MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Te Kāwanatanga o Aotearoa
New Zealand Government

National Construction Pipeline Report 2024

A forecast of Building and Construction Activity

12TH EDITION

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

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1. Introduction

1.1 Overview

The National Construction Pipeline Report 2024 (the report) was commissioned by the Ministry of Business, Innovation and Employment (MBIE) and jointly prepared by BRANZ and Pacifecon (NZ) Ltd (Pacifecon). The report projects building activity for the next six years, ending 31 December 2029. It includes national and regional breakdowns of actual and forecast residential building, non-residential building and infrastructure activity.[1] The report is based on residential and non-residential building and construction forecasts from BRANZ and data on researched non-residential building and infrastructure intentions from Pacifecon.[2] Pacifecon provides no residential data to the report.

1.2 Purpose and content

The report aims to provide awareness of the expected pipeline of building and construction work to support:

- planning by all participants in the sector
- scheduling of investment in skills and capital to meet the future needs of the sector, and
- coordination of construction procurement (particularly central and local government) to enable improved scheduling of construction projects.

Improvements in these areas could help moderate the boom-bust cycles that have negatively impacted productivity, innovation, employment, skill levels and quality in the construction sector.

In this report, building and construction is split into three activity types:

- Residential building – detached and multi-unit dwellings.
- Non-residential building – structures of a building type (vertical) other than residential, including hotels, offices, retail outlets and industrial buildings.
- Infrastructure – structures of a non-building type (horizontal), such as roads, subdivisions and civil works. Infrastructure projects do not typically require a building consent.

The report includes:

- *a summary of the report's key findings*
- *national* and *regional* forecasts of residential buildings, non-residential buildings and infrastructure activity
- *a comparison of this year's forecasts against last year's*
- *appendices, including tables of forecast and research data.*

Queries and feedback can be emailed to *info@building.govt.nz*

[1] The regional areas reported are Auckland, Waikato/Bay of Plenty, Wellington, Canterbury, Otago and Rest of New Zealand (which includes all other regions not stated).

[2] See section 8.3 for more information on forecast and research data.

1.3 Context

Workloads in the construction sector are likely to remain tight in the short-term. Construction costs are high having experienced significant increases over recent years. Consenting activity has also cooled from the highs of 2022. However, cooling inflation, improving lending conditions and growing demand provide reasons for optimism for the construction sector in the longer-term.

Last year saw a return to more manageable building cost increases, with inflation in the residential sector of 4.3%. In 2022, this was much higher at 13%, following an increase of 14% in 2021. General inflation is also down, currently sitting at 4% for the year ending March 2024. Despite the significant price increases in the construction industry affecting project viability, the more stable prices should start to shift confidence and projects that had been paused may return to the pipeline.

The Reserve Bank have kept the official cash rate (OCR) at 5.5% since mid-2023 and market expectations are for the next move to be downwards. Average longer-term new standard mortgage interest rates (i.e. three-plus years) have just edged under 7% with many experts expecting OCR cuts next year. As the costs of lending decrease, access to finance will improve.

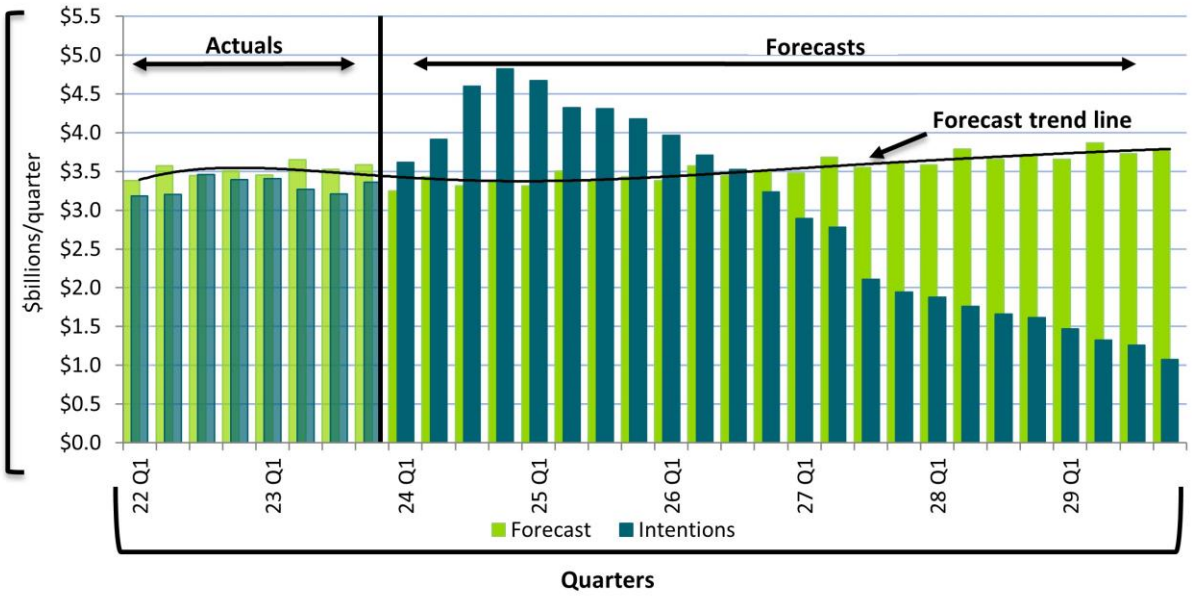
Migration hit an estimated 130,000 net migrants in 2023, up from just over 24,000 in 2022. High net migration can take some time to flow through the system but will drive increased demand for housing and social infrastructure over the forecast period.

There are also several projects in the pipeline from the two severe weather events of early 2023, which caused damage to housing and significant infrastructure such as roads and bridges. In addition, some significant projects remain in limbo as three-waters reform is worked through and local government works through their long-term plans.

1.4 Understanding the graphs and data

Different types of graphs are used in this report to illustrate relevant information. The key features of the graphs are discussed below using the following example.

Figure 1.4.1 Example graph



Source: BRANZ/Pacifecon

- Values are in constant December 2023 dollars and are expressed in $billions (*b*) per quarter or per year, unless otherwise stated. Inflation has been removed from all dollar values.
- *Forecast* refers to forecast data from BRANZ.
- *Research* refers to construction project intentions data provided by Pacifecon.
- *Actuals* are the actual values or activity from official statistics. The year beginning January 2024 is used as the base year for the actual data in the report. A vertical line on the graphs indicates the start of a forecast. Actuals are to the left of the vertical line and are generally shown in a faded colour shade.
- *Years* are calendar years – the 12 months beginning January. Where years are used, each point on the graph represents 31 December of that year; for example, 2024 represents January 2024 through to December 2024.
- *Quarters* refer to parts of the calendar year as follows:
    - Q1 = 1 January to 31 March.
    - Q2 = 1 April to 30 June.
    - Q3 = 1 July to 30 September.
    - Q4 = 1 October to 31 December.
- Where *rolling years* are used, each point on the graph represents the total of the 12 months immediately preceding that point; for example, 2024 Q2 represents July 2023 through to June 2024.

A glossary of key terms is presented in section 8.2.

2. Key findings

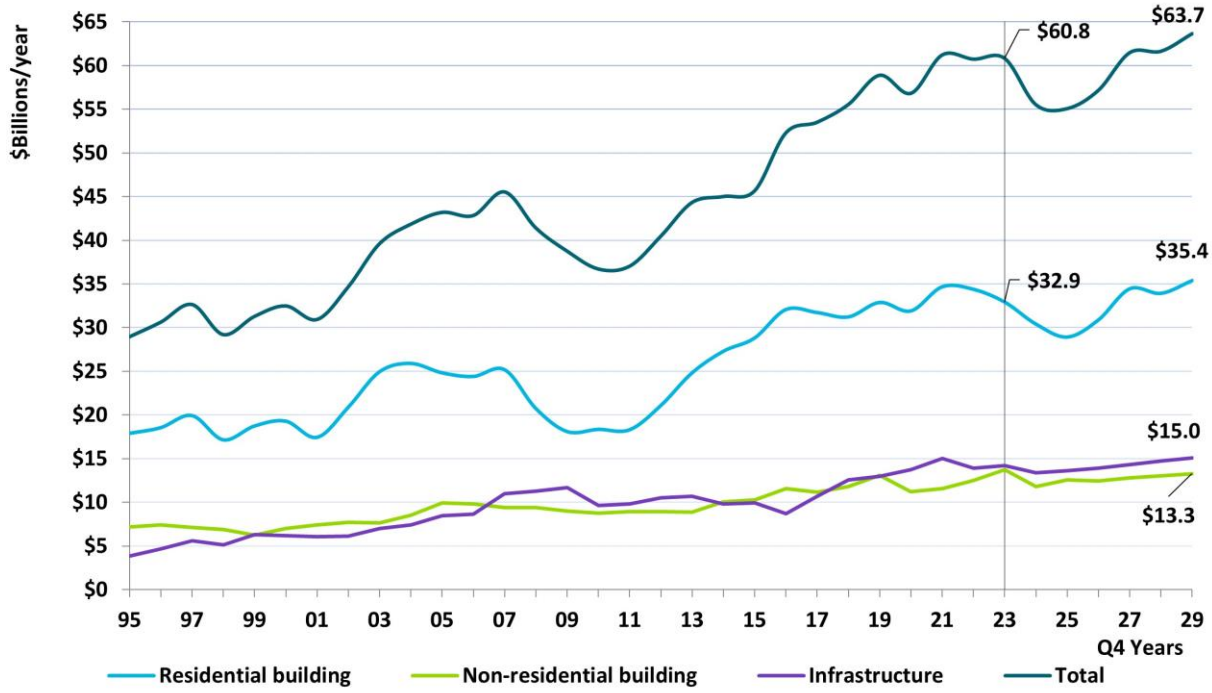
This section discusses the major findings in the report:

- *Strong growth in activity in 2026 and beyond*
- *Waikato/Bay of Plenty region to return to strong dwelling consent numbers*
- *Non-residential intentions remain high in short-term*
- *Local government infrastructure pipeline still to come*

2.1 Strong growth in activity in 2026 and beyond

Our forecast is for falls in construction activity, in the short-term, from *$60.8b* in 2023 to a low of about *$55.1b* in 2025. However, we anticipate that that construction activity will increase by almost 4% in 2026 to *$57.2b* and trend upwards to *$63.7b* at the end of the forecast period.

Figure 2.1.1 All construction nationally, by value

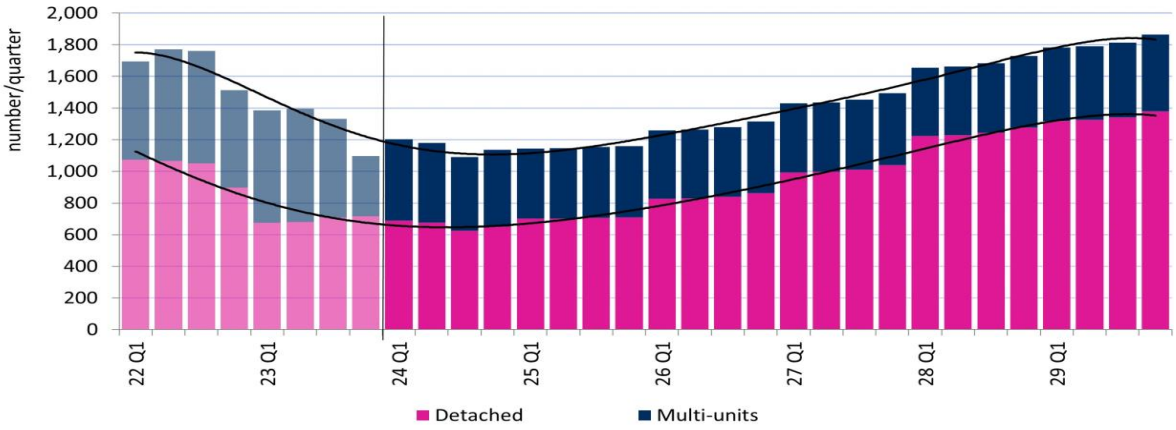


Source: BRANZ/Pacifecon/Stats NZ

2.2 Waikato/Bay of Plenty region to return to strong dwelling consent numbers

Nationally, new dwelling consent numbers are forecast to continue trending downwards throughout the next couple of years. However, the Waikato/Bay of Plenty region is forecast to increase new dwelling consents at a faster rate than the other regions. We forecast dwelling consents in the Waikato/Bay of Plenty region to increase by 60% from the 2024 low of *4,540* new dwellings to *7,250* in 2029.

Figure 2.2.1 Dwelling units in Waikato/Bay of Plenty

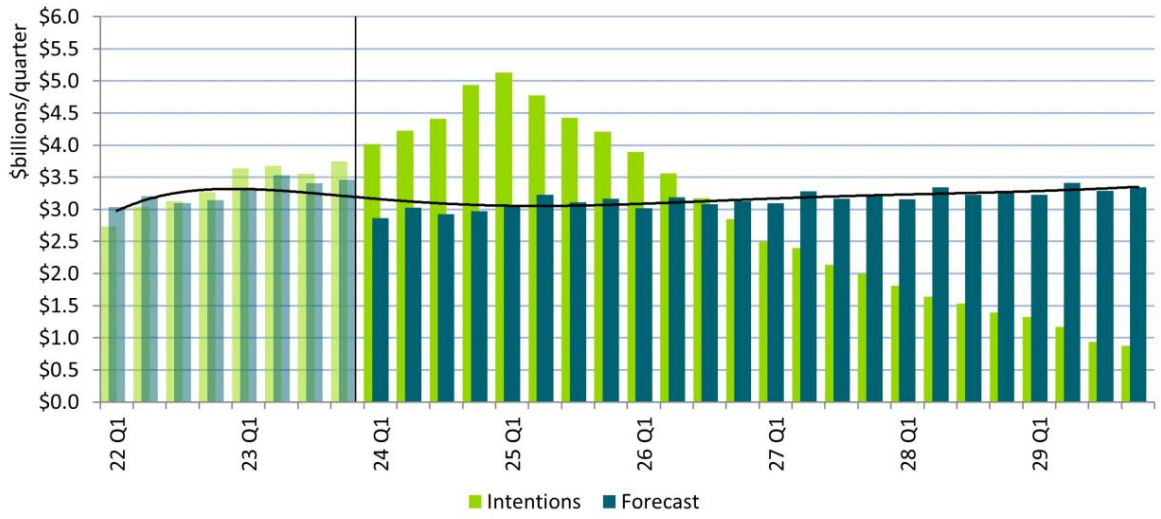


Source: BRANZ

2.3 Non-residential intentions remain high

Despite our forecast for non-residential construction activity to fall by 14.2% in 2024, the intentions data suggests that there remains a significant pipeline of work. The private sector intentions are often skewed to the short-term due to optimism bias, which means that the high level of intentions may not necessarily translate into a similarly high level of workloads. However, it is a positive sign that non-residential activity should trend upwards going forward.

Figure 2.3.1 Non-residential construction activity nationally

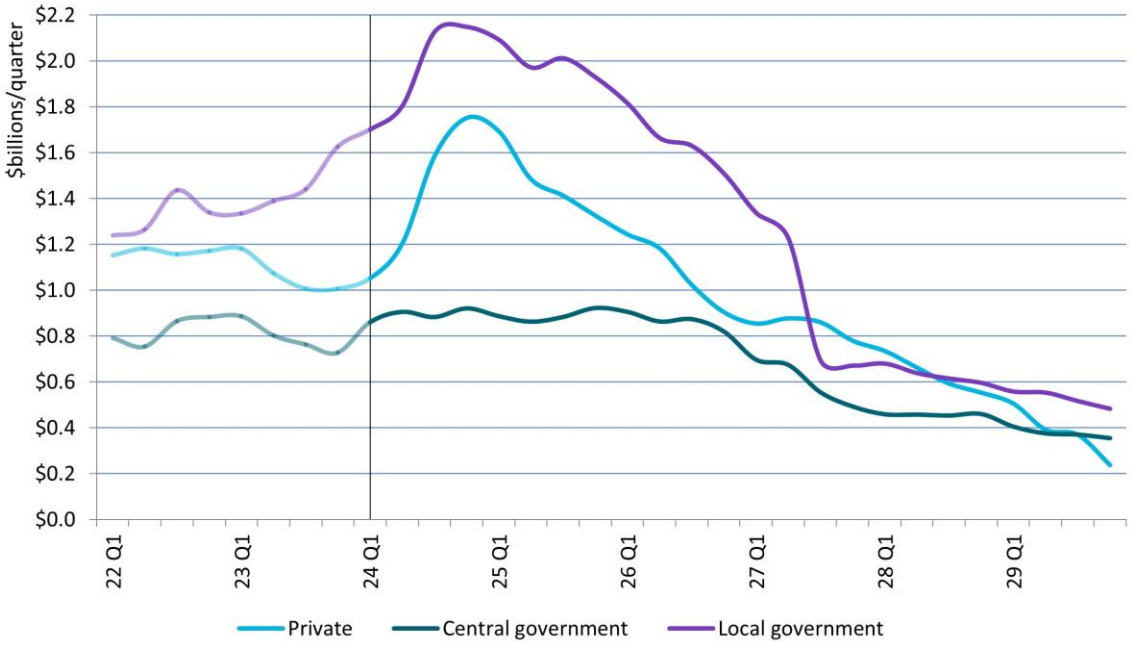


Source: BRANZ/Pacifecon

2.4 Local government infrastructure pipeline still to come

Pacifecon's infrastructure intentions dataset shows a strong pipeline of work over the next two-to-three years, collectively peaking at *$17.3b* in 2025. However, the pipeline is less clear beyond that, particularly for local government-initiated projects. From 2027, there is a significant decrease in local government-initiated projects in the intentions data, with the per annum value of projects decreasing in 2027 by 51% from the peak in 2025. This is likely to be due to both local in central government finalising details on future investment in infrastructure in their respective forward works programmes and long-term plans.

Figure 2.4.1 Infrastructure intentions, by project initiator and start date



Source: Pacifecon

3. Forecast results

This section includes national and regional forecasts for each activity type as well as a breakdown of *non-residential building* and *infrastructure* research data by type and initiator.

3.1 National construction, by value

As forecast, New Zealand's total construction activity increased by 0.1% in 2023 to *$60.8b*. This year's forecast is for construction activity to continue to decrease to about *$55.1b* in 2025, before trending upwards to *$63.7b* in 2029, as the residential sector recovers strength.

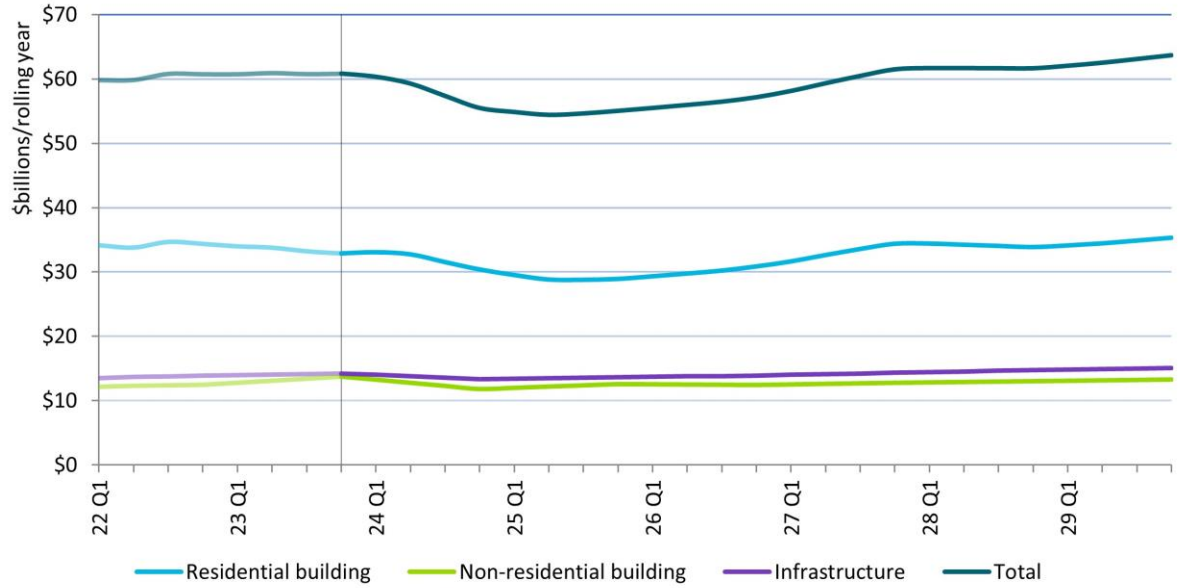
Figure 3.1.1 All construction nationally, by value

Source: BRANZ/Pacifecon/Stats NZ

3.2 National construction, by activity

Residential buildings are the largest contributor to national construction and accounted for 54.1% of total construction activity in 2023. We forecast that residential building activity will decrease from *$32.9b* per annum in 2023 to a low of *$28.9b* in 2025, then rise from early 2026 to *$35.3b* in 2029. Non-residential activity is forecast to decrease from a high of *$13.7b* in 2023 to *$11.8b* in 2024 and then remain relatively steady at around *$12.5b* from 2025 to 2027, before rising very gradually to end the period on *$13.3b*. We forecast infrastructure activity to remain relatively steady around *$13.6b* throughout 2024 to 2027, rising to *$15.0b* by the end of the forecast period.

Figure 3.2.1 All construction nationally, by activity

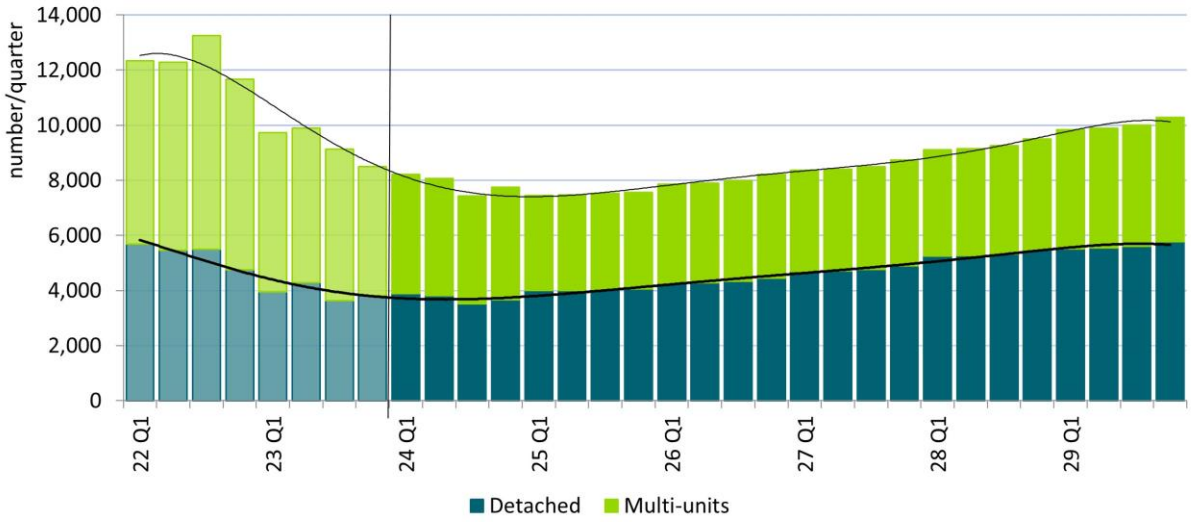


Source: BRANZ

3.3 National residential building, by dwelling number

Multi-unit dwellings accounted for 58% of all dwellings consented in 2023. We are forecasting *16,330* multi-unit consents in 2024, falling to *13,910* by 2025, before rising for the rest of the forecast period. The forecast is for just over 200,000 new dwellings to be consented over the next six years at an average of 34,000 dwellings per year.

Figure 3.3.1 Dwelling units consented nationally[3]

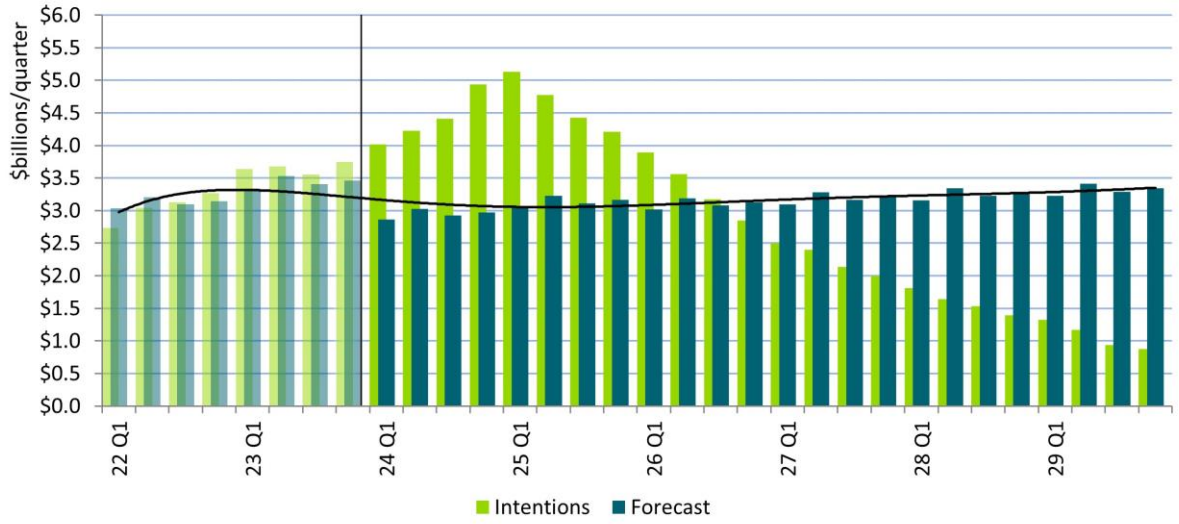


Source: BRANZ

3.4 National non-residential building

Non-residential building activity nationally peaked in 2023 at *$13.7b*, an increase of 9.9% on 2022. We forecast activity in the sector to fall in 2024 to *$11.8b* and to then increase to *$13.3b* by the end of the forecast period.

Figure 3.4.1 Non-residential building activity nationally



Source: BRANZ/Pacifecon

[3] A table of annual total dwelling units, actual and forecast, is provided in section 8.6.

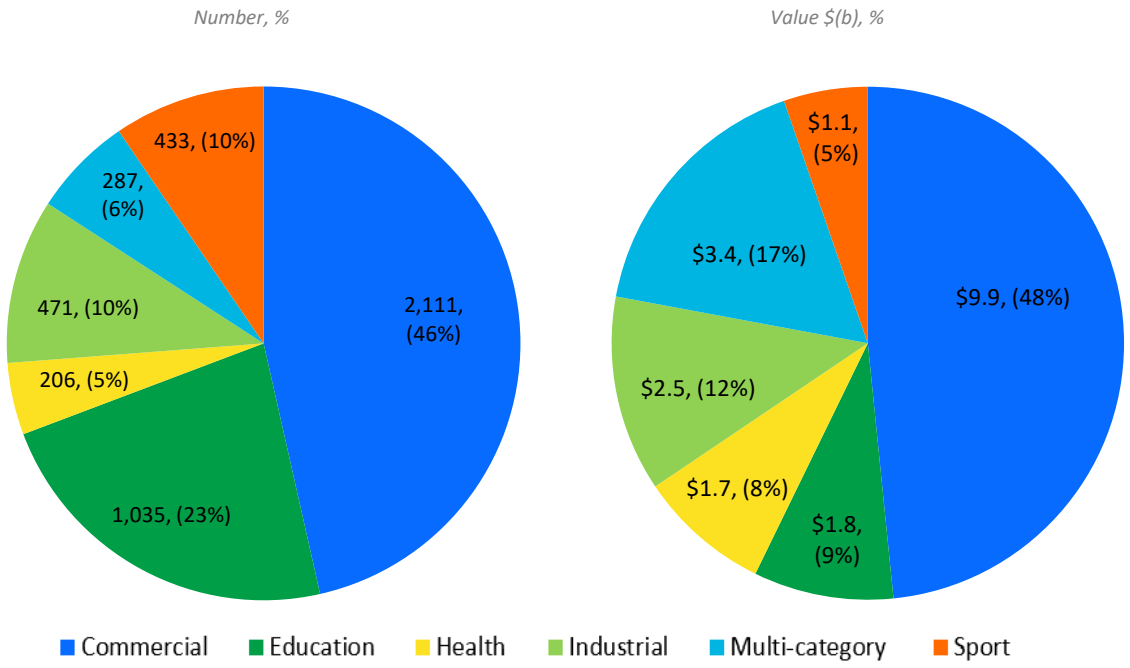
3.5 Types of non-residential building projects

Commercial buildings dominate non-residential building work expected to start in the year to December 2024, contributing 46% of the total number of projects and 48% of total value. Projects are similar to last year with a mix of redevelopments, refurbishments and high value data centres.

Overall, the total number of reported non-residential building projects is lower than last year – down 4.1%. With the exception of the multi-category, all sectors show a decrease but some more than others. The total value of the projects is also lower – *$6.3b* lower than what we reported in 2023.

Education continues to account for almost a quarter of all reported projects (23%) but only accounts for 9% of the total value. The total number of education projects is 10.5% less than 2023. This reflects the period of adjustment that the sector is going through with some projects being cancelled or postponed, and others rescoped for reasons of affordability and changing priorities. The number of health and industrial projects reported are also noticeably down on the previous year with decreases of 14.9% and 9.9% respectively.

Figure 3.5.1 Non-residential building types anticipated to start in 2024,[4] by number and total project value



Source: Pacifecon

[4] Actuals and construction intentions, year ending December 2024.

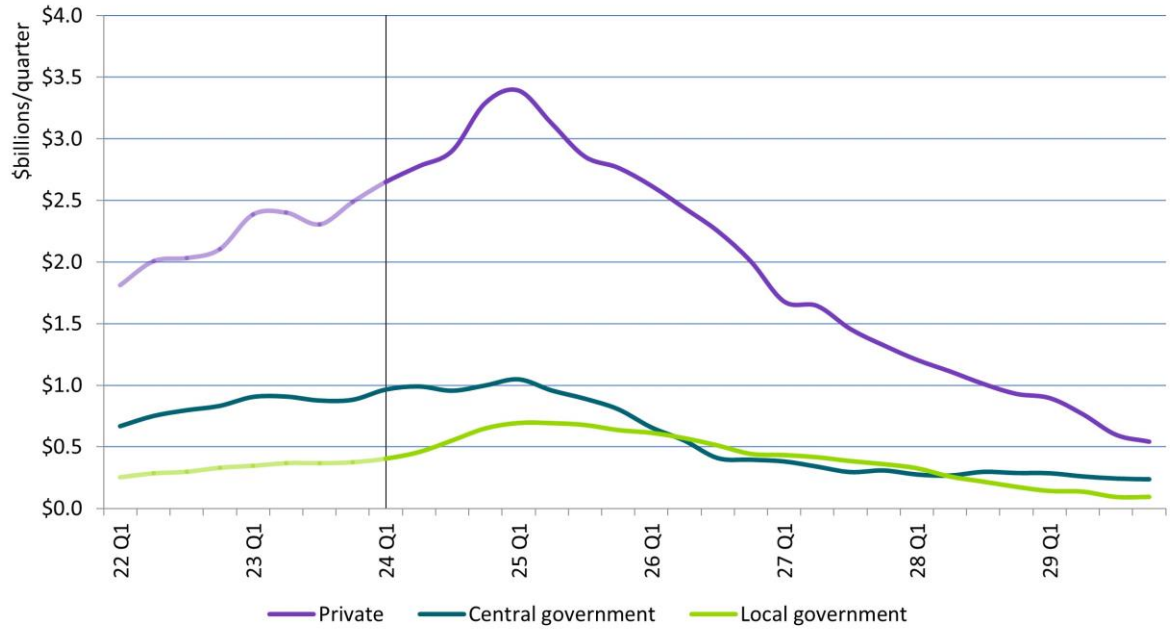
3.6 Project initiators for non-residential building, by sector

The private sector is the largest initiator of non-residential building, contributing 66.6% of the value of researched intentions for 2024–2029, while central and local government make up 18.9% and 14.3% respectively. These are very similar proportions to last year for all sectors.

Central and local government-initiated projects typically benefit from having good long-term visibility of funding,[5] which means intentions tend to remain strong throughout the forecast period. However, this long-term visibility is not as evident in the latter years of the forecast period as it has been in previous versions of this report. This is likely due to the reset both government and local government are currently working through to realign to new priorities as a consequence of the global financial outlook, changing policy directions and community needs in a post COVID environment. At the time of writing, many in the local government sector were in the process of preparing their 10-year plans and some had elected to delay their plans for upwards of 12 months to give more time for new government directions to 'bed-in'.

Private sector intentions are more heavily skewed towards the short term due to optimism bias and more variable private funding,[6] which can result in intentions falling away in the medium term as there is less certainty. Furthermore, as the operating environment changes, project commencement may be delayed, timeframes for completion altered or projects rescoped to match conditions.

Figure 3.6.1 Non-residential building intentions, by project initiator and start date



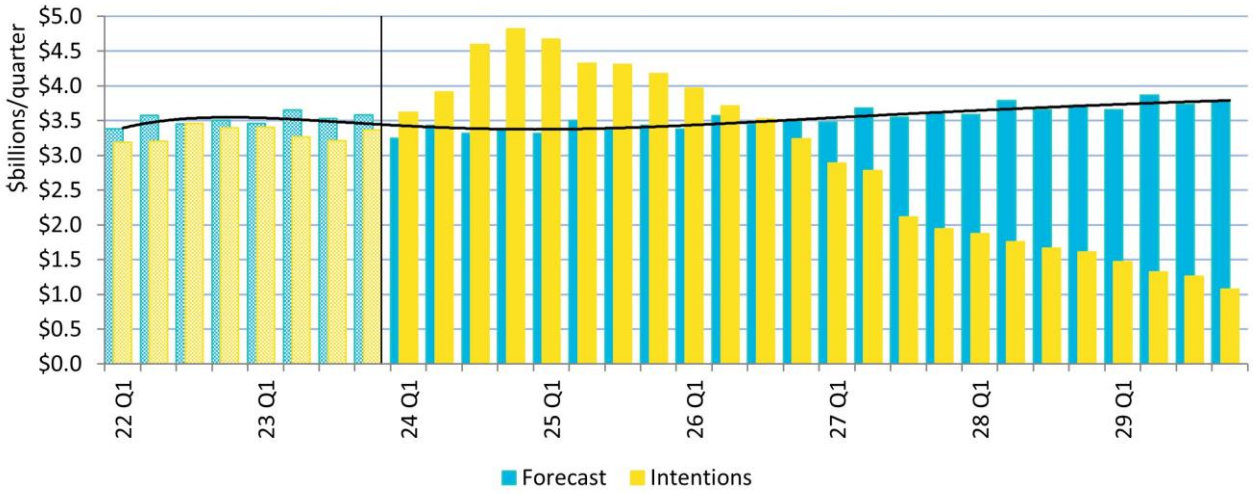
Source: Pacifecon

[5] Local government long-term plans and central government budget statements.
[6] See section 6.5 for more information on optimism bias.

3.7 National infrastructure activity

In 2023, infrastructure represented almost one-quarter of total building and construction value (23.4%). Infrastructure activity increased slightly between 2022 and 2023 to *$14.2b*. We forecast activity to slow slightly in 2024 then remain steady year on year, increasing gradually from 2027 to reach *$15.0b* in 2029. The intentions data indicates strong intentions throughout the forecast period.

Figure 3.7.1 Infrastructure activity nationally



Source: BRANZ/Pacifecon

Each year, the values for forecast and intentions (based on data for planned and ongoing infrastructure projects) are similar. This is due to nearly 67% of the intended work being initiated by the public sector, which shows better long-term visibility of funding than the private sector and means intentions tend to remain strong throughout the forecast period. The forecast by BRANZ is based on mining, electricity, water, gas, transport, telecommunications and other.

At the time of writing, the public sector was reviewing plans for future work programmes and undergoing a period of adjustment to new national directions.

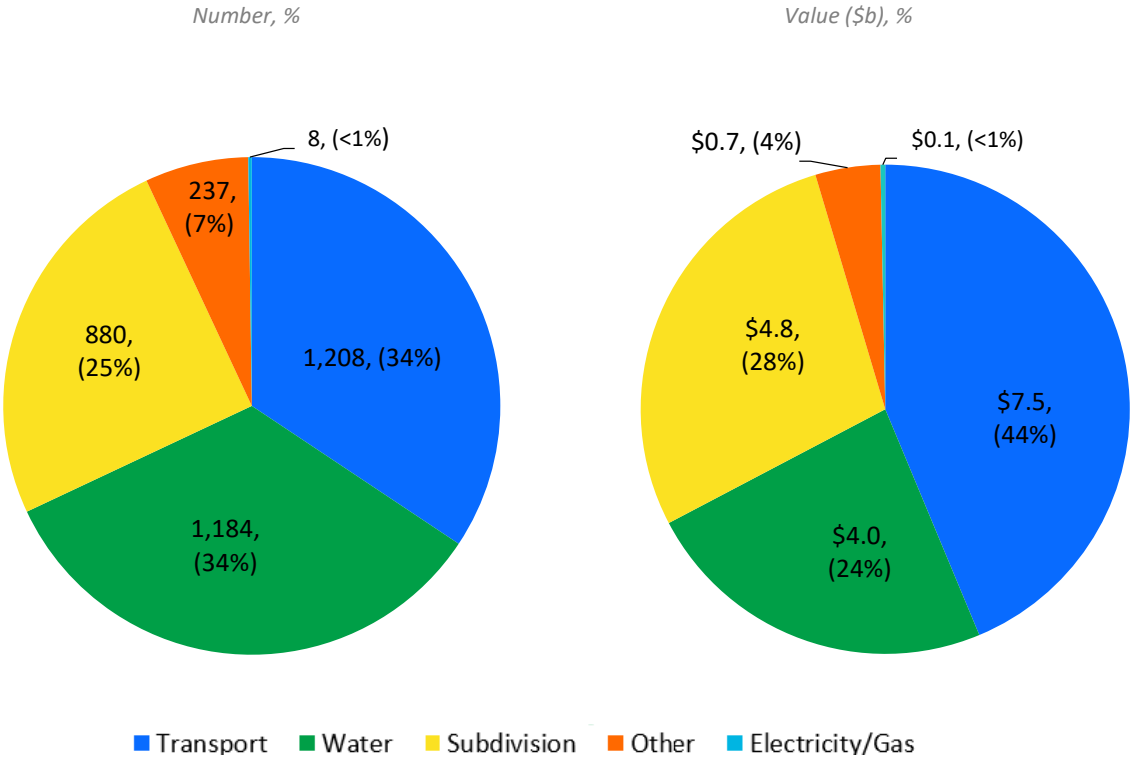
- With the release of the budget in May 2024, government departments were in the process of aligning and reprioritising detailed work programmes based on revised government directions across all sectors. While broad areas of spending were known, information on funding for specific projects was still being worked on. The New Zealand Transport Agency (NZTA), for example, was not expected to finalise its indicative budgets for work with district council until late August 2024 which, in turn, affects local government's plans for land transport.
- Local councils are at different stages of preparing the three-yearly reviews of their respective long-term plans (LTPs). Councils affected by cyclones Hale and Gabrielle in early 2023, have been able to opt for preparing enhanced annual plans rather a full LTP, allowing them to focus on cyclone recovery rather than the longer term. All other councils have also been given the opportunity to delay the preparation of LTPs for up to 12 months (July 2025) following the repeal of the legislation that was to transfer the responsibility for three waters services – drinking water, wastewater and stormwater – to ten water entities established by the previous government. A number of councils have taken up this opportunity and, as a consequence, the long-term visibility across the sector will be better understood in 2025 when most councils will have a completed LTPs.

- Although longer term solutions for future resilience to climate events are still being worked on, infrastructure spending for cyclone recovery projects is evident in the intentions data throughout the forecast period.
- Specific work programmes for the three waters services will remain somewhat uncertain until councils decide whether to establish regionally based council-controlled organisations (CCOs). The delivery of water services will also need to align with the government's policy priorities for Local Water Done Well and legislation to transition to the new regime is pending (mid 2024).
- Also pending is the enactment of the Fast-track approvals Bill, enabling a fast-track decision-making process for infrastructure and development projects that are considered to have significant regional or national benefits. It is likely that some projects will be on hold awaiting the new legislation.

3.8 Types of infrastructure construction

Overall, the total number and value of infrastructure projects underway of expected to start in 2024 is similar to that reported in 2023. Transport, water and subdivision projects continue to dominate new infrastructure activity, contributing 93% of the projects and 96% of the total value, similar to the proportions in the 2023 report.

Figure 3.8.1 Infrastructure project types anticipated to start in 2024,[7] by number and total project value[8]



Source: Pacifecon

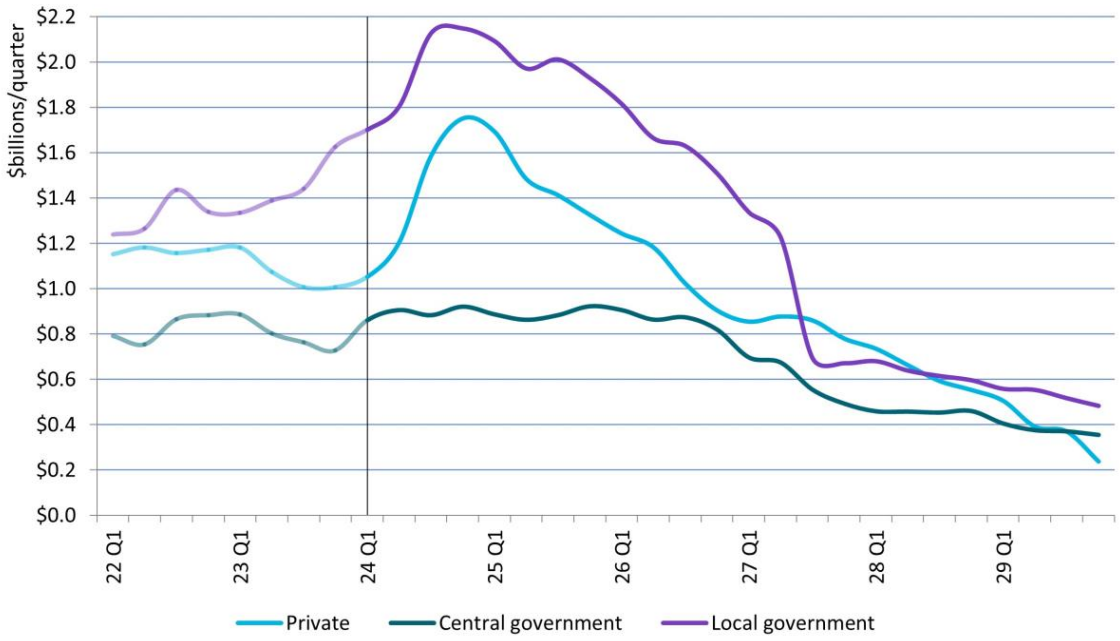
[7] Actuals and construction intentions, year ending December 2024.
[8] Other includes communications, seismic upgrades, parks/recreation, etc.

3.9 Project initiators for infrastructure projects, by sector

As in previous reports, local government is the main initiator of infrastructure intentions, contributing 44% of projects initiated over the forecast period. This is a slight increase on the 2023 report. Projects initiated by central government have reduced slightly to 23%, while the private sector has remained the same on 33%, with most of the value due to subdivisions. Private sector-initiated subdivisions are dependent on other infrastructure developments such as transport, water and power, particularly for greenfield sites.

Project intentions for local government show a marked decrease from 2027 (refer Figure 3.9.1). This is likely to be due to both local in central government finalising details on future investment in infrastructure in their respective forward works programmes and LTPs (refer 3.7).

Figure 3.9.1 Infrastructure intentions, by project initiator and start date



Source: Pacifecon

4. Regional forecast

4.1 Regional comparisons

This section examines the differences in the forecast values for residential buildings, non-residential buildings and infrastructure activity across the regions defined in the report. The individual regions are discussed in more detail in sections 4.2 to 4.7.

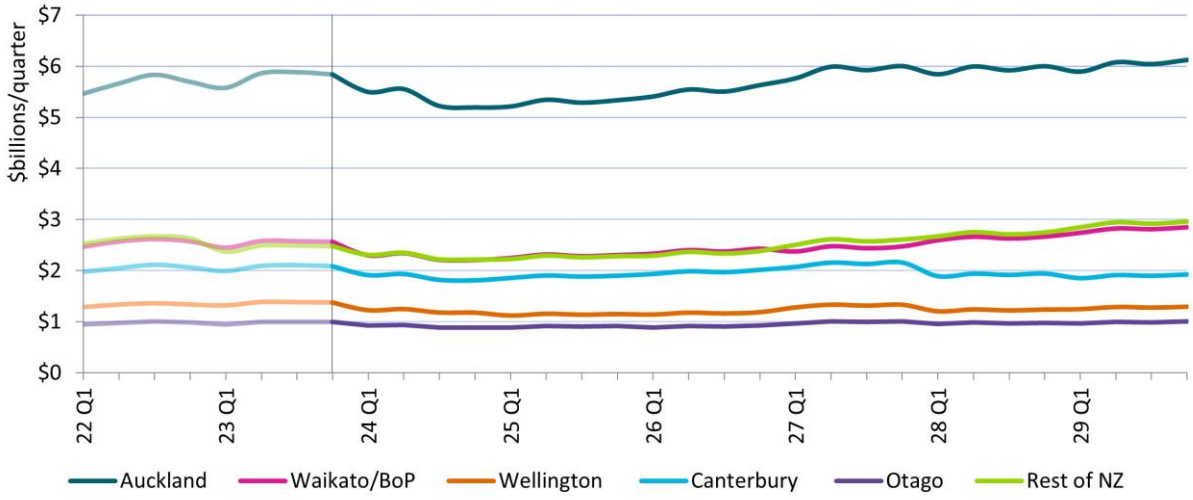
Total building and construction value regional comparison

After a dip in the first quarter, total construction for all regions was relatively steady throughout 2023. The decrease in the first quarter was most evident in Auckland, Waikato/Bay of Plenty and the rest of New Zealand, and likely to be related to the impact of cyclones Hale and Gabrielle on the North Island. The Rest of New Zealand, which includes Gisborne, Hawkes Bay and Manawatu/Whanganui, experienced a 6% decrease in construction value in quarter one compared with the same quarter in the previous year.

In the first four years of the forecast period, all regions are expected to see decreased levels of total construction activity in comparison to 2023. This is followed by a gradual rise toward the end of the period for Auckland, the Rest of New Zealand and Waikato/Bay of Plenty. Auckland is expected to end the period in 2029 on *$24.1b* per annum - slightly higher (4%) than 2023; while construction value for Waikato/Bay of Plenty and the Rest of New Zealand will increase to *$11.2b* and *$11.6b* respectively.

Construction activity in Canterbury is expected to decrease in 2024, then remain steady through to 2027 before decreasing again at the beginning of 2028 and ending the forecast period on *$7.6b*. Wellington and Otago regions remain relatively steady throughout the period.

Figure 4.1.1 Value of total building and construction, by region



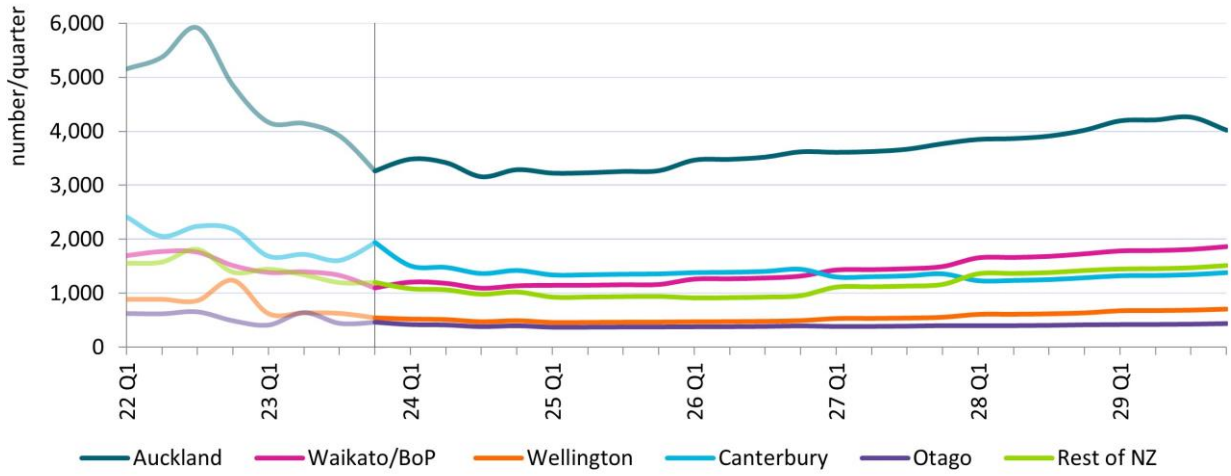
Source: BRANZ/Pacifecon

Residential building regional comparison

The number of new residential consents has decreased over the last 12 months, as total new residential consents went from *49,537* in 2022 to *37,238* in 2023. The Auckland region represented 42% of consents in 2023. Waikato/Bay of Plenty, Canterbury and Rest of New Zealand regions each represented 14-19% of the total number of new residential building consents.

All regions are forecast to track downwards, to different extents, over the short term. Auckland is the most noticeable, with consents having already fallen from *21,301* in 2022 to *15,488* in 2023 and forecast to fall further to a low of *12,960* in 2025.

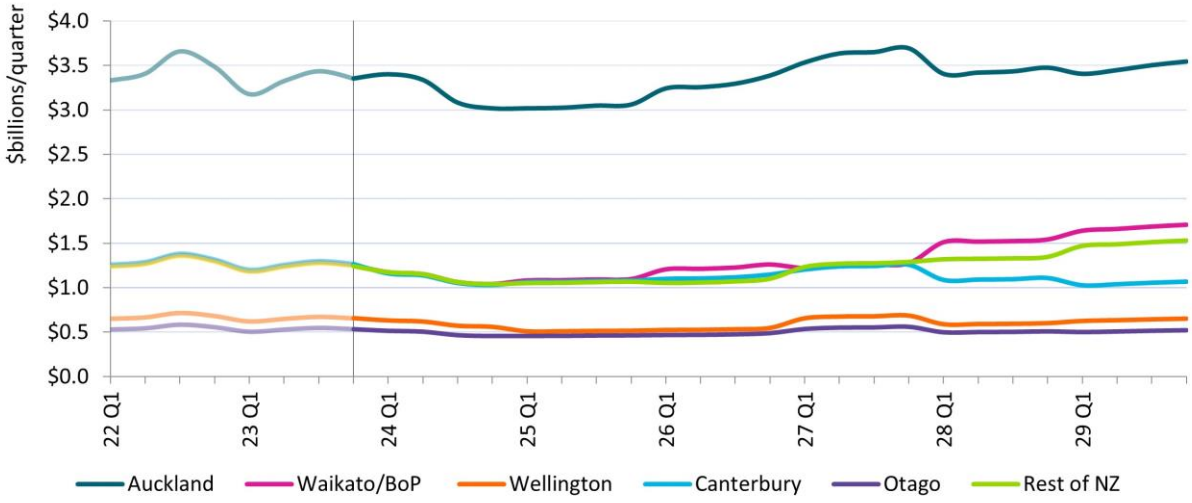
Figure 4.1.2 Number of residential consents, by region



Source: BRANZ

Activity in the residential sector has been strong over the last couple of years, buoyed by high consenting activity. Despite the decrease in new residential consents through 2023, residential activity has remained strong as the industry works through the backlog of residential consents. Workloads are not anticipated to fall off to the same extent as consents, as the industry continues to work through the backlog of consents, potential changes to regulations around granny flats, and the continued renovations of existing housing stock.

Figure 4.1.3 Value of residential buildings, by region

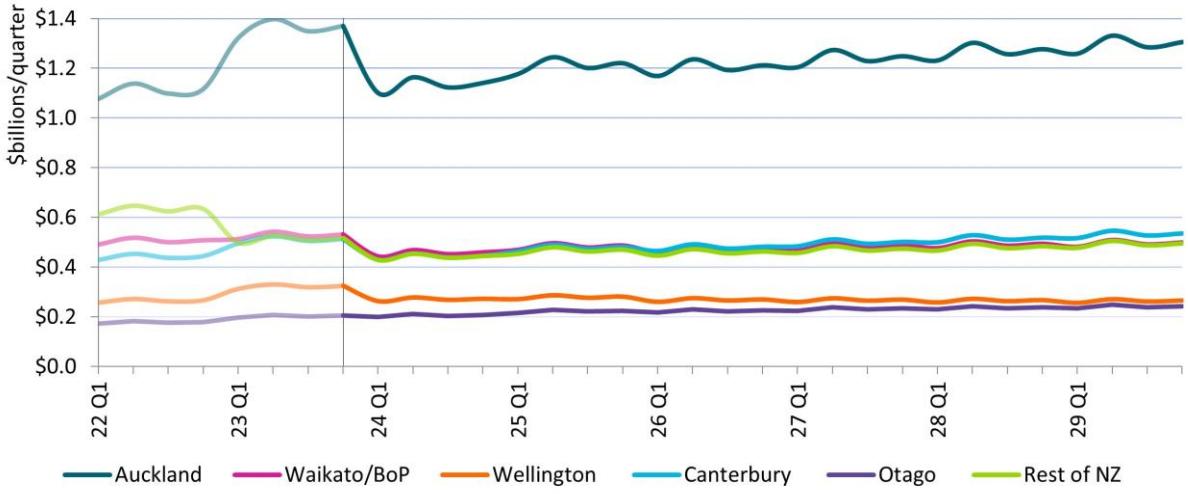


Source: BRANZ

Non-residential building regional comparison

Growth in non-residential building activity at the national level was strong in 2023, up 9.9% from 2022. Growth was strongest in the Auckland and Wellington regions, up 22.8% and 21.9% respectively. The Rest of New Zealand was the only region that saw a decrease in workload in 2023, down 18.6% from 2022.

Figure 4.1.4 Value of non-residential building, by region

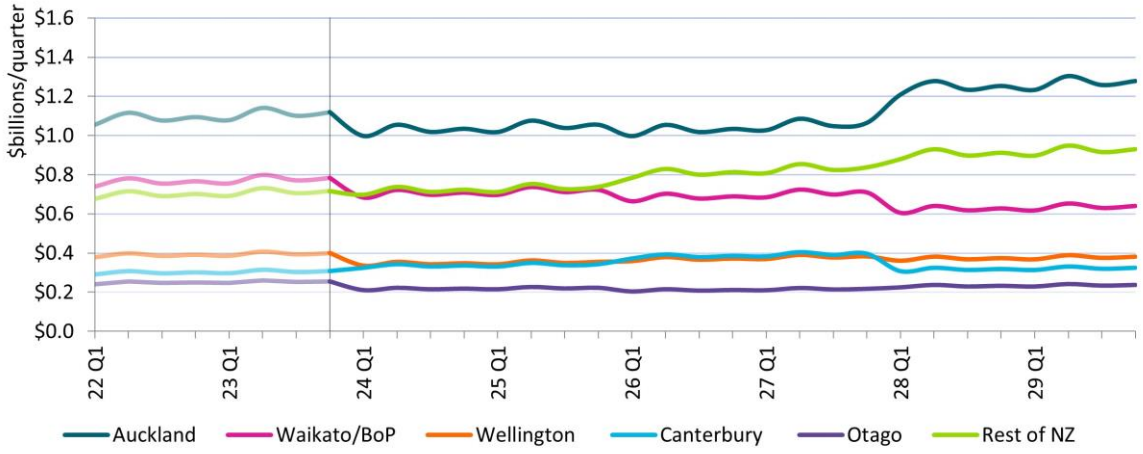


Source: BRANZ

Infrastructure activity regional comparison

In 2023, infrastructure activity across all regions increased by 2.2% over the previous year. With the exception of Canterbury and the Rest of New Zealand, regional infrastructure activity is expected to decrease slightly at the beginning of 2024 then remain relatively constant through to 2026. Post 2026, regional variations are likely, with activity forecast to increase in the Auckland region in 2028 by 21.3% and remain at this level until the end of the period. Infrastructure activity for the Rest of New Zealand increases in 2026 and continues to rise through to the end of 2029 – a 14% increase over the period. Activity is expected to decrease in both the Waikato/Bay of Plenty (-11.5%) and Canterbury (-20%) regions in 2028 and then remain steady until the end of 2029

Figure 4.1.5 Value of infrastructure activity, by region



Source: BRANZ/Pacifecon

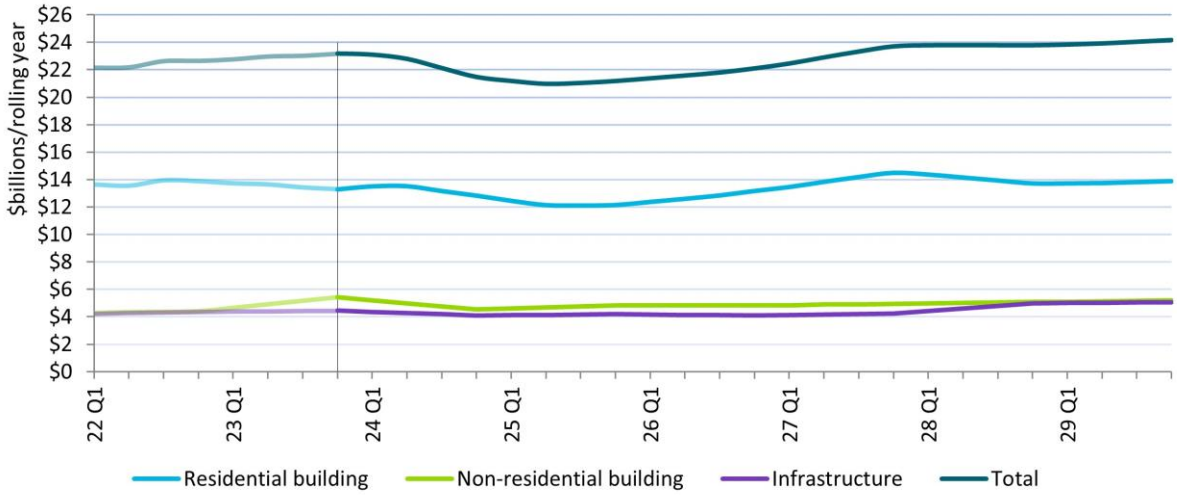
4.2 Auckland[9]

Auckland has always been New Zealand's largest market for building and construction, contributing 38.1% of total national construction value and 41.6% of new dwelling consents in 2023, similar proportions as 2022. By 2029 it is anticipated that activity in the region will represent 38% of total national construction value and 42.6% of new dwelling consents.

Total growth in Auckland in 2023 was 2.3%, to *$23.1b*. The forecast is now for a decrease in activity from the second quarter of 2024, and through 2025, then gradually increasing to *$24.2b* by the end of 2029, a rise of 4.2% compared with 2023.

Infrastructure construction and non-residential building are forecast to remain relatively consistent with infrastructure increasing toward the end of the period.

Figure 4.2.1 All construction in Auckland, by value



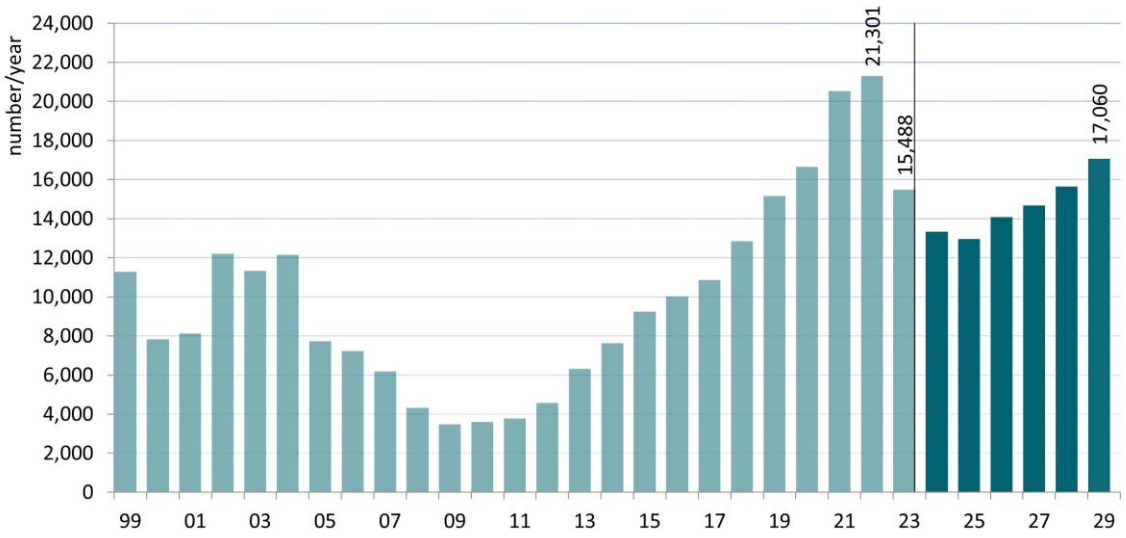
Source: BRANZ/Pacifecon

[9] The area covered by Auckland Council.

Auckland dwelling consent activity

The number of new dwellings consented in Auckland fell by 27.3% to *15,488* in 2023. The forecast for Auckland is for consents to fall to a low of *12,960* in 2025, before trending back up to a high of *17,060* in 2029. Over *87,000* dwelling units are expected to be consented in the six years from 2024 to 2029 (*85,000* were anticipated over the six years in the 2023 report and *95,000* in the 2022 report).

Figure 4.2.2 Dwelling units in Auckland, 1999 to 2029

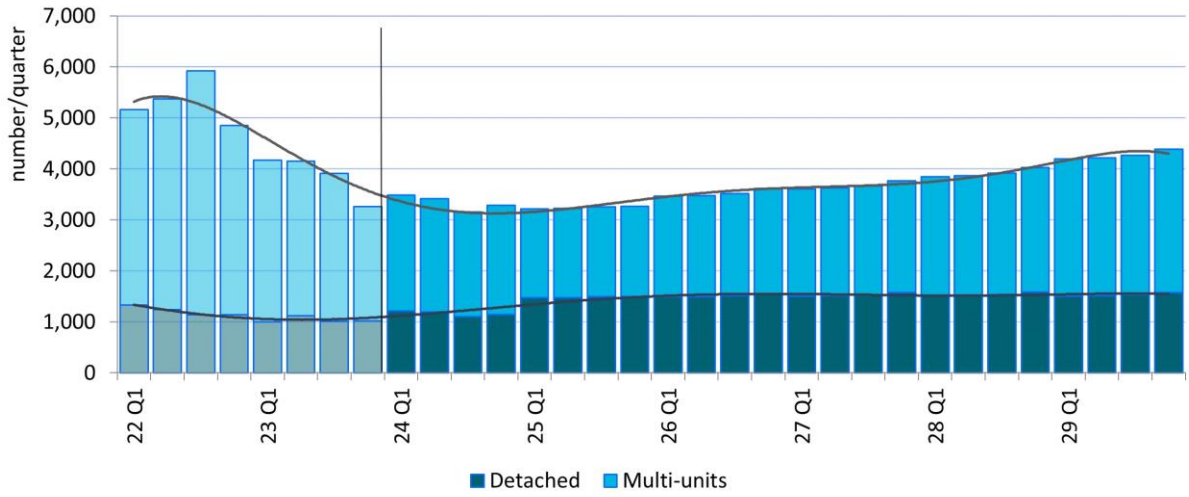


Source: BRANZ/Stats NZ

Auckland multi-unit consents

In recent years, dwelling growth in Auckland has been driven by multi-unit consents. Multi-units share of all new dwellings in Auckland peaked at 77.3% in 2022 and reduced slightly to 73.2% in 2023. Our forecast is for the number of multi-unit consents to decrease in the short term from a high of *16,462* in 2022 to *7,020* in 2025. We then forecast multi-unit consents to trend upwards for the remainder of the period to *10,930* in 2029.

Figure 4.2.3 Dwelling units in Auckland

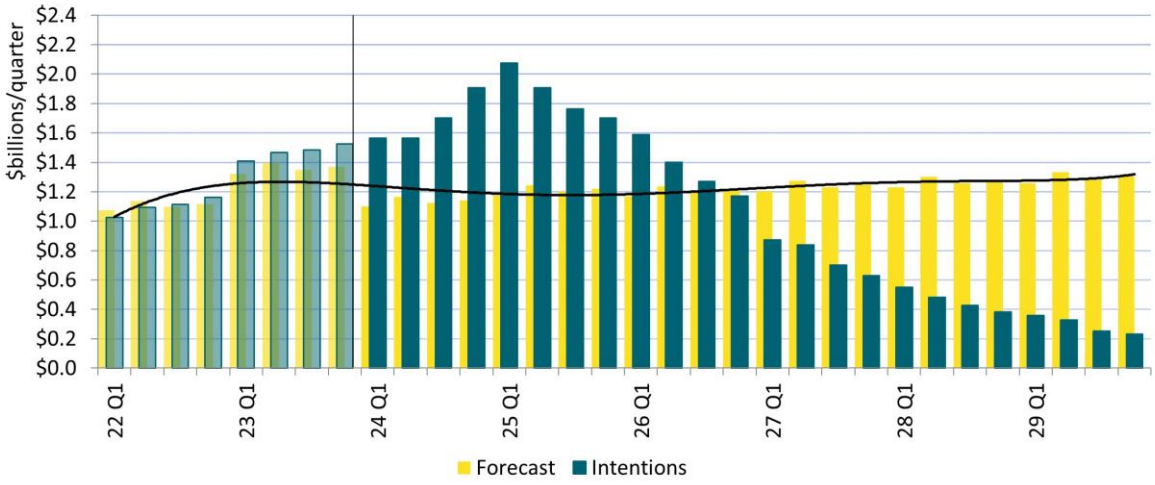


Source: BRANZ

Auckland non-residential building activity

Non-residential building activity in Auckland increased by 22.8% to *$5.4b* in 2023. We forecast non-residential building activity in Auckland to decrease by 16.7% to *$4.5b* in 2024. The remainder of the forecast period shows growth in non-residential activity from the low of *$4.5b* in 2024 to *$5.2b* in 2029. Although reported non-residential construction intentions continue to be high, we note that commencement may not occur within the timeframes indicated. Private sector intentions are more heavily skewed towards the short term due to optimism bias and more variable private funding and at the time of writing public sector organisations were in process of reprioritising their work programmes in accordance with community needs and available funding.

Figure 4.2.4 Auckland non-residential building activity

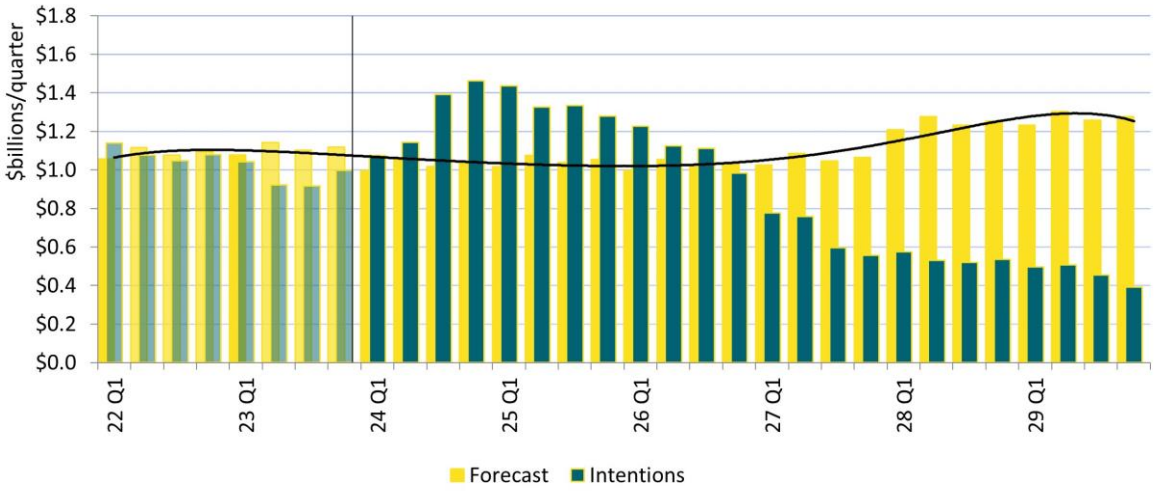


Source: BRANZ/Pacifecon

Auckland infrastructure activity

Infrastructure activity in Auckland increased 2.2% in 2023 to *$4.4b* per annum and is expected to end the forecast period in 2029 at *$5.1b* - 14.3% higher than 2023 levels. The intentions data shows a high value of known infrastructure project intentions throughout the forecast period, which is typical of large publicly funded civil projects that have long complex planning processes.

Figure 4.2.5 Auckland infrastructure activity



Source: BRANZ/Pacifecon

Planned non-residential building and infrastructure work for Auckland includes:

- hospitals and aged care facilities
- schools and universities
- warehouses and storage facilities, logistics facilities and light industrial units
- data centres
- offices and retail
- visitor accommodation
- subdivisions and transport, including roads, rail, bridges/interchanges, car parking, to support growth in residential building and public transport
- three waters expansion (drinking water, wastewater and stormwater)
- Electricity generation including wind farms.

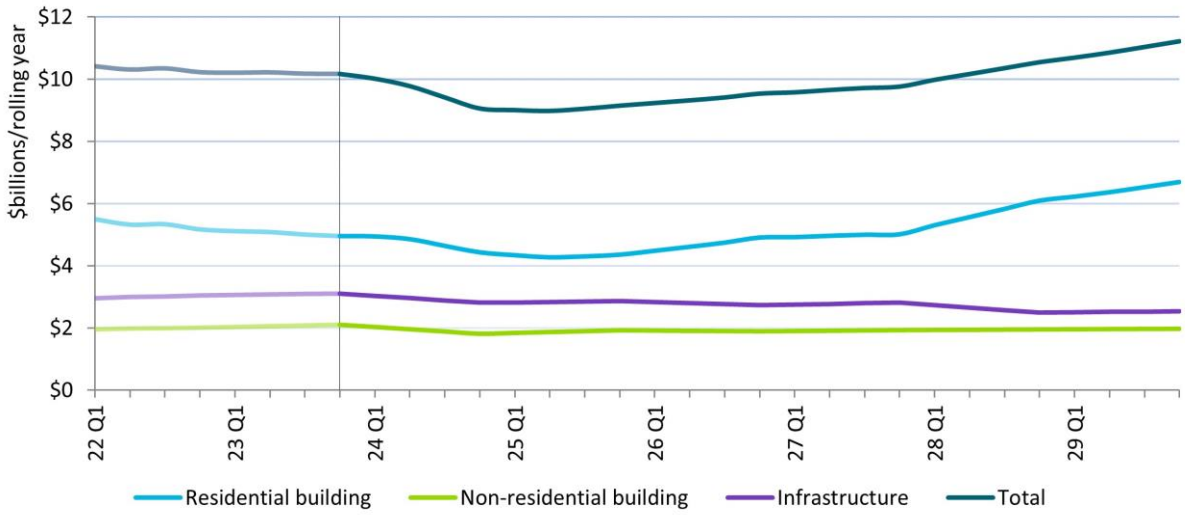
Source: Pacifecon

4.3 Waikato/Bay of Plenty[10]

The total value of construction in Waikato/Bay of Plenty has been gradually slowing, decreasing to *$10.2b* in 2023 – a reduction of 2.4% over the two years since 2021. Residential activity is the main contributor to the decrease while non-residential activity and infrastructure have remained relatively steady.

Residential building decreased from *$5.2b* per annum at the beginning of 2022 to *$4.9b* in 2023. This decrease is expected to continue into 2025, before rising again to *$6.7b* by 2029. Non-residential building is forecast to remain relatively steady over the forecast period. A gradual decrease is anticipated for infrastructure over the period from *$3.1b* in 2023 to *$2.5b* in 2029.

Figure 4.3.1 All construction in Waikato/Bay of Plenty, by value



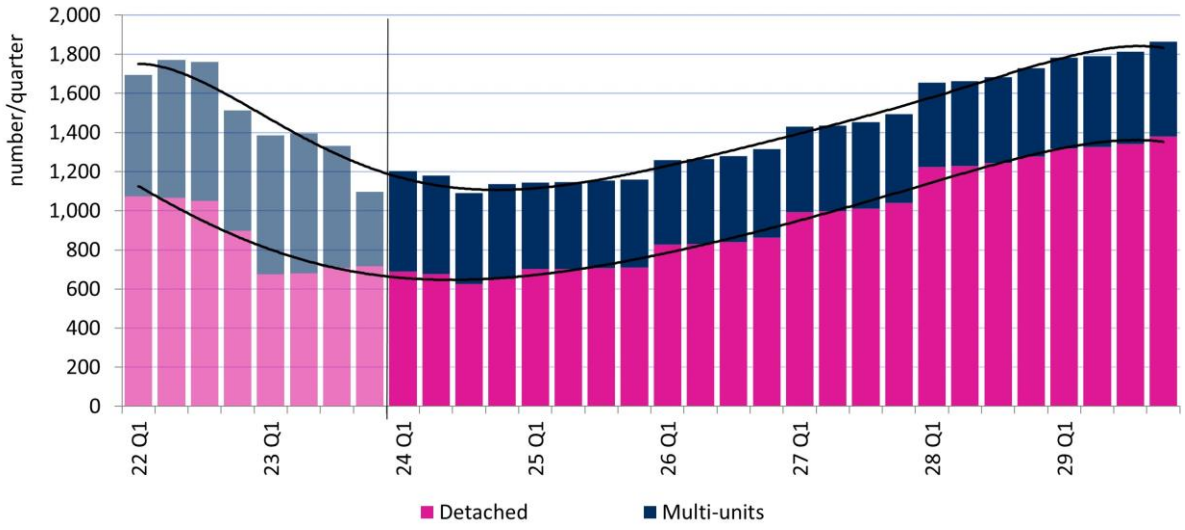
Source: BRANZ/Pacifecon

[10] Waikato/Bay of Plenty includes Hamilton City, Hauraki District, Kawerau District, Matamata-Piako District, Opotiki District, Otorohanga District, Rotorua District, South Waikato District, Taupo District, Tauranga City, Thames-Coromandel District, Waikato District, Waipa District, Waitomo District, Western Bay of Plenty District and Whakatane District.

Waikato/Bay of Plenty dwelling consent activity

Waikato/Bay of Plenty has had strong consenting activity for several years now, with an average of almost *6,500* dwelling consents over the last 5 years. However, this was not enough to overcome the historical undersupply of housing in the region. Over *5,200* dwelling consents were issued for Waikato/Bay of Plenty in 2023, down from *6,740* in 2022. The forecast includes more than *34,000* dwelling consents from 2024 to 2029 for Waikato/Bay of Plenty. Multi-unit consents reached 47% of all dwelling consents in 2023. We forecast that this is going to reduce to 26% at the end of the forecast period. Historical consents show multi-unit consents are more popular in Waikato than Bay of Plenty.

Figure 4.3.2 Dwelling units in Waikato/Bay of Plenty

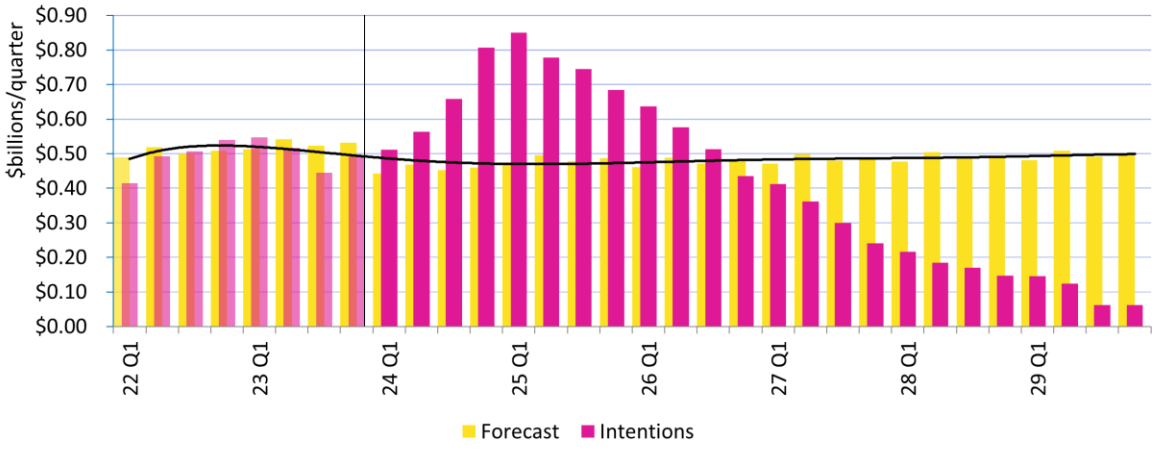


Source: BRANZ

Waikato/Bay of Plenty non-residential building activity

Non-residential building activity in the region increased by 5% to *$2.1b* in 2023 following an increase of 11% in 2022. Non-residential building activity is forecast to fall slightly to *$1.8b* in 2024, but finish the forecast period at *$2b*.

Figure 4.3.3 Waikato/Bay of Plenty non-residential building activity



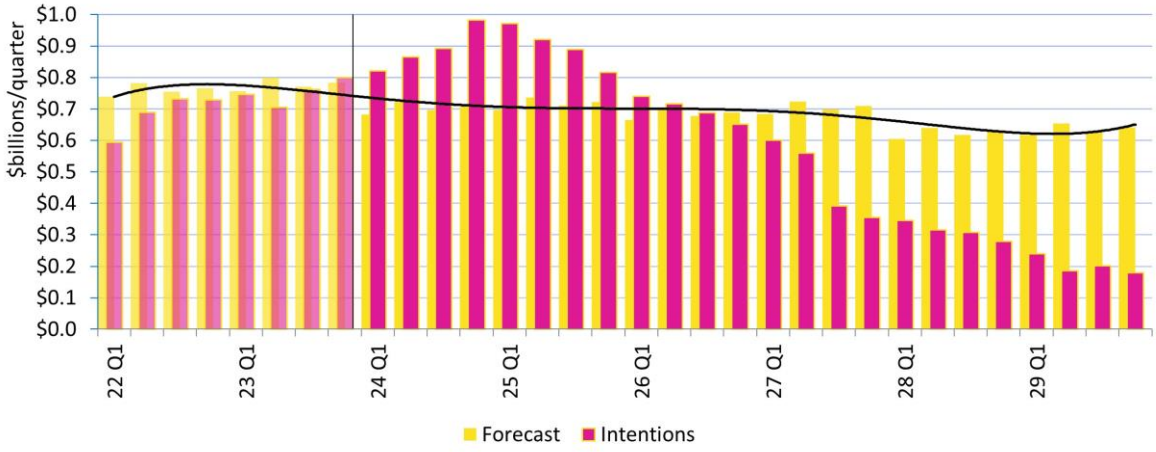
Source: BRANZ/Pacifecon

Waikato/Bay of Plenty infrastructure activity

Infrastructure activity in the Waikato/Bay of Plenty region during 2022 and 2023 was steady. However, over the forecast period a decline in activity of 18.7% is anticipated - from *$3.1b* in 2023 to *$2.5b* in 2029.

From discussions with industry contacts, Pacifecon researchers have noted the availability of land for development as being one of the constraining factors for development this region.

Figure 4.3.4 Waikato/Bay of Plenty infrastructure activity



Source: BRANZ/Pacifecon

Planned non-residential building and infrastructure work for Waikato/Bay of Plenty includes:

- offices, retail, courthouses and museums
- visitor accommodation
- schools and tertiary research buildings
- hospitals and aged care facilities
- manufacturing facilities and processing plants, including dairy, cold stores and distribution
- sports facilities
- subdivisions, mainly residential
- infrastructure, including roads and bridges
- three-waters developments (drinking water, wastewater and stormwater), and
- electricity production and transmission (including windfarms and solar farms).

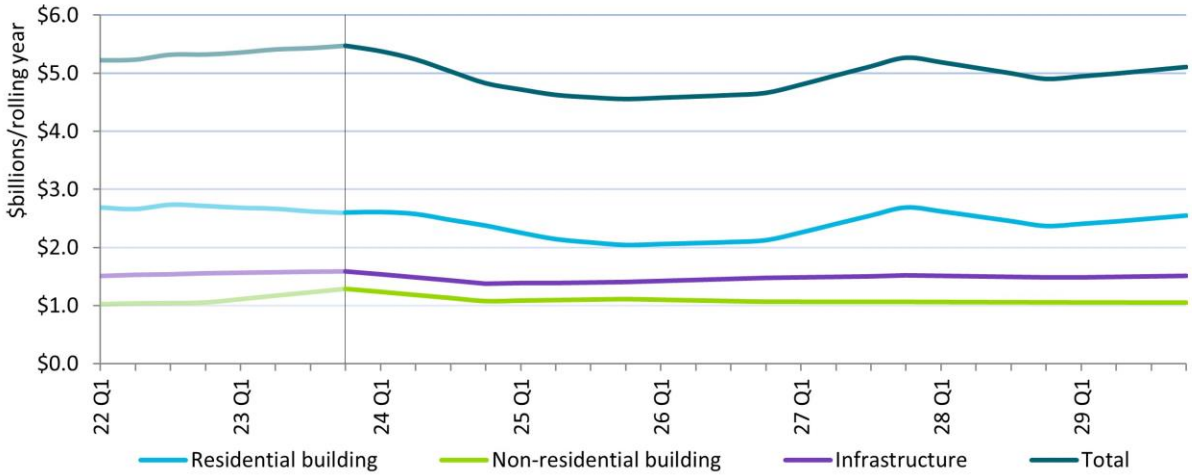
Source: Pacifecon

4.4 Wellington[11]

Overall, Wellington's total construction value increased to *$5.5b* in 2023. However, residential building decreased from *$2.7b* in 2022 to *$2.6b* in 2023 and is expected to further decrease through to 2027, before regaining some strength and ending the forecast period at a similar level to 2023.

Construction activity for infrastructure and non-residential building is expected to be relatively constant from 2024 through to 2029. Infrastructure is forecast to reach *$1.5b* in 2029, similar to 2023, while non-residential activity will end the period slightly below 2023 levels at *$1.0b*.

Figure 4.4.1 All construction in Wellington, by value



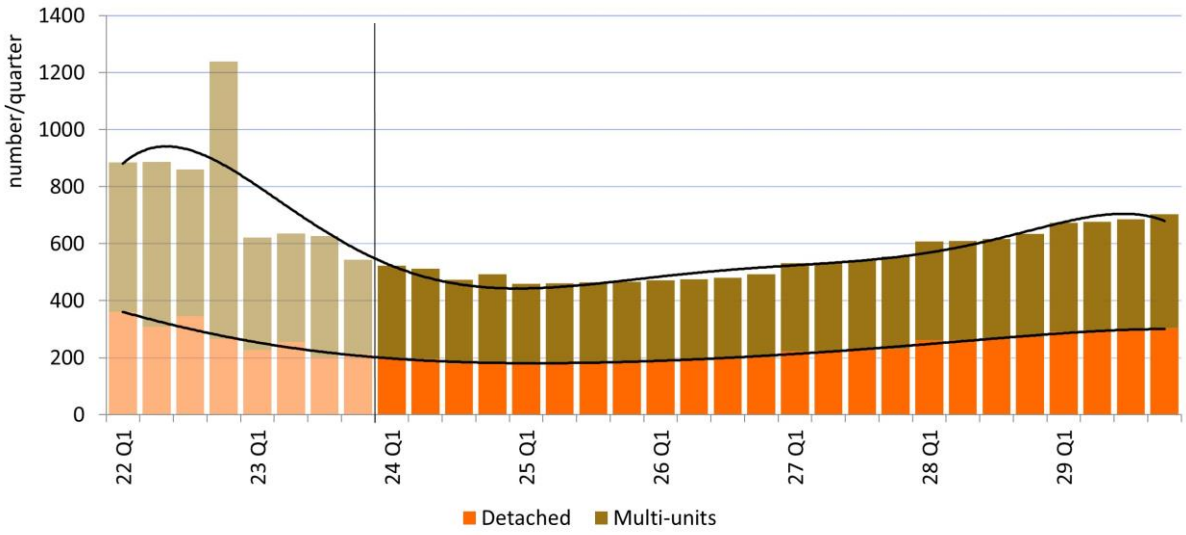
Source: BRANZ/Pacifecon

[11] Wellington includes Carterton District, Kapiti Coast District, Lower Hutt City, Masterton District, Porirua City, South Wairarapa District, Upper Hutt City and Wellington City.

Wellington dwelling consent activity

Dwelling consent numbers in Wellington fell to *2,427* in 2023 from *3,871* in 2022. We forecast just over *13,000* dwelling consents in Wellington over the forecast period, the majority of which are anticipated to by multi-units. Historically, multi-unit dwellings have been popular in Wellington – almost two-thirds of dwelling consents were for multi-units in 2023. This proportion is expected to fall back to about 57% over the forecast period.

Figure 4.4.2 Dwelling units in Wellington

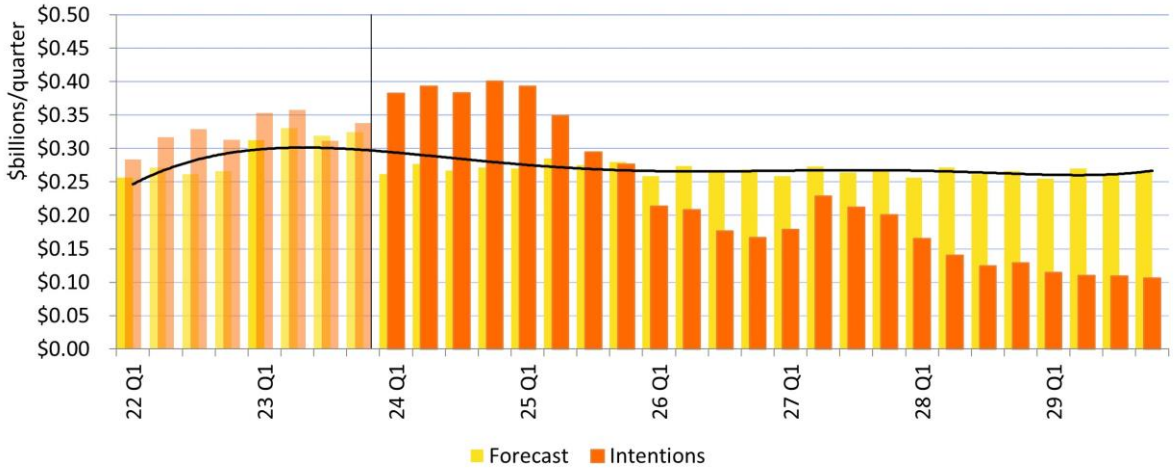


Source: BRANZ

Wellington non-residential building activity

Non-residential building activity in Wellington increased by 21.9% to *$1.3b* in 2023. We anticipate that non-residential building activity in Wellington will fall to *$1.1b* in 2024 and remain relatively steady throughout the remainder of the forecast period.

Figure 4.4.3 Wellington non-residential building activity



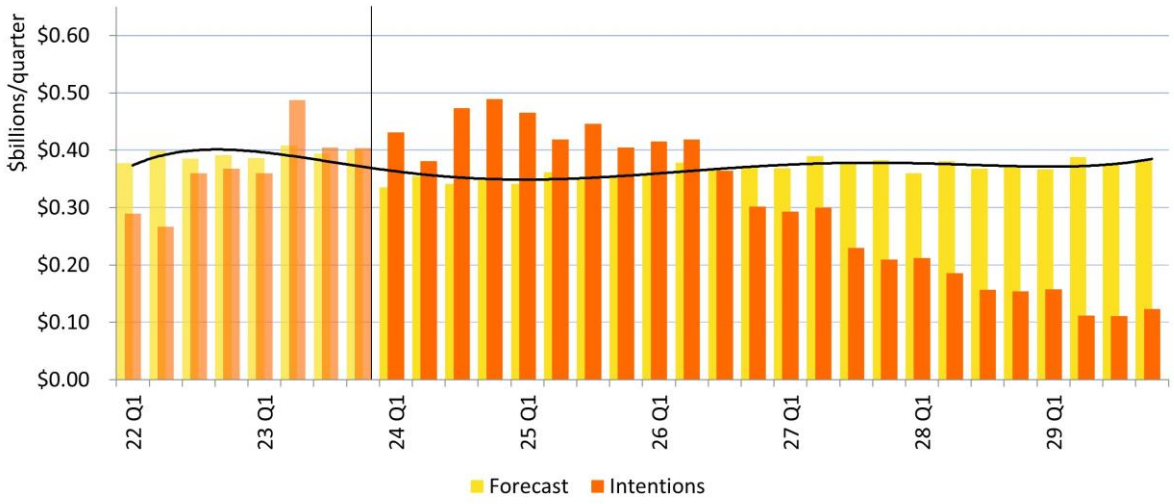
Source: BRANZ/Pacifecon

Wellington infrastructure activity

Wellington infrastructure activity in 2023 remained consistent with the previous year, at *$1.6b*. Activity is expected to decrease from 2024 through to 2026, before returning to slightly below 2023 levels by the end of the forecast period.

The forecast decrease in activity reflects the adjustments occurring in the sector as central and local government reprioritise, rescope and align plans and projects to new directions and available budgets.

Figure 4.4.4 Wellington infrastructure activity



Source: BRANZ/Pacifecon

Planned non-residential and infrastructure work for Wellington includes:

- retirement village communal buildings
- public and community facilities including seismic strengthening
- offices and warehouses – bulk retail, supermarkets and shopping centres
- visitor accommodation
- hospitals and aged care facilities
- infrastructure, including roads and bridges
- three waters developments (drinking water, wastewater and stormwater) and flood protection.

Source: Pacifecon

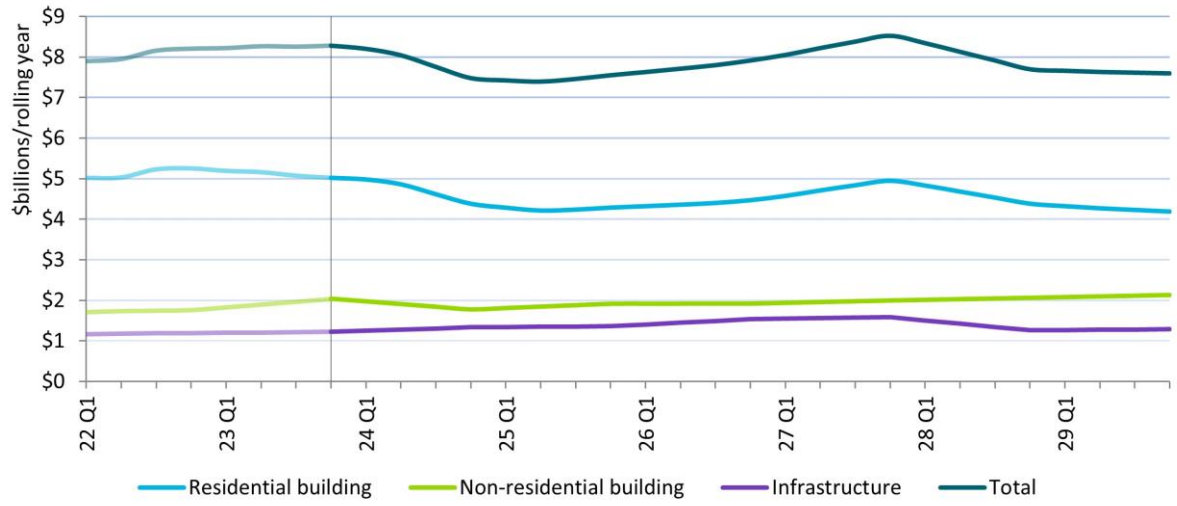
4.5 Canterbury[12]

Construction activity for the Canterbury region was consistent between 2022 and 2023 with both years attaining *$8.2b* in total value. Small increases were apparent for infrastructure and non-residential construction while residential building decreased marginally from *$5.2b* to *$5.0b*.

Peaking in 2022, residential building value is now expected to decrease to *$4.2b* in mid-2025, increase to *$5.0b* in 2027 and decrease again to *$4.2b* at the end of the forecast period.

Non-residential building activity is expected to be stable over the period commencing in 2024 at *$1.8b* and ending slightly higher in 2029 on *$2.1b* while infrastructure, after peaking in 2027 at *$1.6b*, ends the forecast period in 2029 at *$1.3b*.

Figure 4.5.1 All construction in Canterbury, by value



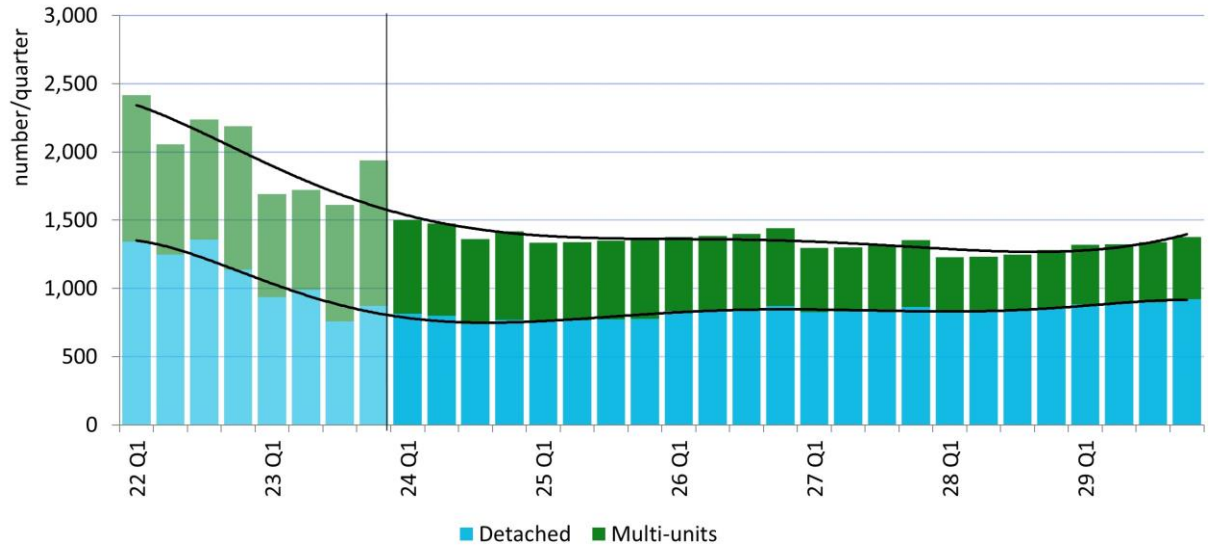
Source: BRANZ/Pacifecon

[12] Canterbury includes Ashburton District, Christchurch City, Hurunui District, Kaikoura District, Mackenzie District, Selwyn District, Timaru District, Waimakariri District and Waimate District.

Canterbury dwelling consent activity

The number of dwellings consented in Canterbury fell by 22% in 2023 to *6,959*. Consents in Canterbury are forecast to fall to *4,990* in 2028 but increase in 2029 to *5,360*. Detached homes have historically been popular in Canterbury, although multi-units represented 49% of dwelling consents in 2023. We forecast that this will fall to 33% by 2029.

Figure 4.5.2 Dwelling units in Canterbury

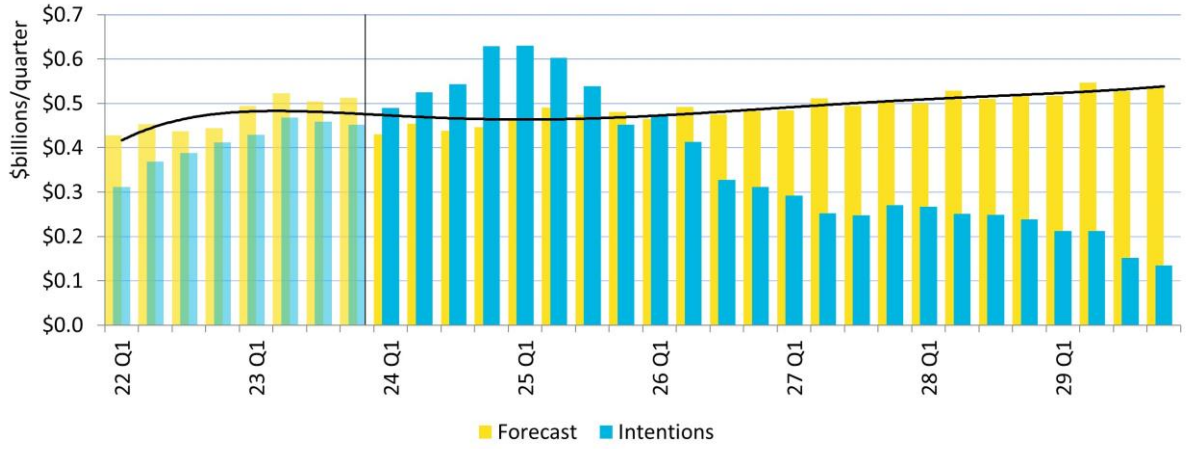


Source: BRANZ

Canterbury non-residential building activity

Non-residential building activity increased by 15.5% to *$2b* in 2023 after increasing by 34% in 2022. We forecast Canterbury non-residential building activity to fall back to *$1.8b* in 2024, before gradually increasing to *$2.1b* at the end of the forecast period.

Figure 4.5.3 Canterbury non-residential building activity

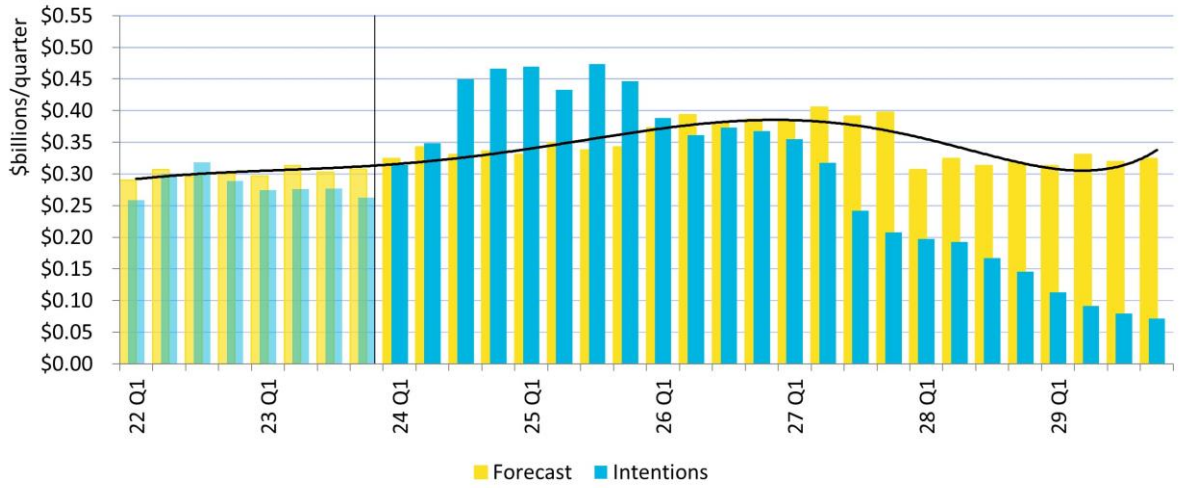


Source: BRANZ/Pacifecon

Canterbury infrastructure activity

Canterbury infrastructure activity in 2023 was similar to the previous year, at *$1.2b*. Activity is expected to increase to *$1.6b* by 2027 and then reduce to *$1.3b* in 2029.

Figure 4.5.4 Canterbury infrastructure activity



Source: BRANZ/Pacifecon

Planned non-residential buildings and infrastructure work for Canterbury includes:

- hospitals and aged care facilities
- bulk retail and manufacturing facilities
- schools and universities
- sports facilities
- places of worship, offices, theatres and museums, including redevelopment and seismic strengthening work
- visitor accommodation
- infrastructure – roads and three waters developments (drinking water, wastewater and stormwater)
- residential subdivisions
- energy projects including solar and wind farms.

Source: Pacifecon

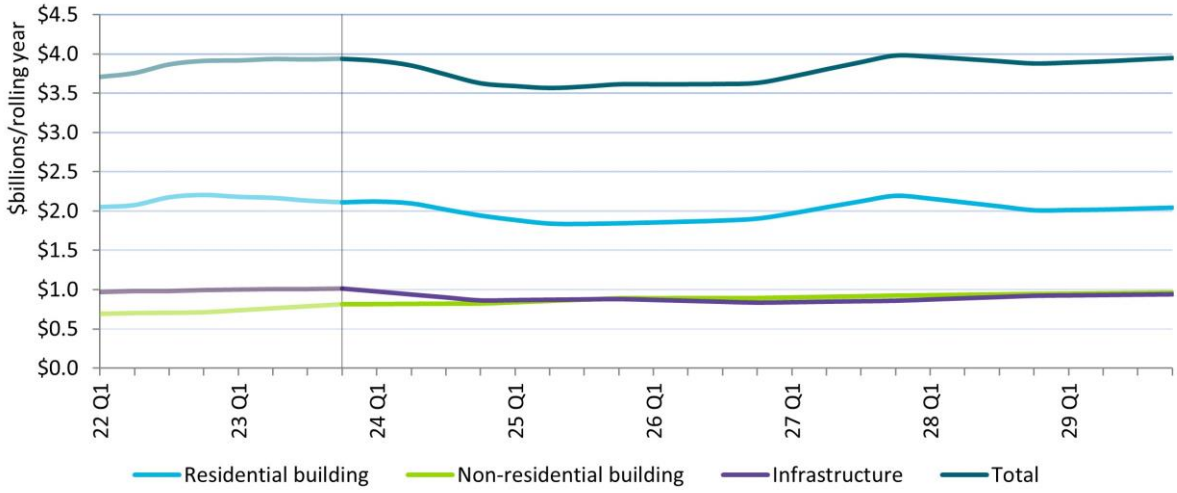
4.6 Otago[13]

From 2013 to 2019, this report included Otago within Rest of New Zealand. Since 2020, the Otago region has been treated separately. Total construction in Otago remained steady on *$3.9b* in 2023.

Non-residential building activity continued to make gains in 2023, increasing by 14.1% to reach *$0.81b*. The sector is expected to make further gains throughout the forecast period, reaching *$0.96b* per annum by 2029. Infrastructure is forecast to decrease from *$1.0b* per annum in 2023 to *$0.94b* in 2029.

Residential building reduced slightly in 2023 to *$2.1b*. Further reductions in the residential sector are expected through to 2026 before rising again in 2028 to return to 2023 levels by the end of the forecast period.

Figure 4.6.1 All construction in Otago, by value



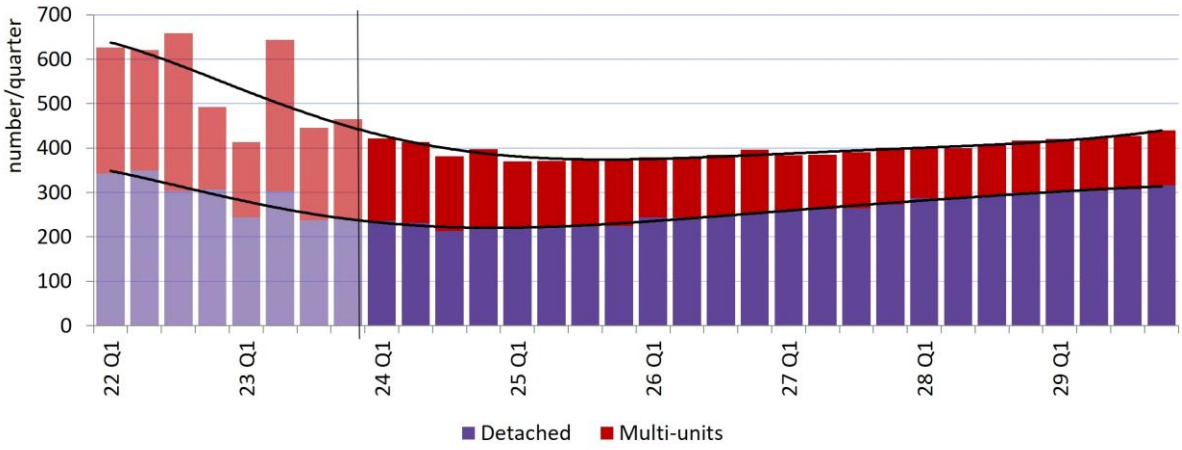
Source: BRANZ/Pacifecon

[13] Otago includes the Otago region, Dunedin City, Central Otago District, Clutha District, Queenstown-Lakes District and Waitaki District.

Otago dwelling consent activity

Consenting in Otago was down from the strong consenting levels of 2021 and 2022, falling from *2,399* in 2022 to *1,968* in 2023. Over the forecast period, we anticipate Otago will consent over *9,500* dwellings, the majority of which will be detached. Multi-units were 48% of all dwelling consents in 2023. We forecast this to decrease, throughout the forecast period, to 28% by 2029.

Figure 4.6.2 Dwelling units in Otago

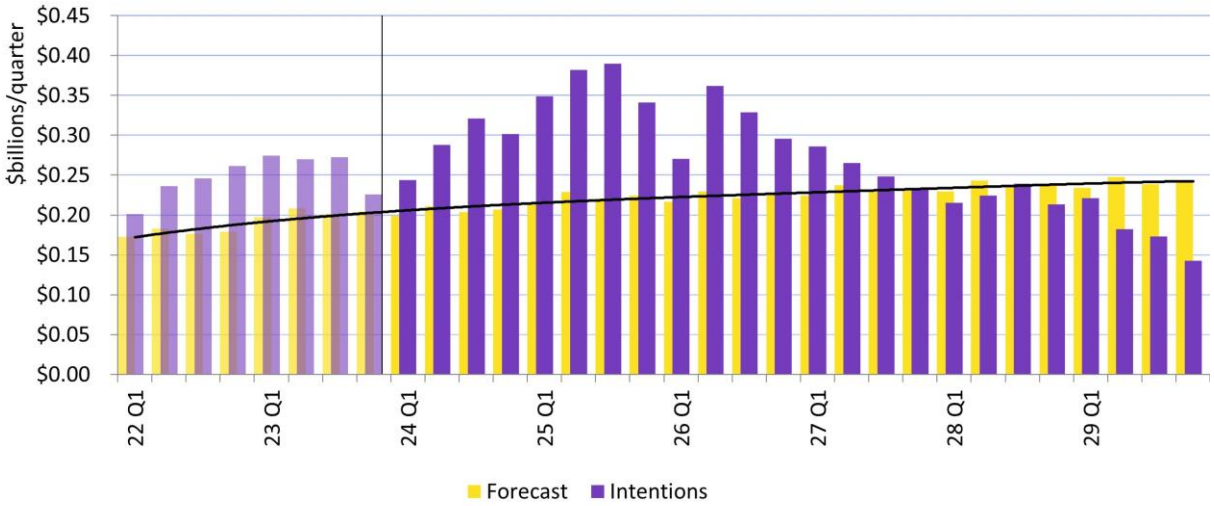


Source: BRANZ

Otago non-residential building activity

Non-residential building activity increased by 14.1% to *$0.81b* in 2023, following a decrease of 3.1% in 2022. We forecast non-residential activity to grow to *$0.82b* in 2024, before decreasing for the remainder of the forecast period, to *$0.96b* in 2029. Intentions data shows that market constraints are limiting non-residential building activity in Otago, as intentions data is significantly higher than our forecast for most of the forecast period.

Figure 4.6.3 Otago non-residential building activity

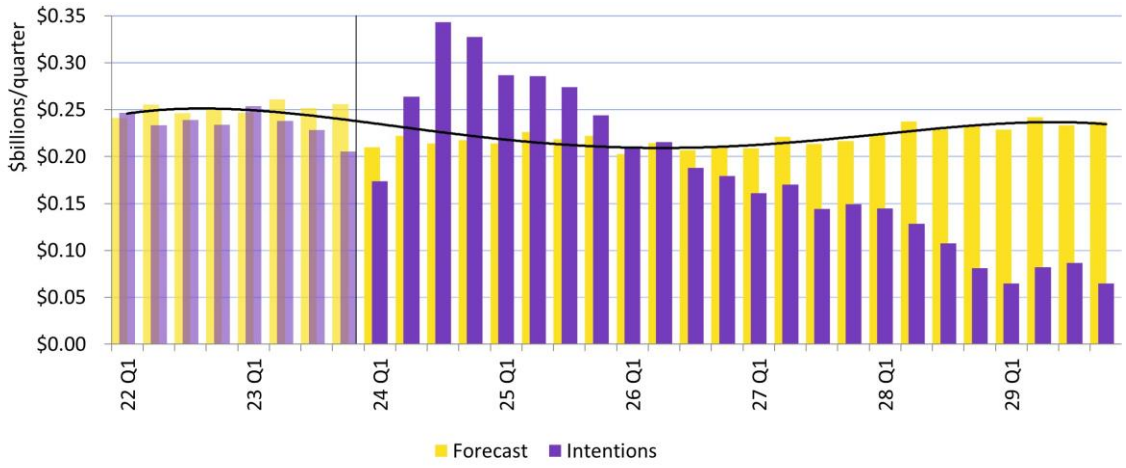


Source: BRANZ/Pacifecon

Otago infrastructure activity

Overall infrastructure activity in 2023 was *$1.0b*, which is similar to the previous year's value. Infrastructure activity is forecast to decrease to *$0.84b* per annum in 2026, then gradually rise to *$0.94b* in 2029.

Figure 4.6.4 Otago infrastructure activity



Source: BRANZ/Pacifecon

Planned non-residential buildings and infrastructure work for Otago includes:

- visitor accommodation and tourist facilities
- hospitals and aged care facilities
- university buildings and student accommodation
- roads and airport developments
- three waters developments (drinking water, wastewater and stormwater)
- electricity production and transmission
- residential subdivisions.

Source: Pacifecon

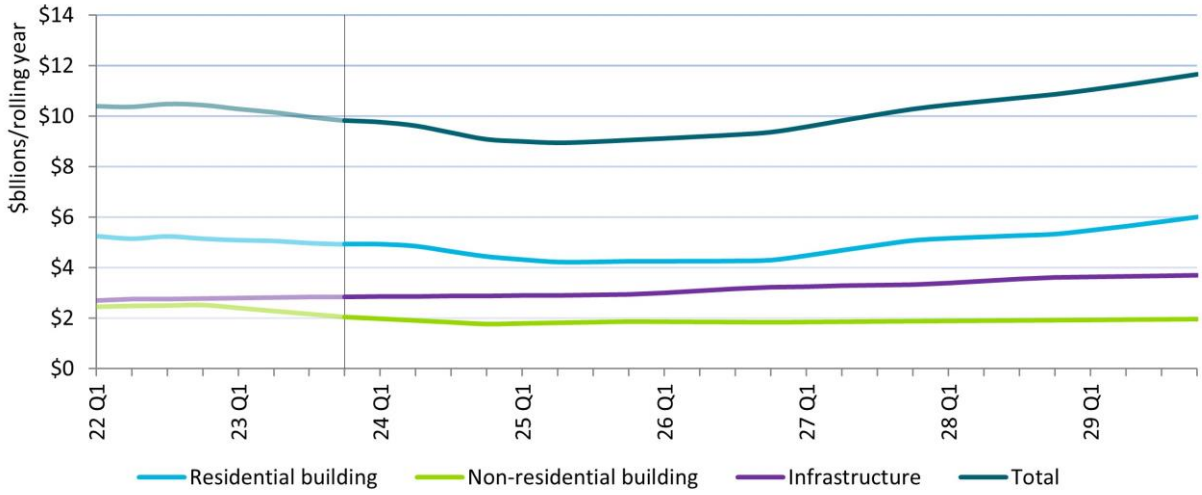
4.7 Rest of New Zealand

Rest of New Zealand covers the remaining 10 regions of New Zealand – Gisborne, Hawke's Bay, Manawatu-Whanganui, Marlborough, Nelson, Northland, Southland, Taranaki, Tasman and West Coast. These regions individually all have a lower value of total construction activity and smaller populations than the other regions considered in this report.[14]

Total construction value for Rest of New Zealand decreased by 6% to *$9.8b* in 2023. Reductions were evident in non-residential building activity and residential building, which experienced decreases of 18.6% and 4.3% respectively. In contrast, infrastructure activity increased slightly (2.2%) in 2023 which may be related to the need for work associated with cyclone remediation.

Total construction value for Rest of New Zealand is forecast to continue to slow through to *$9.0b* per annum in 2025 before rising again to reach *$11.6b* in 2029.

Figure 4.7.1 All construction in Rest of New Zealand, by value



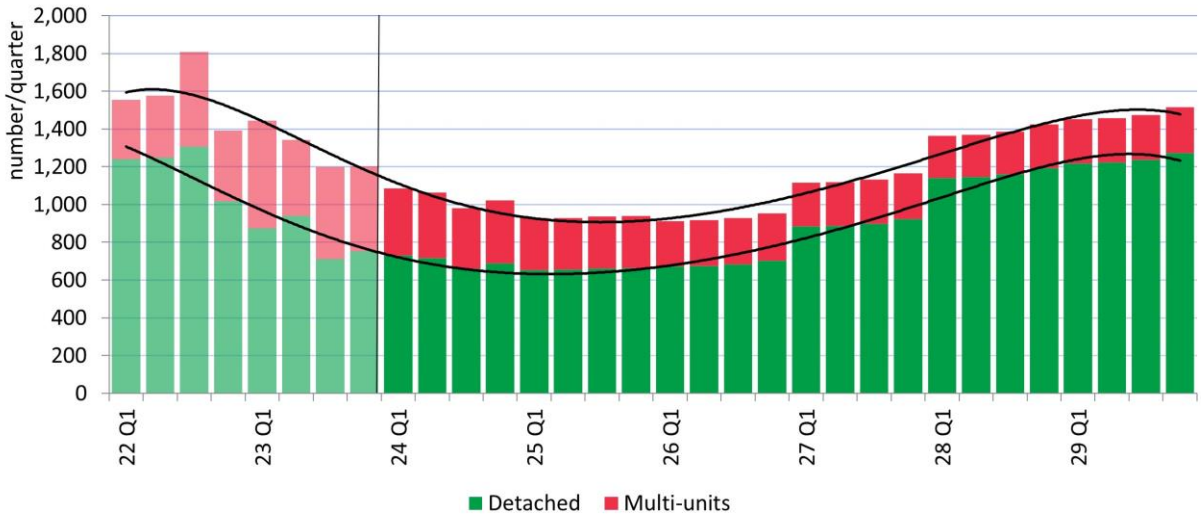
Source: BRANZ/Pacifecon

[14] Some regions have static or decreasing populations.

Rest of New Zealand dwelling consents

Dwelling unit consents in Rest of New Zealand fell by 18% in 2023 to *5,188* and are forecast to fall to a low of *3,710* in 2026. Multi-units are not as popular in these 10 regions, and their proportion is expected to fall back to about 16% by the end of the forecast period. However, uncertainty remains as decisions are made around repair/rebuild intentions post-cyclone on the East Coast of the North Island.

Figure 4.7.2 Dwelling units in Rest of New Zealand

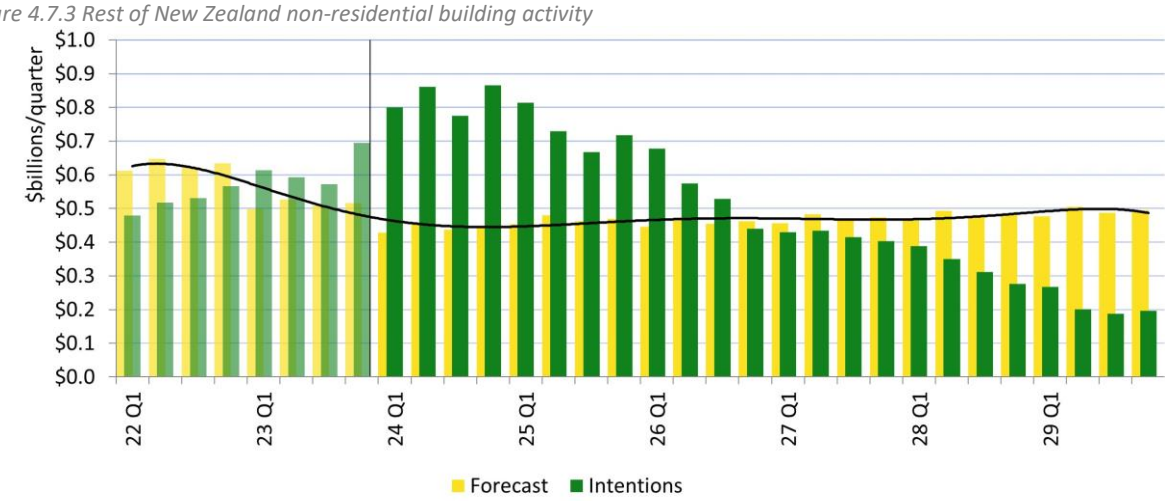


Source: BRANZ

Rest of New Zealand non-residential building activity

The Rest of New Zealand had experienced strong growth in non-residential building activity up to 2022, increasing by 65% in 2021 and by a further 16% in 2022, to *$2.5b*. However, unlike the rest of the country, activity in the Rest of New Zealand fell by 18.6% in 2023 to *$2b*. We forecast that activity will fall further to *$1.8b* in 2024, before tracking back up towards *$2b* by the end of the forecast period. The very high value in the research data indicates that there are strong intentions for non-residential buildings in Rest of New Zealand. However, we anticipate that projects - especially central and local government projects - will be pushed further into the future due to competing priorities as regions balance remediation and resilience work with other community needs.

Figure 4.7.3 Rest of New Zealand non-residential building activity

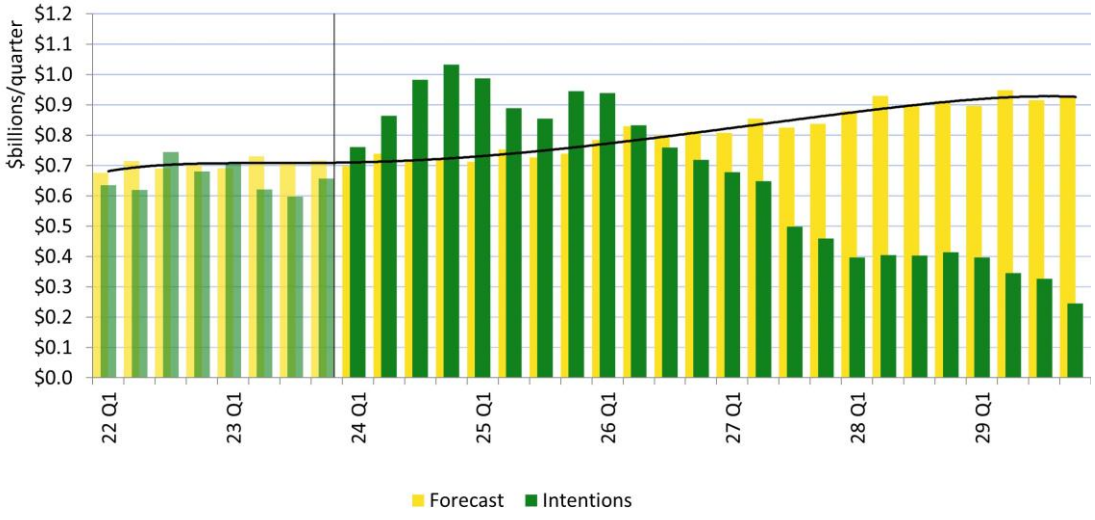


Source: BRANZ/Pacifecon

Rest of New Zealand infrastructure activity

Infrastructure activity for Rest of New Zealand reached *$2.8b* per annum in 2023 and is expected to continue to increase, reaching *$3.7b* by 2029. It is anticipated that a proportion of this increase will be related to cyclone recovery and building further resilience into infrastructure networks.

Figure 4.7.4 Rest of New Zealand infrastructure activity



Source: BRANZ/Pacifecon

Individual regions within Rest of New Zealand

Northland is the largest region in the Rest of New Zealand group and provides approximately 25% of the group's new dwelling consents.[15]

Table 4.7.1 All building and construction in the year to 31 December 2024 for Rest of New Zealand, by region and construction type

Region	Forecast residential building ($m)	Non-residential building intentions ($m)[16]	Infrastructure activity intentions ($m)
Northland	$1,060	$474	$807
Manawatu-Whanganui	$908	$628	$676
Hawke's Bay/Gisborne	$816	$839	$776
Nelson/Marlborough	$756	$354	$387
Taranaki	$435	$300	$403
Southland	$323	$461	$124
West Coast	$135	$123	$128
New Zealand wide[17]	—	$123	$340
Total	**$4,434**	**$3,303**	**$3,639**

Source: BRANZ/Pacifecon

[15] By total construction value and number of new dwelling consents.

[16] Values in red are from Pacifecon's database of anticipated project values and may be subject to optimism bias.

[17] New Zealand wide is used in Pacifecon's database to define work that covers all New Zealand; for example, ultra-fast broadband rollout.

5. Summary

Following the disrupter of COVID-19 and the cyclones in early 2023, coupled with high inflation and interest rates, New Zealand like other countries is undergoing a period of adjustment. While the need for housing and infrastructure remains, central and local government are having to reassess priorities and reallocate funding taking into account community affordability. This may mean rescoping existing projects, pushing timeframes further out than originally planned, cancelling some projects or prioritising new work as a consequence of changed circumstances or new needs (e.g. new flood control measures).

At the time of writing, central government was still working through the detail of some of its new directions, such as the introduction of legislation to support policies related to Local Water Done Well and finalising the Fast-track approvals process. Similarly, local councils were at different stages of undertaking the three-yearly reviews of their respective LTPs or, in the case of cyclone affected councils, enhanced annual plans. While work is continuing, there is a degree of uncertainty for construction as adjustments to work programmes and projects are finalised.

This uncertainty can be seen throughout the forecasts, particularly when comparing the BRANZ forecast to Pacifecon's intentions data. The Intentions data starts to fall away from mid-2027 as the pipeline of work becomes less clear. As central and local governments finalise their plans, the pipeline should start to become clear and restore confidence to the sector.

Overall, we forecast construction activity to fall by 8.7% in 2024, driven by a fall of 7.6% in residential activity, a fall of 14,2% in non-residential activity, and 19% in infrastructure activity. A further small decrease in activity is expected in 2025, before construction activity increases throughout the remainder of the forecast period.

6. Comparison with the National Construction Pipeline Report 2023

6.1 Adjustments to data from the 2023 report

The following adjustments have been made to the forecast data from the 2023 report to enable a closer comparison with actuals and forecasts in this report:

- Conversion from December 2022 dollars to December 2023 dollars to account for inflation as follows:[18]
    - Residential building 4.3%
    - Non-residential building 5.7%
    - Infrastructure construction 2.1%
- Adjustments for Stats NZ's revisions to the December 2022 gross fixed capital formation data:[19]
    - Residential building 1.4%
    - Non-residential building 0.2%
    - Infrastructure construction 6.8%

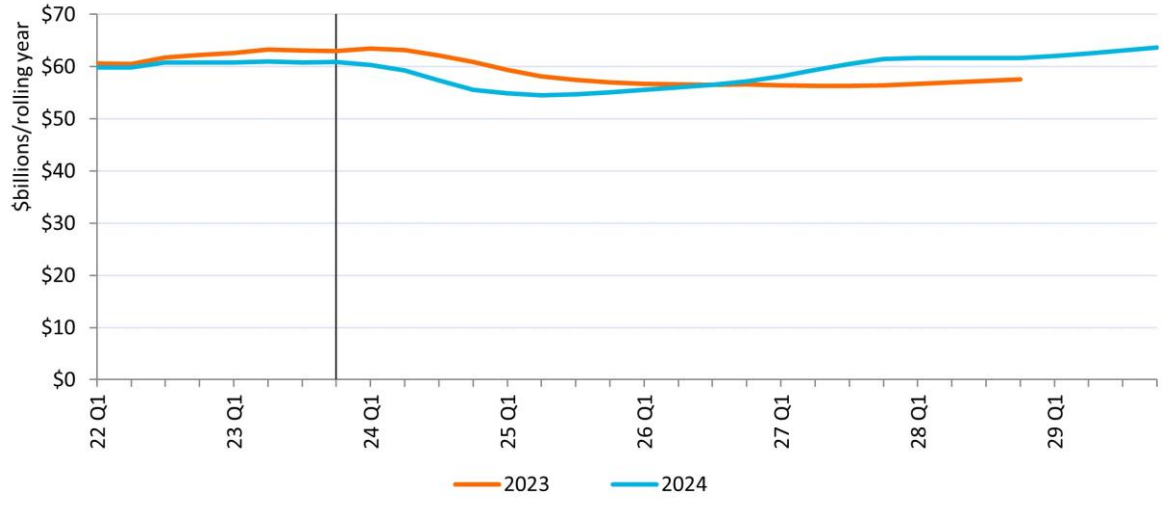
6.2 How did BRANZ do with the 2023 forecast?

The total value of construction nationally increased slightly in 2023 (up 0.1%), whereas the 2023 report had forecast a slight larger increase of 1.3% in total construction activity.

Residential building decreased by 4.3%, non-residential building increased by 9.9%, and infrastructure construction increased by 2.2%.

This year's forecast is for construction activity to decrease sooner and to a slightly larger extent than in the 2023 forecast, but to reach higher activity levels towards the end of the forecast period.

Figure 6.2.1 All construction nationally, 2023 and 2024 forecasts compared



Source: BRANZ/Pacifecon

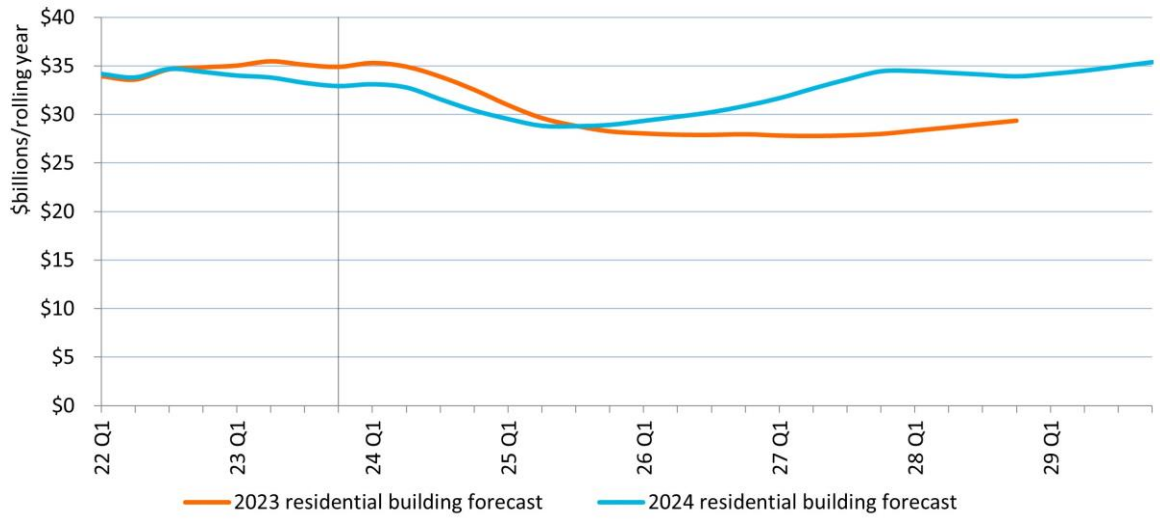
[18] The 2022 report has been adjusted to December 2023 dollars for comparison.

[19] Stats NZ adjusts the gross fixed capital formation data following its initial release for a couple of years. It is likely this data will be adjusted again, either up or down, in the next 12 months.

Residential building forecast comparison

The 2023 report forecast a 0.1% increase in residential building activity for 2023 nationally, whereas there was actually a decrease of 4.3%, to *$32.9b*. The current report forecasts residential building activity to fall to *$28.9b* in 2025, before increasing to *$35.4b* at the end of the forecast period.

Figure 6.2.2 All residential building nationally, 2023 and 2024 forecasts compared

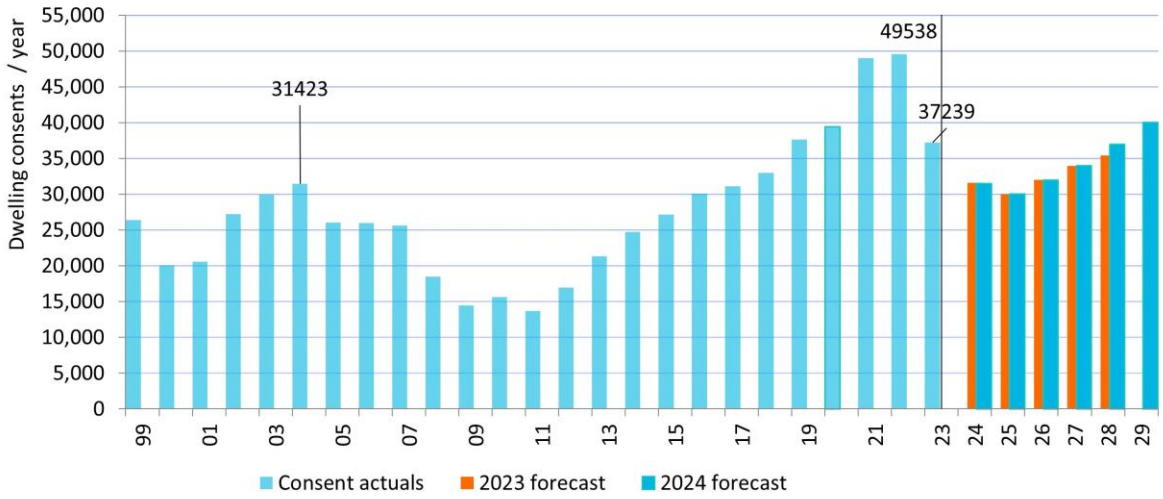


Source: BRANZ

Dwelling unit forecast comparison

The 2023 report forecast a 25% decrease in dwelling consents for 2023 nationally; our forecast was accurate on this. This year's forecast is for a further decrease to 31,000 dwelling consents for 2024. However, we do anticipate new dwelling consents to increase from 2026.

Figure 6.2.3 Dwelling units consented nationally, 2023 and 2024 forecasts comparison



Source: BRANZ/Stats NZ

Non-residential building forecast comparison

The 2023 report forecast a 4% increase in non-residential building activity for 2023 nationally, which was lower than the actual growth rate of 10%. We forecast non-residential building activity to fall throughout 2024, before increasing at a higher rate than forecast in the previous report.

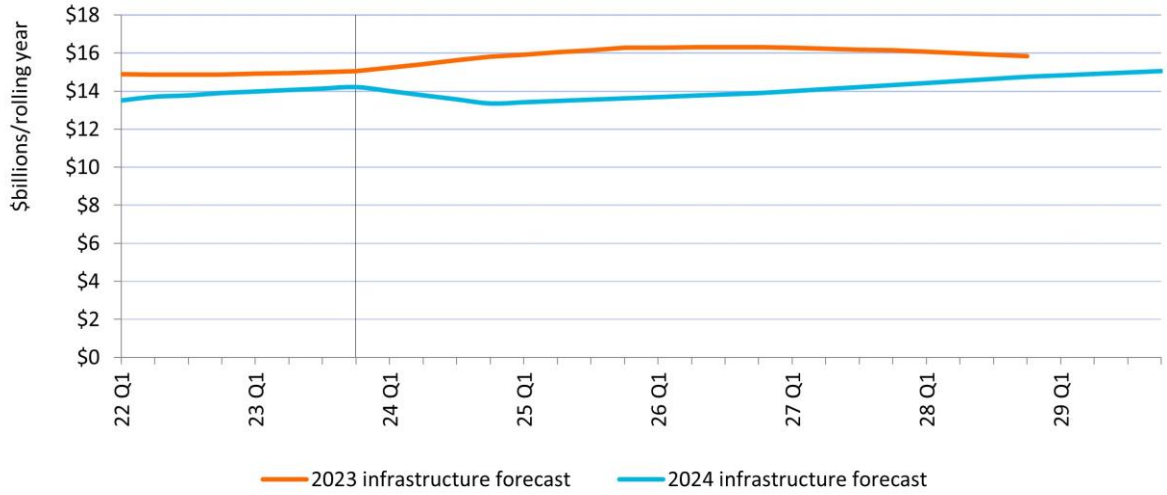
Figure 6.2.4 Non-residential building nationally, 2023 and 2024 forecasts compared

Source: BRANZ

Infrastructure construction forecast comparison

National infrastructure values are historically more consistent year on year than residential or non-residential building activity values. Last year's report expected a 1% increase in infrastructure activity, whereas actual activity recorded a 2% increase. Infrastructure gross fixed capital formation has seen significant revisions over recent years.

Figure 6.2.5 Infrastructure activity nationally, 2023 and 2024 forecasts compared



Source: BRANZ

6.3 Comparison of Pacifecon's 2024 construction intentions data with previous reports

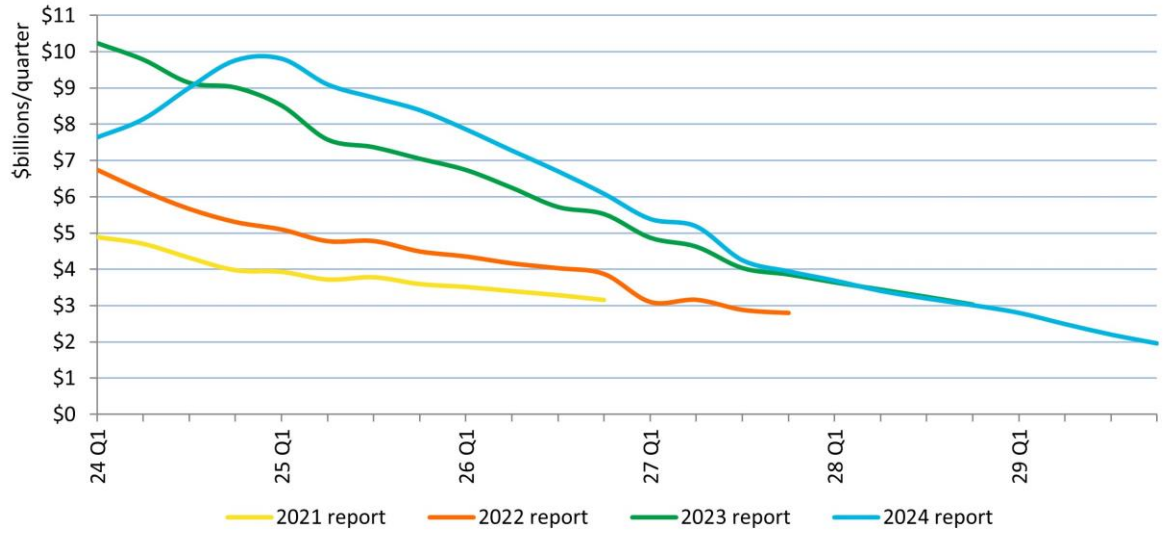
Pacifecon's database of construction intentions contains anticipated values and start dates for non-residential buildings and infrastructure projects. This section compares Pacifecon's 2024 data with the data used in preceding reports. It compares how the value and timeline of Pacifecon's researched project intentions have varied across reports.

Construction intentions data reported in this report rises in 2024 and maintains a high level through to 2026. The total value of 2024 intentions is slightly below that reported in the previous year due the cancellation of a small number of high value projects in late 2023.

The data for intentions for the 2021, 2022 and 2023 reports show similar curves to each other. Pacifecon's researchers are constantly adjusting project values and estimated start dates. While some work is expected to start later than anticipated and work is frequently of a longer duration than expected, a small number of projects may be brought forward.

The report highlights where the data has indicated strong known project intentions for non-residential and infrastructure projects throughout the forecast period.

Figure 6.3.1 Value of all Pacifecon known non-residential and infrastructure project intentions data, by report year



Source: Pacifecon

6.4 Comparison of previous reports' project intentions with project outcomes

The actual number of $100m+ projects that started each year has been increasing year on year, from 20 in 2013 to 36 in 2017 and 37 in 2022. However, 2023 saw a reduction with only 27 $100m+ projects commencing during the year.

The number of $100m+ projects in the dataset anticipated to start in 2023 (37) was higher than the number that actually started (27). Section 6.5 describes the optimism bias that usually occurs with specific project intentions. Comparing the projections with actuals over time helps to inform how to accurately adjust for this bias. Pacifecon was most accurate in anticipating which high-value projects would start in the 2019 report and the 2021 report.

The number of researched projects valued at over $100m expected to start between 1 April 2024 and 31 March 2025 is now anticipated to be 31 projects (22 non-residential building and 9 infrastructure projects; see Appendix D for details).

Table 6.4.1 compares what was projected with actuals over the previous five reports. There were 37 known projects (non-residential building and infrastructure construction) valued at $100m or more included in the 2023 report that were anticipated to start between 1 April 2023 and 31 March 2024. Of these 37 projects, 21 started. An additional 6 projects started, bringing the total to 27.

The number of researched projects valued at over $100m expected to start between 1 April 2024 and 31 March 2025 is now anticipated to be 31 projects (22 non-residential building and 9 infrastructure projects; see Appendix D for details).

Table 6.4.1 Outcome of projects valued at $100 million and over anticipated to start across previous reports

Outcome	Number of projects initiated				
	2019 report	2020 report	2021 report	2022 report	2023 report
Started as anticipated[20]	16	21	26	21	21
Anticipated to start within the coming year	2	2	6	2	0
Anticipated to start beyond one year's time	13	2	4	6	13
On hold or changed since previous report[21]	0	0	0	0	3
Total	**31**	**25**	**36**	**29**	**37**
Additional projects starting[22]	14	16	11	16	6

[20] One project started as anticipated but was subsequently cancelled due to cost escalations. Decisions are still pending with regard to the future of this project.

[21] Two projects have been placed on hold since the previous report. One project has been broken into several smaller, connected projects which have an aggregated value of >$100m and none had commenced during the April 2023 to March 2024 period.

[22] Additional projects starting since the 2022 report: The values of three projects increased to over $100m prior to commencing; one project was brought forward to start during the April 2023-March 2024 timeframe; two projects scheduled to start in the previous year commenced during the period.

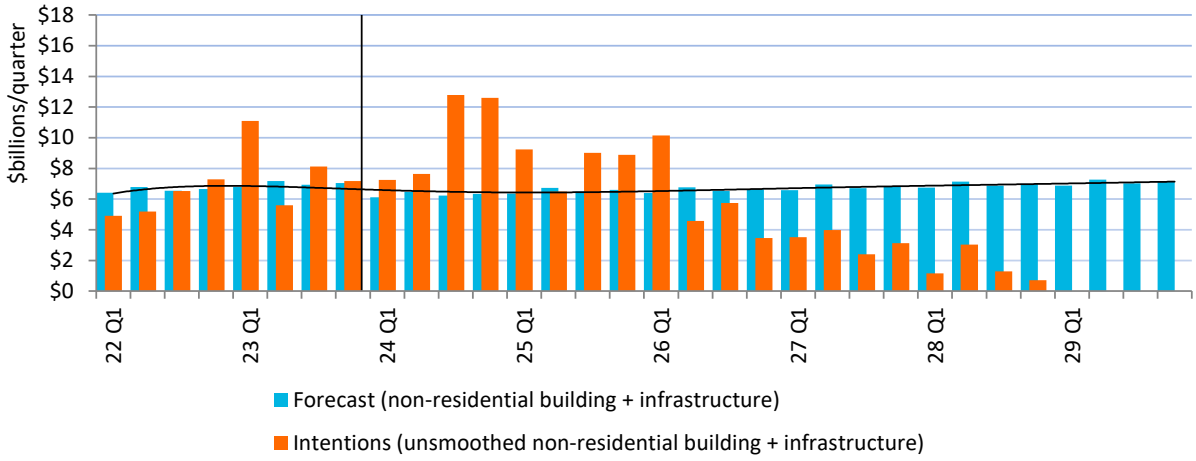
Number of projects started in timeframe	**30**	**37**	**37**	**37**	**27**

Source: Pacifecon

6.5 Construction intentions and optimism bias

All intentions in building and construction come with some level of overconfidence; this is termed 'optimism bias'. Projects may lag behind their original timelines or are occasionally cancelled. This optimism bias of non-residential building and infrastructure construction intentions in the Pacifecon dataset can be seen in the raw (unsmoothed) researched intentions data. Compared with the forecast, optimism bias results in a higher than expected number of intended projects over the next few years and a lower than expected number of intended projects over the longer term.

Figure 6.5.1 All non-residential and infrastructure construction intentions, raw (unsmoothed) data



Source: BRANZ/Pacifecon

7. Disclaimer

All reasonable care has been taken in gathering, compiling and producing the information specified in this report. Pacifecon (NZ) Ltd, BRANZ and MBIE will not be responsible for errors, omissions or inaccuracies or liable for any claims, actions or suits arising directly or indirectly therefrom.

Pacifecon (NZ) Ltd does not typically use its database for this type of analysis. This has required additional data manipulation and changes to its database and processes. Over time, the techniques and processes have been refined.

Advice has been sought from a variety of sources, and it is believed that the methodology has a sound basis for future reporting.

Queries and feedback can be emailed to *info@building.govt.nz*

8. Appendices

8.1 Appendix A: About the parties involved in preparing this report

BRANZ is an independent and impartial research, testing and consulting organisation challenging Aotearoa New Zealand to create a building system that delivers better outcomes for all. This is achieved by transforming insightful research into accessible actionable knowledge.

BRANZ is focused on:

- researching and investigating the design, construction and performance of buildings that impact the built environment in New Zealand, and
- enabling the transfer of knowledge from the research community into the building and construction industry.

www.branz.co.nz

Pacifecon focuses exclusively on the New Zealand and Pacific Islands construction industry, providing business intelligence in the form of future residential, non-residential and infrastructure project information to its client base. Information is also held on projects that may have a work start date far beyond 2029, including local government long-term plans.

Pacifecon has over 30 researchers spread throughout New Zealand. Using their local knowledge in each of the regions and sectors, they deliver thorough, timely and accurate information on construction projects from the earliest planning stages to start of work across all construction sectors:

- residential building – detached houses, townhouses, apartments and retirement villages
- non-residential building – commercial, industrial, education, health and sport
- infrastructure – civil, heavy engineering and energy.

www.pacifecon.co.nz

8.2 Appendix B: Terminology, abbreviations and definitions used in this report

actuals	Documented historical values that have been realised.
apartment	Any dwelling unit that is attached to another dwelling unit above or below it or that is part of a commercial building is considered an apartment. Apartments in retirement villages are not included.
b	Billion (1,000,000,000 or 10^9).
boom-bust cycle	A process of economic expansion (boom) and contraction (bust) that occurs repeatedly.
building consent	A formal approval from a building consent authority to construct or alter a building.
COVID-19	A worldwide pandemic which has resulted in restrictions and economic measures being undertaken in New Zealand.
detached dwelling	Any stand-alone dwelling unit that is not attached to any other unit (i.e. a typical house on its own section).
dwelling	A building that is used for the purpose of human habitation. Dwellings include detached and multi-unit dwellings.
forecast	Refers to BRANZ's information on expected future activity.
forecast period	The six years from 1 January 2024 to 31 December 2029 for which building and construction activity is forecast in this report.
gross fixed capital formation	Net/gross increase in physical assets (investment minus disposals) within the measurement period. It does not account for the consumption (depreciation) of fixed capital or the cost of land purchases. It is a component of the expenditure approach to calculating gross domestic product (expenditure). This report uses gross fixed capital formation. Routine maintenance is not included. Alterations and additions that significantly extend the life or capacity of an asset are included (i.e. all work done with an addition and alteration consent).
infrastructure	Infrastructure covers all construction that is not a building, including: • transport – roads, rail, bridges, tunnels, runways, harbours, marinas, reservoirs, shelters, parking and lighting • ground works – residential, commercial and industrial subdivisions, earthmoving, landscaping, parks and landfill • amenities – telecommunications, water and energy services • mining and energy – wind, thermal, hydro, oil and gas. Infrastructure is termed 'other construction' in Stats NZ classifications.

intentions	Refers to Pacifecon's research into the construction industry's intentions of future activity.
lockdowns	The periods of Alert Level 4 in New Zealand in response to the COVID-19 pandemic
m	Million (1,000,000 or 10^6).
multi-unit dwelling	Separate occupancy dwelling with a wall, ceiling and/or floor in common with another dwelling unit. This category includes apartments, townhouses and retirement village units.
non-residential buildings	Values include new construction, additions and alterations to vertical structures, including hostels, boarding houses, prisons, hotels, motels, hospitals, nursing homes, schools, libraries, museums, churches, shops, restaurants, bars, offices, factories and warehouses.
optimism bias	Overconfidence that is associated with building and construction intentions.
p.a.	Per annum
quarters	Q1: January to March. Q2: April to June. Q3: July to September. Q4: October to December.
residential buildings	Includes houses and multi-unit dwellings. Value of residential buildings includes the value of additions and alterations. The number of dwelling consents excludes additions and alterations.
retirement village units	All retirement village units from detached houses to apartments and rooms. The common areas are captured as non-residential buildings.
rolling years	The aggregation of values from the 12 months immediately preceding a particular point in time – for example, 2024 Q2 is the aggregate of the values from July 2023 to June 2024.
smoothing process	Process of spreading the total cost of a project over its intended construction duration and adjusting for optimism bias.
townhouse	The Stats NZ category of townhouses, flats, units and other dwellings. All dwellings that are attached horizontally (side by side) to another dwelling unit are included in this category. A terraced house is included in this category, as is a minor dwelling or 'granny flat'.
years	The 12 months ending 31 December of the year referred to.

8.3 Appendix C: Methodology, data, statistics and assumptions used in this report

This report is built from two independent but complementary sources of information on national building and construction activity.

Forecast: Produced by BRANZ based on Stats NZ's gross fixed capital formation data series. The gross fixed capital formation measure includes all types of construction (whether a building consent is required or not), providing a common measure across the three fixed asset classes of:

- residential building
- non-residential building, and
- infrastructure construction.

Intentions: Pacifecon's construction project intentions database contains expected costs over time for non-residential and infrastructure projects. Information is collected by Pacifecon on pre-construction project intentions and projects under way. It is an extensive list of non-residential and infrastructure intentions across New Zealand.

Forecasting methodology

The forecasting that provides the basis of this report was completed on 19 April 2024, based on the Stats NZ March 2024 release of 2023 gross fixed capital formation data and other relevant data.

The key variables used in the forecast were as follows:

- Annual average GDP growth to fall to 3.1% by late 2026 before falling back to 2.9% by the end of the forecast period.
- The official cash rate is forecast to have peaked at 5.5% and cuts to the official cash rate will begin in 2025.
- Net migration is forecast to slowly fall from current highs throughout the forecast period.
- Annual average house price growth is forecast to peak at 7.7% in mid-2025 but fall back to about 3% by the end of the forecast period.

Residential methodology

The residential building sector forecasts in this report are produced by BRANZ. They are based on modelling of historical building consents and economic forecast indicators. This sector has much shorter lead times than the non-residential sector.

Key assumptions

- BRANZ has assumed a direct relationship between household formation and demand for new dwelling construction.
- BRANZ has assumed zero unsatisfied residential building demand at the 2013 Census. However, there is assumed to now be a housing shortfall.
- The net result is an average of just over 34,000 dwellings per annum through to 2029.[23]
- An average of a twelve-month time lag is assumed between the building consent issue and value of work completed for detached dwellings and eighteen-months for attached dwellings.
- Value of work includes detached houses, multi-unit dwellings and additions and alterations to existing dwellings, and is based on consent values multiplied by between 1.5 and 1.76 to allow for variations after the consent has been issued and other costs included in the gross fixed capital formation measure. The multiplication factor is calculated from historical ratios of fixed capital formation/consent values.

[23] This was 33,500 dwellings in the 2023 report and 37,000 in the 2022 report.

- Historical consents are first published data, and there may be subsequent changes in some locations. Usually, these revisions are minor.

All non-residential building and infrastructure

The non-residential building and infrastructure forecasts are based on BRANZ forecasts and charted alongside researched project intentions data held by Pacifecon throughout the report.

Non-residential building methodology

BRANZ forecasts of non-residential buildings are based on forecasts of non-residential building consent values provided by Stats NZ. The consent values are multiplied by a factor between 1.3 and 1.4 for gross fixed capital formation using historical ratios between consents and gross fixed capital formation and allowing for an average of a 12-month time lag between building consent issue and value of work completed.

Ten categories of non-residential building consents are forecast based on the Stats NZ data. Single equation regression models have been developed for most of the categories.

Infrastructure methodology

BRANZ forecasts for infrastructure are based on modelling the historical trends for industry commissioning and ownership of assets and expected growth in the five main sectors of:

- mining – about 4% of other construction fixed-capital formation
- electricity/gas/water sectors – 34%
- transport – 39%
- telecommunications – 8%
- other – 15%.

Real growth is based on historical growth trends and planned work (for example, the Government Policy Statement on Land Transport Funding). Real growth in gross fixed capital formation for the five sectors is assumed to be -3% per year for mining, 1% for electricity/gas/water, 1% for transport, 0% for telecommunications and 1% for other infrastructure works.

Intentions data methodology

Pacifecon's anticipated projects

A database of over 29,200 researched projects known to Pacifecon has been used in this report. The data is up to date as of 31 March 2024, and larger-value projects have been added, adjusted or removed up to 15 May 2024.

The Pacifecon database of project values shows the value of all projects, smoothed across future quarters for the duration of the project (as far as this is known or estimated). Work on all high-value (over $50m) non-residential construction initiated since the beginning of 2013 and that is still in progress is also included. The dataset includes both non-residential building and infrastructure.

Pacifecon's refinement of the smoothing process

Pacifecon's data used in this report consists of:

- projects that have started since 2013 and are over $50 million
- projects (of all values) that have started since 1 January 2022
- projects (of all values) that are at pre-construction stages, from the very earliest planning through to tendering.

This real project activity data is collected and retained by Pacifecon.

The total number of projects reported by Pacifecon and included in the dataset for this report has increased from over 6,000 in the 2013 report to over 13,300 planned projects and over 15,500 commenced projects in the current report (over 29,200 projects in total). When using researched project intentions to forecast activity, Pacifecon accounts for optimism bias. Not all projects in the planning process will progress to actual constructions at the intended value or proposed timeframes. To account for this optimism bias in the database, Pacifecon undertakes a *smoothing process* to prepare the data for the report.

Pacifecon has refined its smoothing process over the years by studying the highest-value projects to ascertain the most likely allocation of their value of work over the forecast period.

- First report (2013): projects over $100 million were individually scrutinised.
- Second report (2014): projects over $90 million were scrutinised.
- Third report (2015): projects over $75 million were scrutinised.
- Fourth report (2016): projects over $60 million were scrutinised.
- Fifth (2017), sixth (2018), seventh (2019), eighth (2020), ninth (2021), tenth (2022), eleventh (2023) and current report (2024): projects over $50 million were scrutinised.

In some (but not all) cases for 2024, projects with values lower than $50m were examined individually.

The thousands of lower-value projects in the research data are smoothed as follows:

- $40m to <$50m projects – value of work is spread over twelve quarters.
- $30m to <$40m projects – value of work is allocated to ten quarters.
- $15m to <$30m projects – value of work is spread over eight quarters.
- $8m to <$15m projects – value of work is allocated to six quarters.
- $5m to <$8m projects – value of work is allocated to five quarters.
- $3m to <$5m projects – value of work is allocated to four quarters.
- $1m to <$3m projects – value of work is allocated to three quarters.
- <$1m – value of work is allocated to two quarters.

8.4 Appendix D: Projects likely to start within the year valued over $100m

Table 8.4.1 Non-residential building projects likely to start[24] within the year[25] valued at over $100m[26]

Region	Type	Project initiator
Auckland		
Mixed-use development	Multi-Category	Private
Hospital/care unit	Health	Private
Railway station	Commercial	Local government
Electricity	Heavy Industry/Energy	Private
Railway station	Commercial	Local government
Commercial development	Multi-Category	Private
Furnace replacement	Industrial	Private
Retail	Commercial	Private
Mixed-use development	Multi-Category	Private
Mixed-use development	Multi-Category	Private
Waikato/Bay of Plenty		
Electricity	Heavy Industry/Energy	Private
Courthouse	Commercial	Central government
Wellington		
Electricity	Heavy Industry/Energy	Private
Precinct redevelopment	Commercial	Central government
Canterbury		
Museum and art gallery	Commercial	Local government
Commercial development	Multi-Category	Private
Hospital	Health	Central government
Electricity	Heavy Industry/Energy	Private
Otago		
Hospital	Health	Central government
Resort development	Commercial	Private
New Zealand Wide		
Electricity	Heavy Industry/Energy	Central government
Electricity	Heavy Industry/Energy	Central government

Source: Pacifecon

[24] At the time of writing, three projects had commenced.
[25] Year is the 12 months ending 31 March 2025.
[26] Inclusion of a project does not mean it will proceed to the scale and timeframe indicated above. It is, however, the best available picture on 2 July 2024. Pacifecon's building and construction information is constantly updated.

Table 8.4.2 Infrastructure projects likely to start[27] within the year[28] valued at over $100m[29]

Region	Type	Project initiator
Auckland		
Renewals	Transport	Local government
Reserve development	Civil	Local government
Stormwater/wastewater	Civil	Local government
Waikato/Bay of Plenty		
Roading	Transport	Local government
Hawkes Bay/Gisborne		
Roading	Transport	Local government
Roading	Transport	Central government
Manawatu/Whanganui		
Roading	Transport	Central government
Roading	Transport	Central government
Nelson/Marlborough		
Road improvements	Transport	Local government

Source: Pacifecon

[27] At the time of writing, one project had commenced.
[28] Year is the 12 months ending 31 March 2025.
[29] Inclusion of a project does not mean it will proceed to the scale and timeframe indicated above. It is, however, the best available picture on 2 July 2024. Pacifecon's building and construction information is constantly updated.

8.5 Appendix E: Forecast and known table

Table 8.5.1 Forecast and known data ($ billions) by region – annual totals[30]

	Actual		Forecast					
Residential	2022	2023	2024	2025	2026	2027	2028	2029
Auckland	13.9	13.3	12.8	12.1	13.2	14.5	13.7	13.9
Waikato/BoP	5.2	4.9	4.4	4.4	4.9	5.0	6.1	6.7
Wellington	2.7	2.6	2.4	2.0	2.1	2.7	2.4	2.5
Canterbury	5.2	5.0	4.4	4.3	4.5	5.0	4.4	4.2
Otago	2.2	2.1	1.9	1.8	1.9	2.2	2.0	2.0
Rest of NZ	5.1	4.9	4.4	4.2	4.3	5.1	5.3	6.0
TOTAL	**34.4**	**32.9**	**30.4**	**28.9**	**30.9**	**34.4**	**33.9**	**35.4**
Non-residential building								
Auckland	4.4	5.4	4.5	4.8	4.8	5.0	5.1	5.2
Waikato/BoP	2.0	2.1	1.8	1.9	1.9	1.9	2.0	2.0
Wellington	1.1	1.3	1.1	1.1	1.1	1.1	1.1	1.0
Canterbury	1.8	2.0	1.8	1.9	1.9	2.0	2.1	2.1
Otago	0.7	0.8	0.8	0.9	0.9	0.9	0.9	1.0
Rest of NZ	2.5	2.0	1.8	1.9	1.8	1.9	1.9	2.0
TOTAL	**12.5**	**13.7**	**11.8**	**12.6**	**12.4**	**12.8**	**13.0**	**13.3**
Infrastructure								
Auckland	4.3	4.4	4.1	4.2	4.1	4.2	5.0	5.1
Waikato/BoP	3.0	3.1	2.8	2.9	2.7	2.8	2.5	2.5
Wellington	1.6	1.6	1.4	1.4	1.5	1.5	1.5	1.5
Canterbury	1.2	1.2	1.3	1.4	1.5	1.6	1.3	1.3
Otago	1.0	1.0	0.9	0.9	0.8	0.9	0.9	0.9
Rest of NZ	2.8	2.8	2.9	2.9	3.2	3.3	3.6	3.7
TOTAL	**13.9**	**14.2**	**13.4**	**13.7**	**13.9**	**14.3**	**14.7**	**15.0**
All construction								
Auckland	22.7	23.1	21.5	21.2	22.1	23.7	23.8	24.2
Waikato/BoP	10.2	10.1	9.1	9.1	9.5	9.8	10.5	11.2
Wellington	5.3	5.5	4.8	4.6	4.7	5.3	4.9	5.1
Canterbury	8.2	8.3	7.5	7.6	7.9	8.5	7.7	7.6
Otago	3.9	3.9	3.6	3.6	3.6	4.0	3.9	3.9
Rest of NZ	10.4	9.7	9.1	9.0	9.4	10.3	10.9	11.6
TOTAL	**60.7**	**60.8**	**55.6**	**55.1**	**57.2**	**61.5**	**61.7**	**63.6**
Non-residential building intentions								
Auckland	4.4	5.9	6.7	7.4	5.4	3.0	1.8	1.2
Waikato/BoP	2.0	2.0	2.5	3.1	2.2	1.3	0.7	0.4
Wellington	1.2	1.4	1.6	1.3	0.8	0.8	0.6	0.4
Canterbury	1.5	1.8	2.2	2.2	1.5	1.1	1.0	0.7
Otago	0.9	1.0	1.2	1.5	1.3	1.0	0.9	0.7
Rest of NZ	2.1	2.5	3.3	2.9	2.2	1.7	1.3	0.9
TOTAL	**12.1**	**14.6**	**17.5**	**18.4**	**13.4**	**8.9**	**6.3**	**4.3**
Infrastructure intentions								
Auckland	4.3	3.9	5.1	5.4	4.4	2.7	2.2	1.8
Waikato/BoP	2.7	3.0	3.5	3.6	2.8	1.9	1.2	0.8
Wellington	1.3	1.6	1.8	1.7	1.5	1.0	0.7	0.5
Canterbury	1.2	1.1	1.6	1.8	1.5	1.1	0.7	0.4
Otago	1.0	0.9	1.1	1.1	0.8	0.6	0.5	0.3
Rest of NZ	2.7	2.6	3.6	3.7	3.3	2.3	1.6	1.3
TOTAL	**13.2**	**13.1**	**16.7**	**17.3**	**14.3**	**9.6**	**6.9**	**5.1**

Source: BRANZ/Pacifecon

[30] Any differences between figures within Appendix E and other tables and charts in this report may be due to rounding.

8.6 Appendix F: Residential dwelling consents actual and forecast data table

Table 8.6.1 Residential dwelling numbers actual consented and forecast, by region – annual totals[31]

	Actual		Forecast					
Detached	2022	2023	2024	2025	2026	2027	2028	2029
Auckland	4,839	4,146	4,600	5,940	6,070	6,120	6,160	6,130
Waikato/BoP	4,086	2,778	2,600	2,820	3,360	4,040	4,970	5,360
Wellington	1,280	898	750	730	780	900	1,060	1,180
Canterbury	5,078	3,553	3,080	3,080	3,390	3,360	3,340	3,590
Otago	1,302	1,023	890	890	990	1,060	1,170	1,230
Rest of NZ	4,814	3,277	2,750	2,630	2,730	3,590	4,640	4,950
TOTAL	**21,399**	**15,675**	**14,670**	**16,090**	**17,320**	**19,070**	**21,340**	**22,440**
Multi-units								
Auckland	16,462	11,342	8,540	7,020	8,010	8,550	9,490	10,930
Waikato/BoP	2,654	2,430	1,940	1,780	1,760	1,770	1,760	1,890
Wellington	2,591	1,529	1,220	1,120	1,140	1,260	1,410	1,560
Canterbury	3,820	3,406	2,590	2,290	2,210	1,910	1,650	1,770
Otago	1,097	945	700	600	550	500	450	480
Rest of NZ	1,514	1,911	1,340	1,100	980	940	900	950
TOTAL	**28,138**	**21,563**	**16,330**	**13,910**	**14,650**	**14,930**	**15,660**	**17,580**
All dwellings								
Auckland	21,301	15,488	13,140	12,960	14,080	14,670	15,650	17,060
Waikato/BoP	6,740	5,208	4,540	4,600	5,120	5,810	6,730	7,250
Wellington	3,871	2,427	1,970	1,850	1,920	2,160	2,470	2,740
Canterbury	8.898	6,959	5,670	5,370	5,600	5,270	4,990	5,360
Otago	2,399	1,968	1,590	1,490	1,540	1,560	1,620	1,710
Rest of NZ	6,328	5,188	4,090	3,730	3,710	4,530	5,540	5,900
TOTAL	**49,537**	**37,238**	**31,000**	**30,000**	**31,970**	**34,000**	**37,000**	**40,020**

Source: BRANZ/Stats NZ

[31] Any differences between figures within Appendix F and other tables and charts in this report may be due to rounding.

Te Kāwanatanga o Aotearoa
New Zealand Government

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