

Embargoed until 10:45am – 08 March 2010

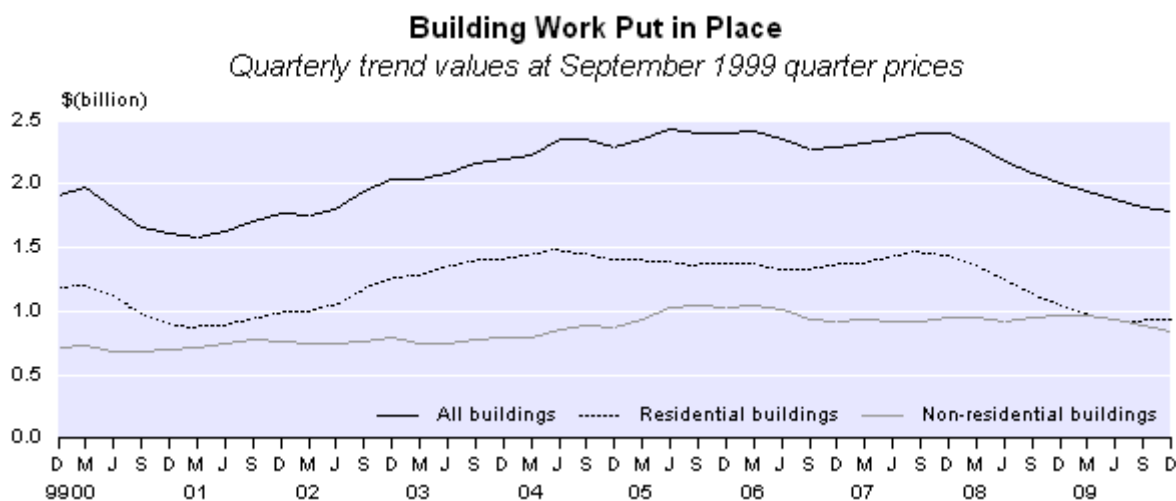
## Value of Building Work Put in Place: December 2009 quarter

### Highlights

The seasonally adjusted volume of:

- All building work rose 0.7 percent.
- Residential building work rose 7.4 percent.
- Non-residential building work fell 6.1 percent, down for the third consecutive quarter.

The trend indicates the volume of all building work decreased by 25.6 percent since the most recent peak in the December 2007 quarter.



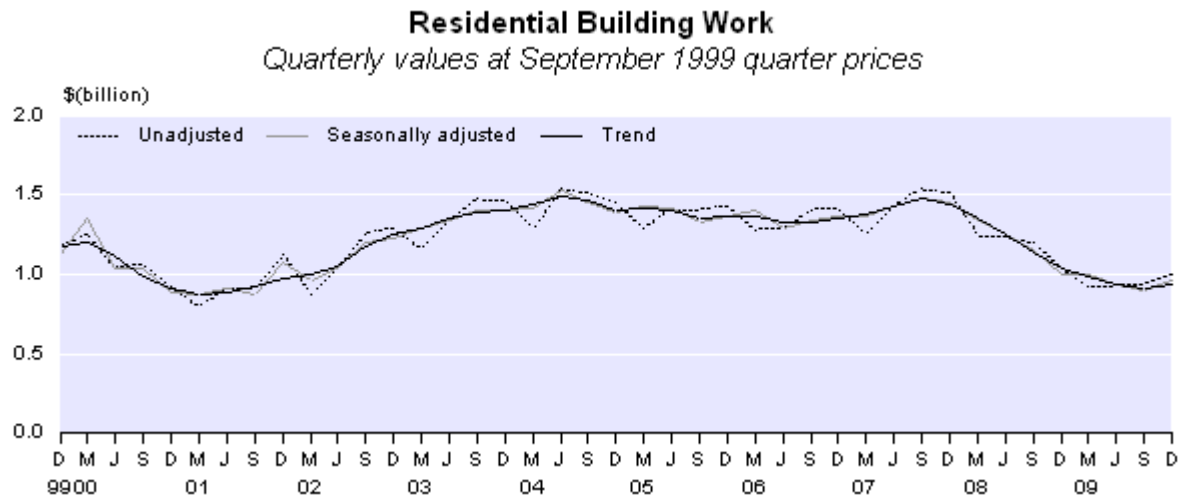
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Government Statistician

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# Commentary

## Residential buildings

The seasonally adjusted volume of residential building work rose 7.4 percent in the December 2009 quarter, following a fall of 4.2 percent in the September 2009 quarter. The increase in the December 2009 quarter is the largest since June 2004.



The trend indicates that the volume of residential building work has increased in the December 2009 quarter, following falls that began in the December 2007 quarter.

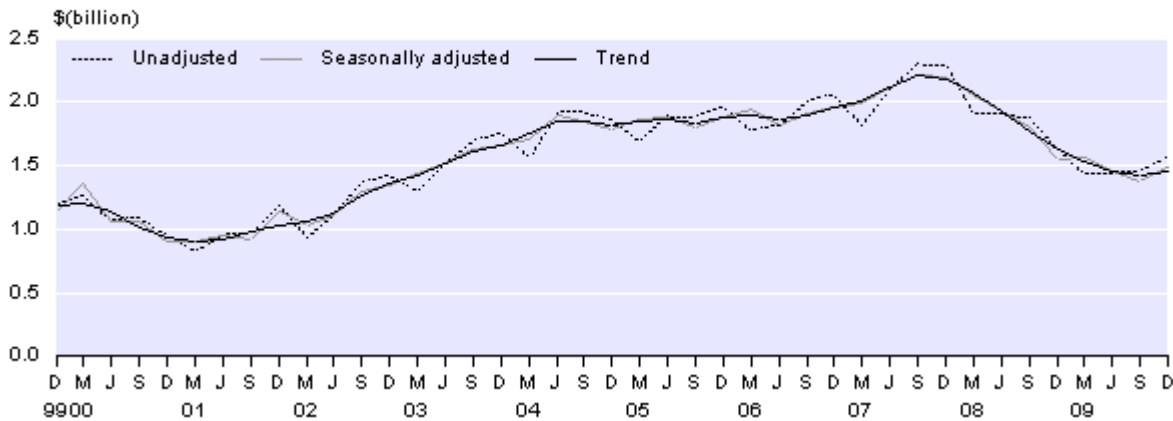
Statistics New Zealand [building consents releases](#) from 2009 have reported increases in the trend for the number of new housing consents issued. The increase in residential work put in place for the December 2009 quarter reflects this.

Construction prices for residential buildings, as reported in [Capital Goods Price Index: December 2009 quarter](#), rose 0.1 percent in the December 2009 quarter, compared with a 0.4 percent fall in the September 2009 quarter. The main driver for the latest increase was higher prices for dwellings and out-buildings (up 0.5 percent).

The seasonally adjusted value of residential building work, in current prices, rose 7.7 percent in the December 2009 quarter, following a 4.8 percent fall in the September 2009 quarter.

## Residential Building Work

*Quarterly values*



The trend, in current prices, for residential building work put in place has increased in the December 2009 quarter, following falls that began in the December 2007 quarter.

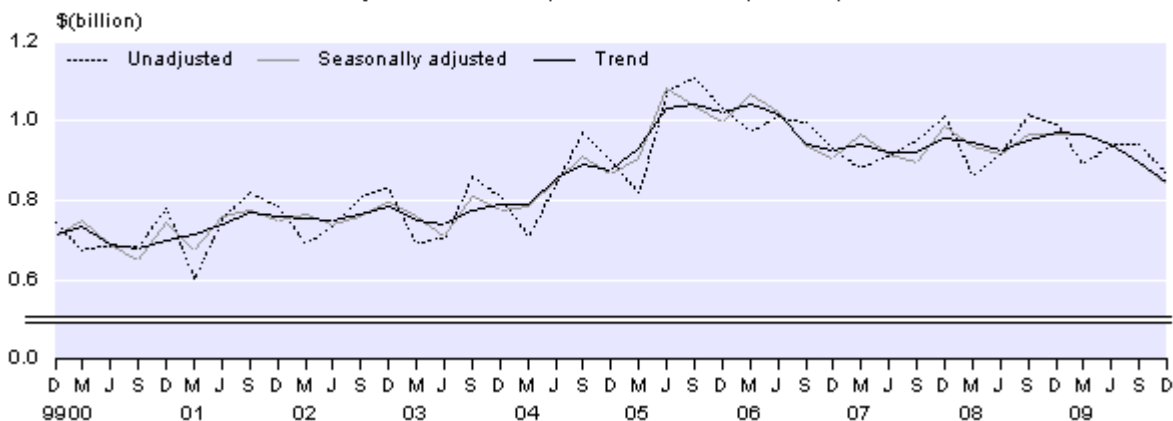
For the December 2009 year, the unadjusted value of residential building work put in place was \$5,875 million, down \$1,448 million (19.8 percent) from the previous December year. Of this total, new dwellings fell \$1,376 million (23.1 percent), and alterations, additions, and outbuildings fell \$72 million (5.2 percent).

## Non-residential buildings

The seasonally adjusted volume of non-residential building work fell 6.1 percent in the December 2009 quarter, following decreases in the previous two quarters. The volume of non-residential building work for the December 2009 quarter is now 12.9 percent lower than in the March 2009 quarter.

## Non-residential Building Work

*Quarterly values at September 1999 quarter prices*

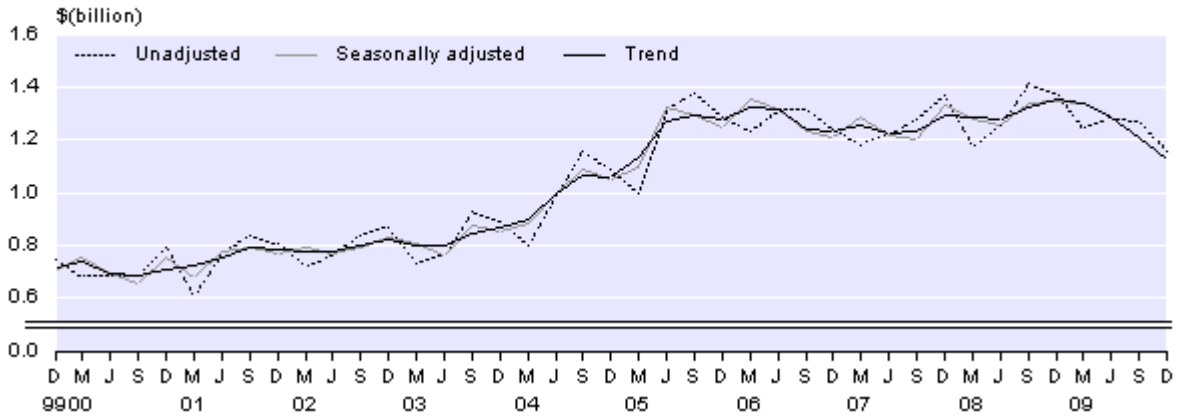


The trend indicates that the volume of non-residential building work has been falling for four quarters, and has fallen 13.2 percent since the recent peak in the December 2008 quarter.

Construction prices for non-residential buildings, as published in [Capital Goods Price Index: December 2009 quarter](#), fell 1.0 percent in the December 2009 quarter. Lower labour costs and contractor margins, and falling material prices due to lower local demand, were cited as the main reasons for the fall.

The seasonally adjusted value of non-residential building work, in current prices, fell 6.9 percent in the December 2009 quarter, the fourth consecutive quarterly fall.

### Non-residential Building Work Quarterly values

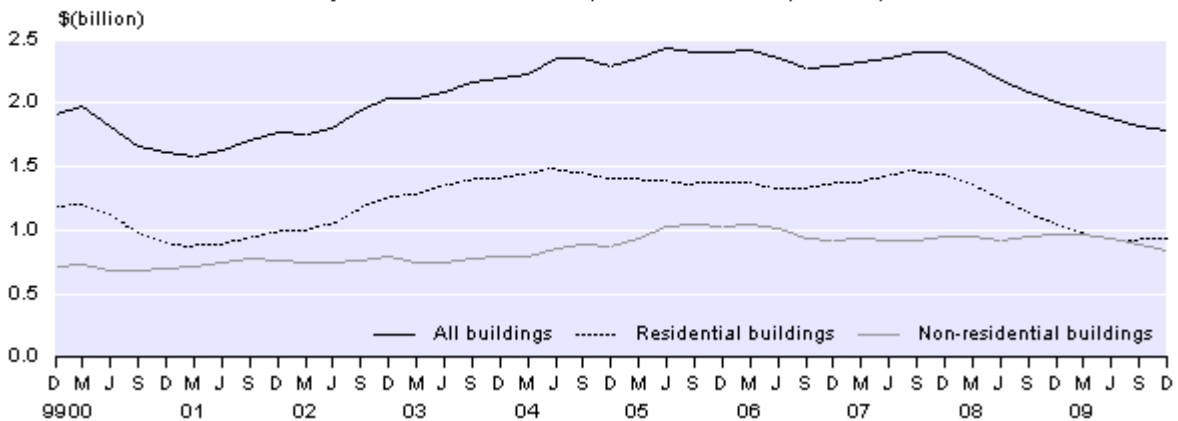


For the December 2009 year, the unadjusted value of non-residential building work put in place was \$4,948 million, down \$272 million (5.2 percent) from the previous year. The largest contributions to this decrease were from hospitals and nursing homes, down \$172 million (39.0 percent) and commercial buildings, down \$149 million (8.9 percent). Partly offsetting these decreases was an increase in education buildings, up \$127 million (20.5 percent).

### All buildings

The seasonally adjusted volume of all building work rose 0.7 percent in the December 2009 quarter, following a fall of 4.4 percent in the September 2009 quarter. This increase was driven by an increase in the volume of residential building work.

### Building Work Put in Place Quarterly trend values at September 1999 quarter prices



The trend indicates that the volume of all building work has been falling for eight quarters, and has fallen 25.6 percent since the most recent peak in the December 2007 quarter.

The seasonally adjusted value of all building work, in current prices, rose 0.9 percent in the December 2009 quarter, following a fall of 5.4 percent in the previous quarter.

For the December 2009 year, the unadjusted value of all building work put in place was \$10,823 million, down 13.7 percent from the previous year. Residential buildings contributed 54.3 percent of this value, down from 58.4 percent in the December 2008 year.

According to Quarterly Employment Survey: December 2009 quarter, the number of paid hours in the construction industry fell 9.2 percent for the December 2009 quarter compared with the September 2009 quarter.

## Table updates

- The data for building consents issued in table 4 is now seasonally adjusted.
- The series on residential mortgage yields is now available on Infoshare.

## Sampling errors

Estimates for the value of building work put in place are derived mainly from a sample survey and are therefore subject to sampling errors. See following table for the sampling errors for the December 2009 quarter.

<b>Sampling errors for the December 2009 quarter</b>	
	Percentage of total value of work put in place
Residential buildings	3.9
Non-residential buildings	3.6
All buildings	2.7

The sample is designed to produce statistics at the 95 percent confidence interval limit. This means that for all buildings, for example, there is a 95 percent probability that the true value of work put in place this quarter is within plus or minus 2.7 percent of the published estimate.

## Non-response imputation

For building projects where no survey response is received, Statistics New Zealand imputes values for work put in place, based on responses for comparable projects. See following table for the values imputed for the December 2009 quarter.

<b>Non-response values imputed for the December 2009 quarter</b>			
	Imputed values \$(million)	Percentage of category value	Percentage of all buildings value
Residential buildings	245	15.7	9.0
Non-residential buildings	58	5.0	2.1
All buildings	303	11.2	11.2

## Excluded consents

Consents valued below \$5,000 are excluded from statistics for the value of building work put in place. The value of excluded consents is estimated to be less than 1 percent of published values.

## Low-value consents

These comprise 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 the issuing of the consent.

Low-value jobs are therefore valued directly from consents (after a one-month lag), rather than by postal survey. See following table for the values included for the December 2009 quarter.

<b>Low-value consents included for the December 2009 quarter</b>			
	Low-value consents \$(million)	Percentage of category value	Percentage of all buildings value
Residential buildings	83	5.3	3.0
Non-residential buildings	64	5.5	2.3
All buildings	146	5.4	5.4

For technical information, contact:  
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**Email:** [info@stats.govt.nz](mailto:info@stats.govt.nz)

### Next release ...

*Value of Building Work Put in Place: March 2010 quarter* will be released on 8 June 2010.

## Technical notes

### Data source

Data on building authorisations is obtained each quarter by postal survey of builders, owners, and other applicants. The survey is called the Quarterly Building Activity Survey (QBAS). GST and consents valued below \$5,000 are excluded.

### Survey design

Building consents issued by councils are grouped each month into four value ranges for residential buildings and four value ranges for non residential buildings.

- Highest value range: For all consents, builders or consent applicants are surveyed to obtain values for building work put in place during the quarter.
- Second/third value range: A sample of builders or consent applicants is surveyed and the quarterly values collected are rated up so as 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 more detailed information on the survey methodology, contact the Statistical Methods Section, Statistics New Zealand, Private Bag 4741, Christchurch.

### 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 re-estimated 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.

Further information about [seasonal adjustment](http://www.stats.govt.nz) is on the Statistics NZ website ([www.stats.govt.nz](http://www.stats.govt.nz)).

### Trend series

Trend estimation 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 re-estimated 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.

## **Constant price series**

Current values include both a quantity and price component, whereas constant price (deflated) values have had the effect of price change removed. This leaves just the volume (or quantity) component, meaning that deflated values provide a measure of the quantity of building work being done each quarter. Comparisons among different time periods are more meaningful when there are no distortions caused by price inflation.

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 ([www.stats.govt.nz](http://www.stats.govt.nz)). The deflated quarterly values are expressed at a constant pricing level, which in this case are prices as at the September 1999 quarter. Deflated quarterly values are also seasonally adjusted and estimated trend values are calculated. Deflated values for all buildings are calculated as the sum of the deflated values for residential and non-residential buildings.

Prior to the June 2006 quarter release, price deflation was done after seasonal adjustment and estimation of trend values. Price deflation is now done before seasonal adjustment and estimation of trend values. Values for the deflated series have been recalculated for all previous quarters. In real terms, the recalculated values are generally within 1 percent of the values produced by the previous method.

Series calculated using the old method and June 1991 quarter expression base are no longer published but can be provided on request.

## **More information**

For more information, follow the [link](#) from the Technical notes of this release on the Statistics NZ website

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## **Timing**

Timed statistical releases are delivered using postal and electronic services provided by third parties. Delivery of these releases may be delayed by circumstances outside the control of Statistics NZ. Statistics NZ accepts no responsibility for any such delays.

## Tables

The following tables are printed with this Hot Off the Press and can also be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the [Excel file viewer](#) to view, print and export the contents of the file.

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