

# Value of Building Work Put in Place: March 2013 quarter

Embargoed until 10:45am – 05 June 2013

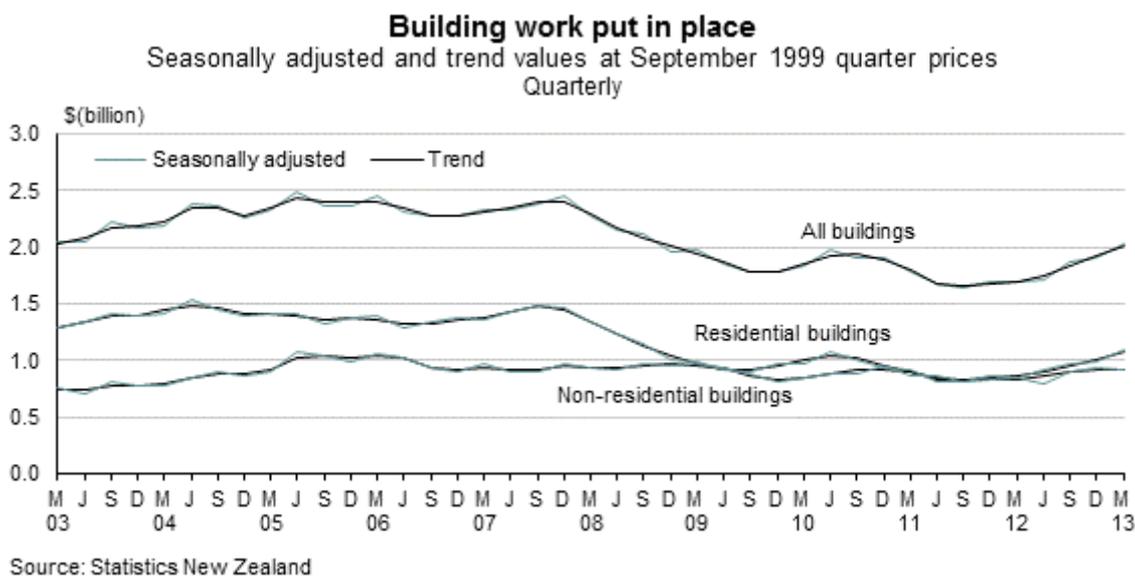
## Key facts

For the March 2013 quarter, after price changes and seasonal variations are removed:

- Residential building activity increased 12 percent.
- Non-residential building activity fell 0.8 percent.
- All building activity increased 5.8 percent.

In the Canterbury region, the value of non-residential building activity (in current prices) was stronger than in the rest of New Zealand.

The trend for overall building activity grew again in the March 2013 quarter, and has now been positive for 18 months. The level of the trend now is close to that last seen in the September 2008 quarter.



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Acting Government Statistician

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## Commentary

- Building activity continues to grow
- Residential building activity increases
- Small fall in non-residential building activity
- Canterbury building work surges post-earthquakes

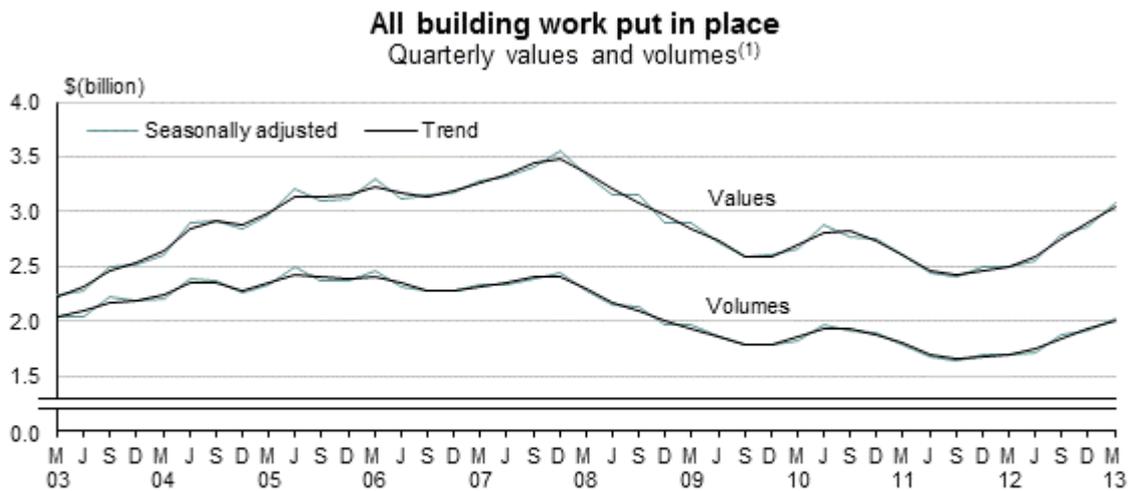
All figures refer to seasonally adjusted volumes (values with price changes and seasonal variations removed) unless otherwise specified.

## Building activity continues to grow

### Volume

Building activity increased 5.8 percent in the March 2013 quarter, following a 2.0 percent increase in the December 2012 quarter.

The trend for overall building activity continues to grow, and is currently 22 percent higher than the low point of the September 2011 quarter. The last time it was higher was in the September 2008 quarter. Trend figures may be revised when future quarters are compiled.



1. Volumes are calculated as values at September 1999 quarter prices.

Source: Statistics New Zealand

### Value

In current prices, the seasonally adjusted value of all building work increased 7.2 percent in the March 2013 quarter. All of the growth came from residential work, which was 13 percent stronger than in the December 2012 quarter. This was the largest increase since September 2002, when it grew 17 percent. Meanwhile, the value of non-residential work edged down 0.4 percent.

Canterbury building activity increased 23 percent in the March 2013 quarter, compared with 5.1 percent for the rest of New Zealand.

## Building work put in place

March quarter unadjusted values



Source: Statistics New Zealand

In the March 2013 quarter, the unadjusted value of all buildings was \$2,837 million, up \$519 million (22 percent) from the March 2012 quarter. Residential building work increased by \$419 million (33 percent) and non-residential work by \$99 million (9.4 percent).

The value of consents for all buildings (unadjusted) was down 11 percent in the March 2013 quarter compared with the December 2012 quarter. But the trend for the value of consents for all buildings has been growing for seven consecutive quarters. Building consents are often used as an early indicator of building activity.

[Building Consents Issued: April 2013](#) has the most recent information.

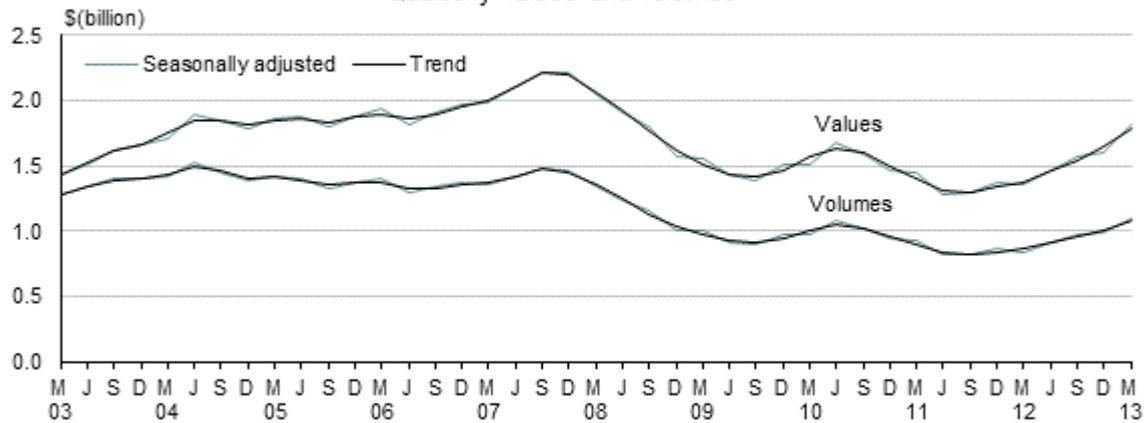
## Residential building activity increases

### Volume

The volume of residential building activity increased 12 percent in the March 2013 quarter, the fourth consecutive quarter of growth. This is the largest increase since the September 2002 quarter, when it grew 16 percent. In the December 2012 quarter the increase was 1.6 percent, and in the September 2012 quarter it was 6.2 percent.

## Residential building work put in place

Quarterly values and volumes<sup>(1)</sup>



1. Volumes are calculated as values at September 1999 quarter prices.

Source: Statistics New Zealand

The trend for residential building activity has risen 31 percent since the September 2011 quarter, which was a significant low point in the series. The last time the trend exceeded the current level was in the September 2008 quarter. Trend figures may be revised when future quarters are compiled.

### Value

The seasonally adjusted value of residential building work, in current prices, increased 13 percent in the March 2013 quarter. This is the fourth quarter of growth, and the largest increase since the September 2002 quarter, when it rose 17 percent.

In the March 2013 quarter, the unadjusted value of residential building work was \$1,682 million, up \$419 million (33 percent) from the March 2012 quarter.

### Small fall in non-residential building activity

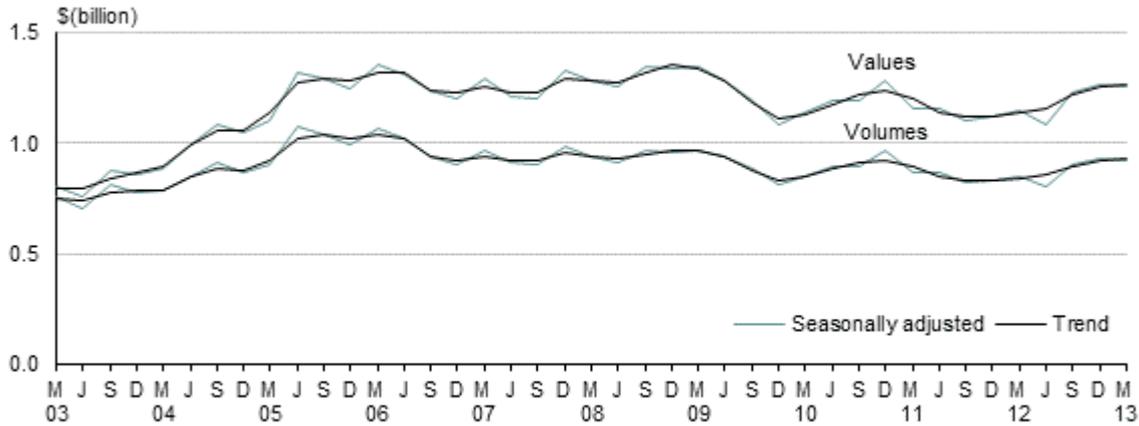
#### Volume

The volume of non-residential building activity fell 0.8 percent in the March 2013 quarter. This follows 2.5 percent growth in the December 2012 quarter.

The trend for the volume of non-residential building work has grown for five consecutive quarters, and is now 12 percent higher than the low point of December 2011.

## Non-residential building work put in place

Quarterly values and volumes<sup>(1)</sup>



1. Volumes are calculated as values at September 1999 quarter prices.

Source: Statistics New Zealand

### Value

The seasonally adjusted value of non-residential building work, in current prices, fell 0.4 percent in the March 2013 quarter, following a 3.0 percent rise in the previous quarter.

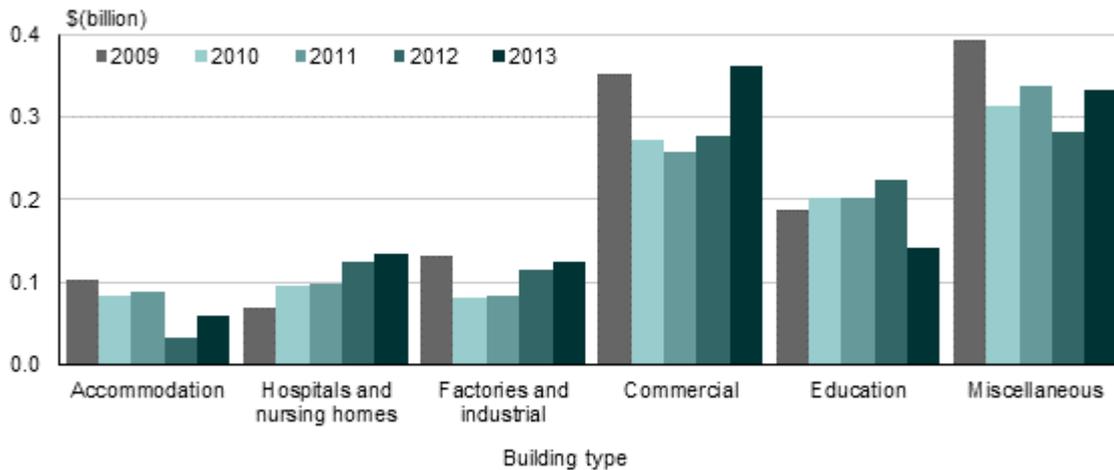
In the March 2013 quarter, the unadjusted value of non-residential building work was \$1,154 million, up \$99 million (9.4 percent) from the March 2012 quarter.

The largest contributors to the unadjusted value in the March 2013 quarter were:

- commercial buildings – \$361 million
- miscellaneous buildings – \$333 million
- education buildings – \$142 million.

## Non-residential building work put in place

By building type  
March quarter unadjusted values



Source: Statistics New Zealand

## Canterbury building work surges post-earthquakes

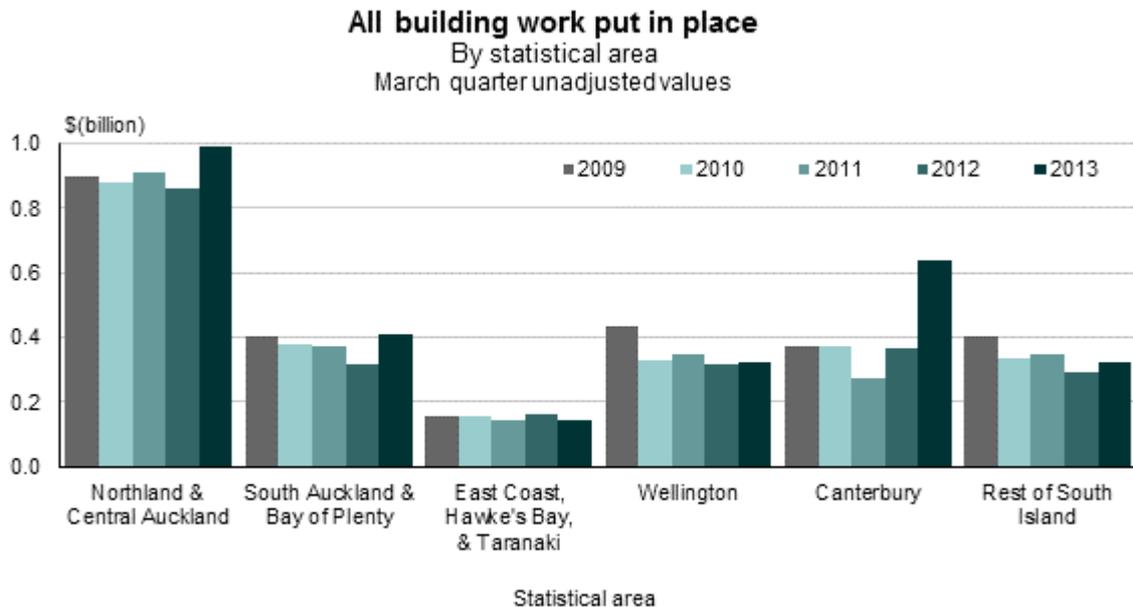
Building activity surged in Canterbury in the March 2013 quarter, particularly for non-residential work. In current prices, the seasonally adjusted changes in the March 2013 quarter for Canterbury were:

- all building activity – up 23 percent (compared with a 5.1 percent rise in the rest of the country)
- residential building activity – up 21 percent (compared with an 11.4 percent rise in the rest of the country)
- non-residential building activity – up 26 percent (compared with a 4.5 percent fall in the rest of the country).

The latest movements follow a modest increase in the December 2012 quarter (1.5 percent) and a strong increase in the September 2012 quarter (30 percent).

For non-residential building activity, there was a large difference between Canterbury and the rest of New Zealand, indicating that Canterbury had a positive effect on the national total. In current prices, seasonally adjusted non-residential building activity was down 0.4 percent across the whole nation. Strong growth in Canterbury meant that the national total did not fall by 4.5 percent like the rest of New Zealand.

This survey is designed for accuracy at the national level, meaning that indicators of regional building activity may be less reliable. The sample error for the March 2013 quarter is 3.0 percent at the national level for all building activity, while for Canterbury it is 8.7 percent.



Source: Statistics New Zealand

Earthquake-related building consents in Canterbury totalled \$147 million in the March 2013 quarter, down from \$156 million in the December 2012 quarter. The latest value includes \$45 million for non-residential building consents, and \$83 million for residential building consents. The residential consents include 173 new dwellings, compared with 118 in the previous quarter.

Building consents are often used as an early indicator of building activity. *Building Consents Issued: May 2013* will be published on 28 June 2013.

Value of Building Work Put in Place data is obtained mostly from a postal survey of builders, owners, and others who have been granted building consents. For further information, see the 'Definitions' section.

For more detailed data on the value of building work put in place, see the Excel tables in the 'Downloads' box.

## Definitions

### About the value of building work put in place

These quarterly releases provide estimates of the value and volume of work put in place on construction jobs in New Zealand. The value of building work includes residential building work and non-residential building work, which are summed to give all building work. Non-building construction work, such as roads and bridges, is excluded.

The value of building work put in place measures activity in the construction sector, and complements building consents issued information (which represents the intention to build).

### More definitions

**Accommodation buildings:** includes hostels, boarding houses, prisons, workers' quarters, hotels, motels, and motor camp buildings.

**Commercial buildings:** includes shops, restaurants, taverns, offices, and administration buildings.

**Miscellaneous buildings:** includes social, cultural, religious, recreational, storage, and farm buildings.

**New buildings:** includes conversions. For example, if a hotel is converted to apartments, the value of work is classified to new dwellings. Values for new building work may sometimes include the cost of demolishing or removing the previous buildings.

**New dwellings:** includes houses, flats, and apartments.

**Non-residential buildings:** includes work on new buildings, plus alterations and additions to existing buildings. There are six categories:

- accommodation buildings
- hospitals and nursing homes
- factories and industrial buildings
- commercial buildings
- education buildings
- miscellaneous buildings.

**Out-buildings:** includes garages, glasshouses, and sheds on residential sections.

**Residential buildings:** includes new dwellings and domestic outbuildings, plus alterations and additions to existing buildings.

**Values:** dollar values for building work put in place. Calculated at current prices.

**Volumes:** values with price changes removed. Calculated at September 1999 quarter prices.

## **Related links**

### **Upcoming releases**

*Value of Building Work Put in Place: June 2013 quarter* will be released on 4 September 2013.

[Subscribe to information releases](#), including this one, by completing the online subscription form.

[The release calendar](#) lists all our upcoming releases by date of release.

### **Past releases**

[Value of Building Work Put in Place](#) has links to past releases.

## **Related movements**

Related movements for the March 2013 quarter compared with the December 2012 quarter were as follows:

### **Capital goods price index**

In the March 2013 quarter:

- residential building construction prices rose 1.0 percent
- non-residential building construction prices rose 0.5 percent.

### **Quarterly Employment Survey**

In the March 2013 quarter:

- the number of full-time equivalent employees (FTEs) in the construction industry rose 3.5 percent
- the number of paid hours in the construction industry increased 4.5 percent.

### **Building consents issued**

Consent figures measure the intention to build. In the March 2013 quarter:

- the number of new dwellings consented rose 0.3 percent (seasonally adjusted)
- the value of consents for residential buildings increased 6.8 percent
- the value of consents for non-residential buildings fell 6.2 percent.

### **International travel and migration**

In the March 2013 quarter, seasonally adjusted figures showed a net gain of 2,280 migrants.

### **National population estimates**

The estimated resident population increased by 0.2 percent in the March 2013 quarter.

To view national population estimates for the March 2013 quarter, select the following categories from the [Infoshare](#) homepage:

Subject category: **Population**  
Group: **Population Estimates**

### **Residential mortgage yields**

Mortgage yields are available from [www.rbnz.govt.nz](http://www.rbnz.govt.nz), or select the following categories from the [Infoshare](#) homepage:

Subject category: **Industry Sectors**  
Group: **Building Activity Survey (BAS)**  
**Interest rates**

### **Production**

The volume of ready-mixed concrete produced fell 2.8 percent in the March 2013 quarter.

To view the production series, select the following categories from the [Infoshare](#) homepage:

Subject category: **Industry Sectors**  
Group: **Secondary production**  
**Ready mixed concrete by region**

# Data quality

## Period-specific information

This section contains information about data that has changed since the previous release.

- [Sample errors](#)
- [Non-sample errors](#)
- [Non-response imputation](#)
- [Low-value consents](#)

## General information

This section contains information about data that does not change between releases.

- [Data source](#)
- [Survey design](#)
- [Consistency with other periods](#)
- [Interpreting the data](#)
- [Comparison with building consent statistics](#)
- [More information](#)

## Period-specific information

### Sample errors

Estimates for the value of building work put in place are derived mainly from a sample survey and are therefore subject to sample errors.

| Sample errors for the March 2013 quarter |  |
|--|--|
|  | Percentage of total value of work put in place |
| Residential buildings                    | 4.1  |
| Non-residential buildings                | 4.3  |
| All buildings                            | 3.0  |

Sample errors quantify the variability that occurs by chance because a sample rather than an entire population is surveyed. The sample errors above indicate that there is a 95 percent probability that the true value of work put in place this quarter is the published estimate, within plus or minus the sample error.

### Non-sample errors

These errors are variable across quarters and cannot be quantified. They can occur when data on building consent and survey forms is incomplete or incorrect or when it is incorrectly delivered, interpreted, or classified. Editing procedures aim to minimise their impact.

### Non-response imputation

For building projects where no survey response is received, Statistics NZ imputes values for work put in place, based on responses for comparable projects.

| <b>Non-response values imputed for the March 2013 quarter</b> |                              |                                 |                                      |
|---|------------------------------|---------------------------------|--------------------------------------|
|   | Imputed value<br>\$(million) | Percentage of<br>category value | Percentage of all<br>buildings value |
| Residential buildings   | 287                          | 17.1                            | 10.1                                 |
| Non-residential buildings                                     | 95                           | 8.2                             | 3.4                                  |
| All buildings   | 382                          | 13.5                            | 13.5                                 |

### **Low-value consents**

These are residential building consents valued from \$5,000 up to \$45,000, and non-residential building consents valued from \$5,000 up to \$80,000. For these consents, it is assumed that:

- the consent value represents the value of work put in place
- consented work will be done during the month following issuing of the consent.

Low-value jobs are therefore valued directly from consents (after a one-month lag), rather than by postal survey. The following table shows the values included for the March 2013 quarter.

| <b>Low-value consents included for the March 2013 quarter</b> |                                   |                                 |                                      |
|---|-----------------------------------|---------------------------------|--------------------------------------|
|   | Low-value consents<br>\$(million) | Percentage of<br>category value | Percentage of all<br>buildings value |
| Residential buildings   | 55                                | 3.3                             | 1.9                                  |
| Non-residential buildings                                     | 44                                | 3.8                             | 1.6                                  |
| All buildings   | 100                               | 3.5                             | 3.5                                  |

### **General information**

#### **Data source**

Values for building work put in place are obtained each quarter by a postal survey of builders or consent applicants. The survey is based on building consents data and is called the Quarterly Building Activity Survey (QBAS).

#### **Survey design**

Building consents are grouped each month into four value ranges for residential buildings, and four value ranges for non-residential buildings, as follows:

- Highest-value range – for all residential or non-residential consents, builders or consent applicants are surveyed to obtain quarterly values for building work put in place.
- Second- and third-value ranges – a sample of builders or consent applicants is surveyed and the quarterly values collected are rated up, to represent both surveyed and non-surveyed building work.
- Lowest value range – the consent values are used to represent the quarterly value of building work put in place.

Surveyed building jobs that are not completed at the end of the quarter are surveyed again in following quarters until the work is finished.

The rating up of sampled values and calculation of sampling error are complex and depend on factors that differ for each value range and month of selection. For further information, contact

[info@stats.govt.nz](mailto:info@stats.govt.nz) or Statistical Methods, Statistics New Zealand, Private Bag 4741, Christchurch.

### Consistency with other periods

| Year | Change in coverage   |
|------|--|
| 1989 | From September 1989, building work is excluded if its consent value is below \$5,000. This excluded work is estimated as being less than 1 percent of published values.  |
| 1993 | From January 1993, the building consents system replaced the less extensive building permits system. This may have affected the consistency of the time series to some extent.   |
| 1996 | From the September 1996 quarter, consent values for multi-purpose buildings are coded to one or more of the most appropriate building types. Multi-purpose buildings were previously added to miscellaneous buildings. |

### Interpreting the data

#### Constant price series (volumes)

Current values include both a quantity and price component, whereas constant price series (volumes) have had the effect of price changes removed. Removal of price change (deflation) leaves just the volume (or quantity) component, enabling comparisons across different time periods without the distortion caused by price inflation (or deflation).

Quarterly values for residential building work and non-residential building work are separately deflated by the residential buildings and non-residential buildings sub-indexes from the capital goods price index. The deflated quarterly values are expressed at a constant pricing level, using September 1999 quarter prices. Deflated values for all building activity are calculated as the sum of the deflated values for residential and non-residential building activity.

Price deflation is done before seasonal adjustment and estimation of trend values.

#### Seasonally adjusted series

Seasonal adjustment removes the estimated impact of regular seasonal events, such as summer holidays and pre-Christmas purchasing, from statistical series. This makes figures for adjacent periods more comparable.

The seasonally adjusted series are recalculated quarterly when each new quarter's data becomes available. Figures are therefore subject to revision, with the largest changes normally occurring in the latest quarters.

The X-12-ARIMA seasonal adjustment program, developed at the U.S. Census Bureau, is used to produce the seasonally adjusted and trend estimates.

[Seasonal adjustment in Statistics New Zealand](#) has more information.

## Trend series

Trend calculation removes the estimated impact of regular seasonal events and irregular short-term variation from statistical series. This reveals turning points and the underlying direction of movement over time.

The trend series are recalculated quarterly when each new quarter's data becomes available. Figures are therefore subject to revision, with the largest changes normally occurring in the latest quarters. Revisions can be large if values are initially treated as outliers but are later found to be part of the underlying trend.

The X-12-ARIMA seasonal adjustment program is used to produce the seasonally adjusted and trend estimates. Irregular short-term variation is removed by smoothing the seasonally adjusted series using optimal weighted moving averages.

## Comparison with building consent statistics

Building consent statistics provide an indication of upcoming building activity, but comparisons may be affected by variable timing and valuation differences, particularly following the Canterbury earthquakes.

## More information

[View more information about building work put in place](#)

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## Tables

The following tables are available in Excel format from the 'Downloads' box. If you have problems viewing the files, see [opening files and PDFs](#).

1. Value of building work put in place, unadjusted values
2. Value of building work put in place, seasonally adjusted and trend values
3. Value of building work put in place, volumes (constant price values) at September 1999 quarter prices
4. Related series

## Access more data on Infoshare

Infoshare allows you to organise data in the way that best meets your needs. You can view the resulting tables onscreen or download them.

### Use Infoshare

For this release, select the following categories from the Infoshare homepage:

Subject category: **Industry Sectors**

Group: **Building Activity Survey - BAS**