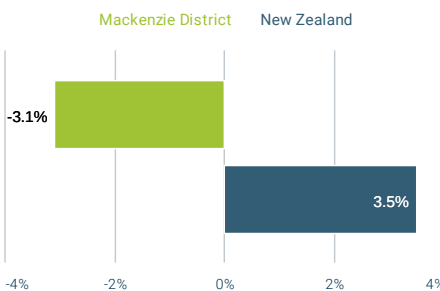
National overview

The New Zealand economy saw a determined but short-lived rebound in economic activity in the December 2021 quarter, as restrictions were relaxed across the country over the course of the quarter. Provisional estimates from Infometrics show a 2.8% rise in economic activity, leaving annual activity over the 2021 calendar year sitting 5.5% above the 2020 total, and 3.6% above pre-pandemic levels. There was substantial regional variation, with a longer period of Alert Level and Traffic Light restrictions keeping upper North Island activity lower than last summer. Other areas saw a rush back to building, manufacturing, and primary sector activities in December, alongside strong summer holiday spending boosts in many areas. Expectations remain for the Omicron outbreak to disrupt this rebound and economic activity over the early stages of 2022.

Traffic flow

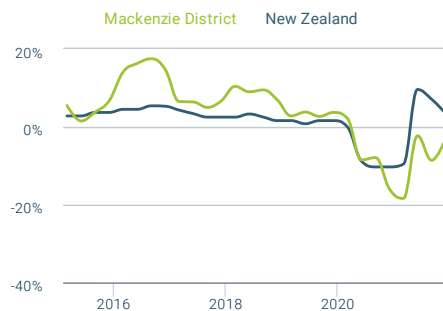
Annual change in traffic flows

Annual average % change December 2020 - December 2021



Traffic volume growth

Annual average % change



Highlights for Mackenzie District

- Traffic flows in Mackenzie District decreased by 3.1% over the year to December 2021. This compares with an increase of 3.5% in New Zealand.

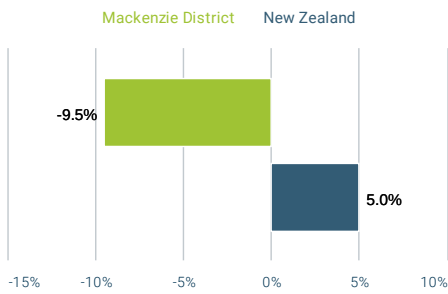
National overview

Traffic activity remained subdued in the December 2021 quarter, driven by considerably lower movement in the upper North Island. Auckland's third of the national population weren't able to move outside the Super City boundaries for most of the quarter, with a 31%pa drop in traffic from a year earlier. Northland's traffic volumes were sitting nearly 40% below last summer's levels, due to the lack of Auckland traffic, and Red setting over the key summer period. Rising fuel prices over the December quarter will also have contributed to traffic activity, with a 30%pa increase in prices at the pump. A more expensive trip, combined with uncertainty over possible Covid restrictions over summer, appears to have kept New Zealanders home more throughout the December quarter.

Consumer spending

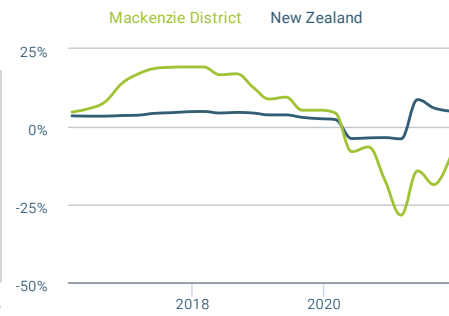
Growth in consumer spending

Annual average % change December 2020 - December 2021



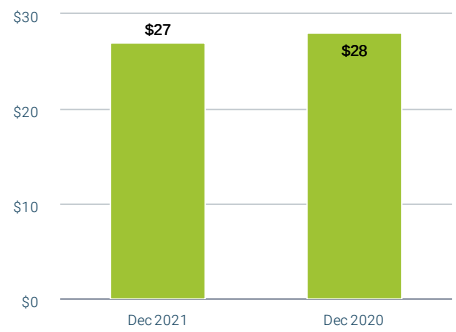
Consumer spending

Annual average % change



Consumer spending

Quarterly spending (\$m), Mackenzie District



Highlights for Mackenzie District

- Electronic card consumer spending in Mackenzie District as measured by Marketview, decreased by 9.5% over the year to December 2021 compared to the previous year. This compares with an increase of 5.0% in New Zealand.

National overview

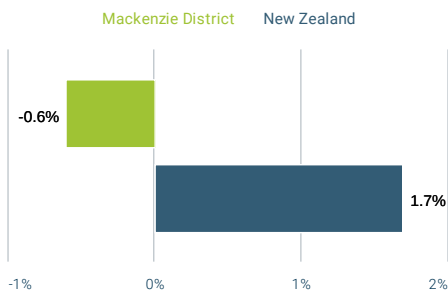
National spending activity was still slightly down on a year earlier, as the sustained lockdown restrictions in the upper North Island for part of the quarter limited activity. Marketview card spending data shows a 0.4%pa drop in national spending over the December quarter, representing a further \$68m drop in spending. However, excluding Auckland, spending rose 4.4% from a year earlier as the rebound in activity occurred and savings from the Delta lockdown were spent. Higher inflation means that underlying spending growth wasn't as impressive, with the consumers price index rising 5.9%pa in the December quarter as supply chain disruptions and a stretched economy hit household wallets.

Note that we have now switched our reporting basis to align with Marketview's Council Tool spending definitions, resulting in a revision in the consumer spending timeseries.

Employment (place of residence)

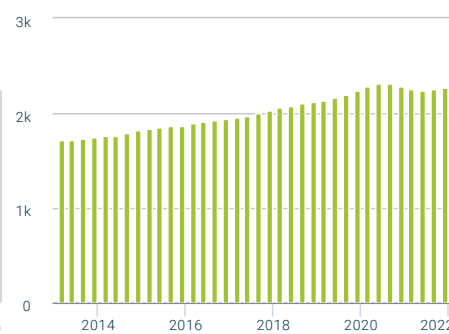
Employment (place of residence) growth

Annual average % change December 2020 - December 2021



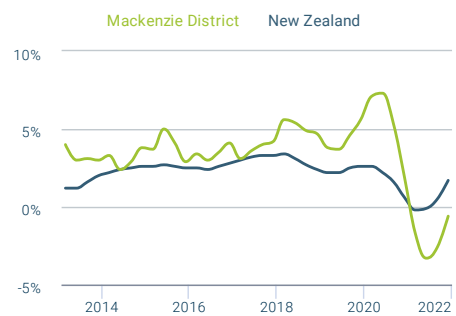
Employment (place of residence)

Annual level, Mackenzie District



Employment (place of residence) growth

Annual average % change



Highlights for Mackenzie District

- Employment for residents living in Mackenzie District was down 0.6% for the year to December 2021 compared to a year earlier. Growth was lower than in New Zealand (1.7%).
- An average of 2,269 people living in Mackenzie District were employed in the year to December 2021.
- Annual employment growth for Mackenzie District residents peaked at 7.3% in the year to June 2020.

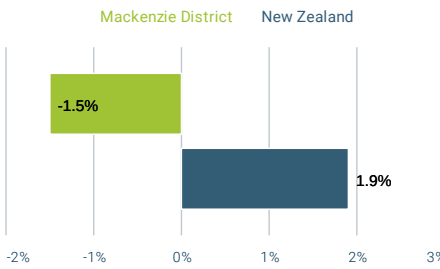
National overview

Labour market pressures remain intense, with more people still getting into jobs. December quarter filled jobs are estimated to have risen 3.7%pa, with construction and professional service employment leading the way. However, jobs growth slowed or fell in tourism-related industries, and the primary sector remains smaller than usual due to the difficulty finding staff. Wage pressures are rising, with an average 7.2% increase in earnings per filled job in 2021. High inflation, higher levels of staff turnover, and continued economic demand are set to see workers demand higher wages in 2022, particularly with a further rise in the minimum wage to match inflation.

Jobseeker Support recipients

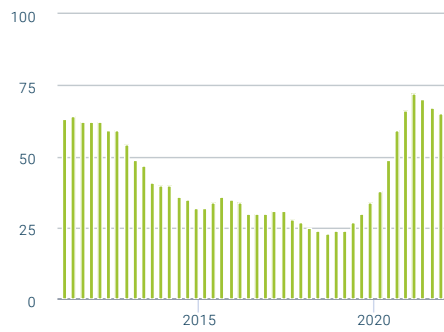
Annual change in Jobseeker Support recipients

Annual average % change December 2020 - December 2021



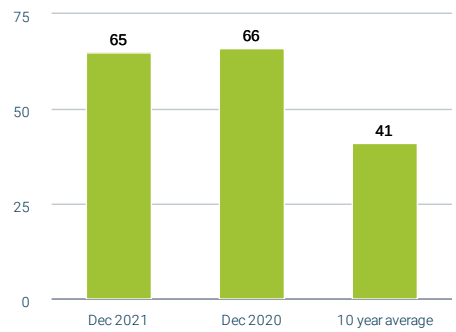
Jobseeker Support recipients

Annual average, Mackenzie District



Jobseeker Support recipients

Annual average, Mackenzie District



Highlights for Mackenzie District

- Jobseeker Support recipients in Mackenzie District in the year to December 2021 decreased by 1.5% compared with previous year. Growth was lower relative to New Zealand (1.9%).
- An average of 65 people were receiving a Jobseeker Support benefit in Mackenzie District in the 12 months ended December 2021. This compares with an average of 41 since the start of the series in 2012.

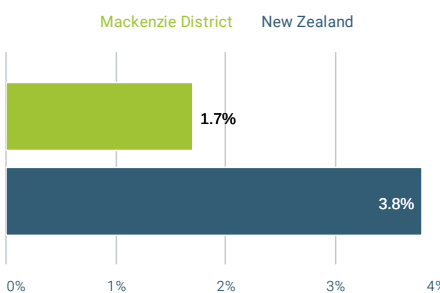
National overview

Jobseeker Support recipient levels resumed their downward path in the December 2021 quarter, to sit nearly 12% below December 2020 levels. Around a fifth (18%) of the fall in Jobseekers is due to policy changes reclassifying some benefit recipients. On an annual average basis, Jobseeker figures are now just 1.9% higher than in the 2020 year. Jobseeker numbers remain around 40,000 (28%) higher than pre-pandemic levels, indicating that despite the tight labour market there remain some discouraged potential workers available. Additionally, there remain some with more complex support needs which need to be addressed to get them into sustainable employment.

Unemployment rate

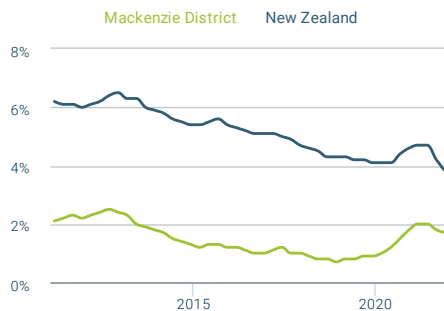
Unemployment rate

Annual average % change December 2020 - December 2021



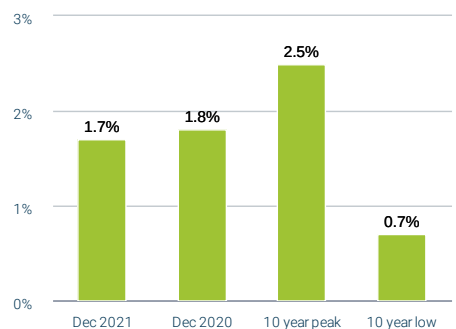
Unemployment rate

Annual average rate



Unemployment rate

Annual average, Mackenzie District



Highlights for Mackenzie District

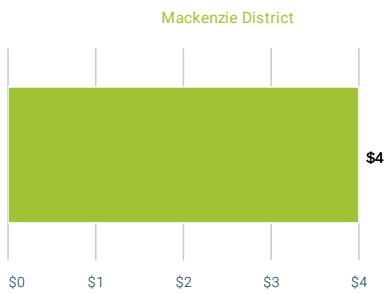
- The annual average unemployment rate in Mackenzie District was 1.7% in December 2021, down from 1.8% 12 months earlier.
- The unemployment rate in Mackenzie District was lower than in New Zealand (3.8%) in December 2021.
- Over the last ten years the unemployment rate in Mackenzie District reached a peak of 2.5% in September 2012.

National overview

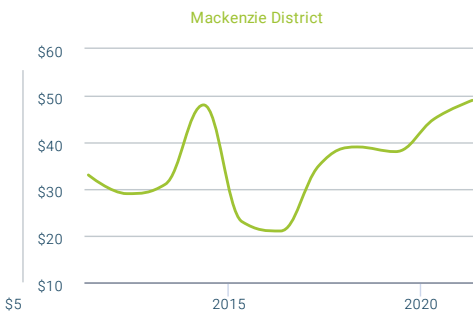
The labour market tightened even further in December 2021, with the unemployment rate hitting a new record low of 3.2%, just below our (and the market's) pick of 3.3%. The underutilisation rate was steady at 9.2%, as part-time employment growth (5.6%pa) outpaced full-time employment (3.2%pa). The labour market is at its tightest since the Household Labour Force Survey began in the mid-1980s, with employment struggling to grow in the face of worker shortages. The pressure across the labour market suggests that wage growth will have to pick up during 2022, as firms compete more for talent.

Dairy payout

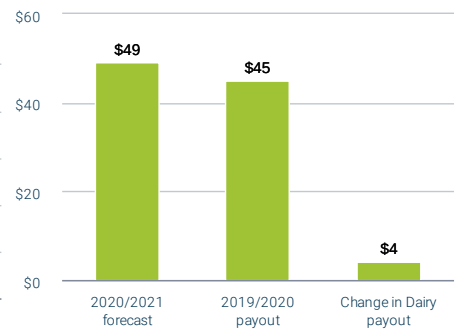
Total dairy payout (provisional)
Change (\$m) between 2019/2020 and 2020/2021 seasons



Total dairy payout
\$m each season, Mackenzie District



Total dairy payout
\$m each season, Mackenzie District



Highlights for Mackenzie District

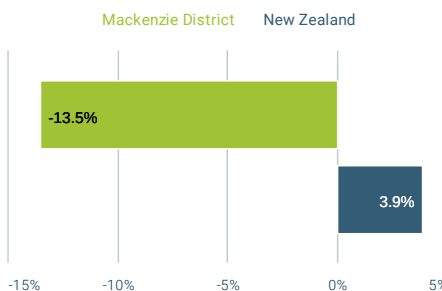
- Mackenzie District total dairy payout for the 2019/2020 season is estimated to have been approximately \$45 million.
- Mackenzie District's dairy payout for the 2020/2021 season is expected to be approximately \$49 million, \$4 million higher than last season, assuming that production levels from last season are maintained.
- The total dairy payout for New Zealand is estimated to have been approximately \$13,537 million in the 2019/2020 season, and is expected to be \$1,147 million higher in the 2020/2021 season.

National overview

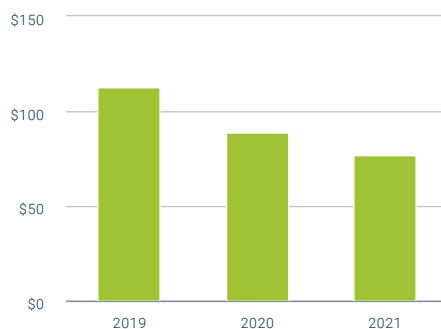
Milk prices continue to rise as demand remains strong, but milk supplies shrink. Fonterra has further increased the farmgate milk price for the 2021/22 season to between \$8.90 and \$9.50, with a midpoint of \$9.20/kgms. The estimated pay-out has risen to \$17.6b, around \$2.2b higher than the peak seen in the 2013/14 season. New Zealand milk volumes have been falling for five straight months now and are down 3.2%pa for the season to date. However, substantial cost rises will skim some cream off the top. Global feed prices were up 40%pa in 2021, and domestic fertilizer costs were up 58%pa rise in the December quarter. Our estimates suggest that the milk price could rise further still.

Tourism expenditure

Tourism expenditure
Annual average % change December 2020 - December 2021



Tourism expenditure
Annual total, Mackenzie District (\$m)



Highlights for Mackenzie District

- Total tourism expenditure in Mackenzie District decreased by 13.5% in the year to December 2021. This compares with an increase of 3.9% in New Zealand.
- Total tourism expenditure was approximately \$77 million in Mackenzie District during the year to December 2021, which was down \$89 million a year ago.

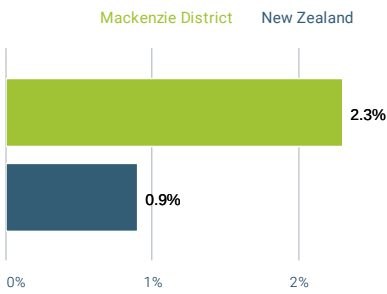
National overview

Visitor spending growth over the 12 months to December 2021 slowed back further, up 3.9% from a year earlier. Tourism card spending growth has slowed from above 5%pa in June, as last summer's strong run is replaced with lower tourism spending since August 2021. Domestic travel spending was down 14%pa nationally over the December 2021 quarter, reinforcing the softer level of travel undertaken by Kiwis this summer.

Health enrolments

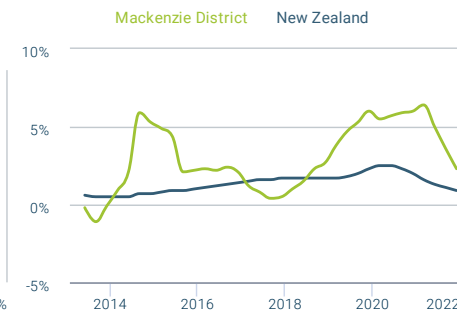
Annual change in health enrolments

Annual average % change December 2020 - December 2021



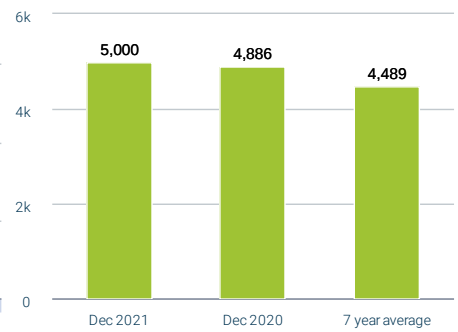
Health enrolments

Annual average % change



Health enrolments

Annual average, Mackenzie District



Highlights for Mackenzie District

- The number of people enrolled with a primary health organisation in Mackenzie District in the year to December 2021 increased by 2.3% compared with previous year. Growth was higher relative to New Zealand (0.9%).
- An average of 5,000 people were enrolled with primary healthcare providers in Mackenzie District in the 12 months ended December 2021. This compares with an average of 4,433 since the start of the series in 2014.

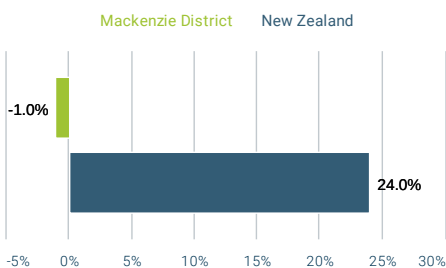
National overview

Population growth remained low in the December quarter, as the population ages and the workforce remains limited. Health enrolments, which provide insight into local populations, rose 0.7%pa in the December quarter, the slowest rate in eight years. This low growth took annual average growth to below 1.0% for the first time since late 2015. Provisional net migration data shows a net loss of around 4,000 over the year to December 2021 – the first drain of talent in a decade. Some regional economies are showing slower or negative growth, as the labour market and regional migration becomes the driver of local population changes.

Residential consents

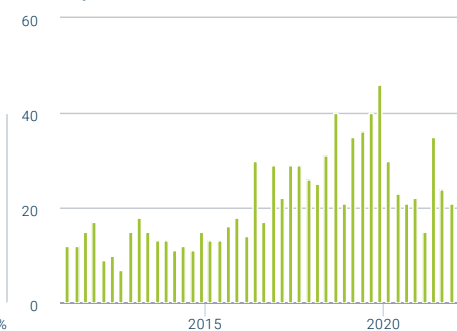
Growth in number of new dwelling consents

Annual average % change December 2020 - December 2021



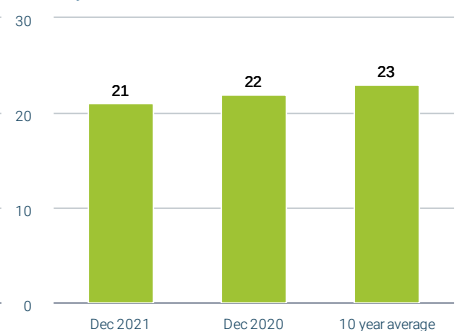
Residential consents

Quarterly number, Mackenzie District



Number of new dwelling consents

Quarterly number, Mackenzie District



Highlights for Mackenzie District

- A total of 21 new residential building consents were issued in Mackenzie District in the December 2021 quarter, compared with 22 in the same quarter last year.
- On an annual basis the number of consents in Mackenzie District decreased by 1% compared with the same 12-month period a year ago. This compares with an increase of 24.0% in New Zealand over the same period.

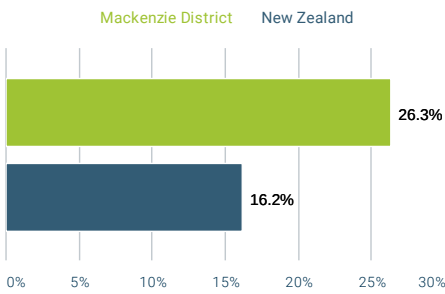
National overview

Residential consents have climbed even higher to 48,899 consents approved over the year to December 2021, sitting up 24% higher than throughout 2020. Townhouses remain the driving factor of growth, with 16,327 in 2021, up 41% compared to 2020. However, we are starting to see momentum wane, with quarterly growth in December sitting at 14%pa, compared to 30%pa in September. New Zealand has had an undersupply of housing for many years, and as a result house prices have been pushed incredibly high as supply has been unable to match strong demand. The record number of consents over the past year will help making some headway into alleviating some of the supply issues.

Non-residential consents

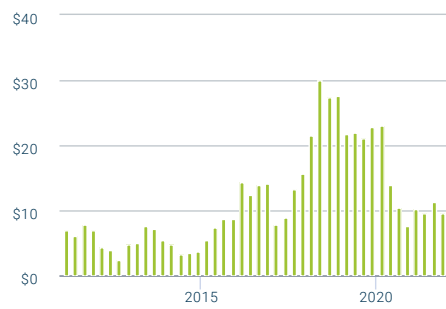
Growth in value of consents

Annual average % change December 2020 - December 2021



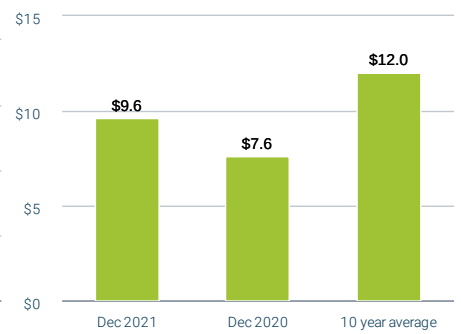
Non-residential consents, Mackenzie District

\$m, annual running total, Mackenzie District



Non-residential consents

Annual value (\$m), Mackenzie District



Highlights for Mackenzie District

- Non-residential building consents to the value of \$9.6 million were issued in Mackenzie District during the year to December 2021.
- The value of consents increased by 26.3% over the year to December 2021. By comparison the value of consents increased by 16.2% in New Zealand over the same period.
- Over the last 10 years, consents in Mackenzie District reached a peak of \$30.0 million in the year to June 2018.

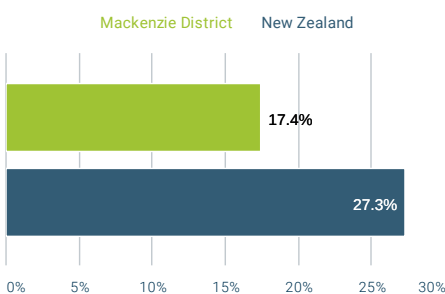
National overview

The value of non-residential consents was \$8.2b in the year to December 2021, sitting 16% higher than in the 2020 year. Public consents drove growth over 2021, with the value of public consents sitting up 42%. Hospitals were responsible for a large share of this growth, with over a billion dollars of hospital consents approved in 2021. Factory and education consents were also strong, sitting up 63% and 22% respectively. Although non-residential consents were very strong over 2021, there was massive difference across building types, with those most impacted by COVID restrictions, such as accommodation, offices, and retail being notably weaker than others.

House values

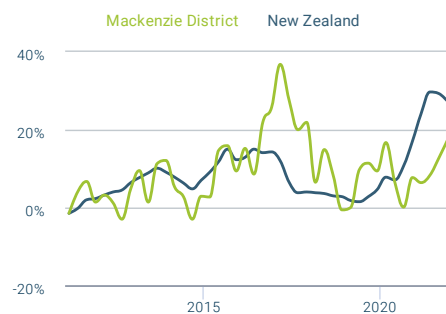
Annual change in house value

Annual % change in house value December 2020 - December 2021



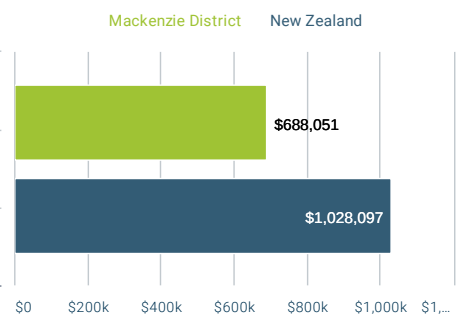
House value growth

Annual % change



Average current house value

Average house value in December 2021 quarter



Highlights for Mackenzie District

- The average current house value in Mackenzie District was up 17.4% in December 2021 compared with a year earlier. Growth underperformed relative to New Zealand, where values increased by 27.3%.
- The average current house value was \$688,051 in Mackenzie District in December 2021. This compares with \$1,028,097 in New Zealand.

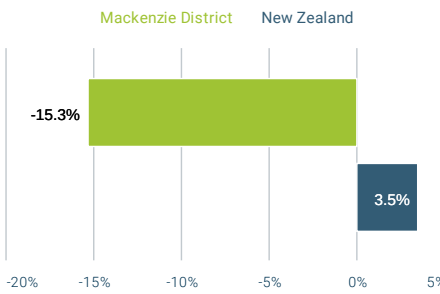
National overview

House values in New Zealand were sitting up 23%pa in December, with values across the country reaching incredible highs over the year. Value growth across the country has been absurd over the past year, driven by incredibly low interest rates encouraging buyers into the market, and demand outstripping supply pushing prices up even further. It appeared as though there was no end in sight for house value growth, however the most recent months show the market has begun to turn a corner. Annual value growth has started to flatten off from earlier highs, driven by new lending restrictions making it harder for buyers to access credit.

House sales

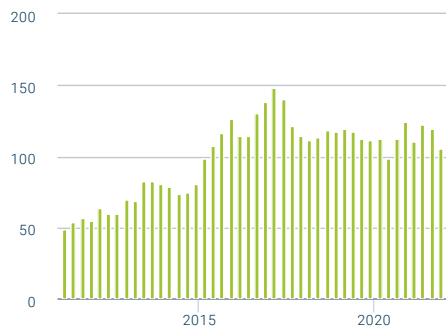
Annual change in house sales

Annual average % change December 2020 - December 2021



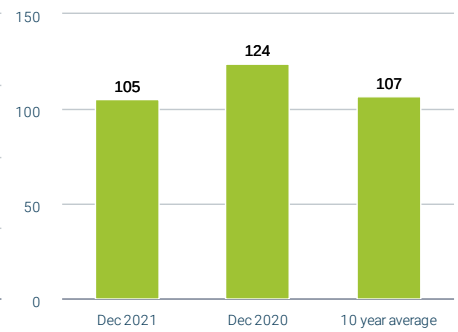
House sales

Annual number, Mackenzie District



House sales

Annual number, Mackenzie District



Highlights for Mackenzie District

- House sales in Mackenzie District in the year to December 2021 decreased by 15.3% compared with the previous year. Growth underperformed relative to New Zealand, where sales increased by 3.5%.
- A total of 105 houses were sold in Mackenzie District in the 12 months ended December 2021. This compares with the ten year average of 107.

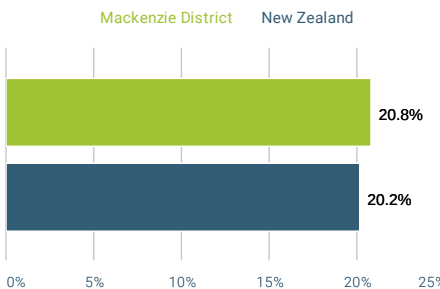
National overview

House sales grew 3.5% over the year to December 2021. House sales have seen a dramatic slowdown in the second half of the year, after strong growth in the first half of 2021. The initial decline in sales was driven by a lack of available supply, with not enough houses being available on the market for buyers. However, particularly in recent months, new lending restrictions have made it harder for buyers to access credit and sales are continuing to drop despite listing numbers picking back up.

Car registrations

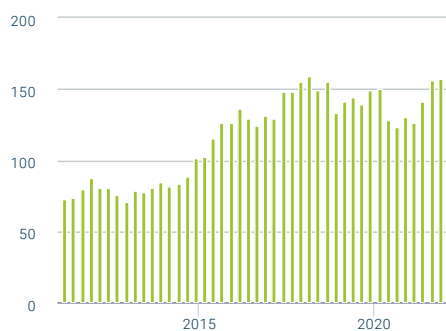
Car registrations

Annual average % change December 2020 - December 2021



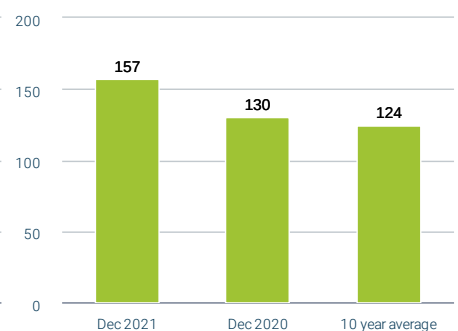
Car registrations

Annual number, Mackenzie District



Car registrations

Annual number, Mackenzie District



Highlights for Mackenzie District

- The number of cars registered in Mackenzie District increased by 20.8% in the year to December 2021 compared with the previous 12 months. Growth was higher than in New Zealand (20.2%).
- A total of 157 cars were registered in Mackenzie District in the year to December 2021. This compares with the ten year average of 124.

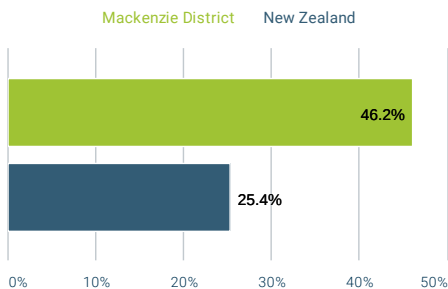
National overview

New car registrations ended 2021 at a new annual record, with solid lift in the December month to see year-end growth sitting at 20%pa. Full-battery EV registrations rose 142% in 2021, accounting for 4.0% of total registrations – double their share in 2020. The new car market continues to go gangbusters, although used cars are still struggling, with less supply and sometimes eye-wateringly high prices. The 2022 year could see momentum in the car market shift back a gear, due to a range of factors. Interest rates are heading higher, and consumer confidence has weakened considerably, which is expected to limit household spending.

Commercial vehicle registrations

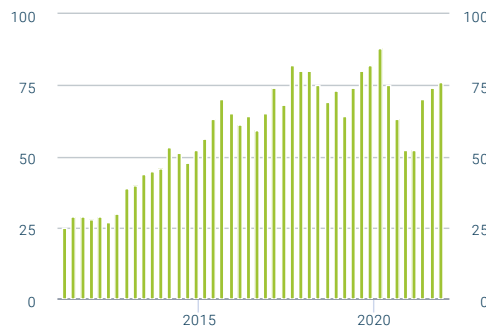
Commercial vehicle registrations

Annual average % change December 2020 - December 2021



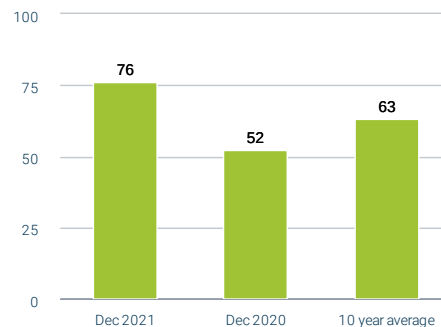
Commercial vehicle registrations

Annual number, Mackenzie District



Commercial vehicle registrations

Annual number, Mackenzie District



Highlights for Mackenzie District

- The number of commercial vehicles registered in Mackenzie District increased by 46.2% in the year to December 2021 compared with the previous 12 months. Growth was higher than in New Zealand (25.4%).
- A total of 76 commercial vehicles were registered in Mackenzie District in the year to December 2021. This is higher than the ten year annual average of 63.

National overview

Total new commercial registrations were up 34%pa in the December quarter, leaving commercial registrations in the 2021 year sitting 25% higher than 2020. There were nearly 51,000 new commercial vehicle registrations in 2021, the most we have on record since 1991. The bounce-back has been reflective of the boom in construction, high commodity prices, but also making up for the lack of activity in 2020. Early 2022 is expected to see this pickup in activity continue, particularly ahead of Clean Car Standard fees for higher-emitting vehicles (like some utes) entering in April 2022.

Technical notes

Building Consents

Building consents data is sourced from Statistics New Zealand. The number of residential consents issued for new dwellings is the measure for residential consents. For non-residential consents, the measure is the value of both new buildings and alterations.

Consumer Spending

The consumer spending data is sourced from Marketview. It measures total electronic card spending using spending through the Paymark network and adding to it an estimate of non-Paymark network spending using the pattern of BNZ card holder spending at non-Paymark retailers. For further breakdown of the data by storetype and other variables contact Marketview.

Employment (place of residence)

Employment data is based off a range of Stats NZ employment datasets, and represents the number of filled jobs, based on the area of residential address for the employee (rather than workplace address). This place of residence location means that the employment series reflects trends in employment of an area's residents, which may be different to trends in employment at businesses in an area, particularly when there are strong commuting flows. The most recent quarter is based off the average of Monthly Employment Indicator (MEI) filled jobs from Statistics New Zealand for the past three months, with previous quarters being backcasted using the percentage change in the quarterly Business Data Collection dataset published by Statistics New Zealand.

Gross Domestic Product

Gross Domestic Product is estimated by Infometrics. A top-down approach breaks national industrial production (sourced from production based GDP measures published by Statistics New Zealand) to TA level by applying TA shares to the national total. Each TA's share of industry output is based on labour market data from LEED. GDP growth in recent quarters is based on a model which uses the various partial economic indicators presented in this report as inputs. Estimates of GDP for these most recent quarters are provisional until Infometrics updates its annual GDP series in the Regional Economic Profile at the beginning of each year. Gross domestic product is measured in 2021 dollar terms.

Health Enrolments

Health enrolments are sourced from the Ministry of Health. They record the number of people in each area who are enrolled with a Primary Health Organisation (PHO). Enrolment is voluntary, but most New Zealanders enrol at a general practice for health reasons and for the benefits of enrolment, such as cheaper doctors' visits and reduced costs of prescription medicines. Changes to how the Ministry of Health recorded this data led to Infometrics revising our approach to health enrolment figures for the March 2019 Quarterly Economic Monitor onwards. Our new approach completely revises our timeseries of health enrolments, so care should be taken when comparing the March 2019 report with previously downloaded reports.

Previously, the data provided was only for those people whose addresses are able to be accurately recorded by the Ministry of Health. We have now switched to breaking down TA-level health enrolments based on trends in stated health enrolments by area, to ensure that the total number of enrolees published in the Monitor align with the national-level figures published by the Ministry of Health. A new system for classifying and recording health enrolment addresses from March 2019 onwards by the Ministry means significantly higher numbers of unallocated enrolees, resulting in the need to review our model.

House Sales

The number of house sales is sourced from REINZ. The indicator measures the number of house sales at the point when the sale becomes unconditional. The unconditional date is the date when all the terms of an agreement have been satisfied and the sale and purchase can proceed to settlement.

House Values

House values (dollar value) are sourced from CoreLogic. The levels quoted in the report are average values for the quarter.

Jobseeker Support Recipients

In July 2013 the New Zealand's welfare system changed to better recognise and support people's work potential. As part of this the Jobseekers Support benefit was introduced. This benefit is for people who can usually look or prepare for work but also includes people who can only work part-time or can't work at the moment, for example, because they have a health condition, injury or disability.

Data presented for the September 2013 quarter onwards is provided by the Ministry of Social Development (MSD). Data prior to September 2013 are Infometrics estimates based on re-grouping pre-July 2013 benefit categories to be consistent with the post-July 2013 benefit categories. The pre-July 2013 benefit categories used to estimate the number of Jobseekers Support recipients are: Unemployment Benefit and Unemployment Benefit Hardship; Unemployment Benefit Training and Unemployment Benefit Hardship Training; Sickness Benefit and Sickness Benefit Hardship; Domestic Purposes Benefit - Sole Parent (if youngest child is 14 or over); Women Alone and Widow's Benefit (without children or with children 14 or over)

Tourism Expenditure

New Tourism Electronic Card Transactions (TECTs) are an interim replacement for the Monthly Regional Tourism Estimates (MRTes). We have removed our previous timeseries of MRTes and published the three annual snapshots provided in the TECTs. The TECTs reflect the expenditure for all electronic card transactions (ECTs) in New Zealand related to tourism. Marketview use a base of spending on the Paymark network (approximately 70 per cent of total ECT spend) to scale up to total ECT spend.

Traffic Flow

Traffic flow growth rates are calculated from the number of vehicles passing approximately 110 sites monitored by New Zealand Transport Agency. Each of the sites has been mapped to a territorial authority.

Unemployment Rate

Regional level unemployment rates are sourced from Statistics New Zealand's Household Labour Force Survey. Trends in the number of Jobseekers are used to break down regional unemployment rates to TA levels. The TA level unemployment rates are benchmarked on census following the release of each census. To reduce volatility the unemployment rate is presented as an average for the last four quarters.

Vehicle Sales

Car and commercial vehicle sales data are sourced from New Zealand Transport Authority. Sales are based on new registrations which include the first time registration of new vehicles and used vehicles imported from overseas.

Weekly Rents

Rents (\$ per week) are sourced from monthly data provided by MBIE and averaged across each quarter or year using weighted geometric means. Rental data pertains to averages from data collected when bonds are lodged and does not control for specifications of the home (eg. size, number of bedrooms, age of home, etc).