

Focus on the Canterbury rebuild

9 April 2015

- The Canterbury rebuild will be our nation's largest ever construction project, and it will play an important role in shaping nationwide economic conditions for a number of years.
- Reconstruction is estimated to cost around \$35bn (in 2012 dollars) - equivalent to around 17% of annual national GDP.
- Construction activity in Canterbury has increased strongly in recent years, and further increases are expected over the coming year. Over time, work is shifting towards higher cost residential projects. Non-residential construction activity is also increasing.
- We expect reconstruction work to peak in early-2016. While the rebuild will continue for an extended period, as work winds down it will contribute to a slowdown in nationwide GDP growth.

Overview

Underpinning our expectations for robust domestic growth over 2015 and 2016 is a strong outlook for construction spending, a key contributor to which is continuing reconstruction activity in Canterbury. The Canterbury rebuild is expected to be our nation's largest ever construction project. It has already provided a significant boost to economic growth, and understanding how this work is proceeding is important for assessing the strength of the overall economic outlook. In this Bulletin, we look at how the reconstruction process is evolving, and what we expect to see going forward. We focus on three key questions:

- How large will the rebuild be?
- What is the expected profile of reconstruction work?
- What is the anticipated mix of reconstruction spending, and what factors are shaping this mix?

We estimate that there will be around \$35bn (in 2012 dollars) of reconstruction spending in Canterbury. This is lower than the Government's \$40bn estimate, reflecting that since plans for the rebuild were initially developed, there have been significant cost increases that will make some planned construction uneconomic. Nevertheless, we still expect that there will be a substantial amount of reconstruction activity, equivalent to around 17% of annual national GDP.

Following a slow start, construction activity in Canterbury has lifted strongly in recent years. The annual amount of building work put in place in Canterbury over the past year was more than double its pre-earthquake pace, which has provide a significant boost to nationwide GDP growth. Construction activity to date has mainly related to repairs to housing and public assets, with much of this work funded by central and local government. Over the coming years, work will shift to larger residential and non-residential projects, with funding increasingly coming from private sources, including insurance payouts.

We expect that construction activity in the region will remain strong for some time. However, we are fast approaching the peak in the rebuild. At current levels, around half of planned reconstruction spending will have been completed within the next two years, after which time there will naturally be a tapering off in demand. At the same time, both cost and labour market pressures have intensified, which will cause some planned spending to be delayed. As a result of these conditions, we expect that reconstruction work will peak in early-2016. Reconstruction spending is expected to gradually ease back from 2017, giving the rebuild a 'long tail'. This gradually winding back in construction activity is a key reason why we expect nationwide GDP growth to slow from 2017.

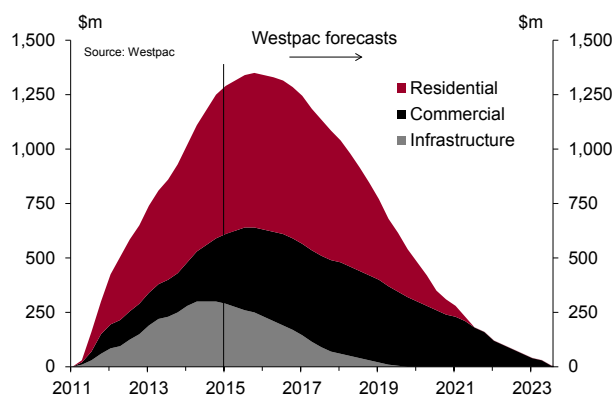
How large will the rebuild be?

We estimate that there will be about \$35bn of reconstruction work in Canterbury (in 2012 dollars, shown in figure 1). This is lower than the \$40bn cost estimate that the Government developed a few years back. That earlier estimate provided a useful and necessarily broad roadmap of how reconstruction might proceed. However, it was inevitable that spending plans would evolve as the rebuild progressed and conditions in the region changed.

Since the Government's estimate was developed there have been significant increases in construction costs that will make some of the planned construction uneconomic. This is a particular concern for privately funded commercial construction projects, spending on which is highly sensitive to economic conditions. As a result of cost increases, some projects will be delayed, which will result in a 'long tail' for rebuild activity. However, there will also be some projects that will be cancelled.

Even allowing for some crowding out of reconstruction work due to cost increases, a substantial amount of reconstruction work is planned. Reconstruction spending is expected to be equivalent to around 17% of annual national GDP.

Figure 1: Rebuild forecasts (2012 dollars)

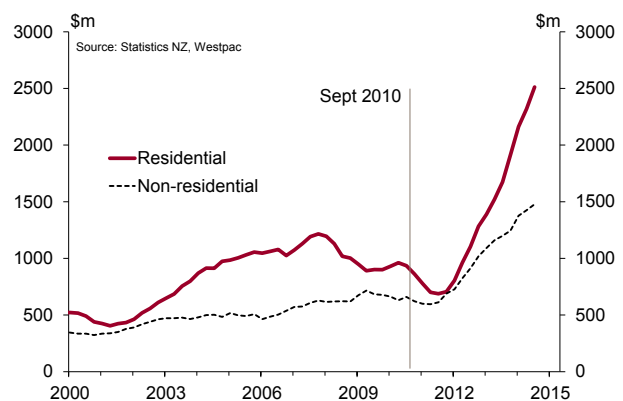


What matters for assessing the ultimate success of the rebuild will not be the amount of dollars spent. It will be whether reconstruction results in a high functioning city that meets the needs of residents and businesses for years to come. This can only really be assessed after construction is complete. However, planned work will allow for the replacement of damaged assets, as well as significant betterment of assets compared to pre-earthquake levels and some new construction.

What is the expected profile of reconstruction work?

We estimate that reconstruction was around 30% complete at the start of 2015. It's true that there have been delays, particularly in the early stages of the rebuild, and many people are still displaced from their homes. Nevertheless, building activity in Canterbury has risen strongly in recent years. Construction spending in Canterbury over 2014 was around 40% higher than in 2013, and it was 150% higher than pre-earthquake levels (figure 2).

Figure 2: Building work put in place for Canterbury, annual total



Continued increases in construction activity in Canterbury are expected over the coming year. There has been a large amount paid out in insurance claims, consent issuance has lifted strongly, and increasing numbers of residential and non-residential projects are moving through the planning process.

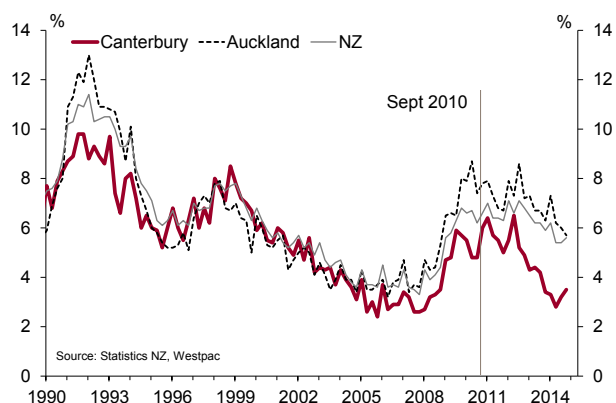
However, as discussed below, the scope for continued increases in construction activity in Canterbury will become increasingly limited over time. Consequently, we expect reconstruction spending will peak over early 2016 and begin gradually easing back from 2017. Underlying this profile for aggregate reconstruction activity are several major work streams. Residential reconstruction work is more advanced and is expected to peak in mid-2015. In contrast, non-residential construction has been increasing more gradually and is not expected to peak until mid-2016, with work expected to continue through to the early part of the next decade.

The timing of the peak in reconstruction work is important for the wider economic outlook. Increases in reconstruction work in recent years have provided a large boost to quarterly GDP growth. However, after we pass the peak, the amount of reconstruction work completed each quarter will start to ease back over time. This means that the rebuild will become a drag on growth, which is a key reason why we expect a downturn in GDP growth from 2017. This will also result in lower demand for labour. Australia has had a similar experience in recent years, with slowing spending on mining investment contributing to a marked downturn in GDP growth.

Our expectation for the peak in reconstruction activity is being shaped by three main considerations. First is the large amount of reconstruction work that has either already been completed or is currently underway. As discussed above, construction in Canterbury has been increasing at a rapid pace. At current levels, around half of planned reconstruction spending will have been completed within the next two years, including the majority of residential replacement spending. As this work is completed, there will naturally be some easing back in activity.

The second factor affecting our expectations for the peak in reconstruction activity is the availability of labour. Following strong growth in recent years, Canterbury's unemployment rate has fallen to 3.5% - similar to the very low levels that prevailed prior to 2009's financial crisis (figure 3). The spare labour market capacity that currently remains is likely to be absorbed as construction, and economic activity in the region more generally, increases over the coming year. This tightness in the labour market is likely to be reinforced by increasing competition for construction labour over the coming years as building activity in other regions, particularly Auckland, increases. These conditions will provide a brake on the amount of construction work that physically can occur.

Figure 3: Unemployment by region



Finally, the pace of construction will be constrained by increases in building costs. Prior to the earthquakes, costs of construction in Christchurch were below the national average. However, since 2011 the average cost of residential construction in Canterbury has risen by around 36%. This has pushed average residential construction costs in Canterbury above both the national average and the cost of building in Auckland (figure 4). There have been

similar increases in non-residential building costs. In part, these increases have been related to the tightness in the labour market. Base wage rates in Canterbury's construction sector have increased by 9.4% since 2012 - well above the 5.7% increase seen in other regions.

Cost pressures in Canterbury are expected to become more pronounced over the coming year as construction activity in Canterbury and elsewhere continues to increase. At the same time, the replacement of damaged housing combined with new construction has meant that the strong increases in Canterbury house prices and rents seen in recent years have been arrested (figure 5). Going forward, we do see some risk that house price and rents pull back. This combination of cost increases and a softening outlook for house prices and rents means that further significant increases in residential construction activity are likely to be uneconomic.

Figure 4: Residential building costs (based on building consents, annual average)

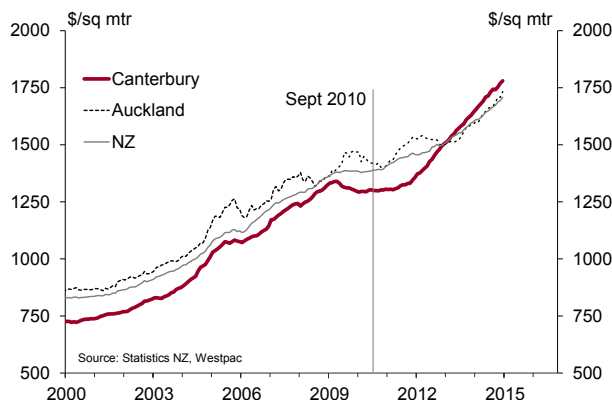
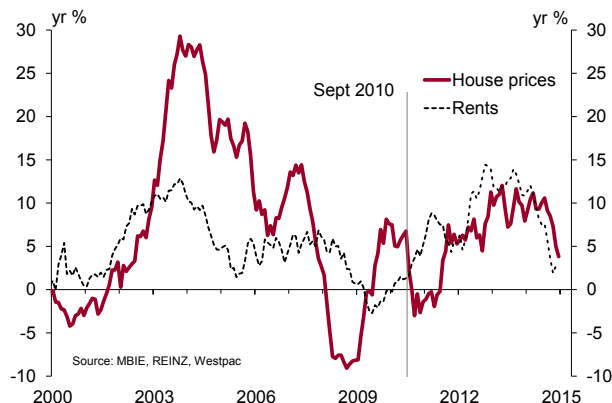


Figure 5: House prices and rents



What is the anticipated mix of reconstruction spending, and what factors are shaping this mix?

Planned reconstruction work is made up of a number of large work streams. This includes significant residential construction work (around \$16.5bn). It also includes a large

amount of spending on non-residential projects including spending on infrastructure, public and social assets (a combined expected spend of around \$10 to \$11bn), as well as spending on commercial property (around \$7.5 to \$10bn). Below, we take a closer look at these work streams and some of the factors that are shaping spending plans.

Residential reconstruction

Work to date has seen residential construction activity in Canterbury rising to very high levels. In 2014 residential construction activity was 50% higher than in 2013, and 170% higher than its pre-earthquake level.

Much of residential reconstruction work to date has been related to EQC's home repair program which covers dwellings with damage of up to \$100,000. There are around 69,000 homes in this category,¹ with spending on these projects expected to total around \$2.5bn. The vast majority of work in this program is expected to be completed in early-2015.

As EQC's repair program has been winding down, residential reconstruction work is shifting towards higher cost "over cap" claims - those homes with damage over EQC's \$100,000 cap that require either major repair work or complete rebuilding. There are around 24,000 homes in this group², many of which are in areas where building costs are relatively high. The majority of this work will be funded through insurance payouts. To date, around 3,000 homes have been repaired or rebuilt by insurers, and a number of homes have been rebuilt by private owners.

Forecasts for the rebuild also allow for the construction of some new homes to meet the needs of population growth.

While we expect residential construction to peak in early 2015, we expect that it will remain elevated for some time. Given the level of consent issuance over the past year (figure 6), this would imply the construction of around 18,000 to 20,000 homes between 2015 and 2017, which would account for the vast majority of residential replacement spending that is required.

After this work is completed, we expect a marked decline in residential construction activity in Canterbury through 2018 (even allowing for some delaying of business as usual construction work). A key factor that will determine the extent of any such decline will be how much new building occurs. We see the risk that the number of new builds will be modest for two reasons.

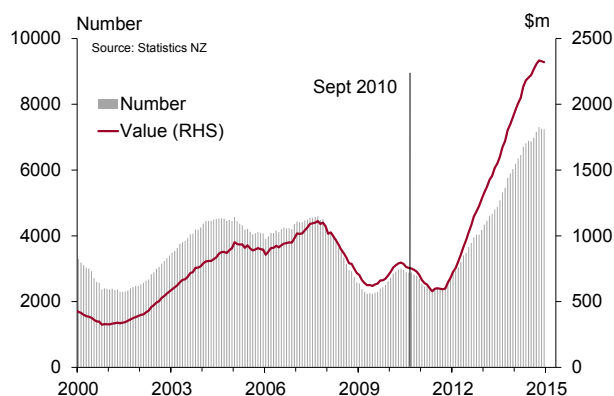
First, as discussed above, the economic incentives for new construction have been moderating as the housing stock has been replaced. Construction costs have continued to push higher, while rents and home prices have levelled off.

The second factor that is likely to limit the amount of new dwelling construction is population growth. Statistics NZ estimates imply that Canterbury's population will grow by

around 53,100 between 2018 and 2028.³ This would imply the need for around 23,000 additional homes over a ten-year period, or around 2,300 per year. As a comparison, prior to the earthquakes there were around 2,500 to 4,500 homes built per year in the region.

Consistent with these factors, many of those we spoke in our recent talks in Christchurch highlighted that demand for subdivisions has started to wane. There has also been a pull-back in residential consent issuance in recent months.

Figure 6: Residential consent issuance in Canterbury



Non-residential construction

A significant amount of non-residential construction is also planned as part of the rebuild. This will be a mix of publicly and privately funded work.

Work to date has included the repair and replacement of horizontal infrastructure (e.g. roading) by the Stronger Christchurch Infrastructure Rebuild Team. Work in this programme is expected to cost around \$2.5bn.⁴ In early 2015 around two-thirds of work was complete, with the program expected to be largely complete by the end of 2016.

There is also around \$8bn of spending planned on public and social assets, such as education and health care facilities.⁵ Construction on a number of projects has commenced, and many others have entered in to planning and pre-construction phases. However, there have been delays, and the availability of funding will be a constraint for some projects. Consequently work on these projects is expected to increase gradually and to occur over an extended period, with a planned tail of work out to around 2020.

Finally, there will be a large amount of privately funded spending on commercial construction. This includes the replacement of damaged assets (many of which will be rebuilt to a higher standard than pre-earthquake levels), and the construction of new assets. To date, around \$8bn in commercial claims has been paid out by insurers.⁶

¹ <http://www.eqr.co.nz/repairs/repair-progress>

² Insurance Council of New Zealand, "Canterbury Earthquake Insurance Progress Update, Q4 2014"

³ Statistics New Zealand, "Subnational Population Projections: 2013(base)-2043"

⁴ CERA/MBIE "Public Sector Rebuild Programme of Work as at January 2015"

⁵ CERA/MBIE "Public Sector Rebuild Programme of Work as at January 2015"

⁶ <http://www.icnz.org.nz/natural-disaster/canterbury/rebuild-statistics/>

Commercial construction work has been proceeding more gradually than work on residential dwellings and infrastructure. Even so, the amount of commercial construction work occurring in Canterbury has lifted strongly, with around \$850m of work consented over 2014 (compared to around \$260m in the year prior to the earthquakes).

We expect that commercial reconstruction activity will continue to increase until late in the decade, and that work will have a long tail. However, we also expect that the amount of commercial reconstruction work will ultimately be at the lower end of announced estimates. This is because the economic incentives for new commercial construction have moderated over time. There has already been a large amount of commercial office space built in recent years, and many tenants are now locked into long-term leases. At the same time as supply has been increasing, construction costs

have risen sharply, pushing up the nominal returns that new projects need to generate in order to deliver an adequate yield to investors. In light of these conditions, it is likely that some projects will not be economically viable at the current time. As a result, some projects will be delayed until economic conditions are more conducive, while some other projects are likely to be cancelled.

Satish Ranchhod
Senior Economist

Estimated reconstruction spending

	Expected cost (\$bn, 2012 dollars)
Residential reconstruction Includes: <ul style="list-style-type: none"> • Land remediation • Under-cap repairs (around 69,000 properties with damage less than \$100k) • Over-cap repairs/rebuild (around 24,000 properties with damage over \$100k, plus some new builds) 	\$11.5 to \$17.5
Non-residential Public and infrastructure <ul style="list-style-type: none"> • Horizontal infrastructure (e.g. roading) • Other public and social assets including councils and community assets Commercial structures (including new builds and betterment)	>\$2.5 \$7.5 to \$8.5 Around \$7.5 to \$10
Total	Around \$35

⁶ <http://www.icnz.org.nz/natural-disaster/canterbury/rebuild-statistics/>

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