# Central City Plan

*Draft Central City Recovery Plan*
*For Ministerial Approval*
*December 2011*

*Central City Plan*
*Technical Appendices*
*2 of 3*

Christchurch City Council

# Contents

# Population Forecasts and Demographics

# *Future population in Christchurch's Central City as at October 2011*

***There is currently a lot of uncertainty around population and household numbers in the Greater Christchurch area. This uncertainty is the result of:***

- The immediate net loss directly as a result of the earthquake, which usually happens in the first year after such an event.
- The movement of households within the city and the Greater Christchurch area as a result of earthquake damage and the rebuild
- The temporary flows due to construction and other workers heading to Christchurch generated by the earthquake.
- The population and household trends over the next five, 10 and 20 years.

## *1. Immediate impact*

Statistics New Zealand released its sub-national population estimates for June 2011 in late October 2011.

*(http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationEstimates_HOTPJun11.aspx).*

These showed that between June 2010 and June 2011, Christchurch city lost 8900 people. This compares with a long-term average annual increase of about 3500 people per annum since 1996. This loss was in the 0 to 14 and 15 to 39 year age groups. While other age groups experienced slight gains, these were not as high as the year to June 2010.

Waimakariri and Selwyn districts experienced higher than normal population growth between June 2010 and June 2011, with increases of 1000 and 1500 respectively. This growth is 43 and 50 per cent higher than the estimated growth in the year to June 2010 for each district respectively. It can reasonably be assumed that a large proportion of this growth was in the Greater Christchurch Urban Development Strategy (UDS) area of each district and that many of those lost from Christchurch were not lost from the wider urban area.

Statistics New Zealand produce their sub-national population estimates annually and release them at the end of October each year. In between, specific indicator data sets will be monitored to measure whether there is continued population loss or if the city is returning to pre-earthquake trends. Some of the dataset used will be:

## *Ministry of Education, school re-enrolment data.*

Data at 13 September 2011 shows 5442 students were still away from their original school within Selwyn, Waimakariri and Christchurch. Of these, 1600 had moved within Christchurch, and 375 and 225 had moved within or to Wamakariri and Selwyn respectively. The total net loss of school students is around 3250 from the UDS area or 4.3% of the total students at July 2010.
*http://www.stats.govt.nz/browse_for_stats/education_and_training/earthquake-schools.aspx).*

## *External migration data*

There was a net loss of 2900 people overseas from Christchurch, Selwyn and Waimakariri in March to August 2011 (accounting for an average net gain of 69 for the same period per year over the past 10 years). The net loss for Christchurch taking into account long-term trends for this period as above (net gain of 154) showed a net loss of 2625 people from Christchurch to overseas since February
*(Source Statistics New Zealand, Infoshare - Permanent & long-term migration monthly arrivals and departures by territorial authority)*

Uncertainty still remains over the next couple of years around the proportion of households that are likely to leave the city as a result of red zone or EQC/insurance payouts or potential future declines in economic conditions, especially employment in some sectors.

### *2. Movement within the city*

Internal movements are a particular gap in our knowledge at this point. Several indicator datasets have shown that there has been a decline in households in the areas with the most damage, as would be expected. However, where these people have moved to has been dispersed throughout the city.

Statistics New Zealand will produce their sub-national population estimates at census area unit level at the end of December 2011. This will give an official estimate of the location of people at a suburb level as at June 2011. In addition to this data set, indicators such as building consents for demolitions, rebuilds and new units and dwellings will provide information on where people are moving to. There are also issues around temporary movements due to residential building damage versus permanent relocations.

### *3. The temporary flows due to construction and other workers heading to Christchurch generated by the earthquake.*

At this point there is little information on the temporary workers arriving in Christchurch – but they are likely to be in the following areas:

- EQC assessors and other staff
- Demolition workers
- Construction planners, workers and associated trades

Currently, much of the temporary workers are in the first two categories, with EQC stating in its media statements they had 1275 staff at July 2011 in Christchurch, compared with a total of 22 staff pre-September 2010, who were not located in Christchurch. *(http://canterbury.eqc.govt.nz/news/release/2011/09/eqc-staff-numbers-and-rates)*

The Press on 10 July 2011 quoted Warwick Issacs from CERA: "There were about 500 people working in the red zone and about 25 to 30 active demolition sites. "It's going to ramp up as we get the demolition of some of these taller buildings underway," *(http://www.stuff.co.nz/the-press/news/christchurch-earthquake-2011/5261762/Backup-workers-hit-the-Christchurch-earthquake-red-zone)*

As the rebuild occurs, these numbers are likely to increase significantly during the next few years. Job advertisement indicators since April 2011 have shown significant increased demand for workers in the construction, engineering, trade and transport sectors *(http://cera.govt.nz/news/2011/canterbury-economic-indicators-for-september-2011-14-october-2011)*

In the Press on 2 August 2011, the Canterbury Employment and Skills Board estimated there was a need for 30,000 extra workers over the next five to 10 years for the Christchurch rebuild.
*(http://www.stuff.co.nz/the-press/news/christchurch-earthquake-2011/5373259/30-000-workers-needed-for-Christchurch-rebuild)*

# Population Forecasts and Demographics

## *4. Future population growth*

Normally, projecting population and household numbers is problematic. Some components are relatively straight forward to model, such as births and deaths, while others such as internal and external migration, where the net flows are small compared with the gross flows of arrivals and departures, can result in significant changes in net migration flows and subsequently population flows. Projected populations are based on the historic trends. In the case of Christchurch post-earthquake, it is difficult to anticipate what impact the earthquake will have on future growth rates.

The Sapere report *(http://www.srgexpert.com/Population%20movement%20after%20natural%20disasters%20-%20%20a%20literature%20review%20and%20assessment%20of%20Christchurch%20data.pdf )* in April 2011 noted that:

"A number of researchers concluded that disasters have the impact of accelerating pre-existing population trends, which suggests in the case of Christchurch that growth can be expected to at least partly counterbalance any permanent loss of population."

And suggests that:

"In one or two years it is likely that the total population of Christchurch will be slightly smaller than it might have been if there had been no one-off out-migration to temporary interrupt growth. But it is also likely that population growth will continue at least at the pre-existing trajectory. Growth may even be enhanced to some extent, if there is an in-migration of construction workers."

Westpac Back *(http://www.wib.westpac.co.nz/web/content/pdfs/Disasters_in_History)* produced a report on the 8 July 2011 titled, Disasters in history – A review, which primarily looked at the economic impacts of natural disasters in order to consider the economic impacts of the Christchurch earthquakes.

In summary they found:

- While major earthquakes can cause enormous destruction, they don't tend to disrupt developed economies for long.
- They usually prompt significant rebuilding, with attendant increases in prices and wages.
- The long-run impact on growth is unclear. While there is some evidence that disasters accelerate existing economic decline, there is no consistent impact (positive or negative) on the prospects of already growing regions, (e.g. Christchurch).
- Population losses after disasters depend on the degree of local damage. Most people return to habitable areas and those who move don't tend to move far.
- They also note that "Christchurch was a growing and economically viable city before the quake, and had no serious rival as the South Island's main urban centre".

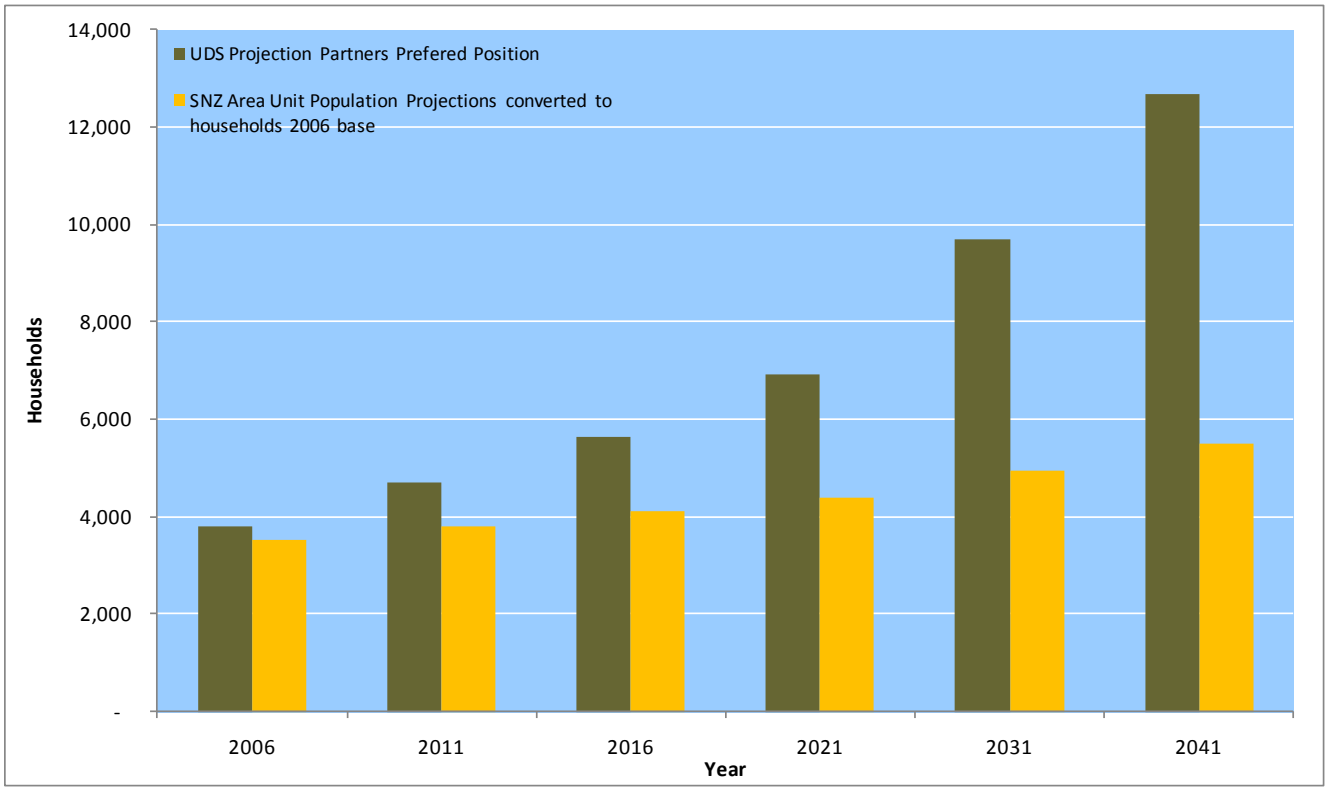
Population growth tends to recover quickly, but tends to occur in areas with less damage – so there are important sub-district or sub-city variations that are likely to be more significant than variations arising from overall projected population trends.

## *5. Summary of pre-earthquake projections for the Central City and possible post-earthquake impacts*

Before the 4 September 2010 earthquake, the growth of population in the Central City was described in two sets of projections: firstly, Statistics New Zealand's area unit medium projections which provides a business as usual projection series; and secondly the aspirational projections used in the Greater Christchurch Urban Development Strategy. It must be noted that to achieve the aspirational projections for the Central City there would need to be employment to encourage more people to live in the Central City. This was part of the focus of various stages of the Central City Revitalisation Strategy and Urban Development Strategy.

The graph and table below outlines the population growth for central Christchurch as a result of these two pre-earthquake projections. At 2041, the difference in households between the two projections is in the order of 7000, illustrating the aspirational view adopted by the UDS partners for Central City growth.

*Figure 1 Pre-earthquake projections for the Central City*




| Summary of pre-earthquake household projections | | | | | | | |
|---|---|---|---|---|---|---|---|
| Projection | 2006 | 2011 | 2016 | 2021 | 2031 | 2041 | 2006-41 |
| Household projection based on SNZ Medium Area Unit Population Projection 2006 base | 3600 | 3800 | 4100 | 4400 | 5000 | 5500 | 1900 |
| UDS partners preferred projection May 2010 | 3800 | 4700 | 5700 | 6900 | 9700 | 12,700 | 8900 |
| Difference | 200 | 900 | 1600 | 2500 | 4700 | 7200 | 7000 |
| Note: The difference between the 2006 values are the result of the different methods for adjusting for the estimated household definition at an area unit level and converting from area unit population to household numbers. | | | | | | | |

# Population Forecasts and Demographics

## *6. Market Economics Household Impact Model*

Market Economics was contracted to provide a household model that took into account the impact of the earthquake on the UDS projections, and subsequently, the impact on projections within the three Central City area units.

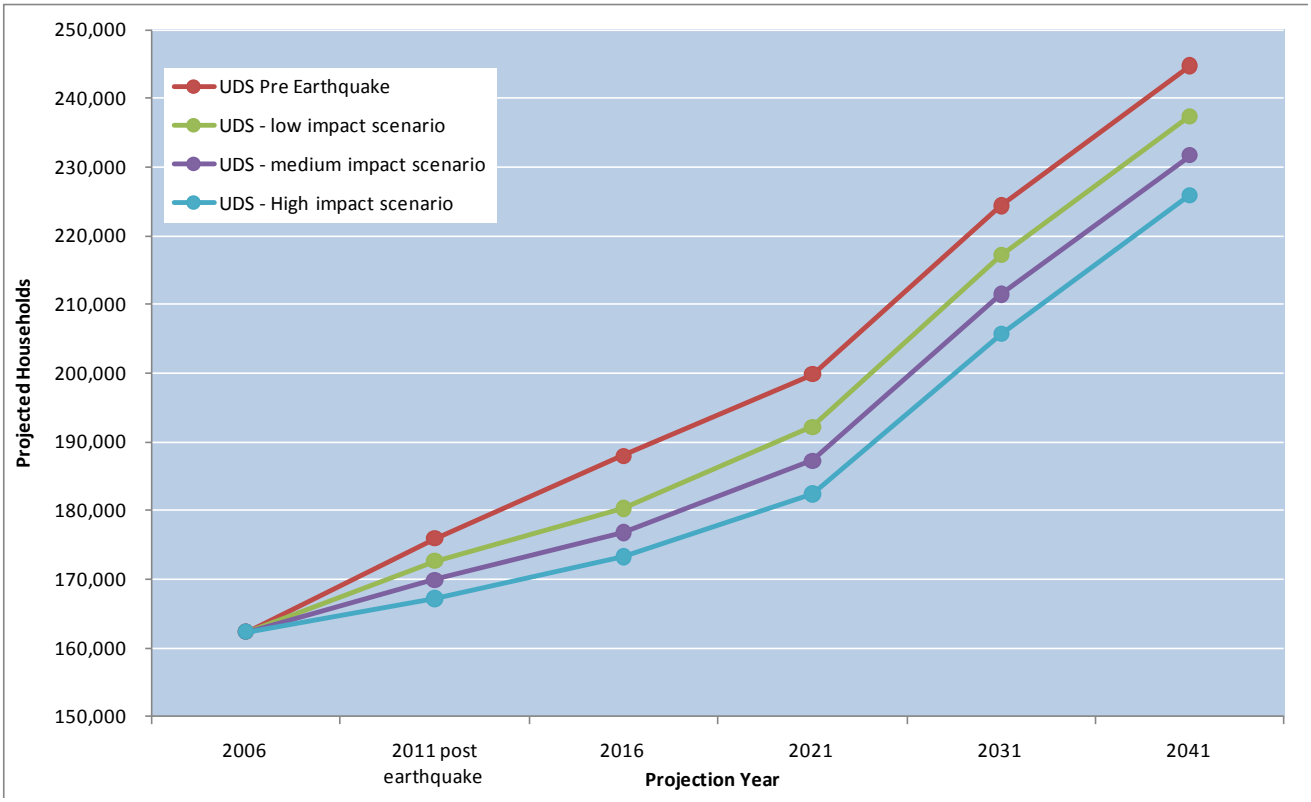
This model uses three UDS level scenarios that reflect possible impacts on future growth as a result of the earthquake. The low impact scenario assumes a small immediate loss of households (2%) and a return to the normal growth rate relatively quickly. The major impact scenario assumes a high level of initial loss (5%), with growth taking longer to recover. The medium impact scenario is the half-way point between both scenarios. Note all scenarios expect growth to return to normal after about 10 years.

The assumptions on impacts on growth are based on the current understanding of the impact of the earthquake on the population, and as such, will evolve over time as more information comes available and the scenarios are adapted[2].

**Summary of future scenarios of household numbers for the Greater Christchurch Urban Development Strategy area**

| | 2006 | 2011 post earthquake | 2021 | 2041 | 2011-21 | 2006-41 | Differnce from UDS base 2006-21 | Differnce from UDS base 2006-41 |
|---|---|---|---|---|---|---|---|---|
| UDS Pre Earthquake | 162,300 | 175,950 | 199,800 | 244,780 | 37,500 | 82,480 | | |
| UDS - low impact scenario | 162,300 | 172,680 | 192,160 | 237,410 | 29,860 | 75,110 | -7,640 | - 7,370 |
| UDS - medium impact scenario | 162,300 | 169,920 | 187,280 | 231,680 | 24,980 | 69,380 | -12,520 | -13,100 |
| UDS – high- impact scenario | 162,300 | 167,150 | 182,410 | 225,930 | 20,110 | 63,630 | -17,390 | -18,850 |
| Percentage difference from UDS base | | | | | | | | |
| UDS – low- impact scenario | 0% | -2% | -4% | -3% | -20% | -9% | | |
| UDS – medium- impact scenario | 0% | -3% | -6% | -5% | -33% | -16% | | |
| UDS – high- impact scenario | 0% | -5% | -9% | -8% | -46% | -23% | | |

*[2]Note these scenarios have not been updated to take into account Statistics New Zealand's sub-national population estimates that were released on 25 October 2011. However, the estimates showed a population loss of 2.4 per cent in Christchurch city which is consistent with the immediate loss in the low-impact scenario. However, there is still a large amount of uncertainty around how quickly the recovery will occur over the next few years.*




| Summary of future household scenarios for each district in the Greater Christchurch Urban Development Strategy area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Base | 2006 | 2011 | 2016 | 2020 | 2031 | 2041 | 2006-20 | 2006-41 |
| Christchurch Ccty | 140,910 | 150,610 | 157,980 | 165,130 | 182,510 | 195,780 | 24,220 | 54,870 |
| Waimakariri in UDS | 13,280 | 15,250 | 17,550 | 19,850 | 23,160 | 26,460 | 6,570 | 13,180 |
| Selwyn in UDS | 8,110 | 10,090 | 12,460 | 14,820 | 18,680 | 22,540 | 6,710 | 14,430 |
| TOTAL UDS | 162,300 | 175,950 | 187,990 | 199,800 | 224,350 | 244,780 | 37,500 | 82,480 |
| **Low impact** | | | | | | | | |
| Christchurch city | 140,910 | 147,600 | 149,070 | 154,790 | 172,230 | 185,500 | 13,880 | 44,590 |
| Waimakariri in UDS | 13,280 | 14,990 | 18,220 | 21,280 | 24,710 | 28,030 | 8,000 | 14,750 |
| Selwyn in UDS | 8,110 | 10,090 | 13,040 | 16,090 | 20,220 | 23,880 | 7,980 | 15,770 |
| TOTAL UDS | 162,300 | 172,680 | 180,330 | 192,160 | 217,160 | 237,410 | 29,860 | 75,110 |
| **Medium impact** | | | | | | | | |
| Christchurch city | 140,910 | 144,960 | 145,880 | 149,990 | 166,540 | 179,810 | 9,080 | 38,900 |
| Waimakariri in UDS | 13,280 | 14,870 | 17,810 | 21,040 | 24,490 | 27,800 | 7,760 | 14,520 |
| Selwyn in UDS | 8,110 | 10,090 | 13,120 | 16,250 | 20,430 | 24,070 | 8,140 | 15,960 |
| TOTAL UDS | 162,300 | 169,920 | 176,810 | 187,280 | 211,460 | 231,680 | 24,980 | 69,380 |
| **Major impact** | | | | | | | | |
| Christchurch city | 140,910 | 142,330 | 142,700 | 145,210 | 160,860 | 174,140 | 4,300 | 33,230 |
| Waimakariri in UDS | 13,280 | 14,730 | 17,380 | 20,790 | 24,240 | 27,550 | 7,510 | 14,270 |

# Population Forecasts and Demographics

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Selwyn in UDS | 8,110 | 10,090 | 13,190 | 16,410 | 20,630 | 24,240 | 8,300 | 16,130 |
| TOTAL UDS | 162,300 | 167,150 | 173,270 | 182,410 | 205,730 | 225,930 | 20,110 | 63,630 |
| **Low impact - difference from base** | | | | | | | | |
| Christchurch City | - | -3,010 | -8,910 | -10,340 | -10,280 | -10,280 | -10,340 | -10,280 |
| Waimakariri in UDS | - | - 260 | 670 | 1,430 | 1,550 | 1,570 | 1,430 | 1,570 |
| Selwyn in UDS | - | - | 580 | 1,270 | 1,540 | 1,340 | 1,270 | 1,340 |
| TOTAL UDS | - | -3,270 | -7,660 | -7,640 | -7,190 | -7,370 | -7,640 | -7,370 |
| **Medium impact - difference from base** | | | | | | | | |
| Christchurch City | - | -5,650 | -12,100 | -15,140 | -15,970 | -15,970 | -15,140 | -15,970 |
| Waimakariri in UDS | - | - 380 | 260 | 1,190 | 1,330 | 1,340 | 1,190 | 1,340 |
| Selwyn in UDS | - | - | 660 | 1,430 | 1,750 | 1,530 | 1,430 | 1,530 |
| TOTAL UDS | - | - 6,030 | - 11,180 | - 12,520 | - 12,890 | 13,100 - | 12,520 | 13,100 |
| **Major impact - difference from base** | | | | | | | | |
| Christchurch City | - | - 8,280 | - 15,280 | - 19,920 | - 21,650 | -21,640 | -19,920 | -21,640 |
| Waimakariri in UDS | - | - 520 | - 170 | 940 | 1,080 | 1,090 | 940 | 1,090 |
| Selwyn in UDS | - | - | 730 | 1,590 | 1,950 | 1,700 | 1,590 | 1,700 |
| TOTAL UDS | - | - 8,800 | - 14,720 | - 17,390 | - 18,620 | 18,850 | 17,390 | 18,850 |

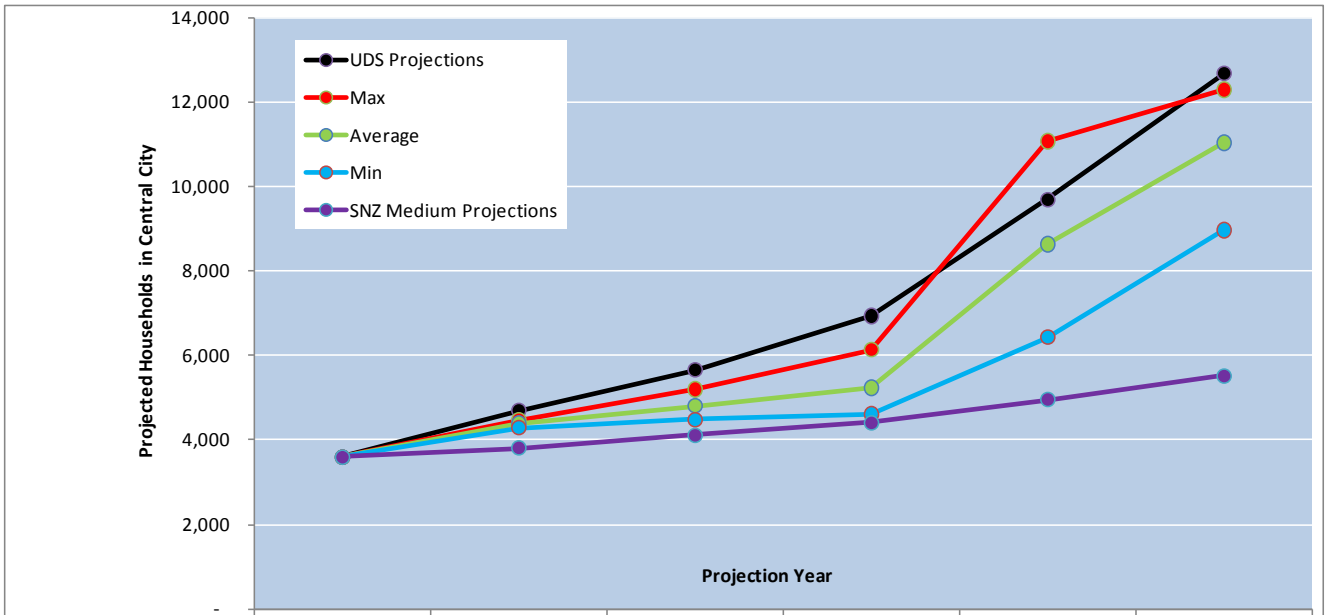
***These scenarios are then distributed at a sub-district level using another set of assumptions that factor in the likelihood that an area of the city would receive the projected growth in the base UDS projections. The assumptions of where growth is likely to be increased or decreased are based on the following factors and outputs at the level of Statistics New Zealand census area units:***

- Removal of capacity from the red zone and some of the orange zone
- The relative amount of building damage in an area from the building assessment data. For example, an area with high damage is likely to get less of its anticipated growth than an area with no damage.
- Capacity in the city, including new greenfield and infill capacity.

The result of this analysis was to produce two additional options to control possible market responses to each of the assumptions – the difference between them being that the second response would reflect a strong aspirational Central City response, which is what would occur if the Central City Plan was successful and the Central City recovers quickly and becomes an attractive place for residential development.

The results of running these six variations are shown in the graph below, with maximum, average and minimum values for all the six runs of the model for the Central City, compared with the UDS and SNZ medium projections for the Central City.

By 2021, the range of households from the model are between 66 to 88 per cent of the UDS projection and by 2041 between 70 and 97 per cent of the UDS targets, with the average at 2021, being 75 per cent of the projected UDS growth and at 2041 just under 90 per cent of the UDS growth.




| | 2006 | 2011 Post-Quake | 2016 | 2021 | 2031 | 2041 |
|---|---|---|---|---|---|---|
| UDS Projections | 3,600 | 4,693 | 5,653 | 6,931 | 9,695 | 12,670 |
| Max | 3,600 | 4,475 | 5,192 | 6,128 | 11,074 | 12,292 |
| Average | 3,600 | 4,379 | 4,802 | 5,236 | 8,627 | 11,037 |
| Min | 3,600 | 4,283 | 4,487 | 4,605 | 6,423 | 8,964 |
| SNZ Medium Projections | 3,600 | 3,801 | 4,115 | 4,407 | 4,956 | 5,517 |

# Population Forecasts and Demographics

## *7. Demographic profile of Central City*

(Sources: Statistics New Zealand, 1996-2006 Census of Population and Dwellings; Department of Public Health, University of Otago (Wellington), 2006 New Zealand Deprivation Index).

***Contents:***

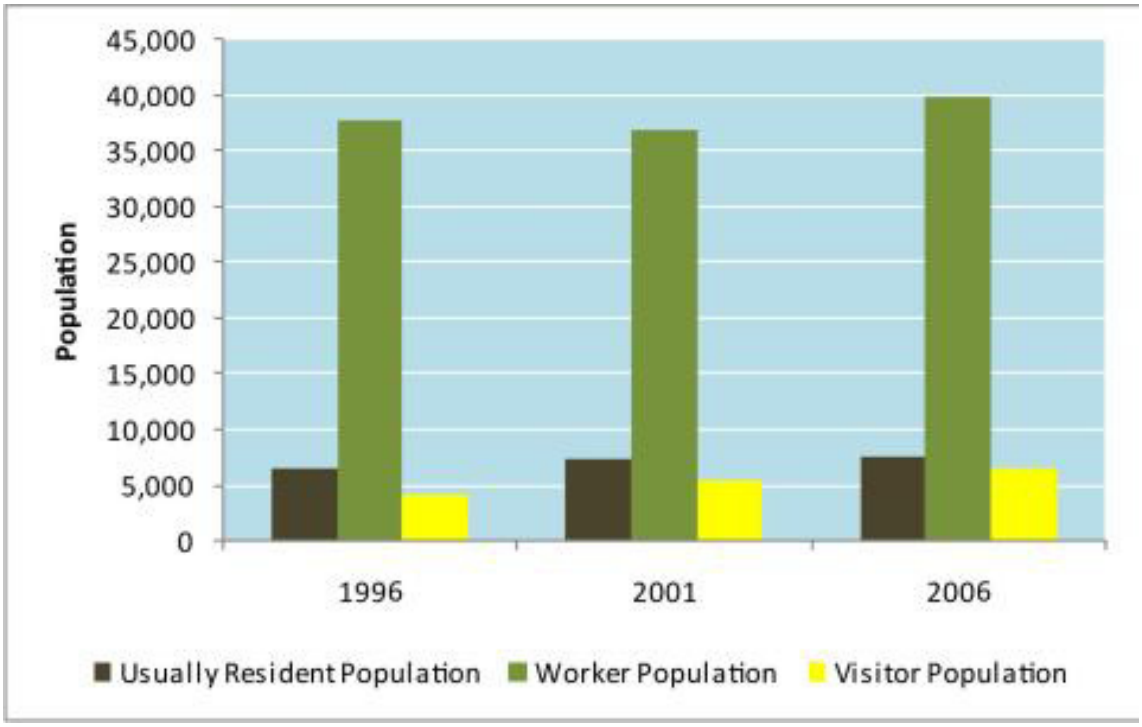
- *Popul*ation
- Age
- Ethnicity
- Deprivation
- Birthplace
- Usual residence five years ago
- Household composition
- Family type
- Income – individual and household
- Hous*ehold tenure of dwelling*

### *Population*

Between 1996 and 2006, the Central City's resident population increased by 16 per cent (1056 people) to reach 7656. By comparison, the city-wide increase was 10 per cent.

Between 1996 and 2006, the Central City worker population increased by 5 per cent (2049 people) to reach 39,780. By comparison, the city-wide increase was 6 per cent.

Between 1996 and 2006, the Central City visitor population increased by 57 per cent (2376 people) to reach 6546. By comparison, the city-wide increase was 35 per cent.



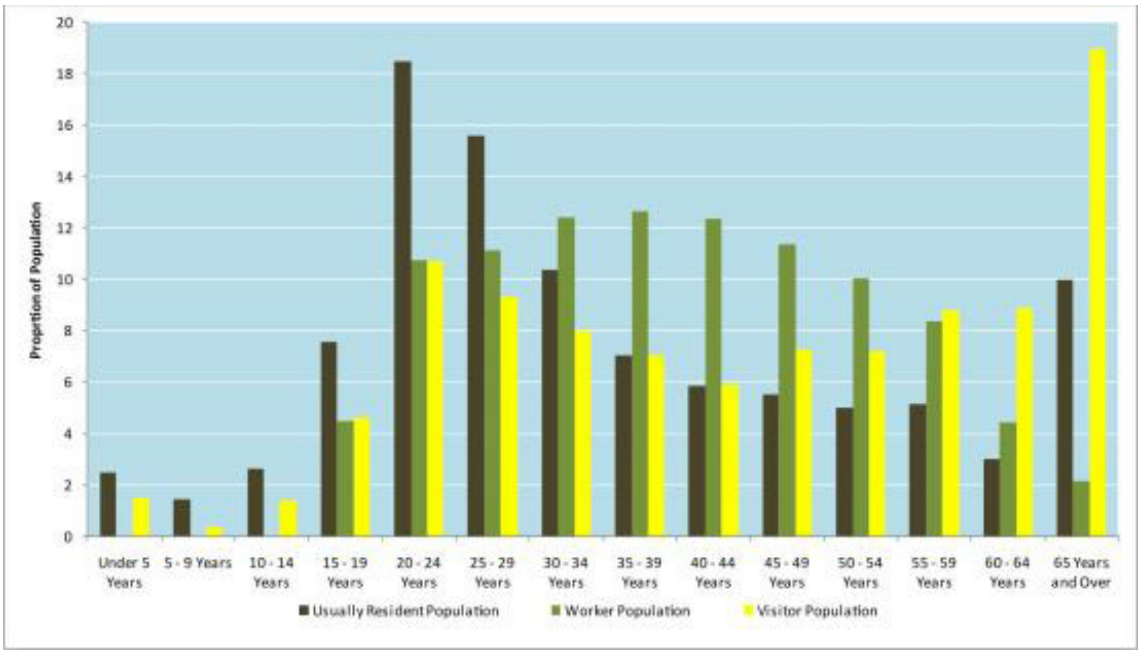
| Central City population change by type of population, 1996-2006 | | | | | |
|---|---|---|---|---|---|
| | Population count | | | Population change 1996- 2006 | |
| Type of population | 1996 | 2001 | 2006 | Number | % |
| Resident population | 6,600 | 7,263 | 7,656 | 1,056 | 16 |
| Worker population | 37,731 | 36,876 | 39,780 | 2,049 | 5 |
| Visitor population | 4,170 | 5,457 | 6,546 | 2,376 | 57 |

## *Age*

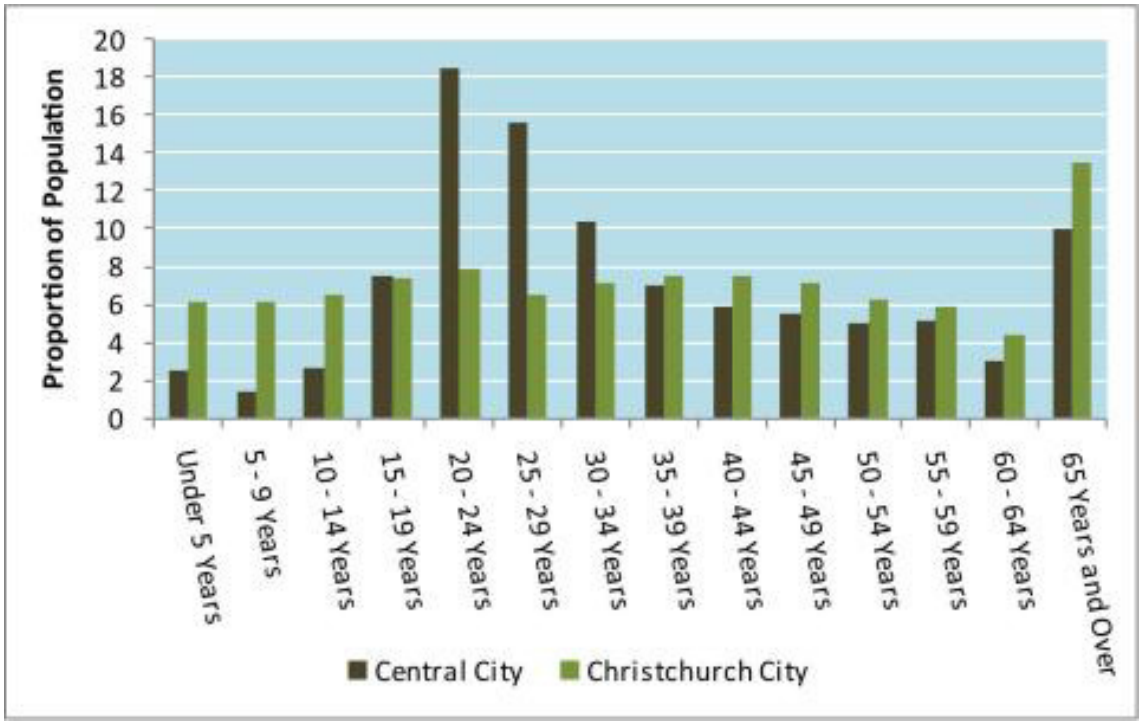
In 2006, just over half (52 per cent) of the Central City resident population were aged 15 to 34 years. Older adults (aged 65 years and over) were the next largest group, comprising 10 per cent of the population. This compares with 29 per cent and 14 per cent respectively in the whole of the city.

In 2006, the highest proportions of the Central City worker population were aged 30 to 44 years (37 per cent).

In 2006, almost one-fifth (19 per cent) of the Central City visitor population was aged 65 years and over. Younger adults aged 20 to 29 years and older adults aged 55 to 64 years also comprised high proportions of the visitor population.



# Population Forecasts and Demographics




### *Ethnicity*

In 2006, over two thirds (68 per cent) of Central City residents identified with the European ethnic group. This has decreased from 88 per cent in 1996.

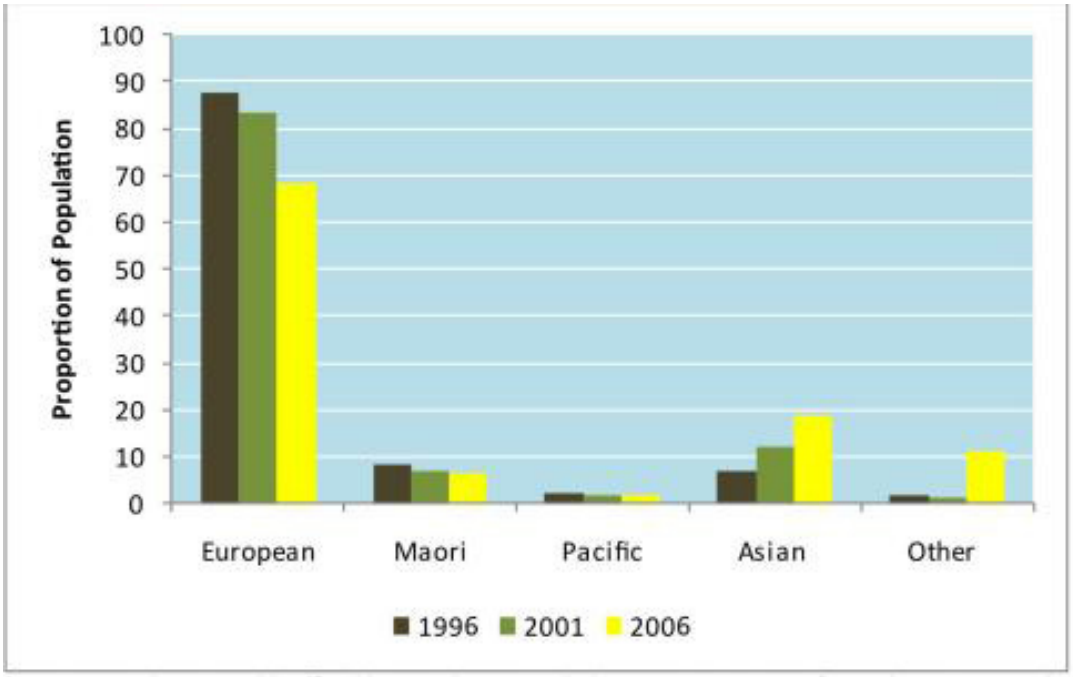
In 2006, almost one-fifth (19 per cent) of Central City residents identified with the Asian ethnic group. This has increased from 7 per cent in 1996.

In 2006, 6.5 per cent of Central City residents identified with the Maori ethnic group. This has decreased from 8 per cent in 1996.

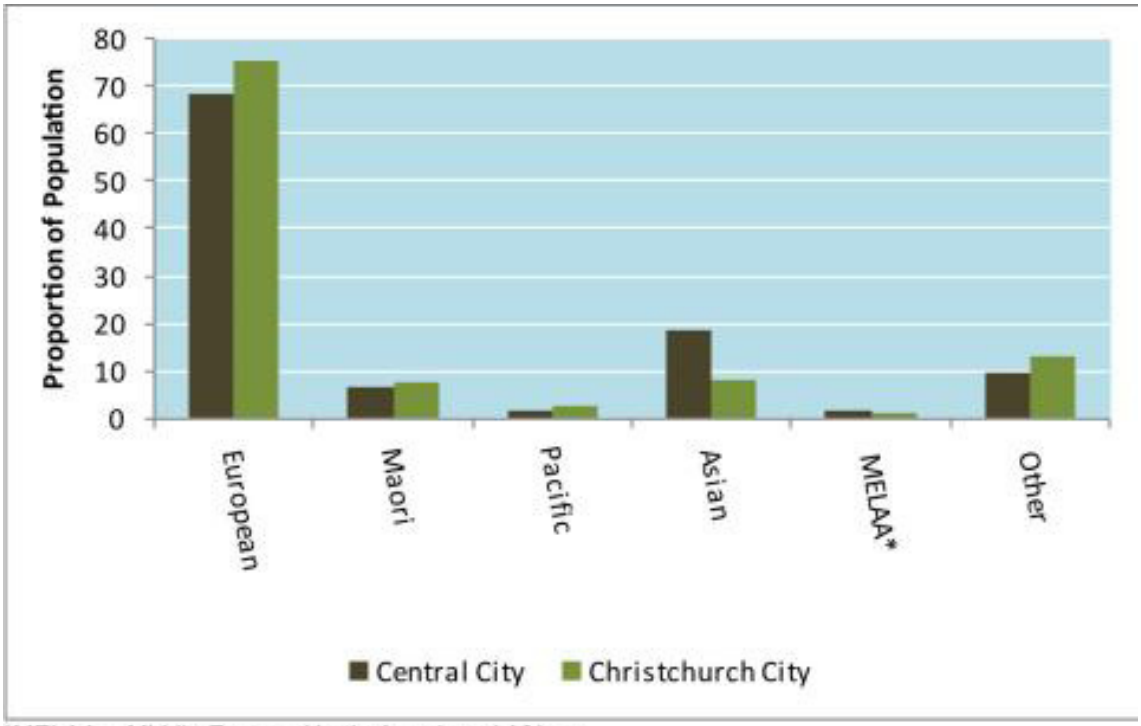
In 2006, 1.6 per cent of Central City residents identified with the Pacific Peoples ethnic group. This has decreased from 2 per cent in 1996.

In 2006, 11 per cent of Central City residents identified with the Other ethnic group category. This has increased from 2 per cent in 1996. (Note that in 1996 and 2001, New Zealander responses were included in the European category, whereas in 2006 such responses were included in the Other category).

In 2006, compared with the city as a whole, the Central City had proportionally twice as many Asians and MELAA than the whole city, and proportionally fewer other ethnicities.




(note: respondents may identify with more than one ethnic group – responses for each category are included)

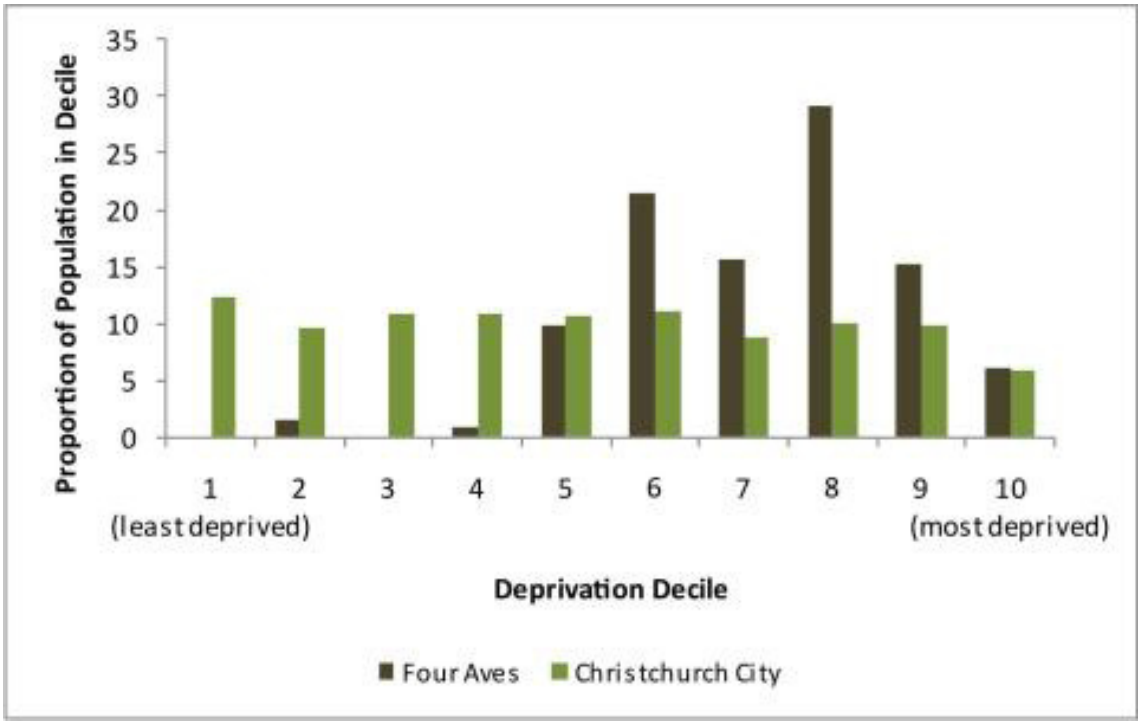



*MELAA = Middle Eastern / Latin American / African

# Population Forecasts and Demographics

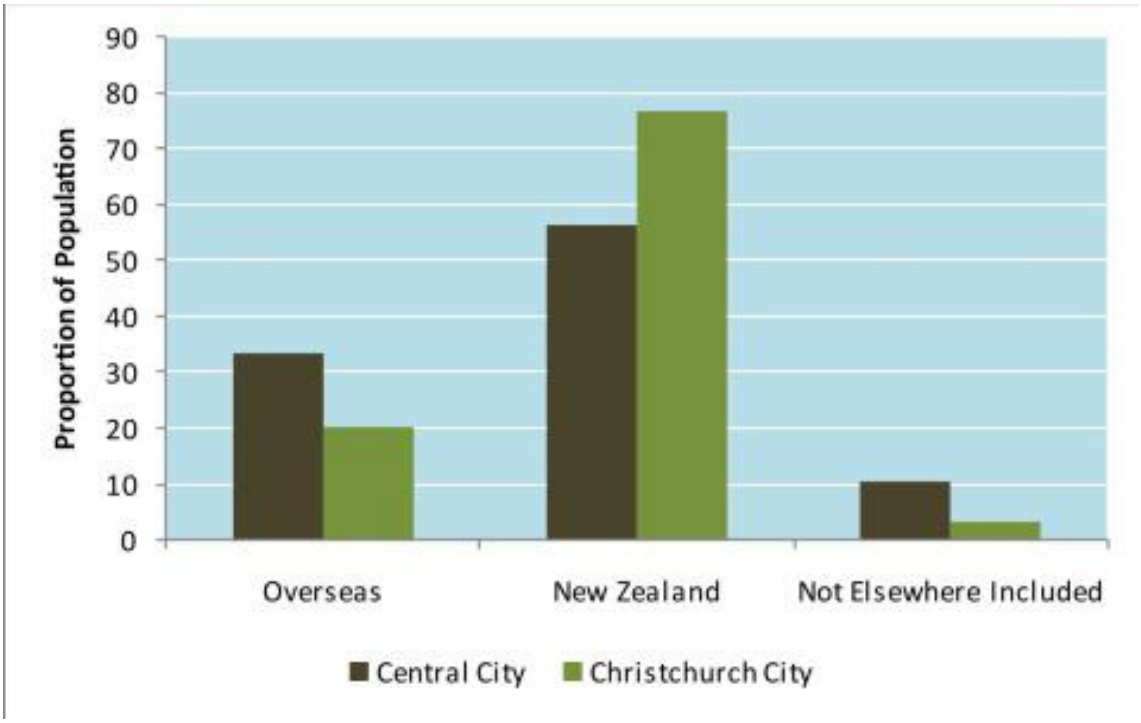
### *Deprivation*

The Central City has higher levels of socio-economic deprivation than the rest of Christchurch. Two thirds of the Central City population live in areas with higher deprivation scores (deciles 7-10), compared with 35 per cent of the city-wide population.




### *Birthplace*

In 2006, 33 per cent of Central City residents were born overseas. This compares with 20 per cent city-wide.

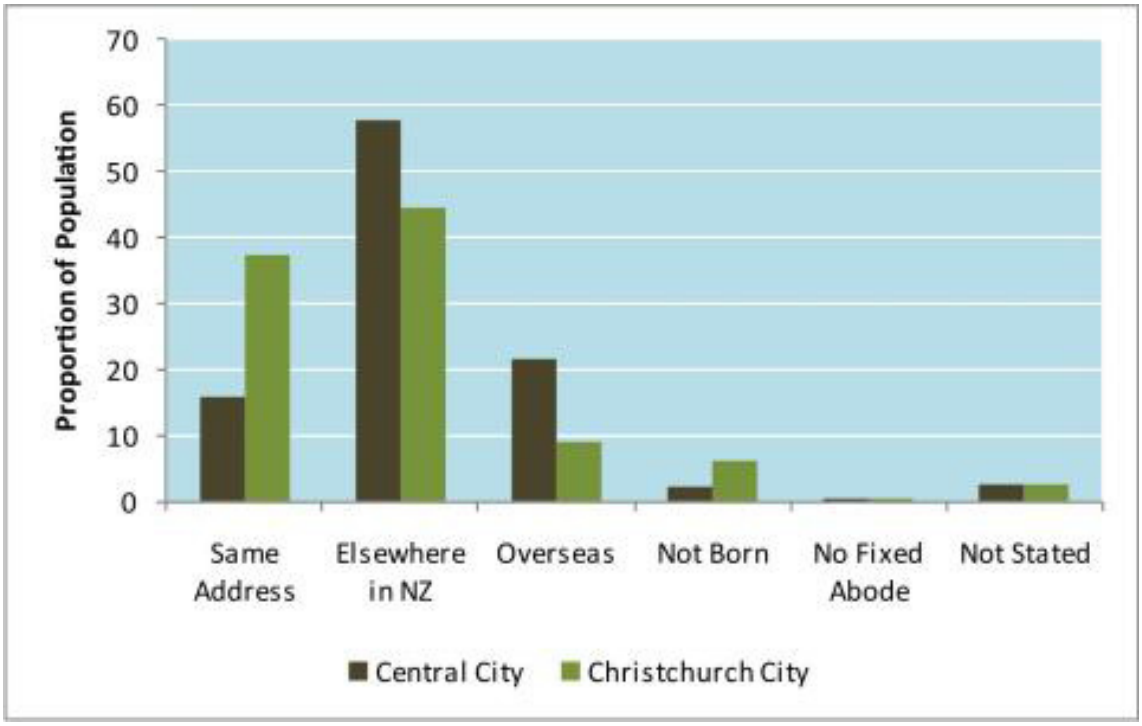


### *Usual residence five years ago*

In 2006, 16 per cent of Central City residents were living at the same address as they were in 2001. This is lower than the city-wide average of 38 per cent.

In 2006, 58 per cent of Central City residents were living at a different address within New Zealand than they were in 2001 (this includes people who lived at another address within Christchurch or within the Central City). This is higher than the city-wide average of 45 per cent.

In 2006, 22 per cent of Central City residents were living overseas in 2001. This compares with 9 per cent city-wide.



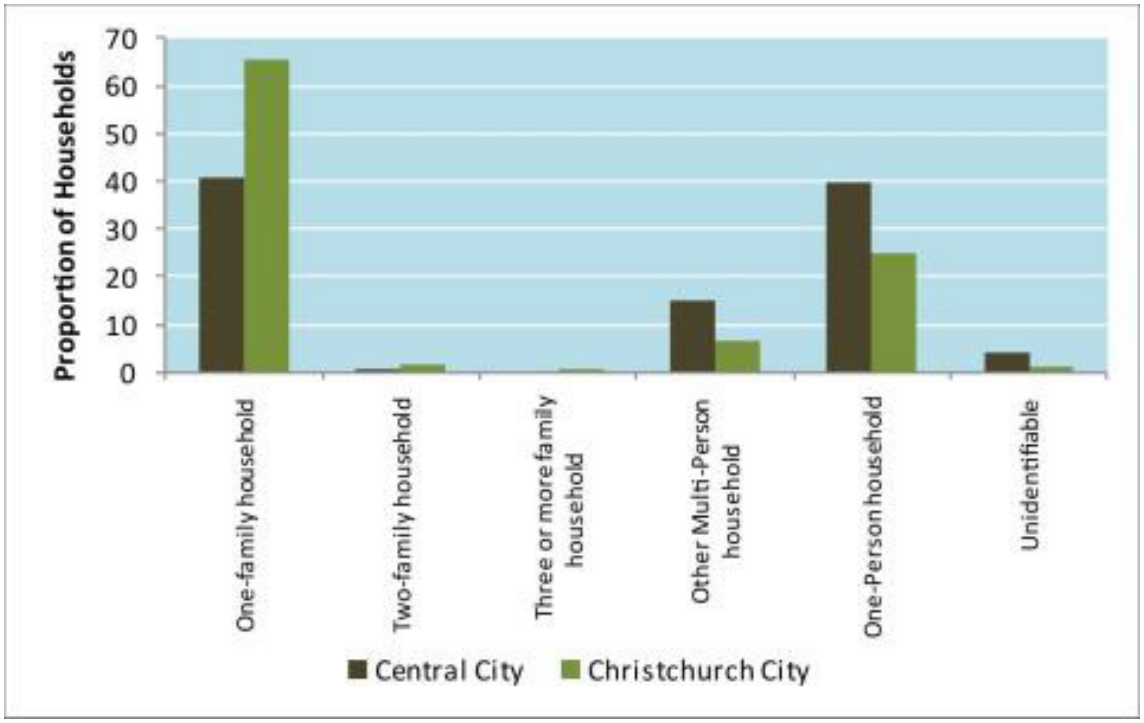

### *Household composition*

In 2006, 41 per cent of Central City households consisted of one family, compared with two thirds (66 per cent) city-wide.

In 2006, 15 per cent of Central City households consisted of other multi-person households (in a non-family situation, e.g. flatting), compared with 7 per cent city-wide.

In 2006, 40 per cent of Central City households consisted of one-person households, compared with 25 per cent city-wide.

# Population Forecasts and Demographics

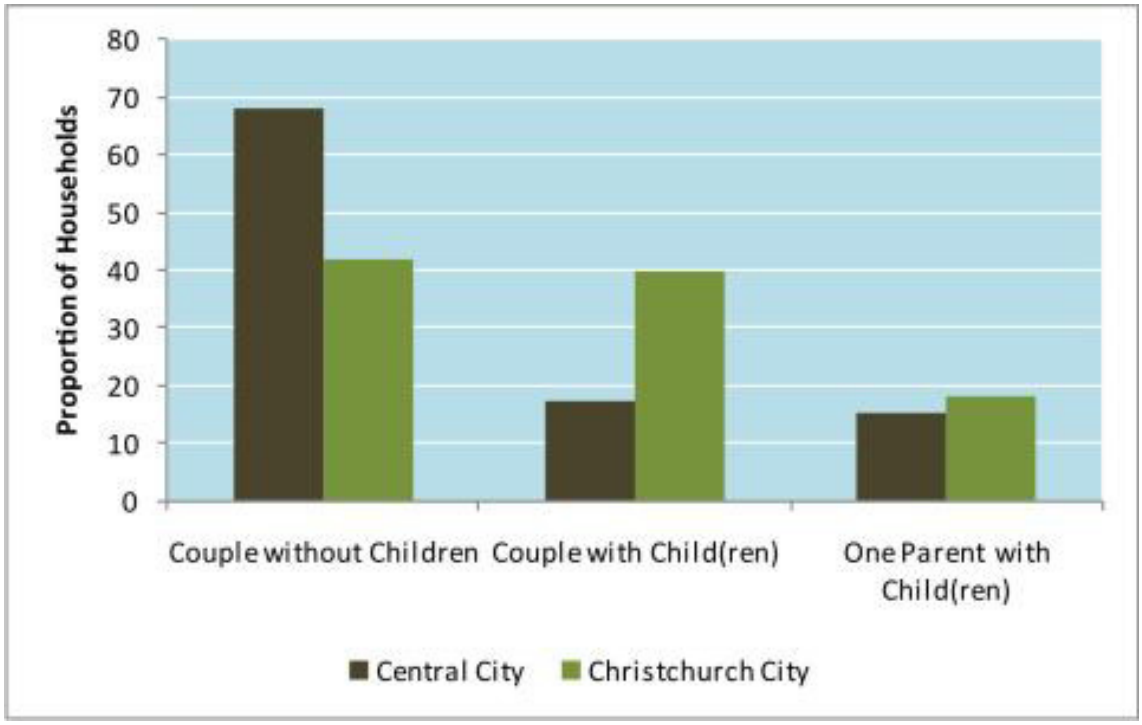



### *Family type*

In 2006, 68 per cent of Central City families were couples without children, compared with 42 per cent city-wide.

In 2006, 17 per cent of Central City families were couples with children, compared with 40 per cent city-wide.

In 2006, 15 per cent of Central City families were one parent with children, compared with 18 per cent city-wide.



## *Income*

**Personal income (residents aged 15 years or over)**

In 2006, a high proportion (18 per cent) of Central City residents did not state their personal income. This compares with 8 per cent city-wide.

In 2006, 32 per cent of Central City residents had an income of greater than $30,000. This compares with 36 per cent city-wide.

In 2006, 19 per cent of Central City residents had an income of less than $10,000. This compares with 20 per cent city-wide.

Generally, personal income in the Central City is around the same or lower than the whole of the city, however, the high proportion of 'not stated' makes it hard to know the true extent of these differences.


## *Household income*

In 2006, a high proportion (19 per cent) of Central City households did not state their personal income. This compares with 14 per cent city-wide.

In 2006, 22 per cent of Central City households had an income of greater than $70,000. This compares with 27 per cent city-wide.

In 2006, 29 per cent of Central City households had an income of less than $20,000. This compares with 27 per cent city-wide.

Generally household incomes are proportionally lower than the city as a whole, excluding those that did not state their incomes.

# Population Forecasts and Demographics


### *Household tenure of dwelling*

In 2006, only one quarter of households owned or partly owned the dwelling that they usually resided in, and 63 per cent of households did not own their dwelling.

This is almost the complete opposite for the city as a whole, where 64 per cent of households owned or partly owned their dwelling, and 31 per cent did not own their dwelling.

Figure 13 missing

# Appendix E. Population Forecasts and Demographics

# Demand Analysis — Office Space

## *Office Space Demand*

This section details the results of the forecasts for office space demand within the four avenues, and it describes the core assumptions used to arrive at these results. From an economic perspective, the key assumption underlying this model is that it is an 'unconstrained demand' model – that is, it assumes that anyone who wants central city space can find it, and that it suits their needs and price point. It is also important to note that it does not adjust for existing space; it presents the gross amount of office space demanded, and that can include existing space.

### *Technical Background*

These results are based on a probabilistic model which was calibrated using survey results. The survey took place 12-18 May and surveyed over 380 businesses that had been located in the Central City. These were further broken down into 'Professional Services' and 'Health and Public Administration'.

The survey asked businesses what their likelihood of return to the Central City was, what the timing of their return was likely to be, and whether their floor-space requirement would increase, decrease, or stay the same. It also examined employment intentions, but these were not incorporated into the model, as tests performed on the results suggested they were unreliable.

These results were used to perform a multi-trial simulation that applied probabilities based on the survey data to the pre-earthquake business population. The return times were incorporated to develop a 'return to city' curve, and were applied to the pre-earthquake population in a similar manner. The results were summed, and error bands were developed based on the 25th, 50th, and 75th percentile results from those multiple runs.

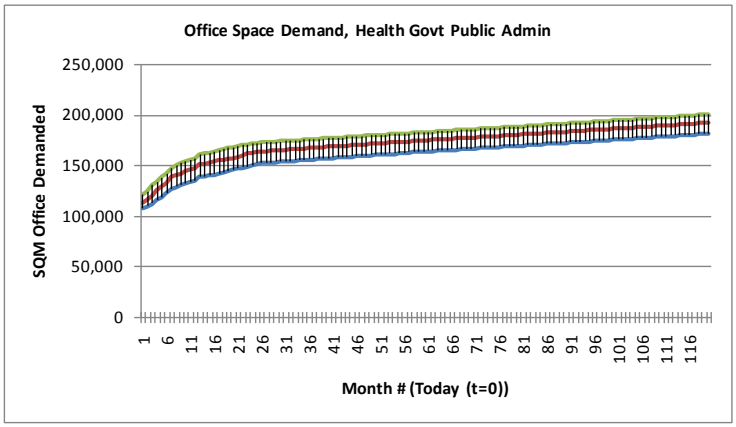
### *Key Assumptions*

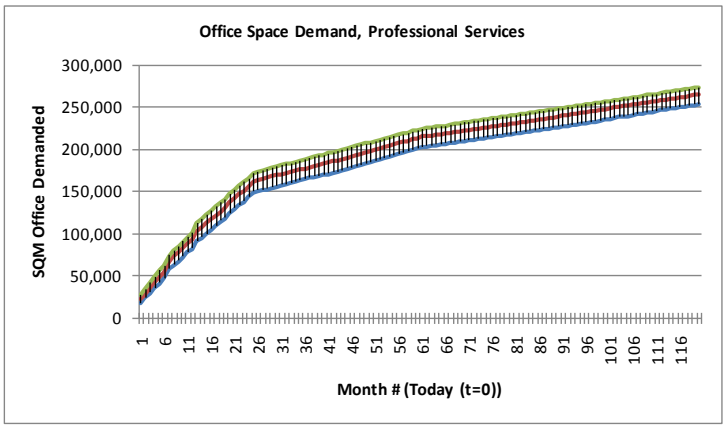
1. The reported intention (probability) of a business returning to the Central City is accurate, and it remains constant over time;
2. The proportion of future employment in the central city, in these sectors, is similar to that which existed prior to the earthquake;
3. Office space requirements are dictated by national employee per square meter ratios, not necessarily by those that existed prior to the earthquake;
4. The projections of future office employment generated by the Christchurch Economic Futures Model are still relatively accurate;
5. The reported 'return' timing intentions of business to the central city are accurate and are representative across businesses;
6. Businesses that were not in the Central City at the time of the earthquake are unlikely to relocate there in the short (<5 yr) term. This appears to be a sensible assumption based on surveys that examined the location intention of existing suburban businesses.

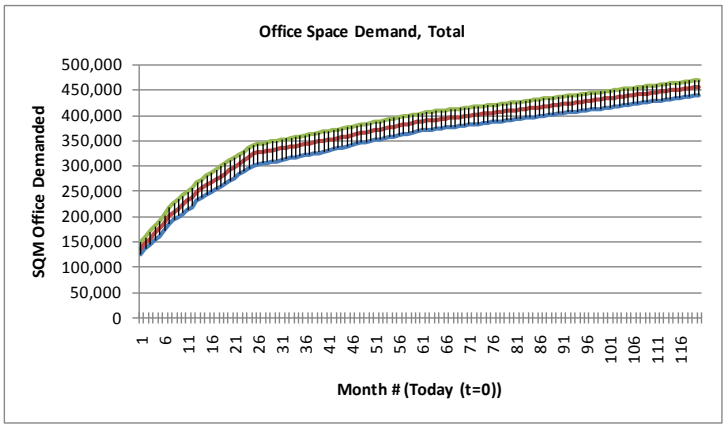
### *Results*

The following results are based on the assumptions above; the model allows a variety of scenarios to be executed. Error bands on the graphs represent 25/50/75% thresholds of the computed results.

| Office Floorspace Demanded, By Sector, Square Meters | | | | |
|---|---|---|---|---|
| | 2012 | 2014 | 2016 | 2021 |
| Professional Services | 100,000 | 176,000 | 211,000 | 260,000 |
| Health & Public Administration | 150,000 | 168,000 | 175,000 | 193,000 |
| Total | 250,000 | 344,000 | 386,000 | 453,000 |




## *Forecast of Office Space Demand within the Four Avenues (2011-2031)*

This document details the results of the forecasts for office space demand within the four avenues, and it describes the core assumptions used to arrive at these results. From an economic perspective, the key assumption underlying this model is that it is an 'unconstrained demand' model – that is, it assumes that anyone who wants central city space can find it, and that it suits their needs and price point. It is also important to note that it does not adjust for existing space; it presents the gross amount of office space demanded, and that can include existing space.

# Demand Analysis — Residential

# *Residential Demand*

This section details the results of the forecasts for residents living within the four avenues, and it describes the core assumptions used to arrive at these results. These assumptions should be interpreted as realistic, but aspirational; that is, they rely on Christchurch recovering well, becoming vibrant, and attracting similar proportions of its resident population to the Central City as in other high-value cities.

### *Population Projections*

These projections are based on the Statistics NZ projection of the populations within the four-avenues. The total projections for each area unit are presented in the table below, note that Stats New Zealand 'Medium' projections have been used throughout as the baseline comparison.

| Statistics New Zealand Medium Population Projections by Area Unit | | | | | | |
|---|---|---|---|---|---|---|
| | 2006 | 2011 | 2016 | 2021 | 2026 | 2031 |
| Cathedral Square | 1140 | 1220 | 1400 | 1570 | 1750 | 1920 |
| Hagley Park | 1980 | 2110 | 2230 | 2350 | 2460 | 2570 |
| Avon Loop | 4870 | 5210 | 5550 | 5890 | 6220 | 6530 |
| **Total** | **7990** | **8540** | **9180** | **9810** | **10430** | **11020** |

The forecasts rest on the key assumption that if Christchurch City is successful with its rebuild of the inner city, there will be more residents within the inner-city than projected using Statistics New Zealand medium projections. A good starting place is to look at other inner cities such as Wellington and Auckland. Both Auckland and Wellington have a higher proportion of young adults living in their central city and Christchurch has a higher proportion of older adults and potential retirees living in its central city.

In order for Christchurch Central to look more like other inner cities, the number of young people needs to increase. A successful rebuild will attract a greater proportion of young people to the Central City, and the ratio between the proportions of each age group living 'in' a city versus living 'outside' a city is relatively similar in Wellington and Auckland. Those proportions have been averaged to develop 'scaling factors' for Christchurch. For example, on average in Auckland and Wellington 56% of inner city residents are 15-29 year olds and 26% of all residents are 15-29 year olds. The ratio is 2.11. Applying this ratio to the projected proportion (2031) of Christchurch residents in this age group (22%) means we could realistically anticipate around 41% of inner city residents in Christchurch to be in this age group, if our young people make similar decisions about where to locate as young people in Auckland and Wellington. The ratios, implied proportions and current proportions are presented in the table below.

| Breakdown of Central City Residents by Age, 2006 | | | | | | |
|---|---|---|---|---|---|---|
| | Average Auck Well City | Average Auck Well Central | Ratio | Christchurch City | CHC Central Current ('06) | Implied CHC central % |
| 0-14 years | 18% | 4.00% | 0.22 | 19% | 6.60% | 4.10% |
| 15-29 years | 26% | 55.70% | 2.11 | 22% | 41.10% | 46.80% |
| 30-49 years | 32% | 26.20% | 0.81 | 29% | 29.20% | 23.70% |
| 50-64 years | 14% | 10.10% | 0.7 | 17% | 13.30% | 11.60% |
| 65 years and older | 9% | 4.00% | 0.45 | 13% | 9.80% | 6.10% |

However, these Christchurch Central proportions do not add to 100%. They were therefore adjusted by constant proportions to equal 100% by 'anchoring' the number (but not the proportion) of 65+ residents and growing the additional populations relative to that number. This is a sensible assumption, given the relatively lower proportion of 65+ residents in most successful central cities. It also assumes policies will not drive out over 65 residents, should they choose to live the in Four-Avenues.

Using this new implied proportion by age group and again anchoring the number of residents in 2031 in the 65 years and older

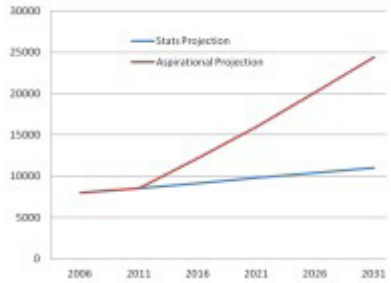
age group, the projected 2031 population in Central Christchurch is on adjacent page.

| Projection Central Christchurch Population 2031 | | | |
|---|---|---|---|
| | Existing Projection | Adjusted Projection (to gain correct proportions) | Adjusted Proportions |
| 0-14 years | 725 | 1086 | 4.50% |
| 15-29 years | 3705 | 12367 | 50.70% |
| 30-49 years | 3245 | 6270 | 25.70% |
| 50-64 years | 1760 | 3054 | 12.50% |
| 65 years and older | 1600 | 1600 | 6.60% |
| **Total** | **11035** | **24377** | |

Because we gradually wanted to approach the new proportions the 2031 population projection was used. Therefore the in-between years need to be estimated. To achieve this, the 2011 projections have been held, and the 2016, 2021 and 2026 were adjusted to gradually approach the 2031 projections. The results are presented in the table and chart below.

| Adjusted Central Christchurch Population Projections | | | | | | |
|---|---|---|---|---|---|---|
| | 2006 | 2011 | 2016 | 2021 | 2026 | 2031 |
| 0-14 years | 525 | 550 | 736 | 849 | 947 | 1086 |
| 15-29 years | 3280 | 3350 | 5498 | 7787 | 10023 | 12367 |
| 30-49 years | 2330 | 2560 | 3385 | 4340 | 5370 | 6270 |
| 50-64 years | 1060 | 1215 | 1462 | 1805 | 2358 | 3054 |
| 65 years and older | 780 | 860 | 1070 | 1250 | 1435 | 1600 |
| **Total** | **7975** | **8535** | **12151** | **16031** | **20133** | **24377** |

Figure Two: Population Projections- Central Christchruch




## *Estimating Household Demand*

The 2006 Census included information by age group on the type of dwelling. By applying those household grouping to the

# Demand Analysis — Residential

population projections, it is possible to produce an estimated number of households in each group under the assumption that the proportion by age group living in each household type in Christchurch in 2006 is applicable to the Central City and will remain through to 2031.

| Demand (by households) for Household Type, Aspirational Projections | | | | | |
|---|---|---|---|---|---|
| | 2011 | 2016 | 2021 | 2026 | 2031 |
| 11 Couple Only | 843 | 1,131 | 1,448 | 1,812 | 2,197 |
| 12 Couple Only and Other Person(s) | 112 | 173 | 238 | 305 | 374 |
| 13 Couple With Child(ren) | 738 | 1,048 | 1,378 | 1,723 | 2,076 |
| 14 Couple With Child(ren) and Other Person(s) | 63 | 92 | 124 | 156 | 189 |
| 15 One Parent With Child(ren) | 258 | 376 | 499 | 627 | 758 |
| 16 One Parent With Child(ren) and Other Person(s) | 71 | 106 | 143 | 180 | 219 |
| 20 Two-Family Household Not Further Defined | | | | | |
| 21 Two 2-Parent Families | 3 | 4 | 6 | 7 | 9 |
| 22 One 2-Parent Family and a 1-Parent Family | 7 | 10 | 13 | 16 | 20 |
| 23 Two 1-Parent Families | 6 | 9 | 13 | 16 | 19 |
| 24 Other 2-Family Household | 25 | 37 | 50 | 63 | 77 |
| 31 Three- or More Family Household (With or Without Other People) | 1 | 2 | 3 | 4 | 4 |
| 40 Other Multiperson Household Not Further Defined | 1 | 2 | 2 | 3 | 4 |
| 41 Household of Related People | 36 | 54 | 74 | 94 | 114 |

| | | | | | |
|---|---|---|---|---|---|
| 42 Household of Related and Unrelated People | 13 | 22 | 30 | 39 | 48 |
| 43 Household of Unrelated People | 386 | 600 | 831 | 1,063 | 1,303 |
| 51 One-Person Household | 795 | 1,038 | 1,300 | 1,600 | 1,908 |
| 61 Household Composition Unidentifiable | 52 | 76 | 101 | 127 | 155 |

# *Tourism Accommodation Demand*

This section details the methodology for forecasting the demand for tourist accommodation within the four avenues. It is mainly based on historical data and Ministry of Tourism forecasts. The results and key assumptions are outlined below.

### *Pre-Earthquake Supply of Accommodation*

Historical data detailed the pre-earthquake (2010) supply of accommodation within the four avenues by both establishments and capacity for Hotels, Motels and Backpackers.

| Supply Four Avenues, 2010 | | |
|---|---|---|
| | Establishments | Capacity |
| Hotels | 25 | 2709 |
| Motels | 18 | 367 |
| Backpackers | 19 | 1957 |
| **Total** | **62** | **5032** |

### *Forecasting Growth in Visitor Nights*

The Ministry of Tourism forecasts visitor nights in the Canterbury region from 2011 to 2016. The growth rates were applied to the 2010 demand for accommodation within the four avenues.

### *Assumption: The forecast growth for Canterbury aligns with the forecast growth for the four avenues.*

***The Ministry of Tourism forecasts were undertaken prior to Christchurch losing its Rugby World Cup games. As a result, the forecast growth from 2010 to 2011 is high. Since losing the games it is likely that the impact will not be exactly the same but it is uncertain what the new impact will be. Therefore the growth rates have been unchanged. This may not be a significant issue because:***

- Strong growth between 2010-2011 has been seen with increased visitors to assist in the recovery
- Many packages for the World Cup were already booked and due to accommodation shortages elsewhere in NZ many visitors will still visit

# Demand Analysis — Tourism Accommodation

- The Ministry of Tourism forecasts low growth between 2011 and 2012 so in the long run the impact of the World Cup is small

### *Estimating the peak demand*

The key to presenting a useful forecast for tourist accommodation for planning purposes is to ensure that peak demand is met, not the average demand. Statistics NZ has occupancy rates for Canterbury by month. To estimate the peak demand for each accommodation type the average occupancy rate by month between 2000-2010 was applied to the annual forecast, adjusting for the numbers of days each month (that is monthly forecast demand was estimated using the monthly occupancy rates so the annual average forecast was achieved).

### *Assumption: Monthly occupancy rates for Canterbury are applicable to the four avenues, constant across accommodation types (would not be the case if Holiday Parks were included) and are unlikely to change through time*

***The peak demand was in February. This is presented in the table below.***

| Forecast Peak Visitors Four Avenues | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2021** | **2026** | **2031** |
| Hotels | 2327 | 2391 | 2398 | 2434 | 2469 | 2502 | 2534 | 2703 | 2883 | 3036 |
| Motels | 250 | 257 | 257 | 260 | 265 | 269 | 272 | 290 | 309 | 326 |
| Backpackers | 1296 | 1331 | 1335 | 1355 | 1374 | 1393 | 1410 | 1505 | 1604 | 1690 |
| **Total** | **3873** | **3980** | **3990** | **4050** | **4108** | **4164** | **4215** | **4498** | **4796** | **5052** |

### *Estimating the preferable supply of accommodation*

It is desirable to have capacity above peak demand to allow for some variation and additional growth. The difference between the 2010 supply and peak demand is presented in the table below.

| Supply and Peak Demand Four Avenues 2010 | | | |
|---|---|---|---|
| | **Supply** | **Peak Demand** | **Proportion Above** |
| Hotels | 2588 | 2327 | 11% |
| Motels | 331 | 250 | 32% |
| Backpackers | 1914 | 1296 | 48% |
| **Total** | **2588** | **2327** | **11%** |

Based on these numbers, if we retain 15% extra capacity above peak demand in hotels, 30% in motels and 45% in backpackers (to roughly match 2010 so that our accommodation landscape is similar to pre-Earthquake) demand would be:

| Demand by visitor capacity allowing for additional capacity | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2021** | **2026** | **2031** |
| Hotels | 2588 | 2659 | 2667 | 2707 | 2745 | 2782 | 2818 | 3006 | 3206 | 3421 |
| Motels | 331 | 340 | 340 | 345 | 351 | 356 | 360 | 384 | 409 | 437 |
| Backpackers | 1914 | 1967 | 1973 | 2002 | 2030 | 2058 | 2083 | 2223 | 2370 | 2530 |
| **Total** | **4834** | **4967** | **4980** | **5054** | **5126** | **5196** | **5260** | **5613** | **5985** | **6387** |

# Financial Feasibility of Building in the CBD


## Advisory Report

Financial Feasibility of Building Development in the Christchurch CBD

Christchurch City Council
Central City Plan Strategy & Planning
PO Box 237
Christchurch 8140
Attention: Adam Naiman

Date: 14 November 2011 Ref: 6122/GS

## Contents



## Appendices

# Financial Feasibility of Building in the CBD

## 1.0 INTRODUCTION

Beca Carter Hollings & Ferner Limited (Beca) and Colliers International Valuation (ChCh) Limited (Colliers) were engaged separately by the Christchurch City Council (CCC) to provide building and property professional consultancy respectively for input into the Christchurch City Central City Plan as part of the "Built Form" Workstream.

The principal aim of the exercise was to determine the trends and viability of Council selected building heights and to provide informed input into the Central City Plan.

The purpose of this report is to summarise the methodology, inputs and results.

Colliers was engaged to separately advise CCC and accept legal responsibility only to CCC and not any other party that may receive or review this report. Although this report may be included in the Central City Plan, it is for information purposes only, and any reliance by any other party is at their own risk.

## 2.0 CHRISTCHURCH CITY COUNCIL BRIEF

Prior to commencing, the scope of work was identified within the framework of various discussions with the CCC. The initial discussions outlined the guidelines that CCC required Beca and Colliers to work within for the proposed model buildings and valuation assessment. These conditions and environments were:

- Examine typical commercial buildings from four to eight levels, plus a 12 level building
- CBD block location fringed by main streets/roads with possibility of a mid-block lane
- Land size (area) and shape to be flexible to fit within the block with no specific restrictions
- Car parking to be included at expected market ratios pre February earthquake
- Car parking to be integral within the building or separate as appropriate
- Building to include ground floor retail
- Location of the block was to be in a good, but not prime, retail location
- The model building was to be of good quality and equivalent to a "bench marked", New Zealand 4 Star Green building

The responsibilities of Beca and Colliers were to provide information relating to their respective areas of expertise, with Beca developing the "model" building and determining construction costs and Colliers providing valuation assessment modelling.

The model building was developed around a conventional podium/tower structure with and without a full basement of car parking with building height ranging from CCC specified heights of 4 to 8 levels above ground. A 12 level building was included at the later stages of the study, to indicate the trend of higher buildings.

This report must be read in conjunction with the corresponding Beca report. Beca provided critical input in terms of the design of the hypothetical model buildings providing floor areas and estimated construction costs.

## 3.0 COLLIERS SCOPE OF WORK

In preparing its advice, Colliers was responsible for valuation feasibility models to test the feasibility of the various model buildings at the specified height levels. In completing this work Colliers adopted accepted valuation principles and methodology, utilised the model building and cost information provided by Beca and applied market derived valuation inputs.

## 4.0 VALUATION METHODOLOGY

The most appropriate valuation methodology is the development residual valuation approach which in this case was utilised to produce two measures of development feasibility;

- Residual land value
- Development margin

The development residual valuation approach is based upon the principle that the value of the land is the residual value derived from the capitalised investment value of a hypothetical development utilising the property to its highest and best economic use. This process examines the property from a development view point and determines whether a particular development is economically feasible. The first step in the process is to assess the market value of the hypothetical completed project and then deduct all costs and expenses together with an allowance for development margin to arrive at what a developer could afford to pay for land prior to development.

Alternatively the development residual valuation model can be modified to produce the residual development margin by instead deducting an assessed land value.

## 5.0 VALUATION INPUTS

The following is a summary outline of the inputs utilised in each of the valuation models:

### 5.1 BULK AND LOCATION

Beca in consultation with Colliers designed 18 commercial office buildings ranging in height from 4 to 8 plus a 12 level building. A 12 level building was included in the later stages of the study to indicate the potential trend of higher buildings.

The hypothetical "model" building used in this exercise was based on a conventional podium/tower structure with and without a full basement of car parking. Three options were developed for the "model" building:

- Option 1 – with basement and land size of 1,500 $m^2$
- Option 2 – without basement and land size of 1,500 $m^2$
- Option 3 – without basement and land size of 2,400 $m^2$

# Financial Feasibility of Building in the CBD

Ground floor retail is provided in each case and office levels have a net lettable floor plate of 1,110 square metres.

The following is a summary of the gross floor area ("GFA") and net lettable area ("NLA") for each model building under each option:

| Floor Area Summary – Option 1 | | |
|---|---|---|
| Building | GFA sq m | NLA sq m |
| 4 Level | 6,600 | 4,550 |
| 5 Level | 7,800 | 4,960 |
| 6 Level | 9,000 | 6,070 |
| 7 Level | 10,200 | 7,020 |
| 8 Level | 12,300 | 8,290 |
| 12 Level | 18,300 | 12,130 |

| Floor Area Summary – Option 2 | | |
|---|---|---|
| Building | GFA sq m | NLA sq m |
| 4 Level | 6,000 | 3,850 |
| 5 Level | 7,500 | 4,360 |
| 6 Level | 8,700 | 5,470 |
| 7 Level | 10,800 | 6,580 |
| 8 Level | 12,000 | 7,690 |
| 12 Level | 18,000 | 11,530 |

| Floor Area Summary – Option 3 | | |
|---|---|---|
| Building | GFA sq m | NLA sq m |
| 4 Level | 7,650 | 5,400 |
| 5 Level | 8,850 | 4,960 |
| 6 Level | 10,050 | 6,070 |
| 7 Level | 11,250 | 7,180 |
| 8 Level | 12,450 | 8,290 |
| 12 Level | 20,100 | 12,280 |

## 5.2 CAR PARK RATIOS

The conceptually designed and costed buildings used in the feasibility analysis provided car park ratios ranging from 1 per 68 square metres up to 1 per 135 square metres which are higher than current City Plan requirements, but similar to benchmarked successful existing A and B grade office buildings. For example Forsyth Barr House has a car park ratio 1 per 83.13 square metres, HSBC Tower 1 per 66.59 square metres and PricewaterhouseCoopers Centre 1 per 101.14 square metres.

## 5.3 GROUND FLOOR RETAIL

We have assessed a market rent of $650.00 per square metre which is representative of a good but not prime retail location within the Christchurch CBD.

## 5.4 UPPER FLOOR OFFICES

We have assessed a net market rent of $420.00 per square metre for all upper floor office accommodation assuming the building is built to an uncertified 4 Star Green rating. This rent level is supported by recent post earthquake leasing evidence from proposed office accommodation on the periphery of the city in the likes of Victoria Street where rents of $400.00 per square metre have been achieved. This rent level assumes the premises are leased on a standard Auckland District Law Society lease format or similar on the basis of un-partitioned but carpeted bare office accommodation.

## 5.5 CAR PARKS

We have adopted a car park rent rate of $75.00 per week per car park which again is supported by recent post earthquake rental evidence. Recent post earthquake leasing evidence on the periphery of the CBD indicates a market rent of $65.00 per week per car park. Pre earthquake car park rents in PricewaterhouseCoopers Centre were $70.00 per week.

## 5.6 COST OF LEASING AND SALES

We have adopted industry standard allowances for leasing costs of 17.00% of market rent and in the case of sale costs we have adopted 2.00% of the value of the completed project.

## 5.7 DEVELOPMENT PROFIT AND RISK MARGIN

An important component of the development residual approach is an allowance for profit and risk or development margin to reflect a return on investment time, expertise and risk to the developer. We have adopted a mid range acceptable development margin allowance of 20.00% in the models where we produce a residual land value output.

# Financial Feasibility of Building in the CBD

## 5.8 CONSTRUCTION COSTS

Beca has completed detailed analysis of building costs and assessed appropriate construction costs dependent upon the building type, size and height for each option. The following is a summary of the construction costs adopted:

**Construction Cost Summary**

| Building | Option 1 psm | Option 2 psm | Option 3 psm |
|---|---|---|---|
| 4 Levels | $2,400 | $2,200 | $2,400 |
| 5 Levels | $2,400 | $2,100 | $2,200 |
| 6 Levels | $2,500 | $2,200 | $2,300 |
| 7 Levels | $2,600 | $2,300 | $2,500 |
| 8 Levels | $2,600 | $2,400 | $2,600 |
| 12 Levels | $2,600 | $2,500 | $2,500 |

The construction costs estimated by Beca generally increased as building height increased. Different "model" building options were developed to test the impact of not constructing a basement car park but instead providing car parks above ground.

In all cases an allowance of 12.00% was made for professional fees for design, management and project management.

## 5.9 LAND VALUE

The land value adopted assumes an active market within the Christchurch CBD core, however it is accepted there is limited, if any, sales evidence post earthquake. We have adopted a land value of $2,000 per square metre although accept that on the periphery in the likes of Victoria Street recent sales evidence indicates land values of at or around $2,500 per square metre.

A land area of 1,500 square metres was adopted for the valuation model scenarios adopting the buildings in Options 1 and 2, and 2,400 square metres for buildings in Option 3.

## 5.10 CAPITALISATION RATE

Capitalisation rate is a term which describes the return or yield that an investment property provides.

We have adopted a capitalisation rate of 8.00% and applied this to the assessed net market rent to convert the rental income cashflow into value. This capitalisation rate has been derived on the basis of a long term average rather than a spot value post earthquake. Pre Global Financial Crisis, capitalisation rates for typical modern CBD office buildings were in the region of 7.00% to 7.50%. Pre earthquake, this type of building achieved a yield of at or around 8.00%. We are of the opinion that post earthquake capitalisation rates could be in excess of 8.00%. We consider an appropriate long term average capitalisation rate is 8.00%.

## 5.11 DEVELOPMENT COSTS

We have allowed for the following development costs:

- **Resource Consents**
  Beca has provided input in determining the cost of the resource consent which has been assessed at $10,000.

- **Building Consent**
  Cost of $85,000 for each building was adopted.

- **Development Contributions**
  Development contributions were allowed at $100,000 on the assumption that the site contained an existing building and was be able to utilise credits for the existing building.

- **Legal Expenses**
  Allowed $10,000 for legal expenses.

- **Professional Fees**
  Allowed $25,000 for additional professional fees over and above those associated with the building design and construction.

- **Holding Costs**
  Allowed $10,000 for holding costs such as rates.

- **Bridging Finance**
  The cost of funding was allowed on the basis the land value is funded at 8.00% per annum over the entire development period, and in the case of the development costs we have allowed the funding cost at 8.00% per annum over half of the development realisation period. The rationale in applying an interest cost over half of the development realisation period for development costs is accepted practice and is based on the principle that development costs are incurred progressively throughout the development phase and not incurred in totality at the date of commencement.

# Financial Feasibility of Building in the CBD

## 5.12 DEVELOPMENT REALISATION PERIOD

The following is a summary of the development period adopted for each scenario which was arrived at in conjunction with Beca:

| Development Realisation Period | |
|---|---|
| Building | Period mths |
| 4 Levels | 18 |
| 5 Levels | 18 |
| 6 Levels | 21 |
| 7 Levels | 21 |
| 8 Levels | 24 |
| 12 Levels | 24 |

## 6.0 DEVELOPMENT FEASIBILITY RESULTS

The following is a summary of the valuation outputs measured in terms of development profit or margin and residual land value under each building option:

| Development Feasibility Results – Option 1 | | | | |
|---|---|---|---|---|
| Building | Profit Margin $ | Profit Margin % | Land Value $ | Land Value $ psm |
| 4 Levels | $3,260,000 | 14.54% | $2,090,000 | $1,393 |
| 5 Levels | $3,370,000 | 13.04% | $1,660,000 | $1,107 |
| 6 Levels | $4,190,000 | 13.67% | $1,580,000 | $1,053 |
| 7 Levels | $3,940,000 | 11.11% | $ 700,000 | $ 467 |
| 8 Levels | $4,380,000 | 10.32% | $ 50,000 | $ 33 |
| 12 Levels | $6,690,000 | 10.91% | ($1,160,000) | ($ 483) |

| Development Feasibility Results – Option 2 | | | | |
|---|---|---|---|---|
| Building | Profit Margin $ | Profit Margin % | Land Value $ | Land Value $ psm |
| 4 Levels | $3,250,000 | 16.85% | $2,550,000 | $1,700 |
| 5 Levels | $3,650,000 | 16.36% | $2,400,000 | $1,600 |
| 6 Levels | $4,990,000 | 18.75% | $2,760,000 | $1,840 |
| 7 Levels | $4,630,000 | 13.84% | $1,500,000 | $1,000 |
| 8 Levels | $5,130,000 | 13.30% | $1,150,000 | $ 767 |
| 12 Levels | $6,720,000 | 11.55% | ($ 610,000) | ($ 254) |

| Development Feasibility Results – Option 3 | | | | |
|---|---|---|---|---|
| Building | Profit Margin $ | Profit Margin % | Land Value $ | Land Value $ psm |
| 4 Levels | $3,300,000 | 12.03% | $3,180,000 | $2,120 |
| 5 Levels | $1,260,000 | 4.38% | $1,460,000 | $ 973 |
| 6 Levels | $2,200,000 | 6.58% | $1,520,000 | $1,013 |
| 7 Levels | $1,830,000 | 4.64% | $ 370,000 | $ 247 |
| 8 Levels | $1,920,000 | 4.27% | ($ 330,000) | ($ 220) |
| 12 Levels | $3,930,000 | 5.90% | ($2,260,000) | ($ 942) |

## 7.0 CONCLUSIONS

It should be noted this analysis did not investigate the financial feasibility of building heights below 4 levels and above 12 levels. Historically buildings higher than 12 levels have been developed in Christchurch in isolated cases although it is debateable whether any of these buildings have ever been an economic success from a development perspective.

The financial analysis indicated a positive development profit margin (after holding costs) of between 4.27% and 18.75% of total cost under the 18 different "model" buildings. A development profit margin of at or greater than 20.00% is generally an aspirational target for developers although in reality many will only achieve between 10.00% and 20.00%.

The Option 2 analysis produced the most attractive feasibility results where the development margin ranged from 11.55% for the 12 level building and 18.75% for the 6 level building. There was a tight development margin range for the Option 2 Level 4 to Level 6 buildings and then the development profit margin reduced gradually for the Level 7 building and above.

The Option 2 building configuration (without basement and a land area of 1,500 square metres) is the most efficient in terms of the build cost and land utilisation. The Option 3 building configuration (without basement and a land area of 2,400 square metres) is the least efficient.

The financial analysis indicated a similar pattern in terms of indicated residual land value which declined sharply as building height increased above 6 levels.

In summary the Option 2 building financial analysis indicated that buildings of 4 to 12 levels are feasible, although only marginally and only after achieving new post earthquake rent levels. In the current market environment, the analysis indicated the optimum building height is in the 4 to 6 level range.

# Financial Feasibility of Building in the CBD

## 8.0 DISCLAIMER

The scope of the work set by CCC did not require the analysis of building heights and the resultant impact above 12 levels; therefore no data or commentary is made with respect to this. This report is not a recommendation on limits on building heights.

CCC separately engaged both Beca and Colliers to provide independent input into this exercise. Both Beca and Colliers have summarised their work in their own reports. They are each solely responsible only for the scope of work commissioned. They have not verified each others work. Neither of them is responsible for the accuracy, completeness, currency or sufficiency of each other's work.

**GARY SELLARS** FNZIV, FPINZ
**Registered Valuer, Director**
**Email:** gary.sellars@colliers.com

**Contact Details:**
**Colliers International Valuation (ChCh) Limited**
**Unit 1, 15 Sir Gil Simpson Drive**
**PO Box 13478**
**Christchurch 8053**
**Phone No. (03) 379-6280**

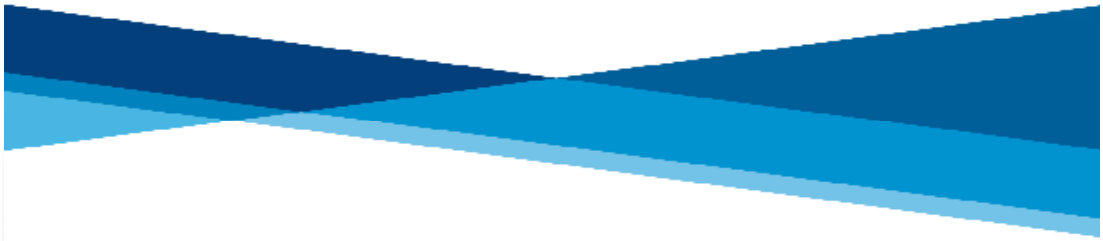
# APPENDIX 1

## Hypothetical Development Feasibilty – Development Margin

# Financial Feasibility of Building in the CBD

## APPENDIX 2

### Hypothetical Development Feasibilty – Residual Land Value



# APPENDIX 3
## Summary of Results

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 4 Levels - Option 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | |
| Ground Rear Service | 900.00 | 700.00 | @ | $ | 350.00 | $ | 245,000 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **6,600.00** | **4,550.00** | | | | **$** | **2,125,900** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,125,900 | @ | | 8.00% | | | $ 26,570,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 361,403 | |
| Sale Costs | | | @ | | 2.00% | $ | 531,400 | $ 892,803 |
| | | | | | | | | $ 25,677,197 |
| **Less Construction Costs** | | | | | | | | |
| Building | 6,600.00 | | @ | $ | 2,400 | $ | 15,840,000 | |
| Fees | | | @ | | 12% | $ | 1,900,800 | |
| | | | | | | $ | 17,740,800 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 1,500.00 | @ | $ | 2,000.00 | $ | 3,000,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | | 18 | $ | 360,000 | |
| Bridging Finance - Development | | $ 17,980,800 | 8.00% | | 18 | $ | 1,078,848 | $ 22,419,648 |
| **Profit/Loss** | | | | | | | | **$ 3,257,549** |
| **Adopt** | | | | | | | | **$ 3,260,000** |

13 November 2011

| Development Margin | 14.54% |
|---|---|

**Appendix 1.1**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 5 Levels - Option 1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ 75.00 | $ | 144,300 | |
| Ground Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **7,800.00** | **4,960.00** | | | **$** | **2,417,300** | |
| | | | | | | | |
| **Investment Valuation** | | $ 2,417,300 | @ | 8.00% | | | $ 30,220,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 410,941 | |
| Sale Costs | | | @ | 2.00% | $ | 604,400 | $ 1,015,341 |
| | | | | | | | $ 29,204,659 |
| **Less Construction Costs** | | | | | | | |
| Building | 7,800.00 | | @ | $ 2,400 | $ | 18,720,000 | |
| Fees | | | @ | 12% | $ | 2,246,400 | |
| | | | | | $ | 20,966,400 | |
| **Less Land Value** | | | | | | | |
| Land Area | | 1,500.00 | @ | $ 2,000.00 | $ | 3,000,000 | |
| | | | | | | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | 18 | $ | 360,000 | |
| Bridging Finance - Development | | $ 21,206,400 | 8.00% | 18 | $ | 1,272,384 | $ 25,838,784 |
| **Profit/Loss** | | | | | | | **$ 3,365,875** |
| **Adopt** | | | | | | | **$ 3,370,000** |

13 November 2011

| Development Margin | 13.04% |
|---|---|

**Appendix 1.2**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 6 Levels - Option 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **9,000.00** | **6,070.00** | | | | **$** | **2,883,500** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,883,500 | @ | | 8.00% | | | $ 36,040,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 490,195 | |
| Sale Costs | | | @ | | 2.00% | $ | 720,800 | $ 1,210,995 |
| | | | | | | | | $ 34,829,005 |
| **Less Construction Costs** | | | | | | | | |
| Building | 9,000.00 | | @ | $ | 2,500 | $ | 22,500,000 | |
| Fees | | | @ | | 12% | $ | 2,700,000 | |
| | | | | | | $ | 25,200,000 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 1,500.00 | @ | $ | 2,000.00 | $ | 3,000,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | | 21 | $ | 420,000 | |
| Bridging Finance - Development | | $ 25,440,000 | 8.00% | | 21 | $ | 1,780,800 | $ 30,640,800 |
| **Profit/Loss** | | | | | | | | **$ 4,188,205** |
| **Adopt** | | | | | | | | **$ 4,190,000** |

13 November 2011

| Development Margin | 13.67% |
|---|---|

**Appendix 1.3**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 7 Levels - Option 1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ 75.00 | $ | 144,300 | |
| Ground Car Parks | 900.00 | 22 | @ | $ 75.00 | $ | 85,800 | |
| Ground Retail | 600.00 | 360.00 | @ | $ 650.00 | $ | 234,000 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **10,200.00** | **7,020.00** | | | **$** | **3,261,300** | |
| | | | | | | | |
| **Investment Valuation** | | $ 3,261,300 | @ | 8.00% | | | $ 40,770,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 554,421 | |
| Sale Costs | | | @ | 2.00% | $ | 815,400 | $ 1,369,821 |
| | | | | | | | $ 39,400,179 |
| **Less Construction Costs** | | | | | | | |
| Building | 10,200.00 | | @ | $ 2,600 | $ | 26,520,000 | |
| Fees | | | @ | 12% | $ | 3,182,400 | |
| | | | | 0.1 | $ | 29,702,400 | |
| **Less Land Value** | | | | | | | |
| Land Area | | 1,500.00 | @ | $ 2,000.00 | $ | 3,000,000 | |
| | | | | | | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | 21 | $ | 420,000 | |
| Bridging Finance - Development | | $ 29,942,400 | 8.00% | 21 | $ | 2,095,968 | $ 35,458,368 |
| **Profit/Loss** | | | | | | | **$ 3,941,811** |
| **Adopt** | | | | | | | **$ 3,940,000** |

13 November 2011

| Development Margin | 11.11% |
|---|---|

**Appendix 1.4**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 8 Levels - Option 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Basement | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | |
| Ground Car Parks | 900.00 | 13 | @ | $ | 75.00 | $ | 50,700 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 20 | @ | $ | 75.00 | $ | 78,000 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **12,300.00** | **8,290.00** | | | | **$** | **3,874,400** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 3,874,400 | @ | | 8.00% | | | $ 48,430,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 658,648 | |
| Sale Costs | | | @ | | 2.00% | $ | 968,600 | $ 1,627,248 |
| | | | | | | | | $ 46,802,752 |
| **Less Construction Costs** | | | | | | | | |
| Building | 12,300.00 | | @ | $ | 2,600 | $ | 31,980,000 | |
| Fees | | | @ | | 12% | $ | 3,837,600 | |
| | | | | | | $ | 35,817,600 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 1,500.00 | @ | $ | 2,000.00 | $ | 3,000,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | | 24 | $ | 480,000 | |
| Bridging Finance - Development | | $ 36,057,600 | 8.00% | | 24 | $ | 2,884,608 | $ 42,422,208 |
| **Profit/Loss** | | | | | | | | **$ 4,380,544** |
| **Adopt** | | | | | | | | **$ 4,380,000** |

13 November 2011

| Development Margin | 10.32% |
|---|---|

**Appendix 1.5**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 12 Levels - Option 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | |
| Ground Car Parks | 900.00 | 13 | @ | $ | 75.00 | $ | 50,700 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 20 | @ | $ | 75.00 | $ | 78,000 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ | 420.00 | $ | 214,200 | |
| Level 2 - Mezz Carparks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 9 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 10 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 11 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 12 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **18,300.00** | **12,130.00** | | | | **$** | **5,627,600** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 5,627,600 | @ | | 8.00% | | | $ 70,350,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 956,692 | |
| Sale Costs | | | @ | | 2.00% | $ | 1,407,000 | $ 2,363,692 |
| | | | | | | | | $ 67,986,308 |
| **Less Construction Costs** | | | | | | | | |
| Building | 18,300.00 | | @ | $ | 2,600 | $ | 47,580,000 | |
| Fees | | | @ | | 12% | $ | 5,709,600 | |
| | | | | | | $ | 53,289,600 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 1,500.00 | @ | $ | 2,000.00 | $ | 3,000,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | | 24 | $ | 480,000 | |
| Bridging Finance - Development | | $ 53,529,600 | 8.00% | | 24 | $ | 4,282,368 | $ 61,291,968 |
| **Profit/Loss** | | | | | | | | **$ 6,694,340** |
| **Adopt** | | | | | | | | **$ 6,690,000** |
| | | | | | | | | |
| 13 November 2011 | | | | Development Margin | | | | 10.91% |

**Appendix 1.6**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 4 Levels - Option 2 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ | 75.00 | $ | 58,500 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **6,000.00** | **3,850.00** | | | | **$** | **1,865,300** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 1,865,300 | @ | | 8.00% | | | $ 23,320,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 317,101 | |
| Sale Costs | | | @ | | 2.00% | $ | 466,400 | $ 783,501 |
| | | | | | | | | $ 22,536,499 |
| **Less Construction Costs** | | | | | | | | |
| Building | 6,000.00 | | @ | $ | 2,200 | $ | 13,200,000 | |
| Fees | | | @ | | 12% | $ | 1,584,000 | |
| | | | | | | $ | 14,784,000 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 1,500.00 | @ | $ | 2,000.00 | $ | 3,000,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | | 18 | $ | 360,000 | |
| Bridging Finance - Development | | $ 15,024,000 | 8.00% | | 18 | $ | 901,440 | $ 19,285,440 |
| **Profit/Loss** | | | | | | | | **$ 3,251,059** |
| **Adopt** | | | | | | | | **$ 3,250,000** |

13 November 2011

| Development Margin | 16.85% |
|---|---|

**Appendix 1.7**

## Hypothetical Development Feasibilty - Development Margin

| Development Feasibilty - 5 Levels - Option 2 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ | 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ | 420.00 | $ | 214,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **7,500.00** | **4,360.00** | | | | **$** | **2,149,700** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,149,700 | @ | | 8.00% | | | $ 26,870,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 365,449 | |
| Sale Costs | | | @ | | 2.00% | $ | 537,400 | $ 902,849 |
| | | | | | | | | $ 25,967,151 |
| **Less Construction Costs** | | | | | | | | |
| Building | 7,500.00 | | @ | $ | 2,100 | $ | 15,750,000 | |
| Fees | | | @ | | 12% | $ | 1,890,000 | |
| | | | | | | $ | 17,640,000 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 1,500.00 | @ | $ | 2,000.00 | $ | 3,000,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | | 18 | $ | 360,000 | |
| Bridging Finance - Development | | $ 17,880,000 | 8.00% | | 18 | $ | 1,072,800 | $ 22,312,800 |
| **Profit/Loss** | | | | | | | | **$ 3,654,351** |
| **Adopt** | | | | | | | | **$ 3,650,000** |

13 November 2011

| Development Margin | 16.36% |
|---|---|

**Appendix 1.8**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 6 Levels - Option 2 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ | 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Level 3 Offices | 600.00 | 510.00 | @ | $ | 420.00 | $ | 214,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **8,700.00** | **5,470.00** | | | | **$** | **2,615,900** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,615,900 | @ | | 8.00% | | | $ 32,700,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 444,703 | |
| Sale Costs | | | @ | | 2.00% | $ | 654,000 | $ 1,098,703 |
| | | | | | | | | $ 31,601,297 |
| **Less Construction Costs** | | | | | | | | |
| Building | 8,700.00 | | @ | $ | 2,200 | $ | 19,140,000 | |
| Fees | | | @ | | 12% | $ | 2,296,800 | |
| | | | | | | $ | 21,436,800 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 1,500.00 | @ | $ | 2,000.00 | $ | 3,000,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | | 21 | $ | 420,000 | |
| Bridging Finance - Development | | $ 21,676,800 | 8.00% | | 21 | $ | 1,517,376 | $ 26,614,176 |
| **Profit/Loss** | | | | | | | | **$ 4,987,121** |
| **Adopt** | | | | | | | | **$ 4,990,000** |

13 November 2011

| Development Margin | 18.75% |
|---|---|

**Appendix 1.9**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 7 Levels - Option 2 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ 420.00 | $ | 214,200 | |
| Level 2 -Mezz Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **10,800.00** | **6,580.00** | | | **$** | **3,152,300** | |
| | | | | | | | |
| **Investment Valuation** | | $ 3,152,300 | @ | 8.00% | | | $ 39,400,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 535,891 | |
| Sale Costs | | | @ | 2.00% | $ | 788,000 | $ 1,323,891 |
| | | | | | | | $ 38,076,109 |
| **Less Construction Costs** | | | | | | | |
| Building | 10,800.00 | | @ | $ 2,300 | $ | 24,840,000 | |
| Fees | | | @ | 12% | $ | 2,980,800 | |
| | | | | | $ | 27,820,800 | |
| **Less Land Value** | | | | | | | |
| Land Area | | 1,500.00 | @ | $ 2,000.00 | $ | 3,000,000 | |
| | | | | | | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | 21 | $ | 420,000 | |
| Bridging Finance - Development | | $ 28,060,800 | 8.00% | 21 | $ | 1,964,256 | $ 33,445,056 |
| **Profit/Loss** | | | | | | | **$ 4,631,053** |
| **Adopt** | | | | | | | **$ 4,630,000** |

13 November 2011

| Development Margin | 13.84% |
|---|---|

**Appendix 1.10**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 8 Levels - Option 2 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ 420.00 | $ | 214,200 | |
| Level 2 -Mezz Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **12,000.00** | **7,690.00** | | | **$** | **3,618,500** | |
| | | | | | | | |
| **Investment Valuation** | | $ 3,618,500 | @ | 8.00% | | | $ 45,230,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 615,145 | |
| Sale Costs | | | @ | 2.00% | $ | 904,600 | $ 1,519,745 |
| | | | | | | | $ 43,710,255 |
| **Less Construction Costs** | | | | | | | |
| Building | 12,000.00 | | @ | $ 2,400 | $ | 28,800,000 | |
| Fees | | | @ | 12% | $ | 3,456,000 | |
| | | | | | $ | 32,256,000 | |
| **Less Land Value** | | | | | | | |
| Land Area | | 1,500.00 | @ | $ 2,000.00 | $ | 3,000,000 | |
| | | | | | | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | 24 | $ | 480,000 | |
| Bridging Finance - Development | | $ 32,496,000 | 8.00% | 24 | $ | 2,599,680 | $ 38,575,680 |
| **Profit/Loss** | | | | | | | **$ 5,134,575** |
| **Adopt** | | | | | | | **$ 5,130,000** |

13 November 2011

| Development Margin | 13.30% |
|---|---|

**Appendix 1.11**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 12 Levels - Option 2 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ 420.00 | $ | 214,200 | |
| Level 2 - Mezz Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 3 Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 3 Offices | 600.00 | 510.00 | @ | $ 420.00 | $ | 214,200 | |
| Level 3 - Mezz Carparks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 9 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 10 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 11 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 12 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **18,000.00** | **11,530.00** | | | **$** | **5,371,700** | |
| | | | | | | | |
| **Investment Valuation** | | $ 5,371,700 | @ | 8.00% | | | $ 67,150,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 913,189 | |
| Sale Costs | | | @ | 2.00% | $ | 1,343,000 | $ 2,256,189 |
| | | | | | | | $ 64,893,811 |
| **Less Construction Costs** | | | | | | | |
| Building | 18,000.00 | | @ | $ 2,500 | $ | 45,000,000 | |
| Fees | | | @ | 12% | $ | 5,400,000 | |
| | | | | | $ | 50,400,000 | |
| **Less Land Value** | | | | | | | |
| Land Area | | 1,500.00 | @ | $ 2,000.00 | $ | 3,000,000 | |
| | | | | | | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 3,000,000 | 8.00% | 24 | $ | 480,000 | |
| Bridging Finance - Development | | $ 50,640,000 | 8.00% | 24 | $ | 4,051,200 | $ 58,171,200 |
| **Profit/Loss** | | | | | | | **$ 6,722,611** |
| **Adopt** | | | | | | | **$ 6,720,000** |

13 November 2011

| Development Margin | 11.55% |
|---|---|

**Appendix 1.12**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 4 Levels - Option 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Office | 1,650.00 | 1,550.00 | @ | $ | 420.00 | $ | 651,000 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **7,650.00** | **5,400.00** | | | | **$** | **2,543,600** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,543,600 | @ | | 8.00% | | | $ 31,800,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 432,412 | |
| Sale Costs | | | @ | | 2.00% | $ | 636,000 | $ 1,068,412 |
| | | | | | | | | $ 30,731,588 |
| **Less Construction Costs** | | | | | | | | |
| Building | 7,650.00 | | @ | $ | 2,400 | $ | 18,360,000 | |
| Fees | | | @ | | 12% | $ | 2,203,200 | |
| | | | | | | $ | 20,563,200 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 2,400.00 | @ | $ | 2,000.00 | $ | 4,800,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 4,800,000 | 8.00% | | 18 | $ | 576,000 | |
| Bridging Finance - Development | | $ 20,803,200 | 8.00% | | 18 | $ | 1,248,192 | $ 27,427,392 |
| **Profit/Loss** | | | | | | | | **$ 3,304,196** |
| **Adopt** | | | | | | | | **$ 3,300,000** |

13 November 2011

| Development Margin | 12.03% |
|---|---|

**Appendix 1.13**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 5 Levels - Option 3 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ 75.00 | $ | 124,800 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **8,850.00** | **4,960.00** | | | **$** | **2,483,600** | |
| | | | | | | | |
| **Investment Valuation** | | $ 2,483,600 | @ | 8.00% | | | $ 31,050,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 422,212 | |
| Sale Costs | | | @ | 2.00% | $ | 621,000 | $ 1,043,212 |
| | | | | | | | $ 30,006,788 |
| **Less Construction Costs** | | | | | | | |
| Building | 8,850.00 | | @ | $ 2,200 | $ | 19,470,000 | |
| Fees | | | @ | 12% | $ | 2,336,400 | |
| | | | | | $ | 21,806,400 | |
| **Less Land Value** | | | | | | | |
| Land Area | | 2,400.00 | @ | $ 2,000.00 | $ | 4,800,000 | |
| | | | | | | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 4,800,000 | 8.00% | 18 | $ | 576,000 | |
| Bridging Finance - Development | | $ 22,046,400 | 8.00% | 18 | $ | 1,322,784 | $ 28,745,184 |
| **Profit/Loss** | | | | | | | **$ 1,261,604** |
| **Adopt** | | | | | | | **$ 1,260,000** |

13 November 2011

| Development Margin | 4.38% |
|---|---|

**Appendix 1.14**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 6 Levels - Option 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ | 75.00 | $ | 124,800 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **10,050.00** | **6,070.00** | | | | **$** | **2,949,800** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,949,800 | @ | | 8.00% | | | $ 36,870,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 501,466 | |
| Sale Costs | | | @ | | 2.00% | $ | 737,400 | $ 1,238,866 |
| | | | | | | | | $ 35,631,134 |
| **Less Construction Costs** | | | | | | | | |
| Building | 10,050.00 | | @ | $ | 2,300 | $ | 23,115,000 | |
| Fees | | | @ | | 12% | $ | 2,773,800 | |
| | | | | | | $ | 25,888,800 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 2,400.00 | @ | $ | 2,000.00 | $ | 4,800,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 4,800,000 | 8.00% | | 21 | $ | 672,000 | |
| Bridging Finance - Development | | $ 26,128,800 | 8.00% | | 21 | $ | 1,829,016 | $ 33,429,816 |
| **Profit/Loss** | | | | | | | | **$ 2,201,318** |
| **Adopt** | | | | | | | | **$ 2,200,000** |

13 November 2011

| Development Margin | 6.58% |
|---|---|

**Appendix 1.15**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 7 Levels - Option 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ | 75.00 | $ | 124,800 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **11,250.00** | **7,180.00** | | | | **$** | **3,416,000** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 3,416,000 | @ | | 8.00% | | | $ 42,700,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 580,720 | |
| Sale Costs | | | @ | | 2.00% | $ | 854,000 | $ 1,434,720 |
| | | | | | | | | $ 41,265,280 |
| **Less Construction Costs** | | | | | | | | |
| Building | 11,250.00 | | @ | $ | 2,500 | $ | 28,125,000 | |
| Fees | | | @ | | 12% | $ | 3,375,000 | |
| | | | | | | $ | 31,500,000 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 2,400.00 | @ | $ | 2,000.00 | $ | 4,800,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 4,800,000 | 8.00% | | 21 | $ | 672,000 | |
| Bridging Finance - Development | | $ 31,740,000 | 8.00% | | 21 | $ | 2,221,800 | $ 39,433,800 |
| **Profit/Loss** | | | | | | | | **$ 1,831,480** |
| **Adopt** | | | | | | | | **$ 1,830,000** |

13 November 2011

| Development Margin | 4.64% |
|---|---|

**Appendix 1.16**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 8 Levels - Option 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ | 75.00 | $ | 124,800 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **12,450.00** | **8,290.00** | | | | **$** | **3,882,200** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 3,882,200 | @ | | 8.00% | | | $ 48,530,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 659,974 | |
| Sale Costs | | | @ | | 2.00% | $ | 970,600 | $ 1,630,574 |
| | | | | | | | | $ 46,899,426 |
| **Less Construction Costs** | | | | | | | | |
| Building | 12,450.00 | | @ | $ | 2,600 | $ | 32,370,000 | |
| Fees | | | @ | | 12% | $ | 3,884,400 | |
| | | | | | | $ | 36,254,400 | |
| **Less Land Value** | | | | | | | | |
| Land Area | | 2,400.00 | @ | $ | 2,000.00 | $ | 4,800,000 | |
| | | | | | | | | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 4,800,000 | 8.00% | | 24 | $ | 768,000 | |
| Bridging Finance - Development | | $ 36,494,400 | 8.00% | | 24 | $ | 2,919,552 | $ 44,981,952 |
| **Profit/Loss** | | | | | | | | **$ 1,917,474** |
| **Adopt** | | | | | | | | **$ 1,920,000** |

13 November 2011

| Development Margin | 4.27% |
|---|---|

**Appendix 1.17**

## Hypothetical Development Feasibility - Development Margin

| Development Feasibilty - 12 Levels - Option 3 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 36 | @ | $ 75.00 | $ | 140,400 | |
| Level 2 Car Parks | 1,650.00 | 34 | @ | $ 75.00 | $ | 132,600 | |
| Level 2 Offices | 750.00 | 660.00 | @ | $ 420.00 | $ | 277,200 | |
| Level 2 - Mezz Car Parks | 1,650.00 | 34 | @ | $ 75.00 | $ | 132,600 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 9 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 10 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 11 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 12 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **20,100.00** | **12,280.00** | | | **$** | **5,838,800** | |
| | | | | | | | |
| **Investment Valuation** | | $ 5,838,800 | @ | 8.00% | | | $ 72,990,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 992,596 | |
| Sale Costs | | | @ | 2.00% | $ | 1,459,800 | $ 2,452,396 |
| | | | | | | | $ 70,537,604 |
| **Less Construction Costs** | | | | | | | |
| Building | 20,100.00 | | @ | $ 2,500 | $ | 50,250,000 | |
| Fees | | | @ | 12% | $ | 6,030,000 | |
| | | | | | $ | 56,280,000 | |
| **Less Land Value** | | | | | | | |
| Land Area | | 2,400.00 | @ | $ 2,000.00 | $ | 4,800,000 | |
| | | | | | | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 4,800,000 | 8.00% | 24 | $ | 768,000 | |
| Bridging Finance - Development | | $ 56,520,000 | 8.00% | 24 | $ | 4,521,600 | $ 66,609,600 |
| **Profit/Loss** | | | | | | | **$ 3,928,004** |
| **Adopt** | | | | | | | **$ 3,930,000** |

13 November 2011

| Development Margin | 5.90% |
|---|---|

**Appendix 1.18**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 4 Levels - Option 1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | | |
| Ground Rear Service | 900.00 | 700.00 | @ | $ | 350.00 | $ | 245,000 | | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **6,600.00** | **4,550.00** | | | | **$** | **2,125,900** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 2,125,900 | @ | | 8.00% | | | $ | 26,570,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 361,403 | | |
| Sale Costs | | | @ | | 2.00% | $ | 531,400 | $ | 892,803 |
| | | | | | | | | $ | 25,677,197 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 4,279,533 |
| Outlay | | | | | | | | $ | 21,397,664 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 6,600.00 | | @ | $ | 2,400 | $ | 15,840,000 | | |
| Fees | | | @ | | 12% | $ | 1,900,800 | | |
| | | | | | | $ | 17,740,800 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ 2,070,000 | 8.00% | | 18 | $ | 248,400 | | |
| Bridging Finance - Development | | $ 17,980,800 | 8.00% | | 18 | $ | 1,078,848 | $ | 19,308,048 |
| **Residual Land Value** | | | | | | | | **$** | **2,089,616** |
| **Adopt** | | 1,500 | @ | $ | 1,393 | | | **$** | **2,090,000** |

| | | | |
|---|---|---|---|
| 13 November 2011 | Land Value | $ | 1,393 |

**Appendix 2.1**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 5 Levels - Option 1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ 75.00 | $ 144,300 | | |
| Ground Car Parks | 900.00 | 18 | @ | $ 75.00 | $ 70,200 | | |
| Ground Retail | 600.00 | 520.00 | @ | $ 650.00 | $ 338,000 | | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| **Total Rent** | **7,800.00** | **4,960.00** | | | **$ 2,417,300** | | |
| | | | | | | | |
| **Investment Valuation** | | $ 2,417,300 | @ | 8.00% | | $ | 30,220,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ 410,941 | | |
| Sale Costs | | | @ | 2.00% | $ 604,400 | $ | 1,015,341 |
| | | | | | | $ | 29,204,659 |
| | | | | | | | |
| Less Development Profit Margin | | | @ | 20.00% | | $ | 4,867,443 |
| Outlay | | | | | | $ | 24,337,216 |
| | | | | | | | |
| **Less Construction Costs** | | | | | | | |
| Building | 7,800.00 | | @ | $ 2,400 | $ 18,720,000 | | |
| Fees | | | @ | 12% | $ 2,246,400 | | |
| | | | | | $ 20,966,400 | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ 10,000 | | |
| Building Consent | | | | | $ 85,000 | | |
| Development Contribution | | | | | $ 100,000 | | |
| Legal Expenses | | | | | $ 10,000 | | |
| Professional Fees | | | | | $ 25,000 | | |
| Holding Costs | | | | | $ 10,000 | | |
| Bridging Finance - Land | | $ 1,660,000 | 8.00% | 18 | $ 199,200 | | |
| Bridging Finance - Development | | $ 21,206,400 | 8.00% | 18 | $ 1,272,384 | $ | 22,677,984 |
| **Residual Land Value** | | | | | | **$** | **1,659,232** |
| **Adopt** | | 1,500 | @ | $ 1,107 | | **$** | **1,660,000** |
| | | | | | | | |
| 13 November 2011 | | | | Land Value | | $ | 1,107 |

**Appendix 2.2**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 6 Levels - Option 1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **9,000.00** | **6,070.00** | | | | **$** | **2,883,500** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 2,883,500 | @ | | 8.00% | | | $ | 36,040,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 490,195 | | |
| Sale Costs | | | @ | | 2.00% | $ | 720,800 | $ | 1,210,995 |
| | | | | | | | | $ | 34,829,005 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 5,804,834 |
| Outlay | | | | | | | | $ | 29,024,171 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 9,000.00 | | @ | $ | 2,500 | $ | 22,500,000 | | |
| Fees | | | @ | | 12% | $ | 2,700,000 | | |
| | | | | | | $ | 25,200,000 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ 1,580,000 | 8.00% | | 21 | $ | 221,200 | | |
| Bridging Finance - Development | | $ 25,440,000 | 8.00% | | 21 | $ | 1,780,800 | $ | 27,442,000 |
| **Residual Land Value** | | | | | | | | **$** | **1,582,171** |
| **Adopt** | | 1,500 | @ | $ | 1,053 | | | **$** | **1,580,000** |

| | | | |
|---|---|---|---|
| 13 November 2011 | Land Value | $ | 1,053 |

**Appendix 2.3**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 7 Levels - Option 1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | | |
| Ground Car Parks | 900.00 | 22 | @ | $ | 75.00 | $ | 85,800 | | |
| Ground Retail | 600.00 | 360.00 | @ | $ | 650.00 | $ | 234,000 | | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **10,200.00** | **7,020.00** | | | | **$** | **3,261,300** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 3,261,300 | @ | | 8.00% | | | $ | 40,770,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 554,421 | | |
| Sale Costs | | | @ | | 2.00% | $ | 815,400 | $ | 1,369,821 |
| | | | | | | | | $ | 39,400,179 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 6,566,697 |
| Outlay | | | | | | | | $ | 32,833,483 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 10,200.00 | | @ | $ | 2,600 | $ | 26,520,000 | | |
| Fees | | | @ | | 12% | $ | 3,182,400 | | |
| | | | | | | $ | 29,702,400 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ 700,000 | 8.00% | | 21 | $ | 98,000 | | |
| Bridging Finance - Development | | $ 29,942,400 | 8.00% | | 21 | $ | 2,095,968 | $ | 32,136,368 |
| **Residual Land Value** | | | | | | | | **$** | **697,115** |
| **Adopt** | | 1,500 | @ | $ | 467 | | | **$** | **700,000** |

| | | | |
|---|---|---|---|
| 13 November 2011 | Land Value | $ | 467 |

**Appendix 2.4**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 8 Levels - Option 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Basement | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | |
| Ground Car Parks | 900.00 | 13 | @ | $ | 75.00 | $ | 50,700 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 20 | @ | $ | 75.00 | $ | 78,000 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **12,300.00** | **8,290.00** | | | | **$** | **3,874,400** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 3,874,400 | @ | | 8.00% | | | $ 48,430,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 658,648 | |
| Sale Costs | | | @ | | 2.00% | $ | 968,600 | $ 1,627,248 |
| | | | | | | | | $ 46,802,752 |
| | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ 7,800,459 |
| Outlay | | | | | | | | $ 39,002,293 |
| | | | | | | | | |
| **Less Construction Costs** | | | | | | | | |
| Building | 12,300.00 | | @ | $ | 2,600 | $ | 31,980,000 | |
| Fees | | | @ | | 12% | $ | 3,837,600 | |
| | | | | | | $ | 35,817,600 | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 50,000 | 8.00% | | 24 | $ | 8,000 | |
| Bridging Finance - Development | | $ 36,057,600 | 8.00% | | 24 | $ | 2,884,608 | $ 38,950,208 |
| **Residual Land Value** | | | | | | | | **$ 52,085** |
| **Adopt** | | 1,500 | @ | $ | 33 | | | **$ 50,000** |
| | | | | | | | | |
| 13 November 2011 | | | | | Land Value | | | $ 33 |

**Appendix 2.5**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 12 Levels - Option 1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Basement Car Parks | 1,500.00 | 37 | @ | $ | 75.00 | $ | 144,300 | | |
| Ground Car Parks | 900.00 | 13 | @ | $ | 75.00 | $ | 50,700 | | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | | |
| Mezz Car Parks | 900.00 | 20 | @ | $ | 75.00 | $ | 78,000 | | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ | 420.00 | $ | 214,200 | | |
| Level 2 - Mezz Carparks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 9 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 10 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 11 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 12 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **18,300.00** | **12,130.00** | | | | **$** | **5,627,600** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 5,627,600 | @ | | 8.00% | | | $ | 70,350,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 956,692 | | |
| Sale Costs | | | @ | | 2.00% | $ | 1,407,000 | $ | 2,363,692 |
| | | | | | | | | $ | 67,986,308 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 11,331,051 |
| Outlay | | | | | | | | $ | 56,655,257 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 18,300.00 | | @ | $ | 2,600 | $ | 47,580,000 | | |
| Fees | | | @ | | 12% | $ | 5,709,600 | | |
| | | | | | | $ | 53,289,600 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ - | 8.00% | | 24 | $ | - | | |
| Bridging Finance - Development | | $ 53,529,600 | 8.00% | | 24 | $ | 4,282,368 | $ | 57,811,968 |
| **Residual Land Value** | | | | | | | | **-$** | **1,156,711** |
| **Adopt** | | 2,400 | @ | -$ | 483 | | | **-$** | **1,160,000** |
| | | | | | | | | | |
| 13 November 2011 | | | | Land Value | | | | -$ | 483 |

**Appendix 2.6**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 4 Levels - Option 2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | | |
| Mezz Car Parks | 900.00 | 15 | @ | $ | 75.00 | $ | 58,500 | | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **6,000.00** | **3,850.00** | | | | **$** | **1,865,300** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 1,865,300 | @ | | 8.00% | | | $ | 23,320,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 317,101 | | |
| Sale Costs | | | @ | | 2.00% | $ | 466,400 | $ | 783,501 |
| | | | | | | | | $ | 22,536,499 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 3,756,083 |
| Outlay | | | | | | | | $ | 18,780,416 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 6,000.00 | | @ | $ | 2,200 | $ | 13,200,000 | | |
| Fees | | | @ | | 12% | $ | 1,584,000 | | |
| | | | | | | $ | 14,784,000 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ 2,550,000 | 8.00% | | 18 | $ | 306,000 | | |
| Bridging Finance - Development | | $ 15,024,000 | 8.00% | | 18 | $ | 901,440 | $ | 16,231,440 |
| **Residual Land Value** | | | | | | | | **$** | **2,548,976** |
| **Adopt** | | 1,500 | @ | $ | 1,700 | | | **$** | **2,550,000** |

| | | | |
|---|---|---|---|
| 13 November 2011 | Land Value | $ | 1,700 |

**Appendix 2.7**

## Hypothetical Development Feasibilty - Land

| Development Feasibilty - 5 Levels - Option 2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | | |
| Mezz Car Parks | 900.00 | 15 | @ | $ | 75.00 | $ | 58,500 | | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ | 420.00 | $ | 214,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **7,500.00** | **4,360.00** | | | | **$** | **2,149,700** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 2,149,700 | @ | | 8.00% | | | $ | 26,870,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 365,449 | | |
| Sale Costs | | | @ | | 2.00% | $ | 537,400 | $ | 902,849 |
| | | | | | | | | $ | 25,967,151 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 4,327,859 |
| Outlay | | | | | | | | $ | 21,639,293 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 7,500.00 | | @ | $ | 2,100 | $ | 15,750,000 | | |
| Fees | | | @ | | 12% | $ | 1,890,000 | | |
| | | | | | | $ | 17,640,000 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ 2,400,000 | 8.00% | | 18 | $ | 288,000 | | |
| Bridging Finance - Development | | $ 17,880,000 | 8.00% | | 18 | $ | 1,072,800 | $ | 19,240,800 |
| **Residual Land Value** | | | | | | | | **$** | **2,398,493** |
| **Adopt** | | 1,500 | @ | $ | 1,600 | | | **$** | **2,400,000** |
| | | | | | | | | | |
| 13 November 2011 | | | | | Land Value | | | $ | 1,600 |

**Appendix 2.8**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 6 Levels - Option 2 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ | 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Level 3 Offices | 600.00 | 510.00 | @ | $ | 420.00 | $ | 214,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **8,700.00** | **5,470.00** | | | | **$** | **2,615,900** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,615,900 | @ | | 8.00% | | | $ 32,700,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 444,703 | |
| Sale Costs | | | @ | | 2.00% | $ | 654,000 | $ 1,098,703 |
| | | | | | | | | $ 31,601,297 |
| | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ 5,266,883 |
| Outlay | | | | | | | | $ 26,334,414 |
| | | | | | | | | |
| **Less Construction Costs** | | | | | | | | |
| Building | 8,700.00 | | @ | $ | 2,200 | $ | 19,140,000 | |
| Fees | | | @ | | 12% | $ | 2,296,800 | |
| | | | | | | $ | 21,436,800 | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 2,750,000 | 8.00% | | 21 | $ | 385,000 | |
| Bridging Finance - Development | | $ 21,676,800 | 8.00% | | 21 | $ | 1,517,376 | $ 23,579,176 |
| **Residual Land Value** | | | | | | | | **$ 2,755,238** |
| **Adopt** | | 1,500 | @ | $ | 1,840 | | | **$ 2,760,000** |
| | | | | | | | | |
| 13 November 2011 | | | | | Land Value | | | $ 1,840 |

**Appendix 2.9**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 7 Levels - Option 2 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ | 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ | 420.00 | $ | 214,200 | |
| Level 2 -Mezz Car Parks | 900.00 | 18 | @ | $ | 75.00 | $ | 70,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **10,800.00** | **6,580.00** | | | | **$** | **3,152,300** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 3,152,300 | @ | | 8.00% | | | $ 39,400,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 535,891 | |
| Sale Costs | | | @ | | 2.00% | $ | 788,000 | $ 1,323,891 |
| | | | | | | | | $ 38,076,109 |
| | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ 6,346,018 |
| Outlay | | | | | | | | $ 31,730,091 |
| | | | | | | | | |
| **Less Construction Costs** | | | | | | | | |
| Building | 10,800.00 | | @ | $ | 2,300 | $ | 24,840,000 | |
| Fees | | | @ | | 12% | $ | 2,980,800 | |
| | | | | | | $ | 27,820,800 | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 1,500,000 | 8.00% | | 21 | $ | 210,000 | |
| Bridging Finance - Development | | $ 28,060,800 | 8.00% | | 21 | $ | 1,964,256 | $ 30,235,056 |
| **Residual Land Value** | | | | | | | | **$ 1,495,035** |
| **Adopt** | | 1,500 | @ | $ | 1,000 | | | **$ 1,500,000** |
| | | | | | | | | |
| 13 November 2011 | | | | | Land Value | | | $ 1,000 |

**Appendix 2.10**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 8 Levels - Option 2 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ 75.00 | $ 70,200 | | |
| Ground Retail | 600.00 | 520.00 | @ | $ 650.00 | $ 338,000 | | |
| Mezz Car Parks | 900.00 | 15 | @ | $ 75.00 | $ 58,500 | | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ 75.00 | $ 70,200 | | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ 420.00 | $ 214,200 | | |
| Level 2 -Mezz Car Parks | 900.00 | 18 | @ | $ 75.00 | $ 70,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ 466,200 | | |
| **Total Rent** | **12,000.00** | **7,690.00** | | | **$ 3,618,500** | | |
| | | | | | | | |
| **Investment Valuation** | | $ 3,618,500 | @ | 8.00% | | $ | 45,230,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ 615,145 | | |
| Sale Costs | | | @ | 2.00% | $ 904,600 | $ | 1,519,745 |
| | | | | | | $ | 43,710,255 |
| | | | | | | | |
| Less Development Profit Margin | | | @ | 20.00% | | $ | 7,285,043 |
| Outlay | | | | | | $ | 36,425,213 |
| | | | | | | | |
| **Less Construction Costs** | | | | | | | |
| Building | 12,000.00 | | @ | $ 2,400 | $ 28,800,000 | | |
| Fees | | | @ | 12% | $ 3,456,000 | | |
| | | | | | $ 32,256,000 | | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ 10,000 | | |
| Building Consent | | | | | $ 85,000 | | |
| Development Contribution | | | | | $ 100,000 | | |
| Legal Expenses | | | | | $ 10,000 | | |
| Professional Fees | | | | | $ 25,000 | | |
| Holding Costs | | | | | $ 10,000 | | |
| Bridging Finance - Land | | $ 1,150,000 | 8.00% | 24 | $ 184,000 | | |
| Bridging Finance - Development | | $ 32,496,000 | 8.00% | 24 | $ 2,599,680 | $ | 35,279,680 |
| **Residual Land Value** | | | | | | **$** | **1,145,533** |
| **Adopt** | | 1,500 | @ | $ 767 | | **$** | **1,150,000** |
| | | | | | | | |
| 13 November 2011 | | | | Land Value | | $ | 767 |

**Appendix 2.11**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 12 Levels - Option 2 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Ground Retail | 600.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 900.00 | 15 | @ | $ 75.00 | $ | 58,500 | |
| Level 2 Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 2 Offices | 600.00 | 510.00 | @ | $ 420.00 | $ | 214,200 | |
| Level 2 - Mezz Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 3 Car Parks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 3 Offices | 600.00 | 510.00 | @ | $ 420.00 | $ | 214,200 | |
| Level 3 - Mezz Carparks | 900.00 | 18 | @ | $ 75.00 | $ | 70,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 9 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 10 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 11 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 12 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **18,000.00** | **11,530.00** | | | **$** | **5,371,700** | |
| | | | | | | | |
| **Investment Valuation** | | $ 5,371,700 | @ | 8.00% | | | $ 67,150,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 913,189 | |
| Sale Costs | | | @ | 2.00% | $ | 1,343,000 | $ 2,256,189 |
| | | | | | | | $ 64,893,811 |
| | | | | | | | |
| Less Development Profit Margin | | | @ | 20.00% | | | $ 10,815,635 |
| Outlay | | | | | | | $ 54,078,176 |
| | | | | | | | |
| **Less Construction Costs** | | | | | | | |
| Building | 18,000.00 | | @ | $ 2,500 | $ | 45,000,000 | |
| Fees | | | @ | 12% | $ | 5,400,000 | |
| | | | | | $ | 50,400,000 | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ - | 8.00% | 24 | $ | - | |
| Bridging Finance - Development | | $ 50,640,000 | 8.00% | 24 | $ | 4,051,200 | $ 54,691,200 |
| **Residual Land Value** | | | | | | | **-$ 613,024** |
| **Adopt** | | 2,400 | @ | -$ 254 | | | **-$ 610,000** |
| | | | | | | | |
| 13 November 2011 | | | | Land Value | | | -$ 254 |

**Appendix 2.12**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 4 Levels - Option 3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | | |
| Mezz Office | 1,650.00 | 1,550.00 | @ | $ | 420.00 | $ | 651,000 | | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **7,650.00** | **5,400.00** | | | | **$** | **2,543,600** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 2,543,600 | @ | | 8.00% | | | $ | 31,800,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 432,412 | | |
| Sale Costs | | | @ | | 2.00% | $ | 636,000 | $ | 1,068,412 |
| | | | | | | | | $ | 30,731,588 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 5,121,931 |
| Outlay | | | | | | | | $ | 25,609,657 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 7,650.00 | | @ | $ | 2,400 | $ | 18,360,000 | | |
| Fees | | | @ | | 12% | $ | 2,203,200 | | |
| | | | | | | $ | 20,563,200 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ 3,180,000 | 8.00% | | 18 | $ | 381,600 | | |
| Bridging Finance - Development | | $ 20,803,200 | 8.00% | | 18 | $ | 1,248,192 | $ | 22,432,992 |
| **Residual Land Value** | | | | | | | | **$** | **3,176,665** |
| **Adopt** | | 1,500 | @ | $ | 2,120 | | | **$** | **3,180,000** |

| | | |
|---|---|---|
| 13 November 2011 | Land Value | $ 2,120 |

**Appendix 2.13**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 5 Levels - Option 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ | 75.00 | $ | 124,800 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **8,850.00** | **4,960.00** | | | | **$** | **2,483,600** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 2,483,600 | @ | | 8.00% | | | $ 31,050,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 422,212 | |
| Sale Costs | | | @ | | 2.00% | $ | 621,000 | $ 1,043,212 |
| | | | | | | | | $ 30,006,788 |
| | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ 5,001,131 |
| Outlay | | | | | | | | $ 25,005,657 |
| | | | | | | | | |
| **Less Construction Costs** | | | | | | | | |
| Building | 8,850.00 | | @ | $ | 2,200 | $ | 19,470,000 | |
| Fees | | | @ | | 12% | $ | 2,336,400 | |
| | | | | | | $ | 21,806,400 | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 1,460,000 | 8.00% | | 18 | $ | 175,200 | |
| Bridging Finance - Development | | $ 22,046,400 | 8.00% | | 18 | $ | 1,322,784 | $ 23,544,384 |
| **Residual Land Value** | | | | | | | | **$ 1,461,273** |
| **Adopt** | | 1,500 | @ | $ | 973 | | | **$ 1,460,000** |

| | | | |
|---|---|---|---|
| 13 November 2011 | Land Value | $ | 973 |

**Appendix 2.14**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 6 Levels - Option 3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | | |
| Building | GFA | NLA | | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ | 75.00 | $ | 124,800 | | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | | |
| **Total Rent** | **10,050.00** | **6,070.00** | | | | **$** | **2,949,800** | | |
| | | | | | | | | | |
| **Investment Valuation** | | $ 2,949,800 | @ | | 8.00% | | | $ | 36,870,000 |
| **Less Leasing & Sale Costs** | | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 501,466 | | |
| Sale Costs | | | @ | | 2.00% | $ | 737,400 | $ | 1,238,866 |
| | | | | | | | | $ | 35,631,134 |
| | | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ | 5,938,522 |
| Outlay | | | | | | | | $ | 29,692,612 |
| | | | | | | | | | |
| **Less Construction Costs** | | | | | | | | | |
| Building | 10,050.00 | | @ | $ | 2,300 | $ | 23,115,000 | | |
| Fees | | | @ | | 12% | $ | 2,773,800 | | |
| | | | | | | $ | 25,888,800 | | |
| **Less Development Costs** | | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | | |
| Building Consent | | | | | | $ | 85,000 | | |
| Development Contribution | | | | | | $ | 100,000 | | |
| Legal Expenses | | | | | | $ | 10,000 | | |
| Professional Fees | | | | | | $ | 25,000 | | |
| Holding Costs | | | | | | $ | 10,000 | | |
| Bridging Finance - Land | | $ 1,520,000 | 8.00% | | 21 | $ | 212,800 | | |
| Bridging Finance - Development | | $ 26,128,800 | 8.00% | | 21 | $ | 1,829,016 | $ | 28,170,616 |
| **Residual Land Value** | | | | | | | | **$** | **1,521,996** |
| **Adopt** | | 1,500 | @ | $ | 1,013 | | | **$** | **1,520,000** |

| | | | |
|---|---|---|---|
| 13 November 2011 | Land Value | $ | 1,013 |

**Appendix 2.15**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 7 Levels - Option 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | | |
| Building | GFA | NLA | | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ | 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ | 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ | 75.00 | $ | 124,800 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ | 420.00 | $ | 466,200 | |
| **Total Rent** | **11,250.00** | **7,180.00** | | | | **$** | **3,416,000** | |
| | | | | | | | | |
| **Investment Valuation** | | $ 3,416,000 | @ | | 8.00% | | | $ 42,700,000 |
| **Less Leasing & Sale Costs** | | | | | | | | |
| Leasing Costs | | | @ | | 17.00% | $ | 580,720 | |
| Sale Costs | | | @ | | 2.00% | $ | 854,000 | $ 1,434,720 |
| | | | | | | | | $ 41,265,280 |
| | | | | | | | | |
| Less Development Profit Margin | | | @ | | 20.00% | | | $ 6,877,547 |
| Outlay | | | | | | | | $ 34,387,733 |
| | | | | | | | | |
| **Less Construction Costs** | | | | | | | | |
| Building | 11,250.00 | | @ | $ | 2,500 | $ | 28,125,000 | |
| Fees | | | @ | | 12% | $ | 3,375,000 | |
| | | | | | | $ | 31,500,000 | |
| **Less Development Costs** | | | | | | | | |
| Resource Consent | | | | | | $ | 10,000 | |
| Building Consent | | | | | | $ | 85,000 | |
| Development Contribution | | | | | | $ | 100,000 | |
| Legal Expenses | | | | | | $ | 10,000 | |
| Professional Fees | | | | | | $ | 25,000 | |
| Holding Costs | | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ 370,000 | 8.00% | | 21 | $ | 51,800 | |
| Bridging Finance - Development | | $ 31,740,000 | 8.00% | | 21 | $ | 2,221,800 | $ 34,013,600 |
| **Residual Land Value** | | | | | | | | **$ 374,133** |
| **Adopt** | | 1,500 | @ | $ | 247 | | | **$ 370,000** |
| | | | | | | | | |
| 13 November 2011 | | | | | Land Value | | | $ 247 |

**Appendix 2.16**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 8 Levels - Option 3 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 32 | @ | $ 75.00 | $ | 124,800 | |
| Level 2 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **12,450.00** | **8,290.00** | | | **$** | **3,882,200** | |
| | | | | | | | |
| **Investment Valuation** | | $ 3,882,200 | @ | 8.00% | | | $ 48,530,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 659,974 | |
| Sale Costs | | | @ | 2.00% | $ | 970,600 | $ 1,630,574 |
| | | | | | | | $ 46,899,426 |
| | | | | | | | |
| Less Development Profit Margin | | | @ | 20.00% | | | $ 7,816,571 |
| Outlay | | | | | | | $ 39,082,855 |
| | | | | | | | |
| **Less Construction Costs** | | | | | | | |
| Building | 12,450.00 | | @ | $ 2,600 | $ | 32,370,000 | |
| Fees | | | @ | 12% | $ | 3,884,400 | |
| | | | | | $ | 36,254,400 | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ - | 8.00% | 24 | $ | - | |
| Bridging Finance - Development | | $ 36,494,400 | 8.00% | 24 | $ | 2,919,552 | $ 39,413,952 |
| **Residual Land Value** | | | | | | | **-$ 331,097** |
| **Adopt** | | 1,500 | @ | -$ 220 | | | **-$ 330,000** |

| | | |
|---|---|---|
| 13 November 2011 | Land Value | -$ 220 |

**Appendix 2.17**

## Hypothetical Development Feasibility - Land

| Development Feasibilty - 12 Levels - Option 3 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Completed Valuation** | | | | | | | |
| Building | GFA | NLA | | | | | |
| Ground Car Parks | 1,650.00 | 40 | @ | $ 75.00 | $ | 156,000 | |
| Ground Retail | 750.00 | 520.00 | @ | $ 650.00 | $ | 338,000 | |
| Mezz Car Parks | 1,650.00 | 36 | @ | $ 75.00 | $ | 140,400 | |
| Level 2 Car Parks | 1,650.00 | 34 | @ | $ 75.00 | $ | 132,600 | |
| Level 2 Offices | 750.00 | 660.00 | @ | $ 420.00 | $ | 277,200 | |
| Level 2 - Mezz Car Parks | 1,650.00 | 34 | @ | $ 75.00 | $ | 132,600 | |
| Level 3 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 4 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 5 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 6 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 7 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 8 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 9 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 10 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 11 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| Level 12 Offices | 1,200.00 | 1,110.00 | @ | $ 420.00 | $ | 466,200 | |
| **Total Rent** | **20,100.00** | **12,280.00** | | | **$** | **5,838,800** | |
| | | | | | | | |
| **Investment Valuation** | | $ 5,838,800 | @ | 8.00% | | | $ 72,990,000 |
| **Less Leasing & Sale Costs** | | | | | | | |
| Leasing Costs | | | @ | 17.00% | $ | 992,596 | |
| Sale Costs | | | @ | 2.00% | $ | 1,459,800 | $ 2,452,396 |
| | | | | | | | $ 70,537,604 |
| | | | | | | | |
| Less Development Profit Margin | | | @ | 20.00% | | | $ 11,756,267 |
| Outlay | | | | | | | $ 58,781,337 |
| | | | | | | | |
| **Less Construction Costs** | | | | | | | |
| Building | 20,100.00 | | @ | $ 2,500 | $ | 50,250,000 | |
| Fees | | | @ | 12% | $ | 6,030,000 | |
| | | | | | $ | 56,280,000 | |
| **Less Development Costs** | | | | | | | |
| Resource Consent | | | | | $ | 10,000 | |
| Building Consent | | | | | $ | 85,000 | |
| Development Contribution | | | | | $ | 100,000 | |
| Legal Expenses | | | | | $ | 10,000 | |
| Professional Fees | | | | | $ | 25,000 | |
| Holding Costs | | | | | $ | 10,000 | |
| Bridging Finance - Land | | $ - | 8.00% | 24 | $ | - | |
| Bridging Finance - Development | | $ 56,520,000 | 8.00% | 24 | $ | 4,521,600 | $ 61,041,600 |
| **Residual Land Value** | | | | | | | **-$ 2,260,263** |
| **Adopt** | | 2,400 | @ | -$ 942 | | | **-$ 2,260,000** |
| | | | | | | | |
| 13 November 2011 | | | | Land Value | | | -$ 942 |

**Appendix 2.18**

# Financial Feasibility of Building in the CBD

## Hypothetical Development Feasibility Summary - Development Margin

| Development Feasibility Summary - Development Margin Output | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Levels | Retail | Offices | Carparks | Park Ratio | Yield | Value | Land Value | Cost | Cost | Dev Time | Profit | Profit |
| **Option 1** | | | | | | | | | | | | | |
| Building 4.1 | 4 | 520 | 4,030 | 37 | 122.97 | 8.00% | $ 26,570,000 | $ 2,000 | $ 17,740,800 | $ 2,400 | 18 | $ 3,260,000 | 14.54% |
| Building 5.1 | 5 | 520 | 4,440 | 55 | 90.18 | 8.00% | $ 30,220,000 | $ 2,000 | $ 20,966,400 | $ 2,400 | 18 | $ 3,370,000 | 13.04% |
| Building 6.1 | 6 | 520 | 5,550 | 55 | 110.36 | 8.00% | $ 36,040,000 | $ 2,000 | $ 25,200,000 | $ 2,500 | 21 | $ 4,190,000 | 13.67% |
| Building 7.1 | 7 | 360 | 6,660 | 59 | 118.98 | 8.00% | $ 40,770,000 | $ 2,000 | $ 29,702,400 | $ 2,600 | 21 | $ 3,940,000 | 11.11% |
| Building 8.1 | 8 | 520 | 7,770 | 70 | 118.43 | 8.00% | $ 48,430,000 | $ 2,000 | $ 35,817,600 | $ 2,600 | 24 | $ 4,380,000 | 10.32% |
| Building 12.1 | 12 | 520 | 11,610 | 106 | 114.43 | 8.00% | $ 70,350,000 | $ 2,000 | $ 53,289,600 | $ 2,600 | 24 | $ 6,690,000 | 10.91% |
| **Option 2** | | | | | | | | | | | | | |
| Building 4.2 | 4 | 520 | 3,330 | 33 | 116.67 | 8.00% | $ 23,320,000 | $ 2,000 | $ 14,784,000 | $ 2,200 | 18 | $ 3,250,000 | 16.85% |
| Building 5.2 | 5 | 520 | 3,840 | 51 | 85.49 | 8.00% | $ 26,870,000 | $ 2,000 | $ 17,640,000 | $ 2,100 | 18 | $ 3,650,000 | 16.36% |
| Building 6.2 | 6 | 520 | 4,950 | 51 | 107.25 | 8.00% | $ 32,700,000 | $ 2,000 | $ 21,436,800 | $ 2,200 | 21 | $ 4,990,000 | 18.75% |
| Building 7.2 | 7 | 520 | 6,060 | 69 | 95.36 | 8.00% | $ 39,400,000 | $ 2,000 | $ 27,820,800 | $ 2,300 | 21 | $ 4,630,000 | 13.84% |
| Building 8.2 | 8 | 520 | 7,170 | 69 | 111.45 | 8.00% | $ 45,230,000 | $ 2,000 | $ 32,256,000 | $ 2,400 | 24 | $ 5,130,000 | 13.30% |
| Building 12.2 | 12 | 520 | 11,010 | 105 | 109.81 | 8.00% | $ 67,150,000 | $ 2,000 | $ 50,400,000 | $ 2,500 | 24 | $ 6,720,000 | 11.55% |
| **Option 3** | | | | | | | | | | | | | |
| Building 4.3 | 4 | 520 | 4,880 | 40 | 135.00 | 8.00% | $ 31,800,000 | $ 2,000 | $ 20,563,200 | $ 2,400 | 18 | $ 3,300,000 | 12.03% |
| Building 5.3 | 5 | 520 | 4,440 | 72 | 68.89 | 8.00% | $ 31,050,000 | $ 2,000 | $ 21,806,400 | $ 2,200 | 18 | $ 1,260,000 | 4.38% |
| Building 6.3 | 6 | 520 | 5,550 | 72 | 84.31 | 8.00% | $ 36,870,000 | $ 2,000 | $ 25,888,800 | $ 2,300 | 21 | $ 2,200,000 | 6.58% |
| Building 7.3 | 7 | 520 | 6,660 | 72 | 99.72 | 8.00% | $ 42,700,000 | $ 2,000 | $ 31,500,000 | $ 2,500 | 21 | $ 1,830,000 | 4.64% |
| Building 8.3 | 8 | 520 | 7,770 | 72 | 115.14 | 8.00% | $ 48,530,000 | $ 2,000 | $ 36,254,400 | $ 2,600 | 24 | $ 1,920,000 | 4.27% |
| Building 12.3 | 12 | 520 | 11,760 | 144 | 85.28 | 8.00% | $ 72,990,000 | $ 2,000 | $ 56,280,000 | $ 2,500 | 24 | $ 3,930,000 | 5.90% |

Colliers INTERNATIONAL

**Appendix 3.1**

## Hypothetical Development Feasibility Summary - Residual Land Value

| Development Feasibility Summary - Residual Land Value Output | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Levels | Retail | Offices | Carparks | Park Ratio | Yield | Value | Profit | Cost | Cost | Dev Time | Land Value | Land Value |
| | Option 1 | | | | | | | | | | | | |
| Building 4.1 | 4 | 520 | 4,030 | 37 | 122.97 | 8.00% | $ 26,570,000 | $ 4,279,533 | $ 17,740,800 | $ 2,400 | 18 | $ 2,090,000 | $ 1,393 |
| Building 5.1 | 5 | 520 | 4,440 | 55 | 90.18 | 8.00% | $ 30,220,000 | $ 4,867,443 | $ 20,966,400 | $ 2,400 | 18 | $ 1,660,000 | $ 1,107 |
| Building 6.1 | 6 | 520 | 5,550 | 55 | 110.36 | 8.00% | $ 36,040,000 | $ 5,804,834 | $ 25,200,000 | $ 2,500 | 21 | $ 1,580,000 | $ 1,053 |
| Building 7.1 | 7 | 360 | 6,660 | 59 | 118.98 | 8.00% | $ 40,770,000 | $ 6,566,697 | $ 29,702,400 | $ 2,600 | 21 | $ 700,000 | $ 467 |
| Building 8.1 | 8 | 520 | 7,770 | 70 | 118.43 | 8.00% | $ 48,430,000 | $ 7,800,459 | $ 35,817,600 | $ 2,600 | 24 | $ 50,000 | $ 33 |
| Building 12.1 | 12 | 520 | 11,610 | 106 | 114.43 | 8.00% | $ 70,350,000 | $ 11,331,051 | $ 53,289,600 | $ 2,600 | 24 | -$ 1,160,000 | -$ 483 |
| | Option 2 | | | | | | | | | | | | |
| Building 4.2 | 4 | 520 | 3,330 | 33 | 116.67 | 8.00% | $ 23,320,000 | $ 3,756,083 | $ 14,784,000 | $ 2,200 | 18 | $ 2,550,000 | $ 1,700 |
| Building 5.2 | 5 | 520 | 3,840 | 51 | 85.49 | 8.00% | $ 26,870,000 | $ 4,327,859 | $ 17,640,000 | $ 2,100 | 18 | $ 2,400,000 | $ 1,600 |
| Building 6.2 | 6 | 520 | 4,950 | 51 | 107.25 | 8.00% | $ 32,700,000 | $ 5,266,883 | $ 21,436,800 | $ 2,200 | 21 | $ 2,760,000 | $ 1,840 |
| Building 7.2 | 7 | 520 | 5,550 | 69 | 95.36 | 8.00% | $ 39,400,000 | $ 6,346,018 | $ 27,820,800 | $ 2,300 | 21 | $ 1,500,000 | $ 1,000 |
| Building 8.2 | 8 | 520 | 6,660 | 69 | 111.45 | 8.00% | $ 45,230,000 | $ 7,285,043 | $ 32,256,000 | $ 2,400 | 24 | $ 1,150,000 | $ 767 |
| Building 12.2 | 12 | 520 | 9,990 | 105 | 109.81 | 8.00% | $ 67,150,000 | $ 10,815,635 | $ 50,400,000 | $ 2,500 | 24 | -$ 610,000 | -$ 254 |
| | Option 3 | | | | | | | | | | | | |
| Building 4.3 | 4 | 520 | 4,880 | 40 | 135.00 | 8.00% | $ 26,570,000 | $ 5,121,931 | $ 20,563,200 | $ 2,400 | 18 | $ 3,180,000 | $ 2,120 |
| Building 5.3 | 5 | 520 | 4,440 | 72 | 68.89 | 8.00% | $ 31,050,000 | $ 5,001,131 | $ 21,806,400 | $ 2,200 | 18 | $ 1,460,000 | $ 973 |
| Building 6.3 | 6 | 520 | 5,550 | 72 | 84.31 | 8.00% | $ 36,870,000 | $ 5,938,522 | $ 25,888,800 | $ 2,300 | 21 | $ 1,520,000 | $ 1,013 |
| Building 7.3 | 7 | 520 | 6,660 | 72 | 99.72 | 8.00% | $ 42,700,000 | $ 6,877,547 | $ 31,500,000 | $ 2,500 | 21 | $ 370,000 | $ 247 |
| Building 8.3 | 8 | 520 | 7,770 | 72 | 115.14 | 8.00% | $ 48,530,000 | $ 7,816,571 | $ 36,254,400 | $ 2,600 | 24 | -$ 330,000 | -$ 220 |
| Building 12.3 | 12 | 520 | 11,760 | 144 | 85.28 | 8.00% | $ 72,990,000 | $ 11,756,267 | $ 56,280,000 | $ 2,500 | 24 | -$ 2,260,000 | -$ 942 |

Appendix 3.2

# Study of New 4 to 8 level buildings in the CBD

Report

## Study of Trends for New 4 to 8 Level Buildings in Christchurch CBD

**Prepared for Christchurch City Council (Client)**

**By Beca Carter Hollings & Ferner Ltd (Beca)**

27 October 2011

## Revision History

| Revision Nº | Prepared By | Description | Date |
|---|---|---|---|
| A | Andrew Jackson | Original Issue – Levels 04 to 08 | 25 October 2011 |
| B | Andrew Jackson | Level 12 Buildings and Model Building Options 2 & 3 Added | 14 November 2011 |
| | | | |
| | | | |
| | | | |

## Document Acceptance

| Action | Name | Signed | Date |
|---|---|---|---|
| Prepared by | Andrew Jackson |  | 14 November 2011 |
| Reviewed by | Rob Churcher |  | 14 November 2011 |
| Approved by | Mike Quirk |  | 14 November 2011 |
| on behalf of | Beca Carter Hollings & Ferner Ltd | | |

# Study of New 4 to 8 level buildings in the CBD



## Table of Contents

## 1 Introduction

Beca Carter Hollings & Ferner Ltd (Beca), was engaged by the Christchurch City Council (CCC), to provide 'buildings' professional consultancy advice for input into the Christchurch City Council Central City Plan, following the February 2011 earthquake, as part of the 'Built Form' Workstream.

The overall aim of the exercise was to develop a hypothetical 'model' building over Council selected heights and determine theoretical construction costs appropriate to this building, providing an informed input into the Central City Plan. The purpose of this report is to summarise the building technical advice only provided by Beca.

Beca have been engaged to separately advise CCC and accept legal responsibility only to CCC and not to any other party that may receive or review this report. Although this report may be included in the Central City Plan, it is for information purposes only, and any reliance by any other party is at their own risk.

## 2 Client Project Brief

Prior to commencing, the scope of work was identified within the framework of various discussions with the CCC. The initial discussions outlined the guidelines that CCC required Beca to work within and the key drivers for the proposed model buildings. These conditions, environments and key features included:

- CBD block location.
- Block size approximately 110m x 60m.
- Block fringed by main streets/roads, with the possibility of a mid-block lane.
- Land size (area) and shape to be flexible to fit within the block with no specific restrictions.
- Car parking to be included at a market ratio.
- Car parking to be integral within the building or separate as appropriate.
- Building to include ground floor retail.
- Location of the block was to be in a good, but not prime, retail location.
- The model building was to be of reasonable quality and equivalent to uncertified New Zealand 4 Star Green Star building.
- Ground conditions considered to be reasonable and consistent with a good to reasonable geotechnical outcome

Over a period of time, CCC requested Beca to review buildings ranging in heights from four to eight levels above ground. A twelve level building was included at the latter stages of the study, to indicate the potential trend of higher buildings.

## 3 Beca Scope of Work

The responsibility of Beca was to provide information relating to their respective area of expertise, with Beca developing hypothetical 'model' buildings and determining theoretical construction costs.

# Study of New 4 to 8 level buildings in the CBD



### 3.1 The 'Model' Building

In preparing this advice, Beca was responsible for developing a number of model buildings over various heights selected by CCC. The Beca scope did not include building models over twelve levels above ground. The study was generally aimed at developing 'model' buildings from four to eight levels above ground.

The 'model' building was developed over a period of time, with 'test' buildings established to consider overall viability of a separate but linked covered car parking building compared with integrated car parking within the overall building footprint.

The final result of the hypothetical 'model' building used for this exercise, as detailed in Appendix A of this report, was based on a conventional podium/tower structure over a full basement of car parking with building height ranging from CCC specified heights of three to eight levels above ground. Three options were developed for the 'model' building, these generally were:

- Option 1 – with basement and land size of approximately 1,500m$^2$
- Option 2 – without basement and land size of approximately 1,500m$^2$
- Option 3 – without basement and land size of approximately 2,400m$^2$

The building perimeter was a standard symmetrical square/rectangular shape.

Colliers, as key advisors in the Christchurch property market environment, advised Beca that a floor plate of between 600 to 1200 square metres is typical for the Christchurch market. Adopting this advice, the gross floor area (GFA), used for the office spaces of the 'model' building was 1200 square metres with the ability to allow this to be divided into multiple tenancies on a floor of around 600 square meters if required.

The 'model' building included the following features/details to a 'base build' level and excluded fit-out. Key features included:

- Main entrance to have good street frontage and quality 'street appeal'
- Reasonable sized and quality entrance lobby
- Vertical transportation (lifts), providing a reasonable level of service to suit the number of occupants/tenants as dictated by the number of floors
- Rear entry onto a laneway/rear street
- Basement car parking as a minimum with additional car parking provided at the rear of the ground floor and on a mezzanine level as dictated by the number of occupants/tenants
- Ground floor retail with good street frontage
- Retail standard floor to floor height at ground floor level of around 4.75 to 5.0m, with a reasonable floor to floor height of 3.8m, on all other subsequent office floors. A larger floor to floor height of approximately 5.2m to 5.6m was provided on levels which included a mezzanine floor
- Dedicated core on each office floor level which included:
  - Lifts
  - Emergency escape stairwells
  - Male and female wc/ablutions – including showers and disabled facilities
  - Cleaners cupboard
  - Service risers
- Roof top plantroom and external plant area
- Power and communications utility rooms at ground floor level

- Piled foundations, consistent with reasonable geotech conditions
- Glazed facades to maximise daylight into the office floors
- Reasonable quality 'base build' interior finishes and services equivalent to an uncertified New Zealand 4 Star Green Star building
- An energy efficient building complete with a mid-upper quality heating and comfort cooling system

From this exercise the following key outputs were determined, with various outputs provided to Colliers for their development valuation assessment:

- Gross Floor Area (GFA)
- Net Lettable Area (NLA)
- Estimated construction costs $/m$^2$, for the overall building cost
- Estimated number of car park spaces

### 3.2 Construction Cost Data

On completion of the hypothetical 'model' buildings, theoretical construction costs were applied to the building based on a square metre rate for each level and use, to determine the overall cost of the 'model' buildings over the various height scenarios. A summary of these costs are included in Appendix B of this report.

During the early stages of the investigation, square metre rates were derived from industry bench mark data to assist in quickly establishing an appropriate model building cost. On confirmation of the preferred 'model' buildings, elemental cost estimates using the 'model' buildings areas and specification, referred to within this report, were prepared to substantiate the square meter rates used.

There have been obvious difficulties in obtaining current market costs for construction within the Christchurch region within the last twelve to eighteen months, due to the relatively stagnant climate for construction. The construction industry emphasis has been more related to demolition and immediate repairs rather than redevelopment. As a consequence, costs have been reviewed and benchmarked against projects in other regions, such as Auckland and Wellington, with a percentage added to reflect current markets for Christchurch.

As with any generic modelling exercise and associated cost planning at the feasibility of a project, there are numerous potential designs and materials that can be adopted, each having their own cost impacts upon the overall scheme.

From a cost estimate perspective, the 'model' buildings are assumed to be of reasonable quality and an uncertified 4 Star Green Star Building of which a mid-market speculative developer would produce.

Within the Christchurch region, one of the fundamental unknowns relates to building structure and foundation systems. With the change in the building codes, and the likelihood of further modifications, it has been assumed that a piled structure would form the basis of the foundation system. With depths being variable depending upon the geotechnical assessment of the ground conditions the model has provided for an average depth of 15m.

An alternative foundation system would be base isolation. This however would be a clear developer/owner driven decision related to market response, and likely to be more expensive than a piled solution.

# Study of New 4 to 8 level buildings in the CBD



The other **key assumptions** have been:

Structural framing – concrete framed building with 125 -150mm thick reinforced composite concrete floor system, supported off concrete columns arranged around a central reinforced concrete core. Additional seismic loading issues will impact further upon the layout and materials proposed.

Central core to provide vertical circulation via lift shafts (Two lift shafts for 4 and 5 story buildings, increasing to three lift shafts for six, seven and eight story buildings); and two precast concrete staircases. The WC amenities are also located within the central core on each floor level, with sufficient facilities to service the number of occupants to Building Code requirements.

The external façade is to be a fully glazed curtain walling system, with double glazed windows, providing reasonable thermal and solar control to the indoor environment. External louvres to the affected façades shall provide solar shading and improve aesthetics of the building.

Floor to floor heights – The retail area at ground floor has a 4.75 – 5.0m floor to floor height. The office areas have a 3.8m floor to floor height. A larger floor to floor height of approximately 5.2m to 5.6m was provided for levels which included a mezzanine floor

**Finishes** –

In assessing the cost plan the finishes allowed for in the 'model' building are to a 'base build' standard which generally includes:

Retail areas – Open plan, no ceilings, base paint to core walls, concrete slab with sealer coat only – left for tenant fit-out.

Office areas – Open plan, 1200 x 600mm suspended ceiling grid tiles, 1200mm x 600mm recessed energy efficient T5 fluorescent lighting, electrical power to tenancy DB at each floor level only. Space heating and cooling to be provided by a reasonable quality HVAC system through a VRF/VRV refrigerant system. Floors to be provided with a commercial grade medium duty carpet tiles, painted core walls and columns and access doors to each tenancy.

Contingency allowance – For the purposes of cost modelling, and noting that the costs are based upon historical costs for a hypothetical 'model' building, an allowance of 5% is included in regard to market price related risks. No allowance has been included for a site specific design and construction contingency.

The table included within Appendix B predicts the estimated square meter rates for construction costs for each floor of the model building.

The accuracy of these costs is comparable to the feasibility level of design development. As the costs are based only upon a generic model building, they should only be used for comparison purposes.

Based upon the foregoing, we would expect construction costs for base build commercial buildings, similar to the model buildings to fluctuate from $2,400/m$^2$ up to $2,800/m$^2$ exclusive of GST.

### 3.3 Exclusions

The construction costs used in this exercise specifically exclude:

- Funding, scope, design and construction contingency specific to each site
- Fit out - assumed "base build" level of services only as described above
- Professional fees for design, management and project management
- Costs for consents, development levies and peer reviews

- External areas and landscaping – cost model relates only to building area
- Demolition costs and removal of materials
- Contaminated ground treatments below the car park level. We have assumed all excavated material to the basement car park level is uncontaminated
- Land remediation and stabilisation. Ground remediation strategies vary significantly depending upon the soils below the buildings and their susceptibility to liquefaction and or lateral movements. For the purposes of the cost model good ground has been assumed.
- Specific Geotech issues that may affect specific sites – note piling has been used in the costs but assumes good bearing at a depth of 15m.
- Base isolation for foundations
- Cost Escalation - The unknown nature of the micro-economic climate within Christchurch, combined with the uncertainty surrounding the availability of resources, represents a risk to the cost of construction in the Christchurch market going forward. There are varying and conflicting views projecting escalation over the next 12 – 24 months at between 5% up to 15%. For the purposes of the cost model, the cost estimates are current market costs based on 3rd Quarter 2011, and future escalation assessments have been excluded.
- Goods and Services Tax – (GST)
- Cost of capital or opportunity cost of capital invested.
- Legal costs
- Land purchase costs

## 4 Summary of the Study

Having tested the various building models developed, the following conclusions have been determined:

- **Building Footprint:**

  To keep the 'model' buildings simple, a symmetrical footprint was used. This proved to be the most cost effective solution with respect to construction costs and the most effective and efficient use of the land.

  – The 'model' buildings were established with a 'podium' which provided the following benefits to the development:
    - Increased basement and ground floor footprint and thus increasing the car parking numbers
    - Created a larger street frontage maximising retail space
    - Provided an opportunity to set-back the office floor levels above the ground floor level, creating a tower, providing space and light between the proposed 'model' building and neighbours

  The study confirmed that the most efficient building was one that maximised the use of the land with a good plot ratio (building to land), with the building continuing the footprint or maximising the footprint over the height of the building

- **Typical Floor Plate Size:**

  Christchurch is a relatively small office market with only limited demand for large floor plates up to and exceeding 1,000 square metres. Floor plates of between 500 and 600 square metres are more appropriate with flexibility to subdivide into smaller suites. As a comparison with other New Zealand regions, with higher quality buildings, the most recent 5 Star Green building in

# Study of New 4 to 8 level buildings in the CBD



Christchurch, the 12 level HSBC Tower, has office floor plates of around 600 square metres. This is compared to several Wellington and Auckland buildings with 1,000 square meter floor plates.

The size of the office floor plate used in the hypothetical building model is 1,200m$^2$ gross - GFA.

- **Car Parking:**

  The 'model' buildings included the provision of car park ratios for the various options ranging from:

  - Option 1 - 1 per 90 square metres up to 1 per 123 square metres
  - Option 2 - 1 per 85 square metres up to 1 per 117 square metres
  - Option 3 - 1 per 69 square metres up to 1 per 135 square metres

  This is significantly higher than current City Plan requirements, but similar to benchmarked successful existing A and B grade office buildings as advised by Colliers using their local market knowledge. For example Forsyth Barr House has a car park ratio 1 per 83 square metres, HSBC Tower 1 per 67 square metres and PWC Centre 1 per 101 square metres.

  The study indicated that the provision of car parking to a building is not a cost effective use of the land – this will fluctuate depending upon land value and location.

  Basement car parking is expensive due to the ground works and waterproofing/tanking of the building below ground. This is especially the case in Christchurch where a high water table increases this problem. Post-earthquake this cost will further increase, with ground conditions being poor and a significant increase in the possibility of liquefaction, placing greater demand on the basement costs.

  Car parking solutions in terms of standalone linked, and shared car park "buildings" in rear positions may be an economical solution and serve to increase viability.

  The 'model' buildings were developed using a number of options which included basement car parking, along with additional car parking provided at ground floor and mezzanine levels as dictated by building occupants as the building height increased.

  Colliers advised that car parking does not provide as high a return as office/retail space. However, based on their market knowledge and feedback a reasonable level of car parking might be considered as a prerequisite for attracting quality office tenants.

- **Key Building Economic Influences**

  Market research, industry trends and 'rules of thumb' identify that the square metre cost of a building, vary with the increased height of the building.

  As building heights increase, the cost of construction increases proportionally. This is due to a number of factors:

  - Building foundation costs increase as the static and live loads of taller buildings increase
  - The structural framing members increase in size as the building height increases
  - Seismic influences on taller buildings require additional structural measures
  - Services are impacted, requiring additional hydraulic and pumping measures
  - Service zones increase, impacting floor areas and plant room sizes increase.

- Vertical transportation costs increase due to additional specification requirements to meet serviceability requirements, more staircases and lifts are required to meet occupational demands.
- The cost of moving materials from delivery areas at ground level to upper floors increases, requiring more craneage and handling time.

These items are more specifically detailed below:

- Floor area efficiencies:
  - As buildings increase with height the floor area is impacted, reducing nett lettable area through:
    - service risers
    - access and circulation spaces eg: vertical transportation (lifts) and stairwells
- Floor areas – as the floor area increases, the build cost becomes more economical per floor area, this is as a consequence of an increased floor to wall ratio, and economies of scale. Should the floor plate areas reduce to the 600m2 option noted above, there will be a corresponding increase in the overall construction costs.
- Wall to floor area ratios:
  - Taller buildings result in an increase in the façade areas. The greater perimeter can result from decreasing floor efficiencies and can have a significant cost effect. Facades can account for 10 to 15% of the construction costs. This can be markedly increased when façade treatments such as heat reducing glazing, louvers and other options are incorporated.
  - As building heights increase the effects of wind loadings has a greater effect. This has an impact on the façade structural design and detailing increasing the elemental cost of the façade, and corresponding impacts upon the foundation design.
- Foundations:
  - The foundations increase in size as buildings increase with height.
  - In Christchurch the design of foundations and need for piled foundations will be of on-going consideration and will need to be carefully assessed on a case by case basis. This is a 'high risk' component for assessing building costs at present, and needs to be factored into the cost of rebuilding
- Vertical Transportation/Circulation:
  - As the building height increases the number of occupants will increase. This will have an effect on the vertical transportation (lifts) which includes:
    - Increase in lift height – ie: floors served
    - Increase in lift car size or number of lifts within a building
    - Increase in lift specification – ie: speed/quality of service
- Building Services:
  - In general, the systems costs are generally in proportion to the building nett area. There are some secondary cost effect increases, these include the following
    - The height of a building increases the hydraulic and air pressures, resulting in increasing pump and fan sizes and extra plant / equipment for the various systems
    - Main service routes increase in size (ductwork, pipework, distribution cabling, etc) as the load moves further away from the plant rooms / source

# Study of New 4 to 8 level buildings in the CBD



        - Plant rooms increase in size to accommodate greater need and general increase in air conditioning and air handling systems, generators, chiller plant, etc. This reduces the overall nett to gross area ratios
  - Structural Frame:
    - The efficiency of the structure can vary significantly depending upon the floor plan 'regularity', which is typically a result of the site constraints
    - Increasing height and the resultant structural member sizes increases the cost per square metre
    - The current seismic loading requirements have been factored in. No allowance for potential future changes has been considered.
    - It is also considered that office use 'flexibility' will also increase the cost per square metre rate. Some example of these which could affect the costs include:
      - Open – column free layouts
      - Creating greater loads (high load areas, lundia shelving etc)
      - Higher floor to ceiling heights. These have not been considered in the simplified comparative models prepared
  - P&G / Margins and Sundry:
    - Construction workforce efficiency reduces
    - Carriage cost increase to get material to the workforce – ie: craneage, hydraulic lifts, manual handling between levels, etc
    - Management experience/quality is likely to increase
    - Removal of construction rubbish
    - Space for setting down/site set up increases
    - Professional fees and likely Building consent fees increase as building height size increases. This may not be significant in proportion of net lettable area, unless comparing simple 2 level buildings with more (due to geometric issues) complex taller buildings

As part of the brief, Beca was not instructed to undertake analysis on building heights above eight levels above ground. Historically, medium to high rise buildings in Christchurch have been developed to take advantage of economies of scale.

- **Escalation:**
  - Escalation is an allowance for the changes in the costs/prices for labour and materials over timescales of six months or more. Generally, escalation is expressed as a percentage applied to the total cost of the project, although it can be derived as percentage additions for the labour and materials components of the cost model. It represents the inflationary aspects of the construction economy, and is often as assessment of the potential for costs to increase.
  - Within the Christchurch area, the large extent of redevelopment required, combined with the required timescales for the projects to be undertaken are likely to create a drain of resource within the Canterbury area, requiring additional labour resources from other parts of New Zealand and further afield. There will also be a corresponding high demand for raw building materials and fabrication of components, which will create a high demand for basic building materials, which may be difficult to meet from within the New Zealand market.
  - This will create an impact upon the cost of building, and early indications are that escalation will be within a 5% to 15% banding over the next two years. (Treasury have indicated a total of 20%+ margin over four plus years.) However, the relative slowing down of the construction market in other areas of New Zealand; as indicated by the monthly building consent trends, will assist with tempering the escalation in relation to labour resource and some material costs.

- Escalation is not directly linked to building storey heights or construction. Combined with the undefined redevelopment timescales for the period of the cost models; and the fact that the impact of escalation is likely to affect all build costs, regardless of storey height; we have excluded escalation from our model.

## 5 Disclaimer

The work was undertaken within a limited time period between each milestone and key delivery date, with the detail and accuracy of information provided limited in various aspects. The schemes for the typical 'model' buildings floor plates were based on generic data and construction cost rates typical of New Zealand construction projects and industry benchmarks, which were not independently verified or reviewed for the purposes of this study.

The "model" buildings prepared by Beca are accordingly general and not suitable for application to particular sites or other uses outside of this study.

The accuracy of the costs estimates based on this feasibility stage are based upon feasibility information.

The scope of work set by CCC did not require the analysis of building heights and the resultant impact above eight levels, with the exception of the twelve level building; therefore no data or commentary is made with respect to this. This report is not a recommendation on limits on building heights.

Christchurch City Council separately engaged both Beca and Colliers to provide independent input into this exercise. Both Beca and Colliers have summarised their work into their own reports. They are each solely responsible only for the scope of work commissioned and they each provided. They have not verified each other's work. Neither of them is responsible for the accuracy, completeness, currency or sufficiency of the other's work.

# Study of New 4 to 8 level buildings in the CBD

Appendix A

## The 'Model' Building

# Christchurch City Council - Central City Plan 'Built Form Workstream'

**Model Building Data**

The hypothetical 'model' building referred to within the report was tested over various height ranges as dictated by Christchurch City Council.

These height ranges include:

- 4 story
- 5 story
- 6 story
- 7 story
- 8 story
- 12 story

With each of the 'model' buildings the following services/uses of building were provided for:

- Integral covered car parking
- Ground floor retail
- Commercial office space

The 'model' building was developed using three options as follows:

- Option 1 – with basement car parking and land size of approx. 1,500m$^2$
- Option 2 – without basement car parking and land size of approx. 1,500m$^2$
- Option 3 – without basement car parking and land size of approx. 2,400m$^2$

The aim of the 'model' building was to determine:

- Construction cost
- Gross floor area (GFA)
- Nett lettable area (NLA)
- Total number of car parks

# Study of New 4 to 8 level buildings in the CBD

## Option 1: Building Type 4:1 – 4 Story

**No. of Levels Above Ground: 4**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Basement** | Car Park | 1,500m$^2$ | NA |
| **Ground** | Commercial Office<br>Retail | 900m$^2$<br>600m$^2$ | 700m$^2$<br>520m$^2$ |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 6,600m$^2$ | |
| **Total Office NLA:** | 4,030m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 37 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,400.00 |
| | ▪ Total GFA | 6,600m$^2$ |
| | **Total Construction Costs:** | **$15,840,000.00** |

Building Type 4.1
Total Car Parking Spaces 37
Total Building Gross Area 6,600m²
Total Retail Net Area 520m²
Total Office Net Area 4,030m²
Total Area of Land 1,500m²
Level 4 - Office
Level 3 - Office
Level 2 - Office
Level 1 (Ground) - Office
Retail
Basement Level - Car Park
FOR INFORMATION
Beca
CHRISTCHURCH CITY COUNCIL
CHCH CITY PLAN - BUILT FORM WORK STREAM
OPTION 1
BUILDING TYPE 4.1
4 STORY
ARCHITECTURAL
5392799-400-A-002
www.beca.com

# Study of New 4 to 8 level buildings in the CBD

## Option 1: Building Type 5:1 – 5 Story

**No. of Levels Above Ground: 5**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Basement** | Car Park | 1,500m$^2$ | NA |
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 7,800m$^2$ | |
| **Total Office NLA:** | 4,440m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 55 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,400.00 |
| | ▪ Total GFA | 7,800m$^2$ |
| | **Total Construction Costs:** | **$18,720,000.00** |

Building Type 5.1
Total Car Parking Spaces 55
Total Building Gross Area 7,800m²
Total Retail Net Area 520m²
Total Office Net Area 4,440m²
Total Area of Land 1,500m²
Level 5 - Office
Level 4 - Office
Level 3 - Office
Level 2 - Office
Retail
Level 1 (Ground) - Car Park
Basement Level - Car Park
FOR INFORMATION
CHRISTCHURCH CITY COUNCIL
CHCH CITY PLAN - BUILT FORM WORK STREAM
OPTION 1
BUILDING TYPE 5.1
5 STORY
ARCHITECTURAL
5392799-400-A-003
Beca
www.beca.com

# Study of New 4 to 8 level buildings in the CBD

## Option 1: Building Type 6:1 – 6 Story

**No. of Levels Above Ground: 6**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Basement** | Car Park | 1,500m$^2$ | NA |
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 9,000m$^2$ | |
| **Total Office NLA:** | 5,550m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 55 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,500.00 |
| | ▪ Total GFA | 9,000m$^2$ |
| | **Total Construction Costs:** | **$22,500,000.00** |

Building Type 6.1
Total Car Parking Spaces 55
Total Building Gross Area 9,000m²
Total Retail Net Area 520m²
Total Office Net Area 5,550m²
Total Area of Land 1,500m²
Level 6 - Office
Level 5 - Office
Level 4 - Office
Level 3 - Office
Level 2 - Office
Level 1 (Ground) - Car Park
Retail
Basement Level - Car Park
FOR INFORMATION
www.beca.com
www.beca.com
Beca
CHRISTCHURCH CITY COUNCIL
CHCH CITY PLAN - BUILT FORM WORK STREAM
OPTION 1
BUILDING TYPE 6.1
6 STORY
ARCHITECTURAL
5392799-400-A-004
A

# Study of New 4 to 8 level buildings in the CBD

## Option 1: Building Type 7:1 – 7 Story

**No. of Levels Above Ground: 7**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Basement** | Car Park | 1,500m$^2$ | NA |
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>360m$^2$ |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 07** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 10,200m$^2$ | |
| **Total Office NLA:** | 6,660m$^2$ | |
| **Total Retail NLA:** | 360m$^2$ | |
| **Total No. of Car Park Spaces:** | 59 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,600.00 |
| | ▪ Total GFA | 10,200m$^2$ |
| | **Total Construction Costs:** | **$26,520,000.00** |

Building Type 7.1
Total Car Parking Spaces 59
Total Building Gross Area 10,200m²
Total Retail Net Area 360m²
Total Office Net Area 6,660m²
Total Area of Land 1,500m²
Level 7 - Office
Level 6 - Office
Level 5 - Office
Level 4 - Office
Level 3 - Office
Level 2 - Office
Level 1 (Ground) - Car Park
Basement Level - Car Park
Retail
FOR INFORMATION
www.beca.com
Beca
CHRISTCHURCH CITY COUNCIL
CHCH CITY PLAN - BUILT FORM WORK STREAM
OPTION 1
BUILDING TYPE 7.1
7 STORY
ARCHITECTURAL
5392799-400-A-005
A

# Study of New 4 to 8 level buildings in the CBD

## Option 1: Building Type 8:1 – 8 Story + Mezzanine

**No. of Levels Above Ground: 8**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Basement** | Car Park | 1,500m$^2$ | NA |
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 07** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 08** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 12,300m$^2$ | |
| **Total Office NLA:** | 7,770m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 70 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,600.00 |
| | ▪ Total GFA | 12,300m$^2$ |
| | **Total Construction Costs:** | **$31,980,000.00** |

Building Type 8.1
Total Car Parking Spaces 70
Total Building Gross Area 12,300m²
Total Retail Net Area 520m²
Total Office Net Area 7,770m²
Total Area of Land 1,500m²
Level 8 - Office
Level 7 - Office
Level 6 - Office
Level 5 - Office
Level 4 - Office
Level 3 - Office
Level 2 - Office
Level 1 (Mezzanine) - Car Park
Level 1 (Ground) - Car Park
Basement Level - Car Park
Retail
FOR INFORMATION
www.beca.com
Beca
CHRISTCHURCH CITY COUNCIL
CHCH CITY PLAN - BUILT FORM WORK STREAM
OPTION 1
BUILDING TYPE 8.1
8 STORY + MEZZANINE
ARCHITECTURAL
5392799-400-A-006
DO NOT SCALE

# Study of New 4 to 8 level buildings in the CBD

## Option 1: Building Type 12:1 – 12 Story + Mezzanine

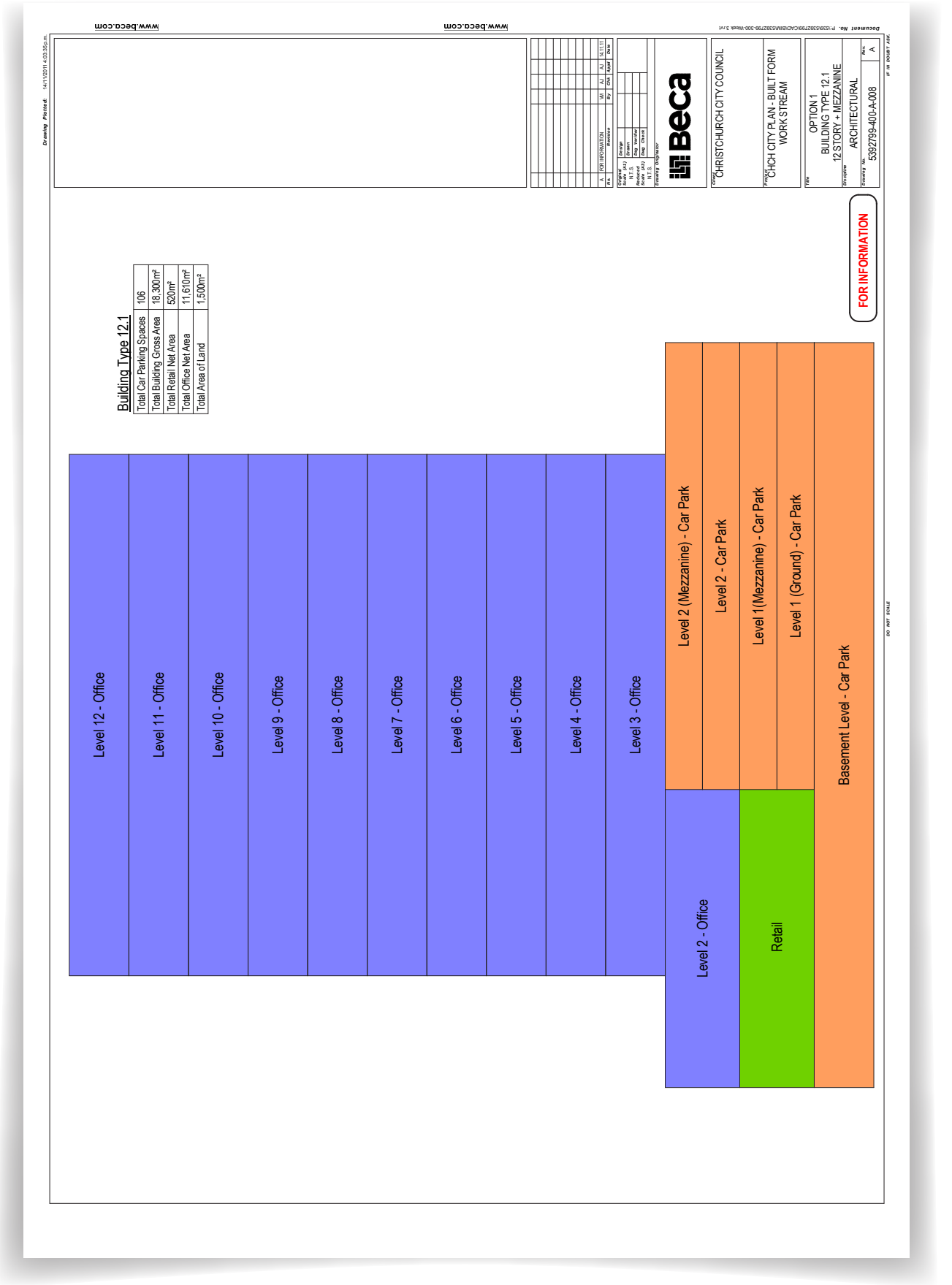
**No. of Levels Above Ground: 12**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Basement** | Car Park | 1,500m$^2$ | NA |
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Car Park<br>Commercial Office | 900m$^2$<br>600m$^2$ | NA<br>510m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 07** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 08** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 09** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 10** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 11** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 12** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

## Option 1: Building Type 12:1 – 12 Story + Mezzanine (Continued)

| | | |
|---|---|---|
| **Total Building GFA:** | 18,300m$^2$ | |
| **Total Office NLA:** | 11,610m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 106 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,600.00 |
| | ▪ Total GFA | 18,300m$^2$ |
| | **Total Construction Costs:** | **$47,580,000.00** |

# Study of New 4 to 8 level buildings in the CBD



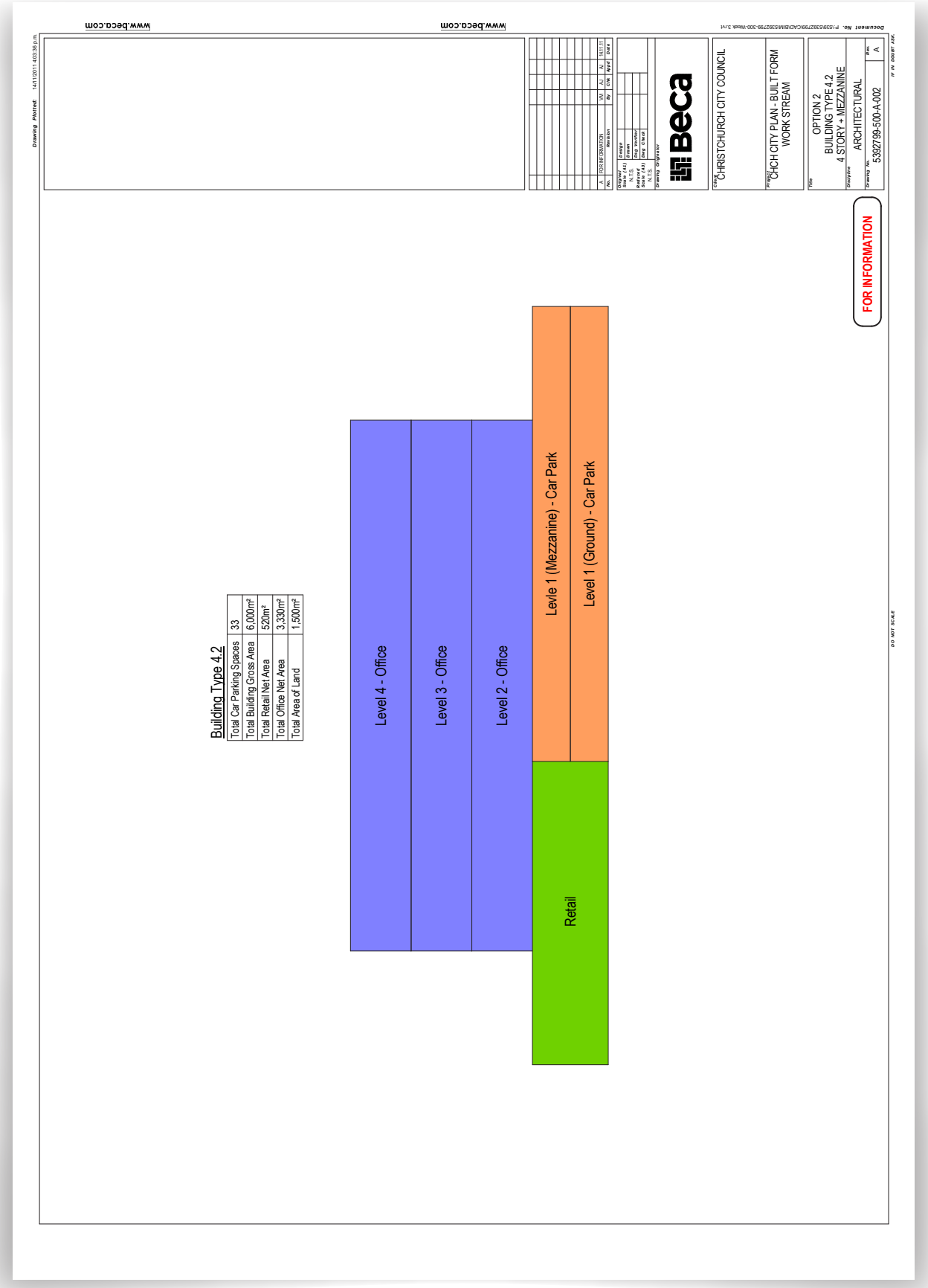
## Option 2: Building Type 4:2 – 4 Story + Mezzanine

**No. of Levels Above Ground: 4**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 6,000m$^2$ | |
| **Total Office NLA:** | 3,330m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 33 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,200.00 |
| | ▪ Total GFA | 6,000m$^2$ |
| | **Total Construction Costs:** | **$13,200,000.00** |

# Study of New 4 to 8 level buildings in the CBD



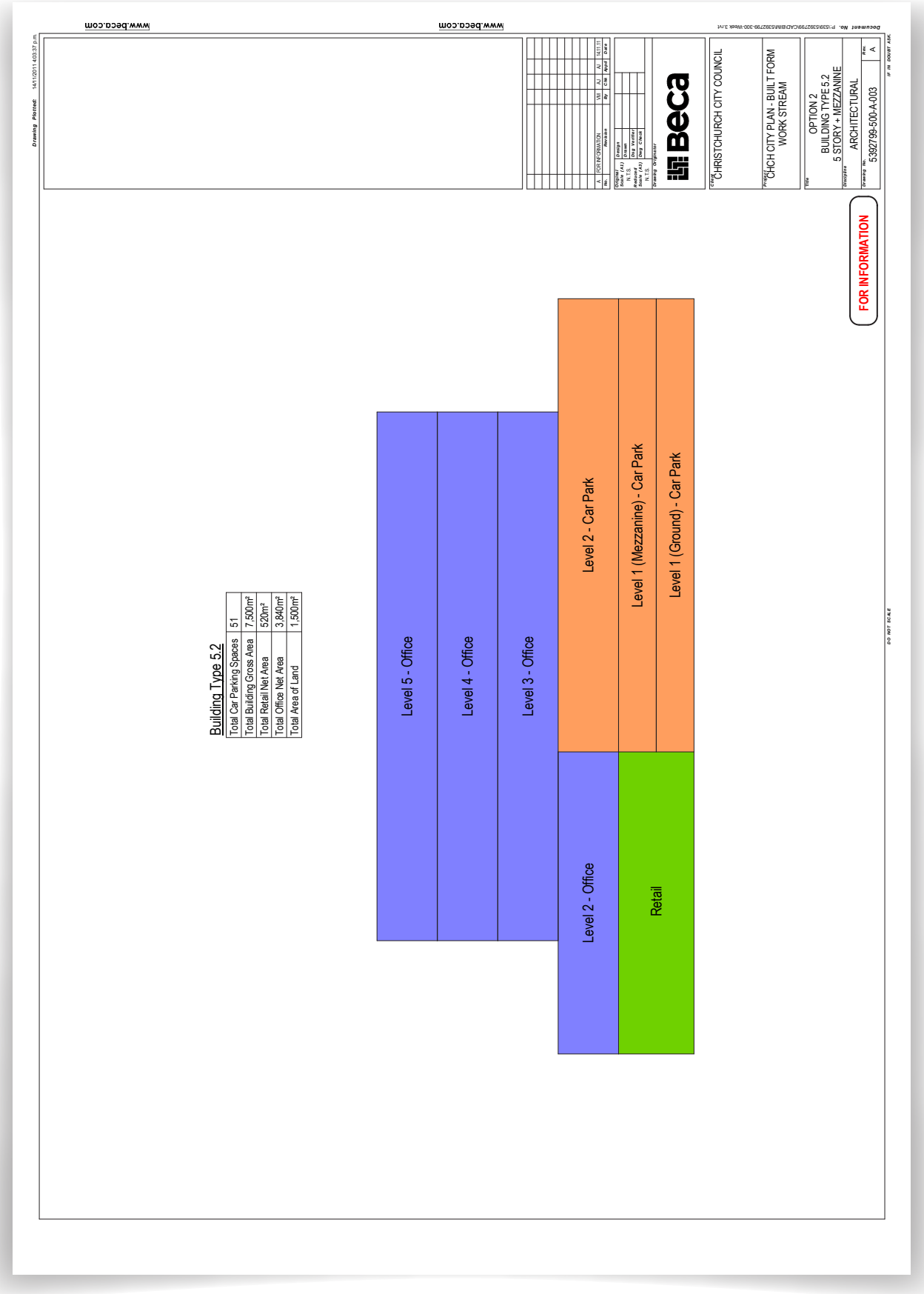
## Option 2: Building Type 5:2 – 5 Story + Mezzanine

**No. of Levels Above Ground: 5**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Car Park<br>Commercial Office | 900m$^2$<br>600m$^2$ | NA<br>510m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 7,500m$^2$ | |
| **Total Office NLA:** | 3,840m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 51 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,100.00 |
| | ▪ Total GFA | 7,500m$^2$ |
| | **Total Construction Costs:** | **$15,750,000.00** |

# Study of New 4 to 8 level buildings in the CBD



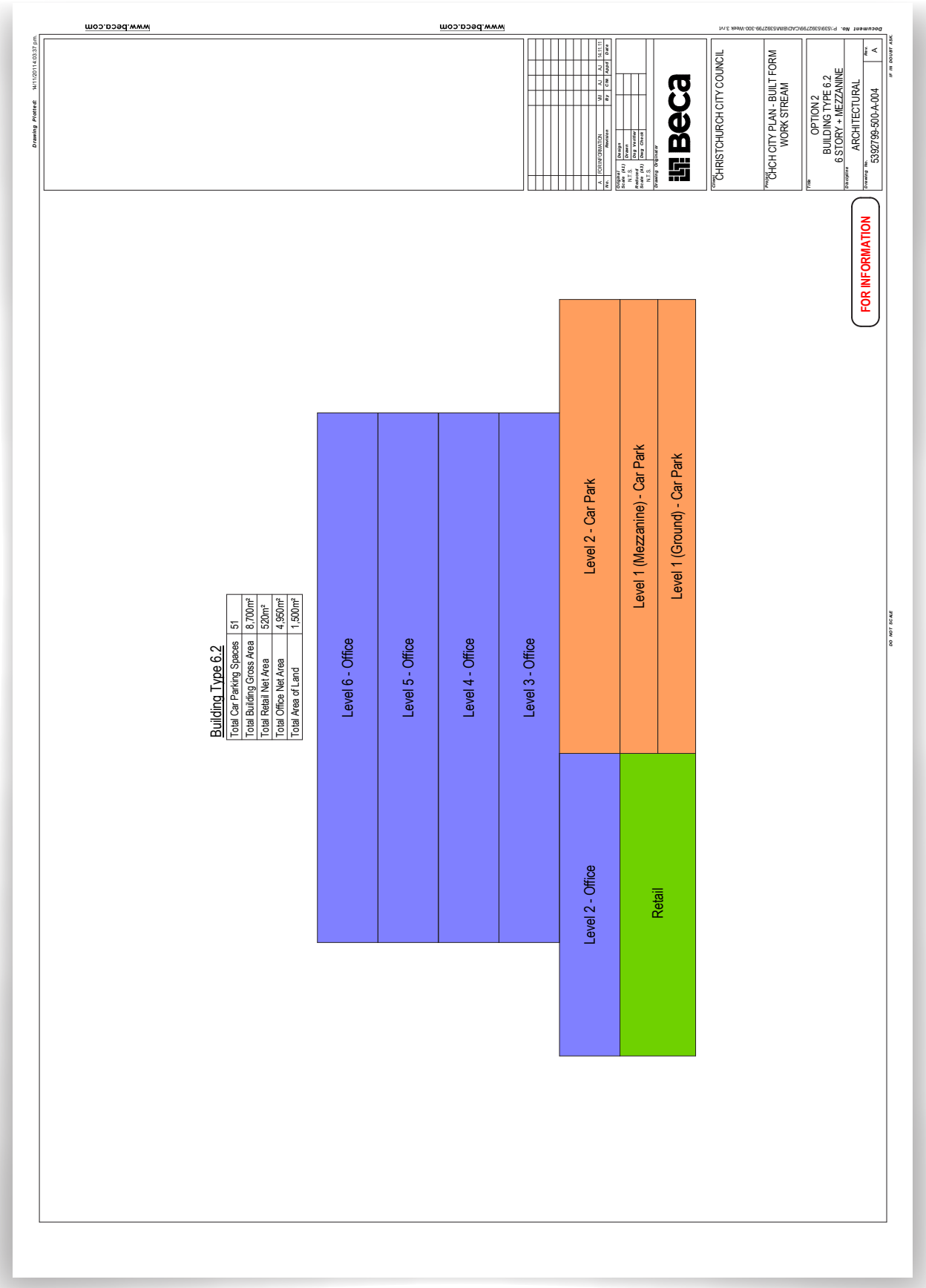
## Option 2: Building Type 6:2 – 6 Story + Mezzanine

**No. of Levels Above Ground: 6**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Car Park<br>Commercial Office | 900m$^2$<br>600m$^2$ | NA<br>510m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 8,700m$^2$ | |
| **Total Office NLA:** | 4,950m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 51 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,200.00 |
| | ▪ Total GFA | 8,700m$^2$ |
| | **Total Construction Costs:** | **$19,140,000.00** |

# Study of New 4 to 8 level buildings in the CBD



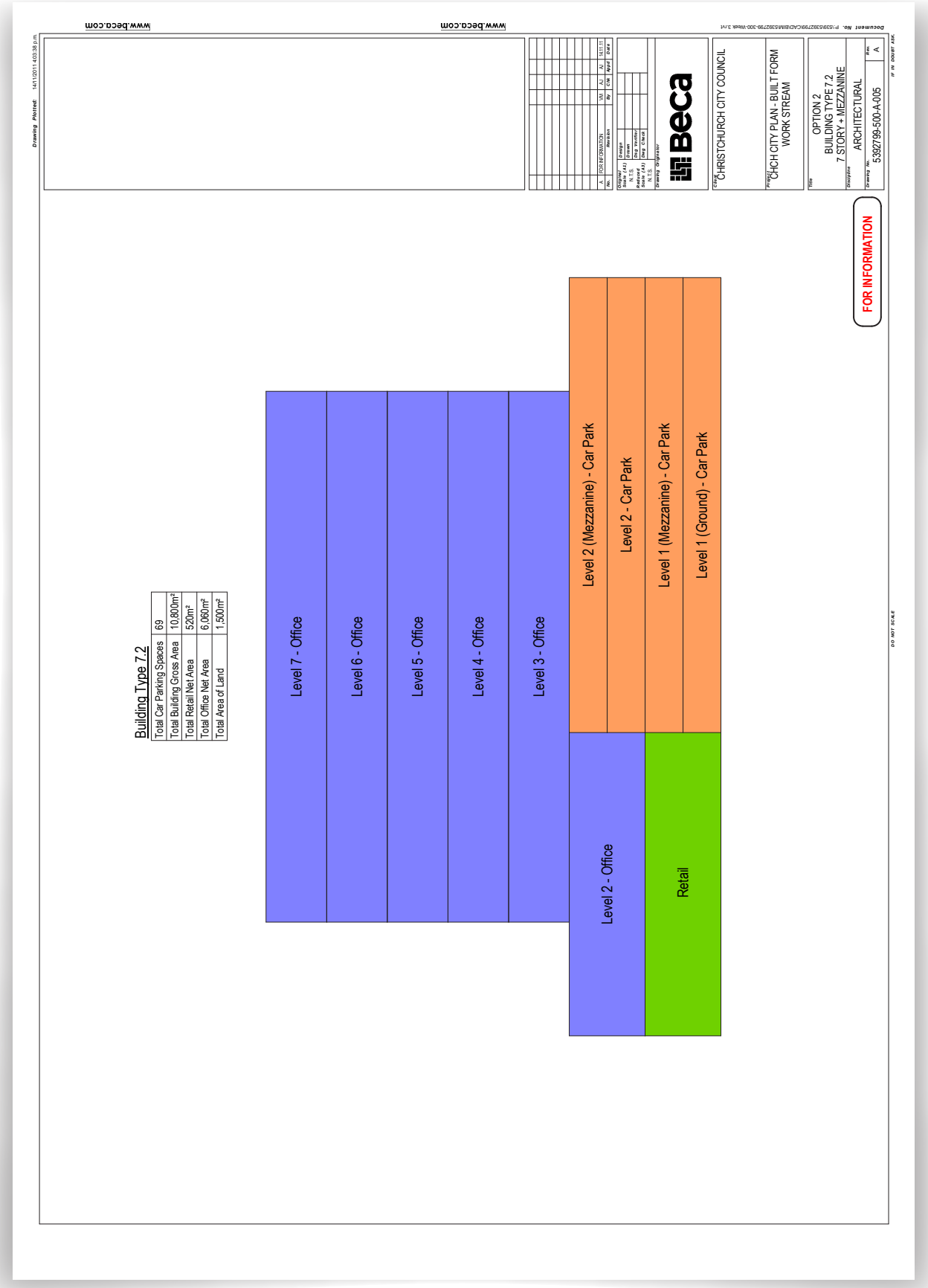
## Option 2: Building Type 7:2 – 7 Story + Mezzanine

**No. of Levels Above Ground: 7**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Car Park<br>Commercial Office | 900m$^2$<br>600m$^2$ | NA<br>510m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 07** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 10,800m$^2$ | |
| **Total Office NLA:** | 6,060m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 69 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,300.00 |
| | ▪ Total GFA | 10,800m$^2$ |
| | **Total Construction Costs:** | **$24,840,000.00** |

# Study of New 4 to 8 level buildings in the CBD



## Option 2: Building Type 8:2 – 8 Story + Mezzanine

**No. of Levels Above Ground: 8**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Car Park<br>Commercial Office | 900m$^2$<br>600m$^2$ | NA<br>510m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 07** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 08** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

# Study of New 4 to 8 level buildings in the CBD

**Option 2: Building Type 8:2 – 8 Story + Mezzanine (Continued)**

| | | |
|---|---|---|
| **Total Building GFA:** | 12,000m$^2$ | |
| **Total Office NLA:** | 7,170m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 69 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,400.00 |
| | ▪ Total GFA | 12,000m$^2$ |
| | **Total Construction Costs:** | **$28,800,000.00** |

Building Type 8.2
Total Car Parking Spaces 69
Total Building Gross Area 12,000m²
Total Retail Net Area 520m²
Total Office Net Area 7,170m²
Total Area of Land 1,500m²
Level 8 - Office
Level 7 - Office
Level 6 - Office
Level 5 - Office
Level 4 - Office
Level 3 - Office
Level 2 (Mezzanine) - Car Park
Level 2 - Car Park
Level 1 (Mezzanine) - Car Park
Level 1 (Ground) - Car Park
Level 2 - Office
Retail
FOR INFORMATION
www.beca.com
www.beca.com
Beca
CHRISTCHURCH CITY COUNCIL
CHCH CITY PLAN - BUILT FORM WORK STREAM
OPTION 2
BUILDING TYPE 8.2
8 STORY + MEZZANINE
ARCHITECTURAL
5392799-500-A-006
DO NOT SCALE

# Study of New 4 to 8 level buildings in the CBD

**Option 2: Building Type 12:2 – 12 Story + Mezzanine**

**No. of Levels Above Ground: 12**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 900m$^2$<br>600m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 02** | Car Park<br>Commercial Office | 900m$^2$<br>600m$^2$ | NA<br>510m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 03** | Car Park<br>Commercial Office | 900m$^2$<br>600m$^2$ | NA<br>510m$^2$ |
| **Mezzanine** | Car Park | 900m$^2$ | NA |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 07** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 08** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 09** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 10** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 11** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 12** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

## Option 2: Building Type 12:2 – 12 Story + Mezzanine (Continued)

| | | |
|---|---|---|
| **Total Building GFA:** | 18,000m$^2$ | |
| **Total Office NLA:** | 11,010m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 105 | |
| **Land Size:** | 1,500m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,500.00 |
| | ▪ Total GFA | 18,000m$^2$ |
| | **Total Construction Costs:** | **$45,000,000.00** |

# Study of New 4 to 8 level buildings in the CBD

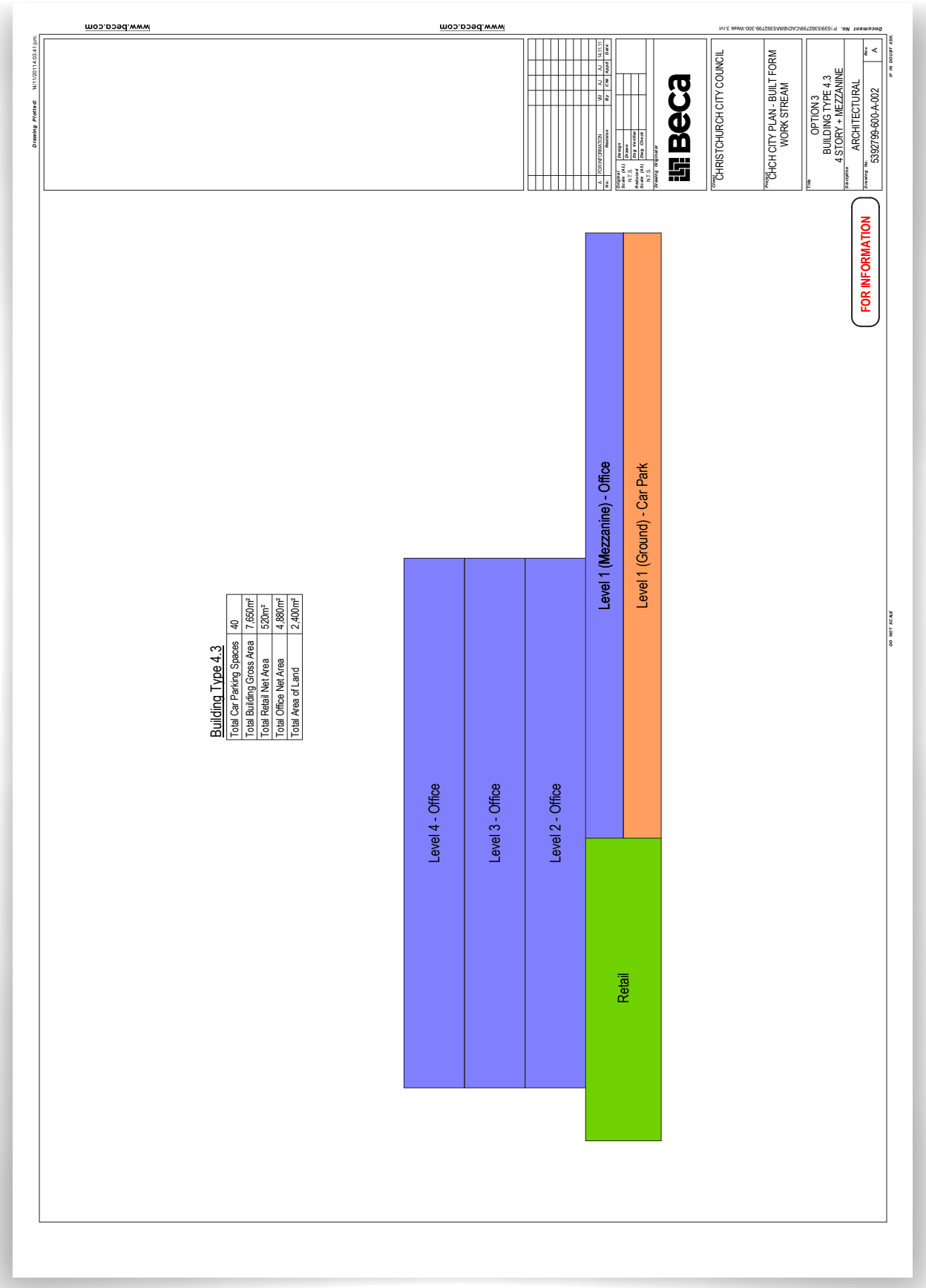
## Option 3: Building Type 4:3 – 4 Story + Mezzanine

**No. of Levels Above Ground: 4**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 1,650m$^2$<br>750m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Commercial Office | 1,650m$^2$ | 1,550m$^2$ |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 7,650m$^2$ | |
| **Total Office NLA:** | 4,880m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 40 | |
| **Land Size:** | 2,400m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,400.00 |
| | ▪ Total GFA | 7,650m$^2$ |
| | **Total Construction Costs:** | **$18,360,000.00** |

# Study of New 4 to 8 level buildings in the CBD



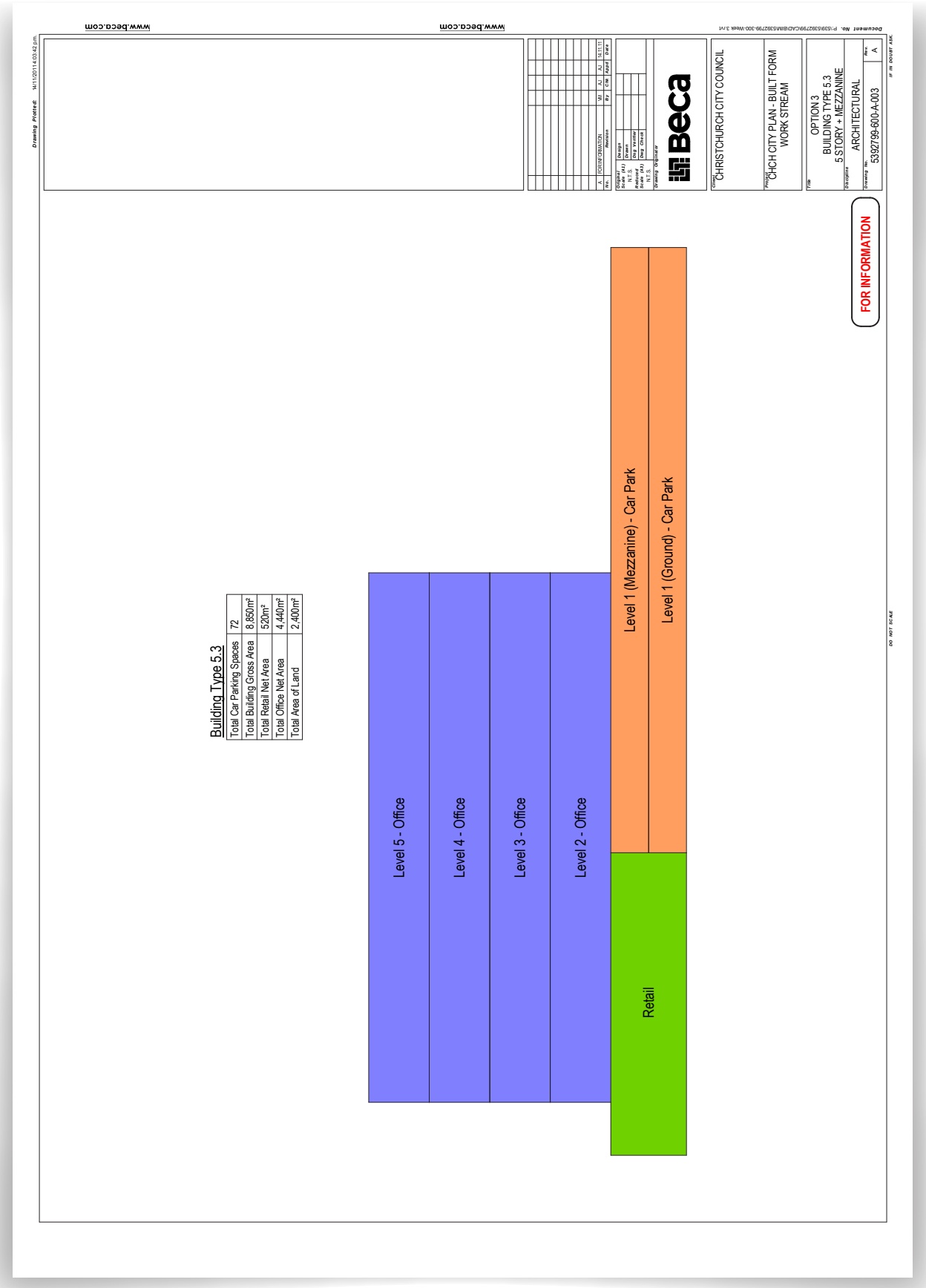
## Option 3: Building Type 5:3 – 5 Story + Mezzanine

**No. of Levels Above Ground: 5**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 1,650m$^2$<br>750m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 1,650m$^2$ | NA |
| **Level 02** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

| | | |
|---|---|---|
| **Total Building GFA:** | 8,850m$^2$ | |
| **Total Office NLA:** | 4,440m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 72 | |
| **Land Size:** | 2,400m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,200.00 |
| | ▪ Total GFA | 8,850m$^2$ |
| | **Total Construction Costs:** | **$19,470,000.00** |

# Study of New 4 to 8 level buildings in the CBD



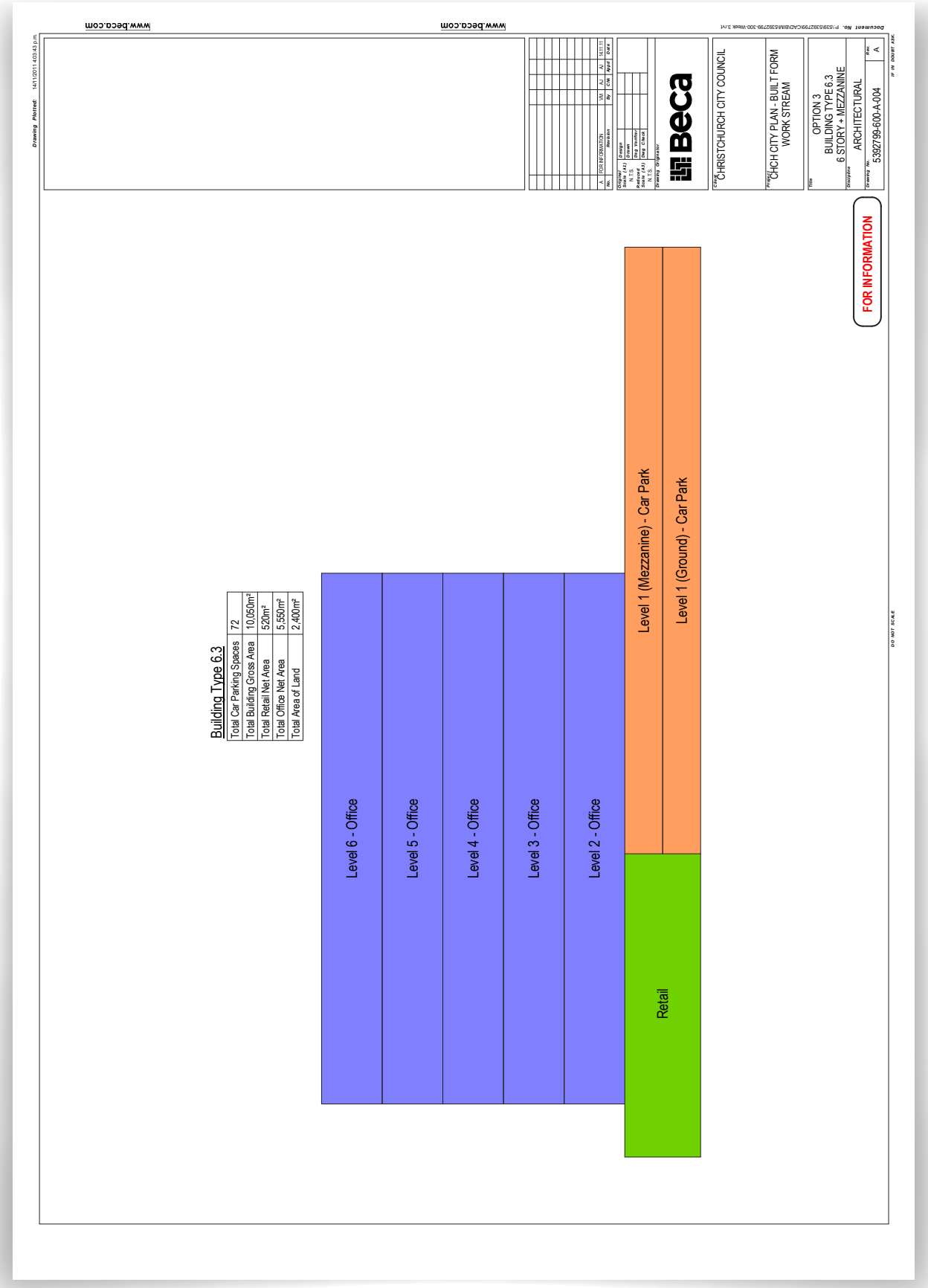
## Option 3: Building Type 6:3 – 6 Story + Mezzanine

**No. of Levels Above Ground: 6**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 1,650m$^2$<br>750m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 1,650m$^2$ | NA |
| **Level 02** | Commercial Office | 1,200m2 | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 04** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 05** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 06** | Commercial Office | 1,200m2 | 1,110m2 |

| | | |
|---|---|---|
| **Total Building GFA:** | 10,050m$^2$ | |
| **Total Office NLA:** | 5,550m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 72 | |
| **Land Size:** | 2,400m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,300.00 |
| | ▪ Total GFA | 10,050m$^2$ |
| | **Total Construction Costs:** | **$23,115,000.00** |

# Study of New 4 to 8 level buildings in the CBD



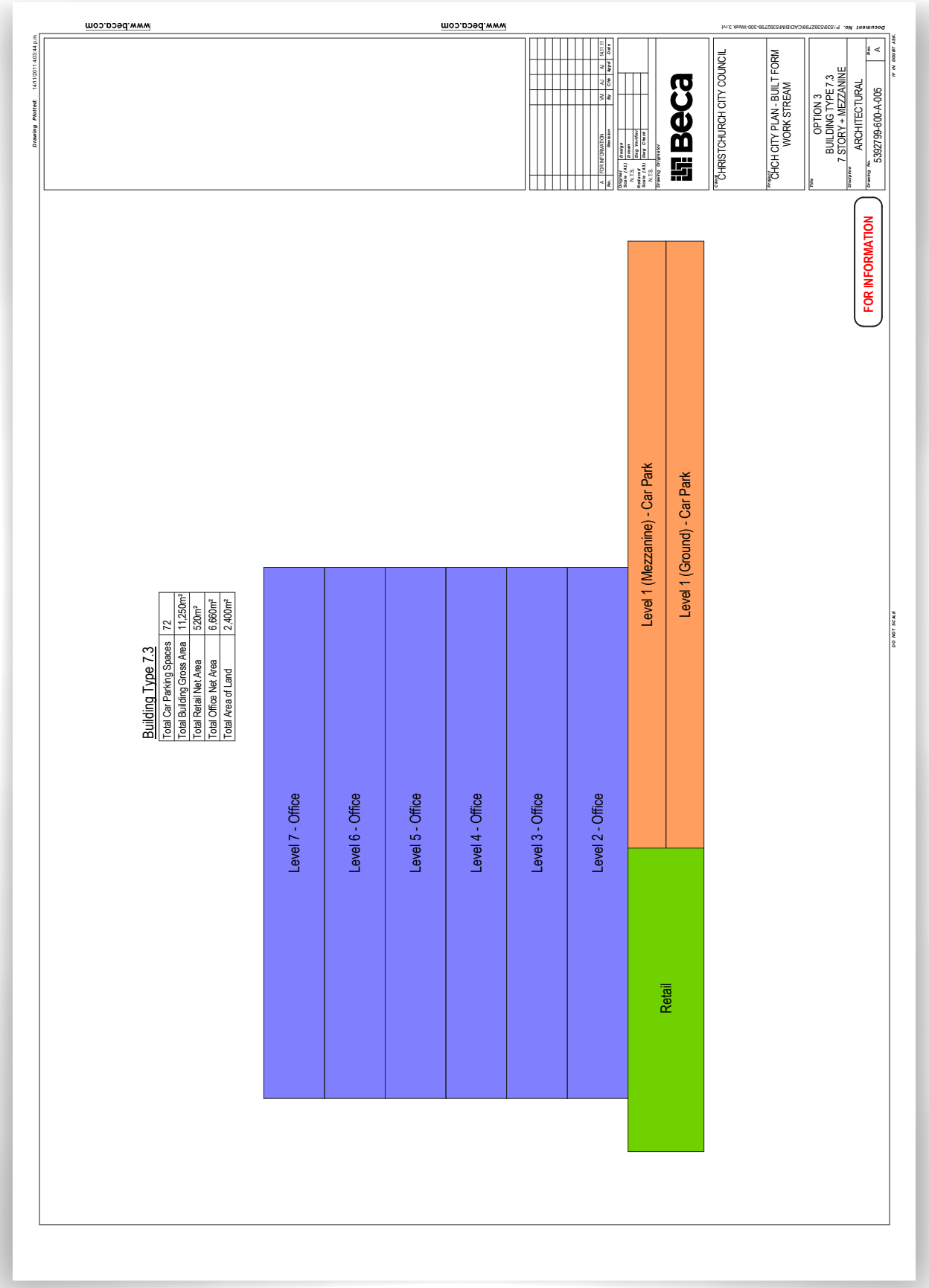
## Option 3: Building Type 7:3 – 7 Story + Mezzanine

**No. of Levels Above Ground: 7**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 1,650m$^2$<br>750m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 1,650m$^2$ | NA |
| **Level 02** | Commercial Office | 1,200m2 | 1,110m$^2$ |
| **Level 03** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 04** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 05** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 06** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 07** | Commercial Office | 1,200m2 | 1,110m2 |

| | | |
|---|---|---|
| **Total Building GFA:** | 11,250m$^2$ | |
| **Total Office NLA:** | 6,660m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 72 | |
| **Land Size:** | 2,400m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,500.00 |
| | ▪ Total GFA | 11,250m$^2$ |
| | **Total Construction Costs:** | **$28,125,000.00** |

# Study of New 4 to 8 level buildings in the CBD



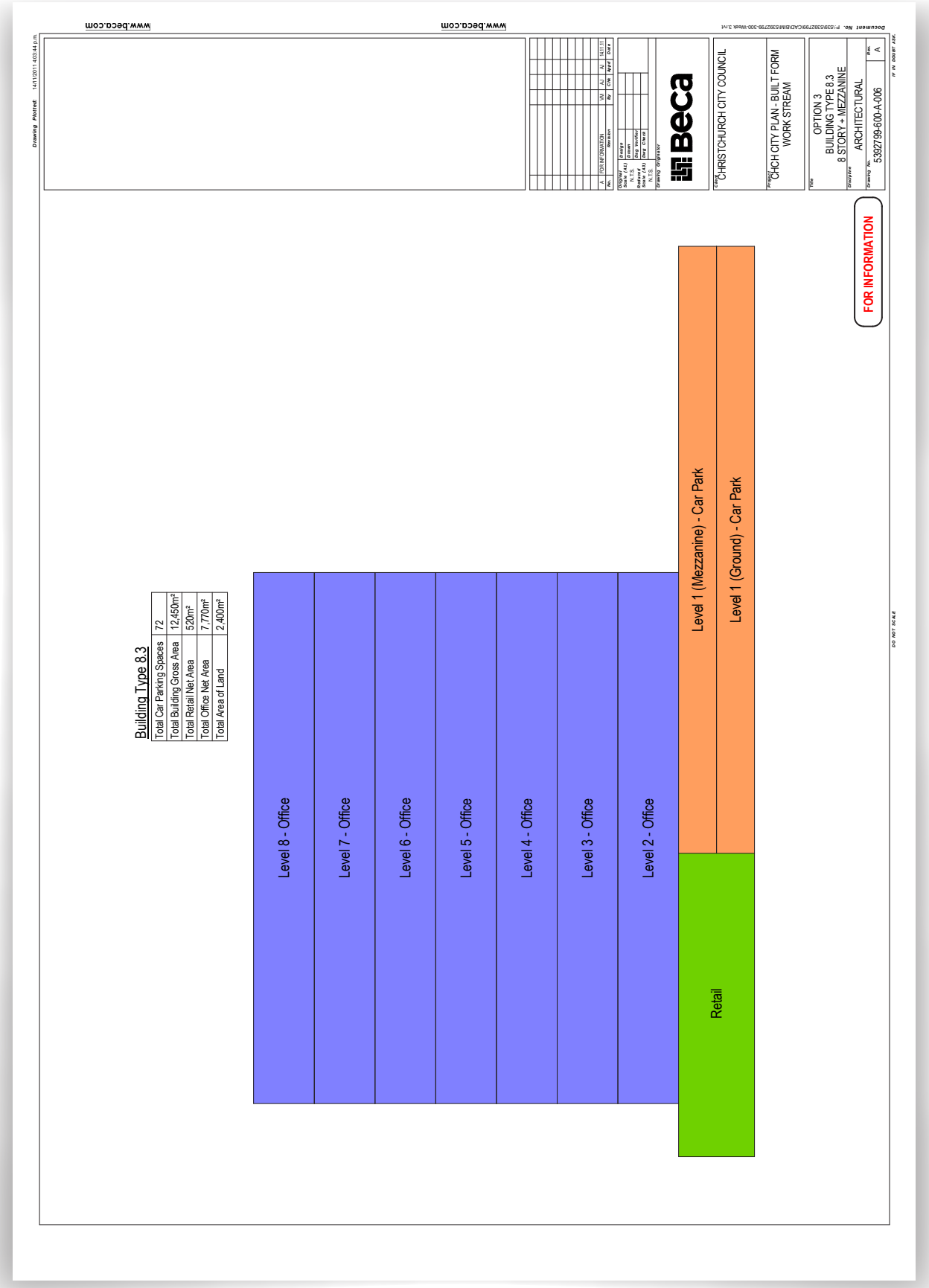
## Option 3: Building Type 8:3 – 8 Story + Mezzanine

**No. of Levels Above Ground: 8**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 1,650m$^2$<br>750m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 1,650m$^2$ | NA |
| **Level 02** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 03** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 04** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 05** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 06** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 07** | Commercial Office | 1,200m2 | 1,110m2 |
| **Level 08** | Commercial Office | 1,200m2 | 1,110m2 |

| | | |
|---|---|---|
| **Total Building GFA:** | 12,450m$^2$ | |
| **Total Office NLA:** | 7,770m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 72 | |
| **Land Size:** | 2,400m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,600.00 |
| | ▪ Total GFA | 12,450m$^2$ |
| | **Total Construction Costs:** | **$32,370,000.00** |

# Study of New 4 to 8 level buildings in the CBD



## Option 3: Building Type 12:3 – 12 Story + Mezzanine

**No. of Levels Above Ground: 12**

| Levels | Description of Space | Gross Floor Area (GFA) | Nett Lettable Area (NLA) |
|---|---|---|---|
| **Ground** | Car Park<br>Retail | 1,650m$^2$<br>750m$^2$ | NA<br>520m$^2$ |
| **Mezzanine** | Car Park | 1,650m$^2$ | NA |
| **Level 02** | Car Park<br>Commercial Office | 1,650m$^2$<br>750m$^2$ | NA<br>660m$^2$ |
| **Mezzanine** | Car Park | 1,650m$^2$ | NA |
| **Level 03** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 04** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 05** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 06** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 07** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 08** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 09** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 10** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 11** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |
| **Level 12** | Commercial Office | 1,200m$^2$ | 1,110m$^2$ |

# Study of New 4 to 8 level buildings in the CBD

**Option 3: Building Type 12:3 – 12 Story + Mezzanine (Continued):**

| | | |
|---|---|---|
| **Total Building GFA:** | 20,100m$^2$ | |
| **Total Office NLA:** | 11,760m$^2$ | |
| **Total Retail NLA:** | 520m$^2$ | |
| **Total No. of Car Park Spaces:** | 144 | |
| **Land Size:** | 2,400m$^2$ | |
| **Construction Costs:** | ▪ Cost / m$^2$ | $2,500.00 |
| | ▪ Total GFA | 20,100m$^2$ |
| | **Total Construction Costs:** | **$50,250,000.00** |

Drawing Plotted: 14/11/2011 4:03:45 p.m.
www.beca.com
www.beca.com
Document No.: P:\5392\5392799\CAD\BIM\5392799-300.Model 3.rvt
Beca
CLIENT: CHRISTCHURCH CITY COUNCIL
PROJECT: CHCH CITY PLAN - BUILT FORM WORK STREAM
Title: OPTION 3 BUILDING TYPE 12.3 12 STORY + MEZZANINE
Discipline: ARCHITECTURAL
Drawing No.: 5392799-600-A-007
Rev: A
Building Type 12.3
Total Car Parking Spaces 144
Total Building Gross Area 20,100m²
Total Retail Net Area 520m²
Total Office Net Area 11,760m²
Total Area of Land 2,400m²
Level 12 - Office
Level 11 - Office
Level 10 - Office
Level 9 - Office
Level 8 - Office
Level 7 - Office
Level 6 - Office
Level 5 - Office
Level 4 - Office
Level 3 - Office
Level 2 (Mezzanine) - Car Park
Level 2 - Car Park
Level 1 (Mezzanine) - Car Park
Level 1 (Ground) - Car Park
Level 2 - Office
Retail
FOR INFORMATION
DO NOT SCALE

# Study of New 4 to 8 level buildings in the CBD

**Summary:**

| No. of Levels | Option 1<br>Building Area = 1,500m$^2$ c/w Basement | Option 2<br>Building Area = 1,500m$^2$ without Basement | Option 3<br>Building Area = 2,400m$^2$ without Basement |
|---|---|---|---|
| 04 Levels | $2,400.00 / m$^2$ | $2,200.00 / m$^2$ | $2,400.00 / m$^2$ |
| | $15,840,000.00 | $13,200,000.00 | $18,360,000.00 |
| 05 Levels | $2,400.00 / m$^2$ | $2,100.00 / m$^2$ | $2,200.00 / m$^2$ |
| | $18,720,000.00 | $15,750,000.00 | $19,470,000.00 |
| 06 Levels | $2,500.00 / m$^2$ | $2,200.00 / m$^2$ | $2,300.00 / m$^2$ |
| | $22,500,000.00 | $19,140,000.00 | $23,115,000.00 |
| 07 Levels | $2,600.00 / m$^2$ | $2,300.00 / m$^2$ | $2,500.00 / m$^2$ |
| | $26,520,000.00 | $24,840,000.00 | $28,125,000.00 |
| 08 Levels | $2,600.00 / m$^2$ | $2,400.00 / m$^2$ | $2,600.00 / m$^2$ |
| | $31,980,000.00 | $28,800,000.00 | $32,370,000.00 |
| 12 Levels | $2,600.00 / m$^2$ | $2,500.00 / m$^2$ | $2,500.00 / m$^2$ |
| | $47,580,000.00 | $45,000,000.00 | $50,250,000.00 |

Appendix B

# Construction Cost Summary

# Study of New 4 to 8 level buildings in the CBD

**Appendix B**

**Model Building Option 1**

**Multi-storey office building cost comparator**

Project Estimate - New Build Concept (Rough Order of Costs comparator)

**Project Details**
Name of Project — **Costs comparator - influence of levels upon build costs**

Type of Project — **Rebuild Costs - Rough Order of Cost Estimate**
Office floor plate - 1200m2
Basement - Car Parking - 1500m2
Ground Floor - 1500m2

**General Summary** — **Capital Costs excluding Fees**

| General Summary | | Floor plate Area (m2) | 4 Storey | | | 5 Storey | | | 6 Storey | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area | Rate/m2 | Total | Area | Rate/m2 | Total | Area | Rate/m2 | Total |
| Foundations | Foundations - piled foundation system (15m) | 1500 | 1500 | $1,400 | $2,100,000 | 1500 | $1,400 | $2,100,000 | 1500 | $1,400 | $2,100,000 |
| Basement Car Park | Basement car park | 1500 | 1500 | $1,650 | $2,475,000 | 1500 | $1,650 | $2,475,000 | 1500 | $1,650 | $2,475,000 |
| Ground Floor - Retail/ Carpark/ Offices | Retail open plan base build facility | 1500 | 1500 | $1,800 | $2,700,000 | 1500 | $1,800 | $2,700,000 | 1500 | $1,900 | $2,850,000 |
| Offices | Offices - open plan base build | 1200 | 3600 | $2,100 | $7,560,000 | 4800 | $2,150 | $10,320,000 | 6000 | $2,300 | $13,800,000 |
| | | varies | | | | | | | | | |
| Roof Structure and Finishes | Roof slab/structure and finishes | 1500 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 |
| Plant Room Roof | Extra over value | varies | 375 | $500 | $187,500 | 375 | $500 | $187,500 | 525 | $500 | $262,500 |
| **Total** | | **m2** | **6600** | | **$15,772,500** | **7800** | | **$18,532,500** | **9000** | | **$22,237,500** |
| | | | **useable area** | | **$2,400** | | | **$2,400** | | | **$2,500** |

| General Summary | | Floor plate Area (m2) | 7 Storey | | | 8 Storey + Mezzanine | | | 12 Storey + Mezzanine | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area | Rate/m2 | Total | Area | Rate/m2 | Total | Area | Rate/m2 | Total |
| Foundations | Foundations - piled foundation system (15m) | 1500 | 1500 | $1,950 | $2,925,000 | 1500 | $1,950 | $2,925,000 | 1500 | $2,500 | $3,750,000 |
| Basement Car Park | Basement car park | 1500 | 1500 | $1,750 | $2,625,000 | 1500 | $1,750 | $2,625,000 | 1500 | $1,750 | $2,625,000 |
| Ground Floor - Retail/ Carpark/ Offices | Retail open plan base build facility | 1500 | 1500 | $1,950 | $2,925,000 | 1500 | $2,000 | $3,000,000 | 1500 | $2,000 | $3,000,000 |
| Mezzanine Level - Carpark | Extra value for carpark at mezzanine level | | | | | 900 | $700 | $630,000 | 2700 | $1,130 | $3,051,000 |
| Offices | Offices - open plan base build | 1200 | 7200 | $2,400 | $17,280,000 | 8400 | $2,550 | $21,420,000 | 12600 | $2,700 | $34,020,000 |
| | | varies | | | | | | | | | |
| Roof Structure and Finishes | Roof slab/structure and finishes | 1500 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 |
| Plant Room Roof | Extra over value | varies | 525 | $500 | $262,500 | 675 | $500 | $337,500 | 675 | $500 | $337,500 |
| **Total** | | **m2** | **10200** | | **$26,767,500** | **12300** | | **$31,687,500** | **18300** | | **$47,533,500** |
| | | | | | **$2,600** | | | **$2,600** | | | **$2,600** |

Costs include for : -

Preliminary & General costs and margin
Estimating Contingency sum at 5%

Costs exclude : -

Funding, scope, design and construction contingency specific to each site
Fit out - assumed "base build" level of services only as described above
Professional fees for design, management and project management
Costs for consents, development levies and peer reviews
External areas and landscaping – cost model relates only to building area
Demolition costs and removal of materials
Contaminated ground treatments below the car park level. We have assumed all excavated material to the basement car park level is uncontaminated
Land remediation and stabilisation. Ground remediation strategies vary significantly depending upon the soils below the buildings and their susceptibility to liquefaction and or lateral movements. For the purposes of the cost model good ground has been assumed.
Specific Geotech issues that may affect specific sites – note piling has been used in the costs but assumes good bearing at a depth of 15m.
Base isolation for foundations
Cost Escalation - The unknown nature of the micro-economic climate within Christchurch, combined with the uncertainty surrounding the availability of resources, represents a risk to the cost of construction in the Christchurch market going forward. There are varying and conflicting views projecting escalation over the next 12 – 24 months at between 5% up to 15%. For the purposes of the cost model, the cost estimates are current market costs based on 3rd Quarter 2011, and future escalation assessments have been excluded.
Goods and Services Tax – (GST)
Cost of capital or opportunity cost of capital invested.
Legal costs
Land purchase costs

## Appendix B

## Model Building Option 2

## Multi-storey office building cost comparator

Project Estimate - New Build Concept (Rough Order of Costs comparator)

**Project Details**
Name of Project — **Costs comparator - influence of levels upon build costs**

Type of Project — **Rebuild Costs - Rough Order of Cost Estimate**
Office floor plate - 1200m2
Car Parking - 1800m2: Ground & Mezzanine
Retail - 600m2

**General Summary** — **Capital Costs excluding Fees**

| General Summary | | Floor plate Area (m2) | 4 Storey + Mezzanine | | | 5 Storey + Mezzanine | | | 6 Storey + Mezzanine | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area | Rate/m2 | Total | Area | Rate/m2 | Total | Area | Rate/m2 | Total |
| Foundations | Foundations - piled foundation system (15m) | 1500 | 1500 | $1,400 | $2,100,000 | 1500 | $1,400 | $2,100,000 | 1500 | $1,400 | $2,100,000 |
| Ground Floor Car Park | Ground floor car park | 900 | 900 | $850 | $765,000 | 900 | $850 | $765,000 | 900 | $850 | $765,000 |
| Ground Floor - Retail/ Carpark/ Offices | Retail open plan base build facility | 600 | 600 | $1,800 | $1,080,000 | 600 | $1,800 | $1,080,000 | 600 | $1,900 | $1,140,000 |
| Mezzanine Level - Carpark | Carpark at mezzanine level | 900 | 900 | $970 | $873,000 | 1800 | $970 | $1,746,000 | 1800 | $970 | $1,746,000 |
| Offices | Offices - open plan base build | 1200 varies | 3600 | $2,100 | $7,560,000 | 4200 | $2,150 | $9,030,000 | 5400 | $2,300 | $12,420,000 |
| Roof Structure and Finishes | Roof slab/structure and finishes | 1500 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 |
| Plant Room Roof | Extra over value | varies | 375 | $500 | $187,500 | 375 | $500 | $187,500 | 525 | $500 | $262,500 |
| **Total** | | **m2** | **6000** | | **$13,315,500** | **7500** | | **$15,658,500** | **8700** | | **$19,183,500** |
| | | | **useable area** | | **$2,200** | | | **$2,100** | | | **$2,200** |

| General Summary | | Floor plate Area (m2) | 7 Storey + Mezzanine | | | 8 Storey + Mezzanine | | | 12 Storey + Mezzanine | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area | Rate/m2 | Total | Area | Rate/m2 | Total | Area | Rate/m2 | Total |
| Foundations | Foundations - piled foundation system (15m) | 1500 | 1500 | $1,950 | $2,925,000 | 1500 | $1,950 | $2,925,000 | 1500 | $2,500 | $3,750,000 |
| Ground Floor Car Park | Ground floor car park | 900 | 900 | $950 | $855,000 | 900 | $950 | $855,000 | 900 | $1,000 | $900,000 |
| Ground Floor - Retail/ Carpark/ Offices | Retail open plan base build facility | 600 | 600 | $1,950 | $1,170,000 | 600 | $2,000 | $1,200,000 | 600 | $2,400 | $1,440,000 |
| Mezzanine Level - Carpark | Carpark at upper levels | 900 | 2700 | $1,070 | $2,889,000 | 2700 | $1,070 | $2,889,000 | 4500 | $1,130 | $5,085,000 |
| Offices | Offices - open plan base build | 1200 | 6600 | $2,400 | $15,840,000 | 7800 | $2,550 | $19,890,000 | 12000 | $2,700 | $32,400,000 |
| Roof Structure and Finishes | Roof slab/structure and finishes | 1500 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 | 1500 | $500 | $750,000 |
| Plant Room Roof | Extra over value | varies | 525 | $500 | $262,500 | 675 | $500 | $337,500 | 750 | $500 | $375,000 |
| **Total** | | **m2** | **10800** | | **$24,691,500** | **12000** | | **$28,846,500** | **18000** | | **$44,700,000** |
| | | | | | **$2,300** | | | **$2,400** | | | **$2,500** |

Costs include for : -

Preliminary & General costs and margin
Estimating Contingency sum at 5%

Costs exclude : -

Funding, scope, design and construction contingency specific to each site
Fit out - assumed "base build" level of services only as described above
Professional fees for design, management and project management
Costs for consents, development levies and peer reviews
External areas and landscaping – cost model relates only to building area
Demolition costs and removal of materials
Contaminated ground treatments.
Land remediation and stabilisation. Ground remediation strategies vary significantly depending upon the soils below the buildings and their susceptibility to liquefaction and or lateral movements. For the purposes of the cost model good ground has been assumed.
Specific Geotech issues that may affect specific sites – note piling has been used in the costs but assumes good bearing at a depth of 15m.
Base isolation for foundations
Cost Escalation - The unknown nature of the micro-economic climate within Christchurch, combined with the uncertainty surrounding the availability of resources, represents a risk to the cost of construction in the Christchurch market going forward. There are varying and conflicting views projecting escalation over the next 12 – 24 months at between 5% up to 15%. For the purposes of the cost model, the cost estimates are current market costs based on 3rd Quarter 2011, and future escalation assessments have been excluded.
Goods and Services Tax – (GST)
Cost of capital or opportunity cost of capital invested.
Legal costs
Land purchase costs

# Study of New 4 to 8 level buildings in the CBD

**Appendix B**

**Model Building Option 3**

**Multi-storey office building cost comparator**

Project Estimate - New Build Concept (Rough Order of Costs comparator)

**Project Details**

Name of Project: **Costs comparator - influence of levels upon build costs**

Type of Project: **Rebuild Costs - Rough Order of Cost Estimate**
Office floor plate - 1200m2
Car Parking - 3300m2: Ground & Mezzanine
Retail - 750m2

**General Summary** **Capital Costs excluding Fees**

| General Summary | | Floor plate Area (m2) | 4 Storey + Mezzanine | | | 5 Storey + Mezzanine | | | 6 Storey + Mezzanine | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area | Rate/m2 | Total | Area | Rate/m2 | Total | Area | Rate/m2 | Total |
| Foundations | Foundations - piled foundation system (15m) | 1500 | 2400 | $1,400 | $3,360,000 | 2400 | $1,400 | $3,360,000 | 2400 | $1,400 | $3,360,000 |
| Ground Floor Car Park | Ground floor car park | 900 | 1650 | $850 | $1,402,500 | 1650 | $850 | $1,402,500 | 1650 | $850 | $1,402,500 |
| Ground Floor - Retail/ Carpark/ Offices | Retail open plan base build facility | 600 | 750 | $1,800 | $1,350,000 | 750 | $1,800 | $1,350,000 | 750 | $1,900 | $1,425,000 |
| Mezzanine Level - Carpark | Carpark at mezzanine level | 900 | 0 | $970 | $0 | 1650 | $970 | $1,600,500 | 1650 | $970 | $1,600,500 |
| Offices | Offices - open plan base build | 1200 | 5250 | $2,100 | $11,025,000 | 4800 | $2,150 | $10,320,000 | 6000 | $2,300 | $13,800,000 |
| Roof Structure and Finishes | Roof slab/structure and finishes | varies 1500 | 2400 | $500 | $1,200,000 | 2400 | $500 | $1,200,000 | 2400 | $500 | $1,200,000 |
| Plant Room Roof | Extra over value | varies | 375 | $500 | $187,500 | 375 | $500 | $187,500 | 525 | $500 | $262,500 |
| **Total** | | **m2** | **7650** | | **$18,525,000** | **8850** | | **$19,420,500** | **10050** | | **$23,050,500** |
| | | | **useable area** | | **$2,400** | | | **$2,200** | | | **$2,300** |

| General Summary | | Floor plate Area (m2) | 7 Storey + Mezzanine | | | 8 Storey + Mezzanine | | | 12 Storey + Mezzanine | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Area | Rate/m2 | Total | Area | Rate/m2 | Total | Area | Rate/m2 | Total |
| Foundations | Foundations - piled foundation system (15m) | 1500 | 2400 | $1,950 | $4,680,000 | 2400 | $1,950 | $4,680,000 | 2400 | $2,500 | $6,000,000 |
| Ground Floor Car Park | Ground floor car park | 900 | 1650 | $950 | $1,567,500 | 1650 | $950 | $1,567,500 | 1650 | $1,000 | $1,650,000 |
| Ground Floor - Retail/ Carpark/ Offices | Retail open plan base build facility | 600 | 750 | $1,950 | $1,462,500 | 750 | $2,000 | $1,500,000 | 750 | $2,400 | $1,800,000 |
| Mezzanine Level - Carpark | Carpark at upper levels | 900 | 1650 | $1,070 | $1,765,500 | 1650 | $1,070 | $1,765,500 | 4950 | $1,130 | $5,593,500 |
| Offices | Offices - open plan base build | 1200 | 7200 | $2,400 | $17,280,000 | 8400 | $2,550 | $21,420,000 | 12750 | $2,700 | $34,425,000 |
| Roof Structure and Finishes | Roof slab/structure and finishes | 1500 | 2400 | $500 | $1,200,000 | 2400 | $500 | $1,200,000 | 2400 | $500 | $1,200,000 |
| Plant Room Roof | Extra over value | varies | 525 | $500 | $262,500 | 675 | $500 | $337,500 | 750 | $500 | $375,000 |
| **Total** | | **m2** | **11250** | | **$28,218,000** | **12450** | | **$32,470,500** | **20100** | | **$51,043,500** |
| | | | | | **$2,500** | | | **$2,600** | | | **$2,500** |

Costs include for : -

Preliminary & General costs and margin
Estimating Contingency sum at 5%

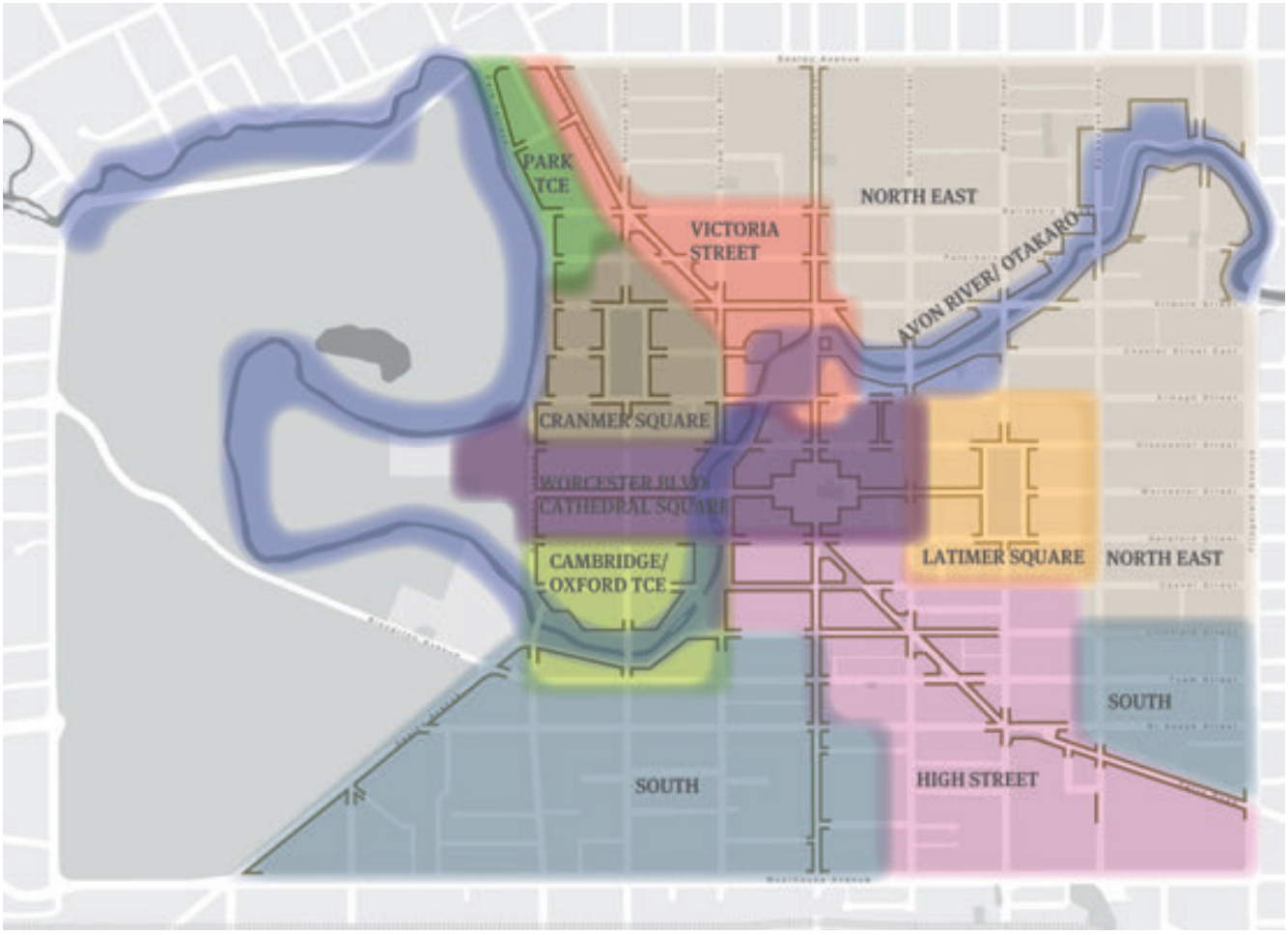
Costs exclude : -

Funding, scope, design and construction contingency specific to each site
Fit out - assumed "base build" level of services only as described above
Professional fees for design, management and project management
Costs for consents, development levies and peer reviews
External areas and landscaping – cost model relates only to building area
Demolition costs and removal of materials
Contaminated ground treatments.
Land remediation and stabilisation. Ground remediation strategies vary significantly depending upon the soils below the buildings and their susceptibility to liquefaction and or lateral movements. For the purposes of the cost model good ground has been assumed.
Specific Geotech issues that may affect specific sites – note piling has been used in the costs but assumes good bearing at a depth of 15m.
Base isolation for foundations
Cost Escalation - The unknown nature of the micro-economic climate within Christchurch, combined with the uncertainty surrounding the availability of resources, represents a risk to the cost of construction in the Christchurch market going forward. There are varying and conflicting views projecting escalation over the next 12 – 24 months at between 5% up to 15%. For the purposes of the cost model, the cost estimates are current market costs based on 3rd Quarter 2011, and future escalation assessments have been excluded.
Goods and Services Tax – (GST)
Cost of capital or opportunity cost of capital invested.
Legal costs
Land purchase costs

# Character descriptions of areas

Based on existing studies of the Central City, along with consultation with a range of disciplines, the descriptions were put together to provide an information layer to the development of the Central City Plan. The descriptions identify the natural and cultural elements that contribute to the sense of place. Many of these features can continue to contribute character to distinctive areas within the Central City.

The Character Descriptions of Areas link to Volume 1 of the Central City Plan and can inform the development of the Central City.




*Map showing areas described in relation to character*

## *Character Description of Area: Cambridge/Oxford Terraces*

- Historical 19th century European-styled recreational river environment – bathing, boating (Antigua Boatsheds) and promenading.
- Early Anglican religious and teaching activity, centred around the Anglican Pro-Cathedral, St Michael's and All Angels, which continues to this day.
- Grouping of 1960s-70s modernist architecture in characteristic Canterbury idiom on north and south sides of river. Beginnings of consciously orienting buildings to river in Christchurch.
- River bank lined with mature deciduous canopy trees.
- Residential development 1910-39 . Early apartment blocks and 1960s multi-storeyed apartments.
- Commemorative values, relating to wars involving New Zealanders – Bridge of Remembrance. Friendship corner – war and peace.
- Bridge of Remembrance located at key point – river crossing, opposite former King Edward Barracks site and terminating main commercial street, with long vistas from east and west.

- The Bridge of Remembrance is a marker of a route that now exists only in memory. Soldiers leaving the King Edward Barracks on Cashel Street would pass through the arch of the Bridge of Remembrance enroute to the Railway Station on Moorhouse Avenue, for their departure to the Port of Lyttelton and onwards to the battlefields on the other side of the globe.
- On axis with the Bridge of Remembrance, along Cashel Street, stands the memorial to James Edward Fitzgerald, Canterbury's first superintendent, and a link to Fitzgerald Avenue to the east.
- The Ōtakaro/Avon River's passage through this area ties it to the landscape beyond.
- It includes part of the Ōtakaro/Avon River which was an important mahinga kai (food gathering) area for tangata whenua.
- The area on the corner of Cambridge Terrace and Hereford Street is a registered wāhi tapu as the urupa associated with the Pūari Pā, reported as being a Waitaha peoples settlement (the first Māori to settle in this area), and includes a burial site. Rata Island and site of mahinga kai post settlement.
- Located within a nominal larger area of tangata whenua significance with extensive Pūari Pā.
- Ōtakaro/Avon River functions as ecological corridor.
- Rhododendron Island sits between Cashel and Montreal streets bridges .
- Views to the river from the roadways of Cambridge and Oxford terraces. View down Cashel Street to the river and Botanic Gardens.
- South side of Oxford Terrace, higher density, high building to lot ratio and multi-storeyed buildings. Some set backs retained with some plantings.
- North side of river – combination of medium-rise apartments and low-to-medium rise commercial buildings. Some setbacks and plantings retained on street frontage, lower building to lot ratio than south side of river.
- Domestic scale and plot ratio in blocks to north of river. Garden settings retained. Some late 19th-early 20th century, two-storeyed gabled timber buildings remain.
- Police station, multi-storeyed building on north-east corner with remainder of site sealed for car parking-garaging. Former King Edward Barracks site cleared and sealed for use as car park. Ngāi Tahu redevelopment is not determined at present.
- Weir in Ōtakaro/Avon River, Antigua Street end – form has changed over time, but weir has existed here for some time to support pleasure boating use.
- The Canterbury Plains have been formed by outwash gravels deposited by rivers rising in the Southern Alps. The majority of Christchurch City is located on the coalescing shingle fans of the Waimakariri River and its subsequent floods.
- Depression in the St Michael and All Angels Church grounds – remains of an old watercourse.

***Character Description of Area: Cranmer Square***

- Historical public open space set aside in 1850 Jollie plan for city.
- Historical use as sportsground, open air meetings, political rallies, schools/educational insititutions used space for sports and recreation.
- Cranmer Square open space flanked on all sides by mature deciduous canopy trees.
- Flat open landform accentuates formal layout of square.
- Historical and contemporary educational precinct on south, west and north of square. Former Normal School, former Christchurch Girls' High School, former Teachers College, former St Margaret's College, former private schools, Cathedral Grammar, Christ's College residences and land holdings.
- Continuation of Collegiate Gothic revival style and use of stone and courtyard arrangement with Cranmer Courts and Peterborough Centre.
- Small groups of residences representing types, style and form of late 19th and early 20th century housing.
- Adaptive reuse of Gothic educational buildings as residential apartments in late 20th century – Cranmer Courts and Peterborough Centre.
- Residential buildings around Cranmer Square are generally large two-storey or multi-storey townhouses or apartments. Variety in age, scale and style. Connection to street and park in earlier buildings enhanced by porches or verandas, large windows facing the Square and relatively small setbacks. More recent buildings emulate these characteristics.

# Character descriptions of areas

- Built form around Square is generally two or three storeys. Scale of built form relates to that of mature trees in the area. Setbacks with planting retained within lots.
- The Ōtakaro/Avon River's passage through this area ties it to the landscape beyond.
- It includes part of the Ōtakaro/Avon River which was an important mahinga kai (food gathering) area for tangata whenua.
- Located within nominal larger area of tangata whenua significance with extensive Puari Pa, and connections between the river and Little Hagley Park corner.
- Ōtakaro/Avon River an ecological corridor through the area.
- Character of Ōtakaro/Avon River in this area defined by banks lined with deciduous trees including weeping willows. Mown grass river bank. Native grasses along river edge.
- The Canterbury Plains have been formed by outwash gravels deposited by rivers rising in the Southern Alps. The majority of Christchurch City is located on the coalescing shingle fans of the Waimakariri River and its subsequent floods.
- Visual linkage from Cranmer Square to river, and Hagley Park, down Chester Street West.
- Patterns of movement through Cranmer Square – north-south, east-west with diagonal cross sections through each half of the square.

***Character Description of Area: High Street***

- Key historical commercial area linked to historical transport networks.
- Key educational precinct – Seddon Memorial Technical College established on education reserve 1907, now CPIT.
- Catholic Precinct – educational, religious, convent, from c1860s. Land set aside by Provincial Government.
- City Mall - historical parade route from King Edward Barracks over Bridge of Remembrance enroute to railway station-contemporary promenade. Commemorative values. City Mall plaques denoting international allegiances.
- Evidence of historical transport infrastructure – railway station on Moorhouse Avenue from 1877, bus depot, tram route-production, Ferry Road main transport arterial to Ferrymead/Lyttelton.
- High Street/Ferry Road – diagonal link through grid to ferry (historically).
- High Street triangles – evidence of early reserve land-public space. Relates to Jollie's insertion of diagonals through grid. Shows evolution of public space utility (wells) to ornamental-recreation (fountains, raised volcanic rock gardens, exotic palms).
- Sightline-view shaft along diagonal of High Street to Port Hills. View along Colombo Street to Port Hills.
- Consistency in character-style of streetscape – High, Colombo and Cashel streets – reflects late 19$^{th}$-early 20th century retail development. Buildings built to street frontage, occupying width of lot, terraced developments. Characterised by two to four-storeyed buildings.
- Lichfield Street – historic warehouse district. Distinct Victorian-Edwardian Italianate architectural style and form. Variety in scale, two, three and four storeys, occupying entire lot to street frontage.
- Late 19$^{th}$-first half of 20$^{th}$ century High Street constituted main economic artery, with ribbon development taking place along the route's length from the earliest years. Consistency of age - late 19$^{th}$ Victorian-early 20$^{th}$ century Edwardian, two to four storeys, variety of form, scale, skylines and architectural style.
- Prominent corner sites due to diagonal cut of High Street. Late 19$^{th}$-early 20$^{th}$ century Victorian-Edwardian buildings that address-punctuate triangular footprint of corner lots.
- Cashel Street – original built character reflects Victorian-Edwardian Classical-Gothic commercial architectural styles and scale, two to three storeys. Front facades align with Cashel Street setback.
- Hereford Street – earliest surviving timber commercial building. Late 19$^{th}$-early 20$^{th}$ century Commercial Classical, five to six storeys.
- Major central city department stores were also clustered around this area – DIC, Beaths, Ballantynes, Stranges, A J Whites and Millers.
- 21st Century High Street underwent a renaissance in retail activity both on its principal street frontage and in the increasing development within the network of historical alleyways and service lanes (e.g. Poplar) that link High Street with neighbouring streets.

- The topography of the city and surrounds was created from low lying landscape mosaic of wetlands and streams formed by the coalesced fans of glacial outwash gravels and alluvial deposits of the Waimakariri River and its subsequent floods.
- Intermittent planted medians along Moorhouse Avenue.

***Character Description of Area: Latimer Square***

- Embodiment of Canterbury Association vision for city – first stone Anglican church, Christchurch Club and Occidental Hotel – reflects mid-Victorian social values.
- Historical public open space set aside in 1850 Jollie plan for city.
- Sportsground, parades, tree planting, WWII bunkers, entertainment, passive recreation and earthquake emergency triage use.
- Colonial buildings mainly two-storeyed and built in timber and stone. Gothic Revival and Italianate in style.
- Important tram route east to Linwood cemetery, residential areas, New Brighton. Tram ran east to west through middle of square.
- Early residential activity, large private houses, later boarding houses.
- Site of early electricity reticulation-supply for city east of Manchester Street between Gloucester and Armagh streets.
- Latimer Square open space flanked on all sides by mature deciduous canopy trees.
- Flat open landform accentuates formal layout Latimer Square.
- Sightline from Latimer Square to rear of Cathedral connects historic open public spaces.
- Variety of building heights, ages and types surround the square. Most properties on east side setback from footpath with some garden frontage. Residential character reflects late 19th century single family dwellings through to high density multi-storeyed apartment block and residential town house developments.
- Commercial development on west side of square with multi-storeyed buildings set to street front. Garden setting to Christchurch Club. Empty sections sealed for car parking.
- The topography of the city and surrounds was created from low-lying landscape mosaic of wetlands and streams formed by the coalesced fans of glacial outwash gravels and alluvial deposits of the Waimakariri River and its subsequent floods.

***Character Description of Area: North east***

- Historical North and East Town Reserves with predominantly residential character that evidences domestic building types, styles and eras.
- East Town Reserve – representative examples of residential building types 1870s onwards. Timber single and double-storey gabled villas, semi-detached turn-of-the-century housing. Characteristic front gardens oriented to and open to the street with low picket fences, and set back dwellings.
- North Town Reserve – representative examples of residential building types 1860s onwards. Characteristic front gardens oriented to and open to the street with low picket fences, and set back dwellings. Workers cottages, early 20th century single storey bungalows and mid 20th century high density development.
- Identifiable clusters of residential groupings with special character – SAM 26: Peacock-Beveridge-Conference, SAM 25: Gracefield Avenue, SAM 27: Otley/Ely, SAM 30: Chester Street East, Avon Loop including SAM 24
- Plastered brick construction used for 1930s-40s low-rise apartment complexes. Tilt slab common for more recent town house developments.
- Cultural heritage site and registered wāhi tapu on site of St Luke's Church. Traditional and spiritual significance as burial site of Ngāi Tahu Chief Potiki Tautahi who's name has become identified with the city Ōtautahi/Christchurch.
- Located within nominal larger area of tangata whenua significance with extensive Puari Pa.
- Located within nominal larger area of tangata whenua significance with Ōtautahi Pa.
- Evidence of historical subdivision patterns, incremental and irregular, as distinguished from the original Central City due to delayed release of land for development. Irregular section sizes.
- Inner city residential development in recent years has resulted in many of the early timber workers cottages and larger dwellings being demolished, and the land subdivided for low-rise, high-density townhouse and apartment developments.

# Character descriptions of areas

- Main transport routes Bealey Avenue and Fitzgerald Avenue are on the perimeter of the area. Today, Madras Street is a key route north on the one-way system. This area is less important as a historical thoroughfare than Victoria and High streets, as it is to the east of this principle diagonal route from north-south.
- Early dwellings on Cambridge Terrace between Colombo and Madras streets were built to address the river.
- Some newer developments have centred high-density residential around green spaces – village green model (St Mary's Courts and Durham Street, near Gracefield Avenue).
- Council housing has also been designed to create public green spaces between high-density residential.
- Pocket sized lots for workers cottages with little setback from the road frontage, especially around Beveridge, Peacock and Montreal streets.
- Larger houses in eastern town reserve have larger sections. Even larger houses have relatively small setback from road frontage retaining street presence.
- Views to river as it winds through grid in north east of city. (see Ōtakaro/Avon River Summary)
- Commercial character between Salisbury Street and Bealey Avenue, west of Madras Street, developed in latter part of 20th century. Warehouse scale 'big box' commercial development with accompanying car park areas.
- The topography of the city and surrounds was created from low-lying landscape mosaic of wetlands and streams formed by the coalesced fans of glacial outwash gravels and alluvial deposits of the Waimakariri River and its subsequent floods.
- Large planted medians of mature deciduous canopy trees on Bealey and Fitzgerald avenues.

**Character Description of Area: *Ōtakaro*/Avon River**

- Historic river corridor with significance to Māori and European settlement.
- The area on the corner of Cambridge Terrace and Hereford Street is a registered wāhi tapu as the urupa associated with the Pūari Pā, reported as being a Waitaha peoples settlement (the first Māori to settle in this area), and includes a burial site. Rata Island and site of mahinga kai post settlement.
- Wahi tapu – Tautahi's Pā site. Māori settlement, mahinga kai and seasonal activity in the area around the Ōtakaro/Avon River.
- The bricks - marked by a river bank cairn at intersection of Barbadoes Street and Oxford Terrace . Point at which river was navigable to – connection to Deans Brothers arrival and campsite of city surveyors in 1848.
- Barbadoes Street Cemetery. Burial site of many of Christchurch's early leading citizens, first opened in 1851. The cemetery itself is divided by Barbadoes Street separating the Anglican section on the eastern side, from the Roman Catholic and Dissenters section on the west.
- Legacy of structures and features left to the city by Thomas Edmonds in the 1920s-30s between Manchester and Colombo streets. This area of the river was popular for passive recreation and a focus for river beautification.
- Edmonds group of structures – the clock tower and telephone cabinet are built in stone and are eclectic in style. The Band Rotunda and adjacent structures and built landscape elements are classically influenced and in plastered concrete.
- Reflects planting character of city (natives and exotics). Iconic poplars – reflect English style of exotic planted character and Barkers Reserve – early native plantings.
- The Ōtakaro/Avon River's passage through this area ties it to the landscape beyond and to the intangible layers of life and death. The river enters the grid at a point which signifies 'life', being marked by the hospital – which includes the maternity hospital, a place of birth. And to the east, the river's exit through the boundary of the four avenues is marked by 'death', passing by the historic Barbadoes Street Cemetery.
- Ōtakaro/Avon River acts as an ecological corridor through the city.
- Ōtakaro/Avon River has two islands Rhododendron Island and Rata-Mill Island.
- Cambridge Green, an area of significance to tangata whenua. Three pou with native plantings at Peterborough-Barbodoes Street intersection-junction of St Mary's Stream and Ōtakaro/Avon River.
- The Canterbury Plains have been formed by outwash gravels deposited by rivers rising in the Southern Alps. The majority of Christchurch City is located on the coalescing shingle fans of the Waimakariri River and its subsequent floods.
- Character of river banks changes along length of river. River bank lined with mature deciduous canopy trees and more recently native grasses have established/been planted along the river edge.

*Character Description of Area: Park Terrace*

- Intact grouping of early 20th century architecturally designed residences with strong relationship to Ōtakaro/Avon River and Hagley Park.
- Neo-Georgian and Arts and Crafts styled houses by leading Canterbury architects.
- Two to three-storeyed masonry houses with setback from street frontage and garden settings. Early 20th century garden settings largely intact. River aspect.
- Slightly later release of land due to original Town Reserve status. Larger sections than original town sections.
- Anglican reserve for Bishop's house from 1850s. Anglican Bishop's former residence - Bishopscourt.
- Replacement of original timber houses early 20th century.
- Visual link from first floor of houses to river, parkland and Southern Alps in distance.
- Road follows river. Views into Hagley Park from roadway towards still evident subdued topography associated with old river courses and floods adding natural element to character.
- Distinctive character of Ōtakaro/Avon River banks lined with deciduous trees including weeping willows. Mown grass river bank. Native grasses along edge more recently.
- Ōtakaro/Avon River is an ecological corridor through the area with remnant native aquatic species.
- The Ōtakaro/Avon River's passage through this area ties it to the landscape beyond.
- It includes part of the Ōtakaro/Avon River which was an important settlement area and mahinga kai (food gathering) area for tangata whenua before settlement, and is near an area where ancestors from Tuahiwi and other places would stay when trading at Market Square (Victoria Square) and attending land court and other hearings 1858 to 1868.
- The Canterbury Plains have been formed by outwash gravels deposited by rivers rising in the Southern Alps. The majority of Christchurch City is located on the coalescing shingle fans of the Waimakariri River and its subsequent floods.

*Character Description of Area: South*

- Historical South and East Town Reserves that forms industrial fringe of central city, largely commercial-industrial in use.
- Evidence of historical mixed use over time including industrial, residential, religious, educational and medical.
- 1940s-70s smaller scale industrial buildings extant. Intact groupings of mid-20th century two-storeyed industrial buildings, e.g. Walker Street.
- Residential pocket in proximity to Hagley Park. 1910-39 residential timber buildings. Waller Terrace evidence of pre-1910 residences.
- Historical Presbyterian land ownership and activity around former site of St Andrew's church (now at Rangi Ruru).
- Hagley High School – site of Kohler's Pleasure Gardens c1860s, then education.
- Major early city brewery remains on site.
- Evidence of historical subdivision patterns, incremental and irregular, as distinguished from the original central city due to delayed release of land for development. Release of land in town reserves from 1855.
- Irregular street grid due to incremental release and development of area.
- Variety of lot coverage reflects mixed use. Industrial use - footprint of buildings covers width of section to street frontage or allows for parking. Residential has setback for garden setting.
- Wide ranging lot sizes and scale of built form due to evolving industrial/commercial character of area from small scale owner/operator single storey structures to 'big box' supermarket developments along Moorhouse Avenue with large car park frontages. Low-to-medium rise buildings.
- Residential architecture and Hagley High School site designed to address South Hagley Park along Hagley Avenue.
- View to South Hagley Park along St Asaph Street.
- Historic tram route, 1880, down Colombo Street.

# Character descriptions of areas

- Industrial character due to vicinity to railway corridor. Rapid development with completion of railway station on Moorhouse Avenue in 1877.
- Residential areas of timber cottages redeveloped for industrial use.
- 1960s onwards, variety in use and form reduced through large scale commercial-industrial development of area.
- 1960s eclipse of rail by road transport led to decline of area.
- The Canterbury Plains have been formed by outwash gravels deposited by rivers rising in the Southern Alps. The majority of Christchurch City is located on the coalescing shingle fans of the Waimakariri River and its subsequent floods.
- Lack of street trees and significant vegetation except for perimeter of South Hagley Park lined with rows of mature deciduous canopy trees.
- Intermittent planted medians along Moorhouse Avenue.

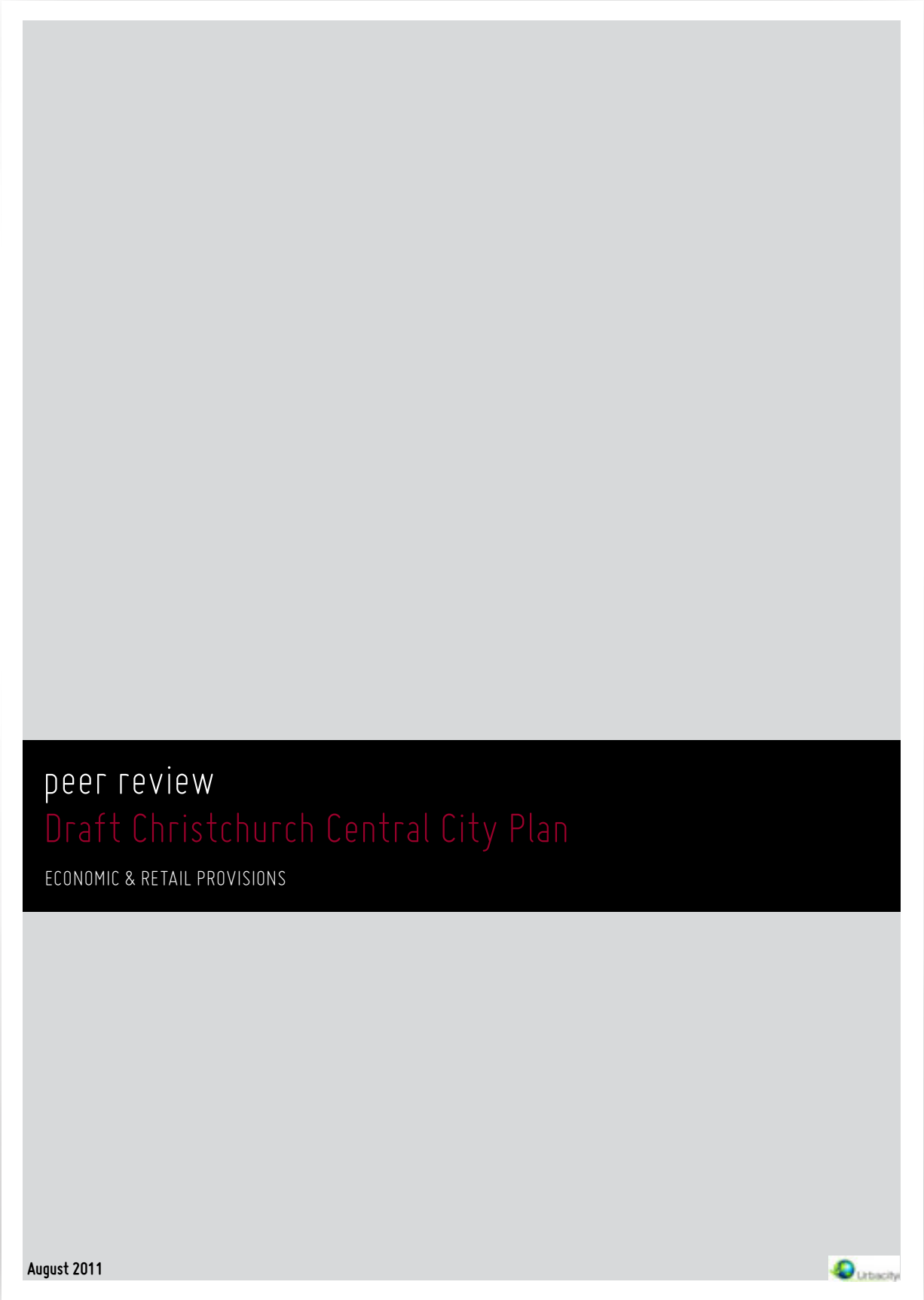
***Character Description of Area: Victoria Street***

- Original market square and contemporary civic public open space. Recreation, festival venue, civic ornamentation – commemorative monuments.
- Market Square first commercial hub of city – post office, courts, police-gaol, fire service and other public services.
- Victoria Street, diagonal link through grid, main transport route north, and to Papanui Bush, felled to build the City's timber buildings. Tram route north from 1880.
- Colombo Street to north of Victoria Square Victorian-Edwardian commercial development. Predominantly two-storeyed Classical Commercial built to street frontage and width of lot. Consistent horizontal emphasis of built form and detailing.
- Victoria Street early commercial history of use and development due to importance of transport link to city.
- The area between the Square and Victoria has a mix of uses, ranging from retail to offices, including the multi-storeyed Forsyth Barr building which fronts towards the south-east corner of Victoria Square.
- Civic focus through presence of Town Hall and, more recent, link with Convention Centre.
- Despite a mix in scale, use and form, the buildings surrounding Victoria Square orient themselves to it.
- Range of heights, scale and massing in the area. The buildings fronting the south of Victoria Square include lower-rise traditional buildings to taller apartment and hotel buildings blocks and a car parking building.
- Victoria Street has a range of offices, retail uses, cafes and religious. There is a large mix of building age, heights, massing and styles along this street including single storey, two-to-four storey and high-rise apartment buildings and hotel.
- View to Cranmer Square from Victoria Street.
- Historical view shaft and transportation route to Victoria Square impeded by Crown Plaza (to be demolished).
- Early high-density residential area, 1920s-30s apartments, between Peterborough and Salisbury streets.
- Victoria (Market) Square site of significance to Ngāi Tūāhuriri as trading post between Maori and European settlers.
- Located within nominal larger area of tangata whenua significance with extensive Pūari Pā, and connections between the river and Little Hagley Park corner.
- The Avon River's passage through this area ties it to the landscape beyond, and to the intangible layers of life and death. Burial site for Waitaha people south along river.
- It includes part of the Ōtakaro/Avon River which was an important mahinga kai (food gathering) area for tangata whenua.
- The Canterbury Plains have been formed by outwash gravels deposited by rivers rising in the Southern Alps. The majority of Christchurch City is located on the coalescing shingle fans of the Waimakariri River and its subsequent floods.
- Ōtakaro/Avon River is an ecological corridor through the area.

*Character Description of Area: Worcester Boulevard/Cathedral Square*

- The historic core was planned as the civic, religious and educational heart of the colonial city of Christchurch and it remains the cultural centre of the city today.
- Grid pattern of streets, and public park provisions, laid out as part of the Jollie Plan in 1850.
- The area embodies the Canterbury Associations vision for the city in terms of the building types, style of architecture, open space provision and street plan.
- Key civic and educational buildings were designed in the Gothic Revival style, built in stone and orientated along the Worcester Street/Worcester Boulevard axis. Stone Gothic Revival buildings are generally two to three storeys in height, including the Canterbury Museum, the Arts Centre, the Provincial Council Buildings, and Christ's College.
- A grouping of late 19th/early 20th century one and two-storeyed timber residential buildings remain in the area. These buildings retain elements of the Gothic character of gables and asymmetry on a domestic scale.
- The cultural identity of this area has been continued through to the present day with key contemporary cultural institutions including COCA, the Christchurch Art Gallery, the adaptive reuse of the former Canterbury College as the Arts Centre and the continued development of the Canterbury Museum.
- Planned contextual and visual link between the Cathedral and the Museum along the Worcester Boulevard. Linkage from Cathedral Square to Botanic Gardens. The axial significance of Worcester Boulevard has been heightened through its landscape/roading treatment to become a popular promenade.
- Cathedral Square, key open space and centralised location of Christchurch. Cathedral. Ngāi Tahu and First Four Ships memorials provide markers of the origins of settlement of the region.
- Cathedral Square, transport hub within the city centre, initially for horses and carts, then trams and then buses, until the removal of the bus exchange in the early 21st century.
- The founding of Christchurch is marked by the statue of John Robert Godley outside the Cathedral, and the area also includes the statues of superintendent Rolleston, located by the Museum. The statue of Sir Robert Falcon Scott signals the city's history of connection to the Antarctic.
- The Ōtakaro/Avon River's passage through this area ties it to the landscape beyond.
- It includes part of the Ōtakaro/Avon River which was an important mahinga kai (food gathering) area for tangata whenua, as well as important settlements.
- The area on the corner of Cambridge Terrace and Hereford Street is a registered wahi tapu as the urupa associated with the Puari Pa, reported as being a Waitaha peoples settlement (the first Maori to settle in this area), and includes a burial site.
- Located within nominal larger area of tangata whenua significance with extensive Puari Pa, and connections between the river and Little Hagley Park corner.
- The area surrounding the east side of Cathedral Square has a wide variety of architectural style, scale, form and use. Higher-density development with multi-storeyed buildings that maximise lot coverage. The west end of the Worcester Boulevard is less intensely developed in terms of site coverage. Original buildings, including those built for residential use and the Canterbury Club, retain a setback from the street with a garden frontage. Variety in height between historic two to three storeys and more recent multi-storied developments.
- The topography of the city and surrounds was created from low-lying landscape mosaic of wetlands and streams formed by the coalesced fans of glacial outwash gravels and alluvial deposits of the Waimakariri River and its subsequent floods.
- Ōtakaro/Avon River is an ecological corridor through the area.
- Rolleston Avenue, mature deciduous canopy street trees.

# Retail Strategy Peer Review



# content
# introduction



This short report represents a peer review of the retail and commercial activity provisions within the Draft Central City Plan. It is structured to provide an introduction to the universal principles of what constitutes a great city and the role of regulatory methods that can deliver on these principles.

It subsequently considers in more detail the efficacy of proposed controls within the current Draft Central City Plan (DCCP) as at 28/07/11.

# Retail Strategy Peer Review

**The Dual Role of Retail in the CBD**

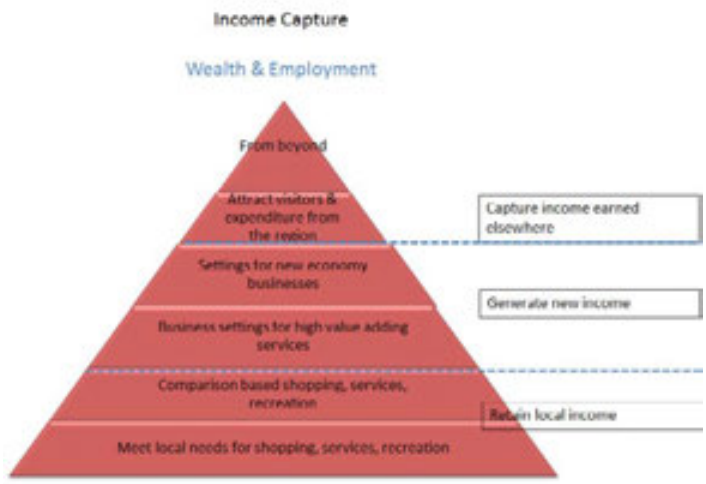
Any regulatory framework for a central city must consider the relationships and connections that are both spatial and functional within the wider city. The city centre does not operate in a vacuum but within an international, national and regional context. Whilst regulations typically seek to control activity and are often written negatively, it is important to understand that the entire approach to a regulatory framework is not to limit growth or activity that can act in a manner that delivers wider economic, social, cultural or environmental benefits. This applies more to retail development than office or housing development. Retail has the ability to switch on higher economic and social output if it is required to activate streets. The ultimate test of regulation must be to determine whether it promotes net benefits to society as a whole. This means that any proposition must consider all costs and benefits in including, in economic terms, "externalities".

Given that this review is heavily focused on retail and commercial activity an obvious starting objective would be to promote the most efficient retail framework for the city. In pure economic or market terms this might point us in the direction of free competition. However we know that retail, when consolidated together outside of centres on the basis of the principle of the "efficiency" of pure competition, generates an inefficient settlement pattern, reduces economic performance, increases vehicle kilometres travelled (vkts) and reduces public transport use. USA has the highest retail floorspace per capita in the world and the highest in also the world vkt load for shopping. This is not a paradox. Increasing retail specialisation results in a growing inability to undertake more tasks in the same place (our centres). We are also becoming aware that an over-reliance on competition policy as a basis for reducing costs to the consumer may increase external costs. In USA this has led to farming monocultures that generate major production efficiencies but result in over-production of food and over consumption of food, with consequent costs to the environment and to public health. It has also resulted in fewer businesses, with large business dominating the entire food supply environment and a consequent reduction in competition.

In city centres, retail needs to be considered on many different levels. It should be considered as a facility that is attractive within the competitive framework of the wider region, a service for workers, a resource for visitors, a cultural experience, a social experience and a facilitator of wider economic output.


Source: Derek Kemp, Prosperous Places

3




Source: Derek Kemp, Prosperous Places

Retail on its own is a low economic value activity. It sits close to the bottom of the economic value ladder. However if it is seen as a catalyst to create the settings for higher economic output, then regulation should be used to ensure that it behaves in a manner that enables such an outcome. Retail must look to its market segment role and respond to it, but it has a much higher duty in the CBD to facilitate higher economic output within the city. This has implications for where it should be within the city centre and for built form.
In functional terms the city retail has two roles.

1. It must be conceived and delivered in a manner that inspires Christchurch residents to drive past their regional malls.
   - City retail should be differentiated in terms of offer or experience.

2. It must be conceived and delivered in a manner that inspires wider economic activity in the city, as a part of a high economic output, integrated, mixed use centre.

In terms of retail's role as an inspirer of higher economic output, regulation will be most effective if it manages built form. Unfortunately the regional malls have not been tasked to deliver the same wider economic benefits from their centres and therefore regulation has been highly advantageous for the suburban malls and disadvantageous for the city centre. In the city, retail must work harder and act in an urban context. In order to do its job as an inspirer or catalyst to higher economic output it must be in buildings that address streets and facilitate a vibrant urban or public realm environment, as such environments attract high value employment. As retail is the most public of all land uses, its success or failure in a city is a major influence over the economic capacity of the city centre. City centres with a failing retail sector with vacancies and under-performing shops are not attractive to investors and do not attract jobs. Therefore retail has a role that is far greater than it simple functional task. In this respect it would be irresponsible for the city to not consider suburban centres in the same manner.

The functional basis for a regionally competitive role for retail in the city is now a weak one. This is because retail competition in the suburbs has been allowed to compete with the city centre and the suburban malls have most of the stores that are found within the city. A consolidation of the core in the city and improved presentation of flagship stores is likely to generate only a marginal improvement in the city's competitive retail position. However such a statement reflects the functional aspects of the appeal of the city centre to potential shoppers. The city centre is a physically different environment to the malls and this should continue as it is one of the most important aspects of the city's future appeal. To draw people to shop in the city the experience must extend beyond pure competitive functionality. The city centre must offer an experience that is highly differentiated from the malls. This places a heavy obligation on built form, streetscape, art & culture, micro-climate or in more general terms the experience of the city. In order for people to come to the city they must get a return on the time and cost they invest to get there that is seen as worthwhile. City centre retail will always be less convenient for residents of the wider city, more costly to get to, require more walking, and be subject to the vagaries of climate, and shoppers all have to share the public realm with traffic and people in the city for other purposes. In addition the retail mix is not programmed, has an inefficient layout (compared with a mall), shops often do not open at the same time or even on the same days, and requires more effort to undertake the same tasks.

# Retail Strategy Peer Review

Typical zoning schemes for CBDs are often based on retail-only considerations related to retail's competitive role in the region. On that basis zoning schemes often seek to condense retail to a walkable core that presents as a whole an easily understood competitive statement to the market. There is nothing wrong with the principle of a "retail core" in a CBD as it firmly establishes the CBD's position within the wider competitive structure of the city. However the use of exclusive zoning to "protect" such an outcome in Christchurch CBD is largely unnecessary and undermines retail's role as a potential catalyst for higher economic performance. The "core" area of the city should indeed be identified in the City Plan and its location is obvious and largely unable to occur elsewhere in the city centre due to the structure of the city and the relationships established within it.

The location of the core area is based on a range of things that are unable to be replicated elsewhere:
- The street structure (the centre of the city is obvious from this structure)
- The location and focus of public transport
- The location of major office activities
- Proximity to the Square, which is the iconic centre of the city
- The profile/status/location of "head office" activities in the financial sector
- The location of the major retail anchors (mainly Ballantynes)
- The location of major cultural attractions
- The location of the major hotels
- The location and course of the river

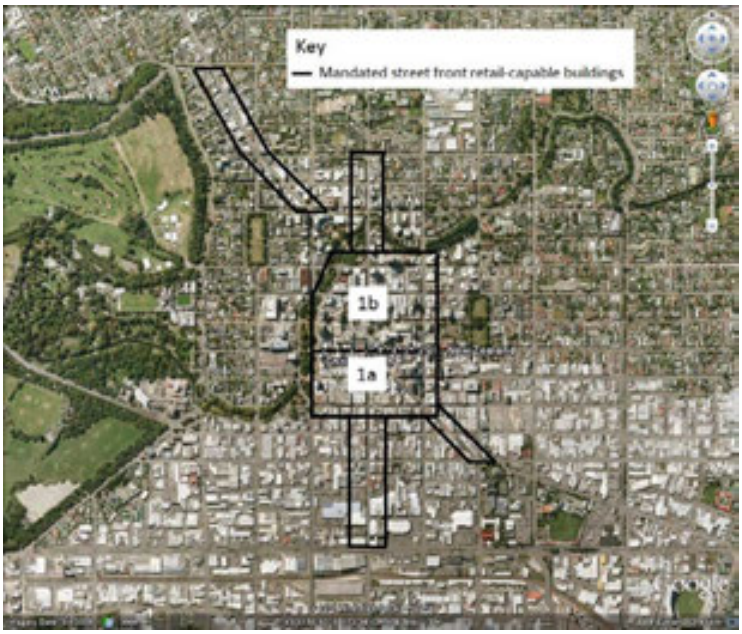
These relationships and the structure have not been affected by the earthquake. Christchurch city centre is too small to have more than one "core". It is therefore appropriate to use regulation not to deny retail outside of the "core" but to ensure that retail outside of the core does not have the potential to become inward focussed and in doing so drop its obligation to provide wider economic benefits to the city. This means that outside of the core area but within the four avenues, retail should be mandated in street-front condition of the ground floor of particular streets and allowed in other streets of the city centre if it is subservient to another dominant use (such as the ground floor of an apartment or office building). The exception to this should be in industrial zones, where provisions may be written differently. These outcomes can be reinforced with restrictive or maximum parking provisions and parking levies in-lieu. It should not be possible for retail-only centres or retail-dominant centres outside of the core to occur so as to diminish (not necessarily challenge) the vitality of the core. If retail outside of the core is street-focused then this effectively prevents any conflict between roles and allows the evolution of a "condensed core," whilst also encouraging wider economic output.

**The Complementary Principles of Retail Core and Active Urban Streets**

The retail core is should be accompanied with a street front provision for important urban streets to support the core. These important streets are required to be formed with fine grained, retail-capable buildings (on ground floor). The composition of these buildings along the streets requires the buildings to work together to deliver an integrated, visually rich streetscape or townscape. These streets are at the focus of the retail story of the city in addition to the core. The only proposed street of this type that does not have a relationship with the core is Victoria Street beyond Kilmore Street. Victoria Street has an important future role as a resource for an intensive residential and mixed use precinct in the north west of the city centre.

The key streets we would propose to be managed in this way are:
- Colombo Street between Salisbury Street and Moorehouse Ave
- Manchester Street between Oxford Terrace & Lichfield Street
- High Street between Hereford Street and St Asaph Street
- Cashel Street between Manchester Street and Oxford Terrace
- Lichfield Street between High Street and Durham Street
- Worcester Street between Manchester Street and Oxford Terrace
- Gloucester Street between Manchester Street and Oxford Terrace
- Victoria Street between Kilmore Street and Bealey Ave.

**Map 1 – Core & Urban Streets**

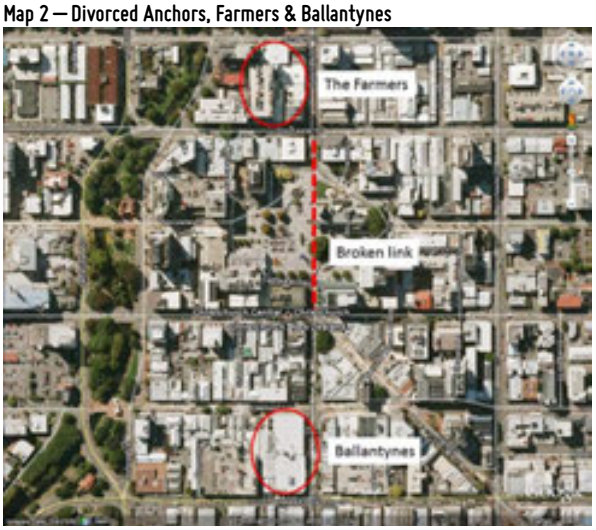



These proposed streets where ground floor, retail-capable buildings should be mandated. In other streets where retail is a subservient use (excluding the industrial zones), retail-capable buildings that address streets, should be permitted.

**The Department Store Divorce**

Currently the CBD has two major department stores, Ballantynes and the Farmers. The Farmers grew out of the Hays department store, which was located between Colombo, Armagh and Gloucester Streets north of the CBD. The subsequent closure of Colombo Street through the Square resulted in a heavy disconnect between the retail environments south and north of the Square mostly as a consequence of a drop off in the retail role of the Square and the amount of retail formerly along its edges. The north side continued with the former Hays store (now the Farmers) but the precinct itself became dominated by tourism stores. The Farmers now largely operates as a stand-alone anchor north of the Square fulfilling a role without the support of a complementary specialty store environment.

**Map 2 — Divorced Anchors, Farmers & Ballantynes**



# Retail Strategy Peer Review

For the retail health of the CBD and the proposed "retail core" area of the CBD which sits south of the Square it would be preferable to Ballantynes and Farmers working together in relative close proximity. This of course means that a site would need to be found for the Farmers, south of Hereford Street and a property deal done to offset at least some of the costs. Given the pre-earthquake retail environment and merchandising composition of the area north of the Square, the loss of the Farmers store to the north is unlikely to materially change the retail viability or merchandise mix of the specialty stores of this area.

By putting the Farmers and Ballantynes close together a competitive advantage is established in the retail core/CBD.

**North/South and East/West Streets & Mid-Block Lanes**

Given prevailing wind conditions and solar access, generally the poorer streets for retail in the city are those that run east/west when they are dominated by tall buildings. Hereford Street has a poor microclimate for retail as do Armagh and Worcester Streets between Colombo and Manchester Streets. Cashel Mall however has low buildings on the north side which reduces the influence of the easterly wind effect and the overshadowing of the street. Colombo Street should continue as the main retail-capable spine through the city centre, but Council should investigate additional mid-block lanes to break up the extended east-west blocks of the retail core area. These lanes should preferably be framed by buildings, as in Melbourne, and as developed off Lichfield Street (not retail arcades such as Shades). The lanes can be as small as 3-4 metres wide (see Melbourne lane below) or as wide as 10 metres — such as Vulcan Lane, following.

**Figure 1 – North/South Orientation Melbourne Lane**

**Figure 2 — East/West Orientation Vulcan Lane (Auckland)**

**The Role of Design Codes**

City centre design codes describe how the physical elements of town (buildings, streets, parks and open space, natural landscape and land form) will work together to create a harmonious whole. The codes will assist developers and designers to creatively interpret the objectives of the City Plan.

There is a general need for buildings to address streets in the CBD. In the "core" area and along key retail streets there should be a requirement for the ground floor of buildings to be retail-capable. A retail-capable edge condition requires a design code in order for the provisions to deliver an appropriate streetscape. In this code buildings should be brought to the ground via dominant vertical elements (as opposed to horizontal) and maximum areas of glazing. Typical fine grained "main streets" have a maximum of 70% glazing. The code should address such issues.

The following photo shows the ground floor "floating on glass" and should be deemed as unacceptable, the second shows an appropriate response.

**Figure 3 — Inappropriate Design Response, "Floating on Glass"**

**Figure 5 — Appropriate Design Response "Brought to Ground"**

Bringing the vertical elements to the ground is a principle shown in the photo on the right. The photo also shows how the street is "composed" of individual buildings all behaving appropriately to create a coherent streetscape.

It is impossible for the city to deliver on any objective of the quality and form of the city without a built form code. This means that the city needs to manage the way architects ply their craft. The core issue with modern architecture is its lack of convention. We need architects to deliver buildings that work together to create a cohesive and finely grained street. No new town centre streets of this type have been created in New Zealand since the Napier earthquake in 1931 and modern architecture has proven inept in this respect.

In order to maintain faith and confidence in the city, such a code should be a part of the regulatory process. Developers have expressed some concern that not all the industry can be trusted to deliver a city that is better than the one lost in the earthquake. The same concern is expressed about the architecture profession. Therefore the wider constituents, who will invest in and use the rebuilt CBD, should have the comfort of a suite of design codes. Such codes were first used after the great fire in London in 1667. Christchurch has had a similar catastrophe and needs to ensure that development delivers a highly attractive city. This means that the community should be more involved in the quality of the built form and its relationship with the public realm.

The codes are a reflection of the relative importance of buildings in town and represent a change of emphasis from land use control to form control that ensures buildings work harmoniously together to improve the quality of the city centre of Christchurch.

These recommended mandatory requirements in the City Plan do not assume that the extent of all these streets must have active frontages. Rather it assumes that these frontages can evolve and adapt at any time to accommodate retail. This is therefore a different emphasis to the notion of "active frontages" as it places a greater emphasis on the built form than the activity. It also allows for a range of settings for retail businesses across the city at a range of price points. This provides for incubator or start-up opportunities that facilitate new businesses and economic growth. Typically a retail-capable or a robust and adaptable building at ground floor will be 4.5 metres in height, floor to ceiling. This allows for a false ceiling for services (if the space is to be used as a restaurant for instance) and every other use combination.

# Retail Strategy Peer Review

It also provides a more generous building dimension at the street edge which has an effect on the ability for pedestrians to more effectively read the linear extent of the streetscape under any canopy. The codes will ensure that specialty shops will ultimately define both an active and fine grained streetscape within the city. Built form controls are the dominant means of managing the effects of a rebuilt city centre, not zoning. This is not to say that the city should not have a zoning overlay to indicate intent, but rather that the desire is to heavily mix activities in the city centre within an attractive built form environment. Buildings are therefore, as in any great city, much more important than land use.

It is also important that the zone for "retail capable" streets and the "core city centre retail and commercial zone" crosses the street so that like built form and land use address each other across the street, as shown in Map 1.

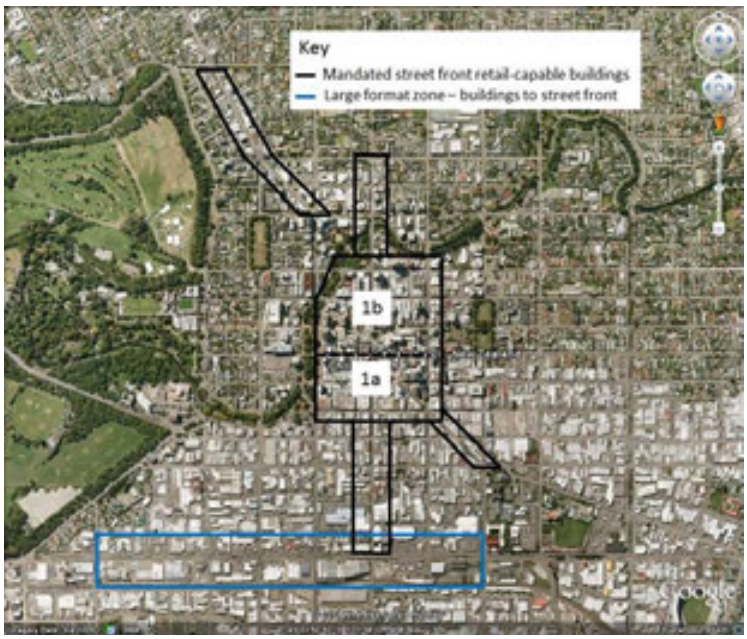
We recommend that the Council develop a design code for the city that if followed by developers, effectively reduces the planning hurdles faced. The level to which this is taken will depend on how prescriptive the controls. In our view the controls should not determine any particular style but should regulate amongst other things dominant vertical proportions (not horizontal), maximum solid to void ratios and the principle of buildings that have a bottom, middle and top. These codes can generally be provided in three or four simple drawings.
Finally the design quality of the city is paramount to its ultimate role and its social, cultural, environmental and economic performance. In the current architectural environment of lack of convention and a poor recent history of this profession in delivering strong, contiguous urban centres the need for design control is paramount.

**Large Format Retail**

So called "large format retail" (LFR) sector is a mish-mash of a variety of retail merchandisers. Often these large boxes are supplemented by a range of smaller retailers to the point where it becomes difficult to define the centre as a pure "large format centre". In our view the term "large format" is a functionally irrelevant proposition that ignores activity and inspires all retailers to create big boxes. The term "bulky goods" is a more effective means by which to identify the activity and the box-style development. The industry has successfully argued for inexpensive and out-of-centre land as the basis for the location of many of these centres. This is an inefficient use of resources and compromises the integrity of any wider centres policy. There is also a spurious argument based on effects that these centres have little to no effect on existing centres when the mix is often broad and reduces the vitality of centres. This reduces the ability to develop mixed use centres that can deliver greater social, environmental and economic benefits (outside of retail). The role of strategic planning, should consider the optimum location for such stores, in the context of an assessment of wider benefit, not simply retail-distributive effects.

Moorhouse Ave currently has many (but not all) of these operators scattered between Madras Street and Durham Street on the north side of Moorhouse Ave and Colombo Street and Selwyn Street on the south side. Given that these retailers typically have a wide regional draw, similar to that of the CBD it would seem logical to complete this currently disjointed precinct by enabling large format retail to respond on the opposite side from the existing conditions as shown in the drawing above. The only difference should be that the buildings address and be entered from Moorhouse Ave and parking is to be located behind (as it should be to all streets in any centre). Given the strategic role of Moorhouse Ave as a major regional distributor, this delivers a more attractive street as it requires developers to build a building that is the first item seen in the street (not the car park). This requires the developer to build a decent building rather than a box in a sea of parking. The proposed extended bulky goods zone should therefore take the same street-based principles for the rest of the CBD to Moorhouse Ave.

**Map 3 – Proposed Extended Moorhouse Ave Bulky Goods Zone**




The important issue for the greater city is that these uses are located in a manner by which they can support the CBD and make more efficient use of existing infrastructure.

**Shoppers in the City Centre**

The market for city centre retail exists in three segments:

1. Residents of the city and its outer regions.
2. Visitors and tourists
3. City centre workers

The city has a largely captive market in the last two of these three segments, i.e. visitors and workers. In most cities the market is split generally into thirds between these categories. Even if the residential segment has a higher share it is likely that it represents less than half of the market. This is not to understate this segment's importance, but rather to suggest that we should not forget that retail in the city serves a much bigger market than regional residents. However future retail must be conceived in a way that is most relevant to locals. To effectively merchandise to tourists it is important to ensure that the offer is primarily relevant to locals (as tourists like to go where the locals go).

# Retail Strategy Peer Review

### Part 2 — Comments on Specific CCP Provisions

The primary CCP control should be over buildings NOT land use as any great city is defined by its buildings and the consequent quality of the public realm. Design controls can use a limited suite of cartoon drawings as discussed earlier. The community could be engaged in the formulation of the vision through the use of examples of places, buildings and streetscapes (and yes, styles). The drawings should cover:

- Buildings addressing streets.
- Buildings addressing lanes.
- Buildings addressing courtyards.
- Buildings addressing squares.
- Streetscapes

These codes would be described in simple plan & section cartoon drawings.

Wider principles in the CCP relating to privacy, and other performance issues can sit alongside the controls. Ideally the controls should allow full site redevelopment and not require FARs. Access and a range of other issues will assist to determine how any particular building will sit on a site. It is important therefore for the Council to determine the general height of the new city centre. Existing buildings that exceed that height will of course remain. In our opinion the height should be between 4-6 storeys. If developed fully to that height this would make Christchurch CBD one of the densest cities in the world. As due diligence Council should conduct a number of site development studies choosing a variety of site types of site to determine the return to the landowner in terms of development yield and broadly test this with the leasing and finance industries.

**Draft CCP Principle:**
Discourage location of "high-intensity office and retail development outside the compact zone and deliver an urban form/streetscape which defines the area".

**Comment:**
The delivery of an "urban form/streetscape" is not guaranteed by the current Draft CCP. The creation of "high intensity retail" development outside of the core can be dealt with effectively by the use of codes and parking restrictions.

However we want adaptable and robust buildings to be a feature of the new city. This is true sustainability as it gets rid of poor built form or the notion of "design life". This means we should encourage ground floor "retail capable" buildings as appropriate outside of the core. We have suggested that these be mandated to key streets and permitted elsewhere if a subservient use to another on-site activity. This allows for a range of properties at a range of price points and facilitates investment and entrepreneurship.

There is a spatial and functional logic to a core retail area (not so sure about commercial or office), but this is based around a number of things including the structure of the city and access, the existing location of major retail stores, location of major car parking buildings, public transport nodes and surrounding activities. This node is clearly located south of the Square between Hereford Street and Tuam Street, largely as defined in the Draft CCP. There is most certainly a need to get this area up and running as soon as possible, but this is a short term imperative. It is virtually impossible for the city to develop an alternate node to this area due to the influences or dynamics mentioned earlier, if we have design controls in place. Any other "node" will be specialised and not a threat to the core retail area. Built form controls plus a statement in the policies that "all buildings shall address streets and be entered from the street or public space" will ensure that the core is supported. In addition, car parking controls can be used as well to limit the opportunity for other precincts that might seek to challenge the status of the core area. The role of these potentially competitive precincts can be further managed by car parking controls by way of a maximum limit (on-site) and a contribution to central city parking. We understand that such controls are currently being written.

In terms of office, again the dynamics of the city will influence where the core or primary office precinct will evolve. The city needs a range of settings for offices at a range of price points or in the various classes (A, B &C). It would seem reasonable to consider upper level, warehouse style space (creative industry, consultants etc) at one end and high class legal and financial space at the other.

**Recommendation:**
1. Add three sentences in the CCP:-
"Buildings shall address streets and public space".
"Shops shall be entered by the public exclusively from streets and/or public space".

"Buildings shall contribute collectively to the street and increase the propensity to walk around the city".
2. Develop a Christchurch City Design Code.

**Draft CCP Principle (Page 66):**
"Introducing a smaller, more vibrant core will provide greater turnover for retailers, a better more vibrant shopping environment for consumers and it will provide for greater choice."

**Comment:**
Suggest that we rephrase this Principle as follows:

"The objective of creating a consolidated core area is so that retailers within this area can trade at optimum levels, which is intended to have the effect of giving the core a stronger and more competitive market presence, to the benefit of the profile of the entire CBD."

That to us is the essential statement. We might carry on with a subsidiary statement such as "Outside of the core retail is permitted provided that it does not undermine either collectively or individually the performance of the core whether by way of opportunity cost (i.e. would be better located in the core) or by way of competition." We may want to be specific?? "The key retail merchandising categories / areas that are to be encouraged in the core are fashion, fashion accessories, books and other media and DSTM (department store type merchandise)." Outside of the core, food services, office supplies, food products, recreational goods and services, personal services, white and brown goods (larger electronics) would be acceptable.

**Draft CCP Principle (P69):**
"Restrictions on suburban development for 5 years"

**Comment:**
We understand the motivation but is 5 years long enough? Also, we need to level the playing field between the CBD and the suburbs. At present the malls have the ability to develop in a manner that the city should not and cannot copy, for reasons of sustainability, regional (and national) economic performance and land value. However, despite the fact that we require the city to deliver far greater benefits than the suburban malls we have rules for the malls that encourage them to diminish the economic potential of the centre of the city. Suburban malls have a starting price advantage over the CBD. We are requiring an urban CBD. As an investment proposition this means at a minimum:
- Mixed use buildings
- Buildings addressing streets

This makes the investment threshold much higher than the retail-only malls where:
- Mixed use buildings are not required
- Addressing the street is not required

If the city is serious about economic growth it should require the suburban centres to use their retail so as to inspire greater economic growth. Retail is at the bottom of the economic value ladder but if used to activate streets it can inspire wider economic activity and agglomeration (efficiency).

Most residents must drive further to go the city than to a suburban mall. On that basis the only reason they will do so is if:
- City retail is meaningfully different to the suburban malls (it was not before the earthquake).
- City retail has a cultural layer that inspires visitation.

This of course means that the physical environment must be meaningful, visually rich and special. This also means that built form controls are essential going forward. This is also an opportunity to be prescriptive in terms of these controls. We need buildings that inspire a connection to local culture, fine grained architecture where the proportions are more vertical than horizontal. We need spatial and functional continuity and intimacy.

If the city continues to lose market share or relevance to the malls then the entire economic capacity of the city is reduced. This is because low-activity CBDs do not attract wider economic investment. The importance therefore of a vibrant retail sector in the CBD cannot be overstated. However it is important to remember that a major component of its role is as an inspirer of economic activity OUTSIDE of retail. Statistics that support the importance of retail in inspiring broader economic output are available in Appendix A.

# Retail Strategy Peer Review

**Recommendation:**
We recommend that the Council not only put a moratorium on suburban mall expansion for 5 years, but that they set up an enquiry within that time as to the relative economic, social, cultural and environmental benefits of supporting continued expansion of retail-only floorspace in these malls.

**Draft CCP Action – Covered Market in the City (P84)**

**Comment:**
This is a good idea. A number of issues arise.....

- Is it to be a permanent feature of the city?
- Is it to trade all days, weekends or at other periods?
- How is it to be managed?
- How is it to be integrated into the wider retail trip i.e. can it flow through to regular stores?

Also, are there two concepts here?

1. The future market as described in the Draft CCP
2. A temporary facility to help kick start CBD retail businesses?

For number 2 above do we offer first right of refusal for stalls to existing CBD retailers?

**Recommendation:**
Investigate the use of temporary facilities as a basis for an expanded retail offer outside of formal premises. Consider the use of streets (exclude or manage traffic during this time) and look at ways to grow retail critical mass in this way. Review options for weather protection (see The Rocks Market, Sydney) and the means by which to deliver power to the stalls. Offer first right of refusal to city centre retail businesses that are currently unable to trade due to the earthquake. Centre-street options at this point may include Colombo Street, Cashel Street, Lichfield Street and Oxford Terrace.

**Figures 4 & 5 Linear Street Markets, Paris Market & The Rocks Market**

**Draft CCP Principle – Built Form Guide (P118)**
The "guide" should be incorporated into the Plan and should have strong regulatory status. It should not be a "guide" but should control the quality and behaviour of buildings in the city.

**Recommendation:**
Make a design code an integral part of the City Plan.

**Draft CCP Principle – Precincts & Neighbourhoods (P126)**
**Comment:**
Precincts evolve from historic factors and adaptation. Precincts in cities are largely defined by built form character with uses adapting often from another dominant but lost activity. It can be easy to use their evolution as a means by which to limit activity. Many of these precincts

did not start life as the places they currently are.

**Recommendation:**
Do not be too use restrictive on the basis of a current time snapshot. Look at evolution if there are clear economic, social, cultural and environmental reasons to do so. Underplay the retail role by using subservience provisions in the Plan. Reinforce precincts in ways that differentiates them from other precincts in the city by the use of different public realm elements. In other words allow them to develop their own style.

**Miscellaneous other Issues:**

**Arts**
The role of the arts community in telling the stories of the city as it was? See Queenstown — layers, heritage, stories, buildings, memorials. Place-based and non place-based. European, Maori?

**New Places**
Do we have opportunities to restructure any blocks, create lanes, piazzas etc? Smaller and more detailed design studies may be necessary.

**Access**
Previous city was dominated by car-dominant interventions (one ways, access denied turns, limits to street parking). We need to restore a greater priority to pedestrians. This does not necessarily mean greater space for pedestrians but rather the environment of the city should be where cars walk through rather than sprint. Important to keep as much of the street parking as possible as it is the least offensive all vehicular activity and acts to soften the vehicular interface.

**Walking**
Fundamental to improved performance is an increase in the desire to walk around the city centre. This requires a built form approach as well as an assessment of block size, structure, pedestrian cover, micro-climate etc.

**Heritage**
Every new building must be multi-generational, potential heritage — built to last.

**Proportions**
In interesting streetscapes, vertical proportions dominate (vertical proportions and "grain" are largely the same thing). We need to bring this into the code.

**Glazing**
The best streets typically have a maximum of 70% void (glazing). This can go higher if buildings are highly ornate or detailed as in many buildings in Europe. Visual interest and complexity is important (the "honesty" notion in modernism is an artificial concept and has no place in townscape).

**Retail design**
Shop front presentation in malls is not transferrable to streets. This is mainly because of the inability to manage natural light (and therefore window presentation in low ambient light as in malls) does not work in streets. Therefore overglazing and horizontal proportions whilst a feature of malls does not work in streets.

**FARs**
Not necessary with street front, height and built form provisions. A well written performance-based code can override any need for FARs.

**Free Car Parking**
Free Car Parking is suggested for up to 120 minutes. This is probably a good idea given that it will take some time for the retail component to reach critical mass. Hence convenience of access will be a very important part of the slow evolution of the re-built city.

**Regulatory Framework – other**

# Retail Strategy Peer Review

There is a conflict in our view between the desire of some residents to have a supermarket (supermarkets require 8,000–10,000 person catchments) and the desired urban nature of the city. City centre residents in high density accommodation are more likely to prefer their food resources supplied in an urban manner by deli's, bakeries, butchers, fruiterers, coffee shops etc. This reflects a more urban, inner city language and makes the city more attractive for people wanting high density living. Limited research shows that the public health performance of communities with supermarkets is worse than those with deli's, bakeries, corner stores etc (see the objectives of HPSTED) in the Draft Plan. There is little point in delivering healthy buildings if the food supply environment:

a) Reduces exercise

b) Increases exposure to poor food choices.

Supermarkets also inspire increased levels of driving and reduced levels of walking. Local stores and specialty food stores inspire increased levels of walking.

**Retail in Living Zones**

There should be no problem with retail in **high density Living Zones** providing it is a subservient use (to a residential apartment building) and providing that the store addresses the street.

**Parking & Housing Density**

A key principle of sustainability is about self-containment, not reduction in choice or increased public transport use. We need to be careful about being too restrictive on residential car parking as we want people who inherently like urban environments to have walkable access to goods and services in the city. Typically these people will want to have the choice to drive and will want to visit areas outside the city. We do not need to force them to not have a car or have fewer cars. The objective of getting them into the central city is so that they don't have to use their cars for many activities. If we reduce the level of car parking for residential buildings, the central city is unlikely to get many residents living in the city. They will live outside the city and will use their car for most daily tasks. In other words creating an urban environment with a wide range of shops and facilities of itself reduces vkts. We therefore need to ensure that the zoning provisions facilitate a wide range of activities by ensuring that some flexibility exists. Restricting car parking for urban residents does not. We need to make the environment such that they don't need to use their car, but we shouldn't prevent them from having one or more. If we too heavily limit private parking then we will not get the same number of people in this environment. As a consequence our vkt load will go up — not down (see work by Robert Cervero & Jeff Kenworthy if further proof is required).

**Bicycles**

It is important to ensure that this is managed correctly. Typically you don't want bicycle lanes down the main street of a town or city (they should stop and walk). There is clearly a discussion in terms of section drawings for key streets and where the priorities should exist for cyclists. In this respect we need to understand the different requirements of regional cycling, leisure cycling and cycling to work. We have no problem with the principle, but this is not a single issue problem and the correct solution requires a degree of balance.

**Use of the Term "Active Frontages"**

We would prefer "retail capable". However we understand the term "active frontages". The key issue is how we deliver buildings so that we get "activity" of all types on the ground floor. We suggest we keep both terms as they indicate similar intent albeit with a slightly different emphasis of where the regulation works.

**Summary of Recommended Built Form Code Provisions**

The following are core planning principles behind the design codes.

- In centres, buildings are more important for centres than land use.
- Built form is the most important factor in mixed use outcomes.
- Good mixed use development is important for sustainability (supports public transport, better social and economic performance, reduced vehicle kilometres travelled, reduced environmental impacts, etc.).
- All buildings must contribute positively and collectively to townscape by: facing the street and having entries directly from the street or other public space.
- All retail stores shall be entered from the street (exceptions may be made for large "boxes" such as supermarkets or discount department stores if a "sleeve" of stores is placed between it and the street).
- "Perimeter block" development requires buildings to be placed adjacent to streets with car parking to the rear of buildings (car parking – intra block or remote – to promote walking).
- All buildings at the ground floor at least to be robust and adaptable over time (i.e. not single-purpose designed).
- All buildings to be visually "brought to the ground" by bringing vertical elements to the ground (not floating on glass).
- All shopfronts to have a maximum 30:70 solid to void ratio (maximum 70% glazing).

The aims and objectives of the CCP are to:

- Improve the economic, social, cultural and environmental performance of the CBD.
- Control the manner by which buildings are developed in the CBD.
- Improve the level of amenity of the CBD.
- Improve the economic capacity of the city centre by allowing it to adapt and grow over time.
- To provide greater certainty to the community and developers over development outcomes within the city centre.
- To create a city centre where walking is the major mode of travel within the centre.
- To provide for a mix of uses.
- To better manage the impact of cars.
- To improve the quality of buildings and the way architecture is delivered in the city centre.
- To reduce congestion by expanding the capacity of the street network within the town centre and by improving links and movement efficiency outside of the town centre.
- To allow for more effective management of parking by not requiring all parking on site.

# Retail Strategy Peer Review

**Discussions with Retail/Developer Groups on Retail and Commercial Issues for the Future City**

A workshop was held with a small number of highly qualified retail and commercial operators. The purpose of the workshop was to find out what issues might drive developers and retailers to invest in the city and how to make the city a more effective retail and commercial environment.

The following were key points raised by this group.

- The city needs a programmed sequence of reconstruction priority areas (similar to the suburban residential areas).
- The city should start its retail and commercial core strategy by opening up the restaurant and bar precinct along Oxford Terrace between Hereford Street and Lichfield Street.
- The retail precinct along Cashel to Colombo and Lichfield Street should follow as a priority.
- The city should look at or facilitate the use of low cost retail premises as temporary opportunities, whilst the city is being rebuilt.
- The city should not attempt to compete with the malls.
- The city should negotiate with central government for some 290,000 sqm of government office space to be relocated within the city where it can be of most benefit.
- Two way streets were generally supported.
- It could be a long time (5 or more years) until the city has retail critical mass. It therefore needs to look at other means by which to bring people into the city.
- The city should not be afraid of incrementally opening retail areas of the city (it has no choice).
- Government should seek to de-risk some key projects where clear economic benefits exists but where market risk may be too high for the private sector alone.

**Appendix A – The Relationship between Built Form and Retail and Jobs Performance**

In Perth Australia employment statistics are collected by the Ministry for Planning (State Government). Centres are defined as specified areas. Some centres are mainly a mall and areas generally around and outside of the mall (we define these centres as "Malls" even though the employment survey looks at activity outside of the mall in terms of the centres definition). Some are "Mall Dominated town centres. This is where the mall dominates the town and where the main retail energy is not in the urban environment (which is struggling), but in the mall. The last definition is "Traditional Town Centres" where the retail faces the street and where a mall (if it exists does not deplete the activity and energy in the street or the vitality of street based retail.

The employment performance of Perth's 63 centres (excluding the CBD) by retail/built form type is:

| | |
|---|---|
| Malls | = 684 employees at 2 retail for every 1 non retail. |
| Mall Dominated | = 2,100 employees at 2 retail for every 2.2 non retail |
| Traditional town | = 2,400 employees at 2 retail for every 5 non retail. |

Some 67% of Mall Dominated centres in Perth are Regional Centres i.e. highest in the planning hierarchy outside of the CBD. Only 23% of Traditional towns are regional centres. In other words because the Metropolitan Plan did not connect hierarchy and built form it was failing to deliver jobs in the largest centres. These jobs were going to urban environments where the retail activated the public realm as a consequence of buildings addressing streets.

# Tourism Peer Review

TOURISM RESOURCE
CONSULTANTS LIMITED

Level 5
Aviation House
12 Johnston St
PO Box 2515
Wellington
New Zealand
Ph: 64-4-472 3114
Fax: 64-4-473 0020
Email: *trcnz@trcnz.com*
Website: *www.trcnz.com*

28 July 2011

The CCP Team

Christchurch City Council

PO Box 237

Christchurch 8140
Attention: Carolyn Ingles

Dear Carolyn Ingles

### *Christchurch Redevelopment and Tourism response to Impact Project Management*

***Thank you for the opportunity to respond to the brief on Christchurch development and the implications of the Central City Plan (CCP) for tourism. As discussed at our meeting and subsequent emails the brief comprises four parts. These are:***

- Review the draft CCP.
- Provide an overview of the principles to be adopted for the CCP in relationship to the Tourism Sector, and in the broader context of the CCP.
- Identify weaknesses (if any) in the draft CCP, in relationship to tourism.
- Recommend specific activities or products that could be developed in the short, medium and long term. These activities could include the role of a temporary Visitor Centre through to the concept of guided tours of the Central Business District (CBD).

We have reported below on each of the parts of the brief and have also attached a conclusion of key points in relation to tourism and the CCP.

# *Section 1: Principles for Tourism within the Christchurch CCP*

***The following principles are proposed as useful guiding concepts for incorporating the visitor economy into the conceptual development, planning, rule development and operationalising of the CCP.***

### *Safe*

Safety for international and domestic visitors is a very important consideration in destination choice, both at a national level and at a local level. Personal safety concerns can have a major impact on arrivals from international markets. Asian markets are particularly sensitive to safety concerns and are quick to respond to health and security events. While safety is often an underlying cultural factor for destination choice, many aspects of urban design can enhance safety for visitors.

### *Welcoming*

A welcoming city, while difficult to define, is important in ensuring that the visitor experience of a destination is positive. Important elements are easy access, good signage, good information, attractive and accessible public spaces and amenities, and locations that treat tourism as a positive part of the destination economy.

### *Distinctive*

A distinctive destination and ideally an aspirational destination will attract visitors who are driven by a desire to experience that which is different or unique. The features making a destination distinctive are many and varied and range from the physical locality, the built environment, the natural attractions through to the character of the people or events that are held in the location. Visitors want to align their experiences with the values they hold and so there is often a desire to see and experience those things which are desirable. Creating a set of experiences that are sought after can establish a distinctive destination through the unique mix of products and services.

### *Environmentally Sustainable*

New Zealand markets itself internationally as 100% Pure, and Christchurch markets itself as the Garden City. Consequently the country and the city create expectations for visitors that should be realised during the visitor experience. Environmental standards for waste and for energy efficiency are rising globally – these standards need to be reflected in the performance of the destination if we are to meet the expectations of our visitors. Most of our international source markets have high environmental standards for waste management and public transport and New Zealand will have to be seen as meeting or exceeding international norms if it is to retain its environmental credentials in the eyes of visitors.

### *Presents compelling reasons to visit and stay*

To grow visitation beyond normal population growth levels destinations generally have to offer compelling reasons to visit or stay. International tourism is highly competitive amongst nations and destinations. Domestic visitors are presented with a myriad of choices from domestic destinations, international destinations or other goods that consume the discretionary dollar. Without events and or unique desirable tourism product offers tourism will struggle to make a strong contribution to the regional economy.

# Tourism Peer Review

### *Tourism sector overview*

In general there are two approaches to tourism sector strategic development. A destination determines its visitor attractions (the supply side) and then markets to a target market that aligns with those attractions. The alternative is to assess the visitor market opportunities (the demand side) and then develop attractions that align with the requirements of those visitor markets. Through the development of the CCP the city has a unique opportunity to do both. It can build on the attractions that exist and cater to that market that is already attracted to what Christchurch has offered in the past. It also has the opportunity to reinvent how the city operates and what it offers and thereby be attractive to different and new markets and visitor segments.

***Bearing these options in mind some key changes in the visitor market are occurring that should be taken into account when considering the framework for the Christchurch city. These include:***

- A rapidly changing international visitor mix with increasing visitation from Asia and less from the Americas and Europe
- Increasing numbers of independent travellers rather than group tours.
- Direct booking internet enabled visitors
- Visitors from highly urbanised home destinations that have high levels of service and infrastructure, ranging from internet to transportation to hotel service standards
- A trend to shorter stays
- Our international visitors are getting older
- Our visitors are placing a greater emphasis on authenticity and direct experiences.
- New Zealand domestic travel static on a population basis and facing increasing competition from international destinations

## *Section 2: Plan Review*

***We have reviewed each section of the 19 July version of the draft plan from a tourism perspective, keeping in mind the principles described above. Comments are provided for each section of the plan on issues or aspects of sections that relate to tourism which are either tourism enhancing or warrant further consideration from a tourism perspective.***

***Front Matter***

- While many use the terms tourist and visitor interchangeably the preferred and more encompassing term that the sector prefers is visitor. In a number of places through the document “tourist” is used.
- The five guiding principles on pages ii and iii are all very positive from a tourism perspective. In general, the more liveable a city from a resident’s perspective the more attractive it will be from a visitor’s perspective.
- While Ngāi Tahu are extremely important as tangata whenua and the stories and knowledge of the city and region can be communicated with new meaning and understanding, sight should not be lost of the European heritage of the city which is iconic for many international and domestic visitors.
- Remembering: A menu of options is presented (p xviii) which all have differing merits, risks and uncertainties. A memorial can certainly have tourism pulling power and would resonate for many communities. It could be an iconic part of the visitor experience such as the ground zero memorial in New York and the Vietnam memorial in Washington DC. EQ HQ appears expensive at over $40M and with a small visitor base may not be able to cover its operating costs without significant subsidy. The earthquake interpretation multimedia proposal also appears expensive for a temporary display. Maintenance and redundancy for such displays is an important issue in assessing the lifecycle costs of this proposal. The phone app with augmented reality option would appear to be a very cost effective option. If combined with a tour guide the experience could be outstanding. The earthquake events proposal is unclear. The target audiences need identification if visitors from out of Christchurch are expected. Further development of this concept would appear to be needed before additional advice can be provided.

***Spatial Plan***

- A compact CBD is likely to be highly attractive to the visitor market as it enables visitors with limited time and ability to travel to experience more of a destination.
- An inclusive and accessible city (p32) would be seen as highly desirable by the majority of visitors and reflects the tourism principles that could be incorporated into the Christchurch CCP.

*Green City*

- A green city concept (p38) and implementation aligns very well with positioning and marketing of New Zealand internationally. 100% Pure is the strapline for Tourism New Zealand marketing and the proposed initiatives to make our urban environments more attuned to this position will improve delivery on this promise.
- The concept of integrating green initiatives into the built environment in a distributed way and not just more blocks of green in a segmented way within what is essentially a built environment will enable visitors to have a greater contact experience with the New Zealand environment and what it has to offer (p66).
- The emphasis and priority accorded to water quality for the Avon River is welcomed. Clean high quality water bodies in an urban context are a rarity and if this can be achieved the attractiveness of the river would be considerably enhanced (p46).
- The plan tends to focus on large green initiatives. Visitors are often time limited and therefore are unlikely to fully utilise large green spaces or opportunities. In general, visitors will be more likely to make intensive use of jewels in an environmental offering. Consequently attention should be paid to having high quality experiences that are easily accessible and close to visitor accommodation. It is questionable whether visitors would be major users of a continuous journey concept (p46) whereas this would be a valuable asset for residents.
- Cathedral Square was a hard surfaced environment in the past. Softening this is expected to be a positive for visitors and fits well with a vision of a green city (p50).
- Benefits: ... to inform residents of all ages and abilities and visitors to Christchurch ... (p50).
- Latimer and Cranmer squares currently have access restricted by traffic. Improved access will benefit visitors and enhance their attractiveness (p55).
- The proposed Central City garden way (p60) - does this provide an events venue as well as recreational and environmental benefits?
- The concepts of markets tend to focus very heavily on farmers markets. While farmers markets are visitor attractions, the visitors can't necessarily make use of the produce. There is potential to have a wider range of markets to be considered such as antique and general markets. Transport to service such markets will need to be considered carefully (p74).

*Market City*

- Shopping is the number one activity for both domestic and international visitors. As a result the retail offer and the opportunity for distinctive shopping will be an important component of visitor satisfaction with a revitalised Christchurch CBD.
- Shaping the retail environment will also have an important bearing on where accommodation is located.
- The tourist centre location at the Botanic Gardens (p90) is adequate as a temporary measure while there is no operative CBD. When the CBD is operative a more central location that maximises the touchpoints with the visitor is imperative. This will probably be at the nexus of accommodation attractions and retail precincts.
- There appears to be no consideration or discussion of visitor accommodation needs and the planning for the 7000 beds lost due to the earthquake. How this integrates into the city plan is a fundamental building block of the visitor economy.
- The incentives outlined (p91) also need to be available for tourism. In particular, for capital intensive activities that have long payback periods. Hotels will take some time to return to high occupancy levels in a city rebuilding over a 10 or 20 year period.
- The retail strategy (p98) needs to factor in the location and density of visitor accommodation in the CBD. Visitor spending can be a significant early contributor to the recovery of the city and is additional spending that comes from outside the local economy.
- The concept of an international quarter (p103) appears to be at odds with making Christchurch a distinctive city and seems forced and out of character. In particular, ideas around specific ethnic style quarters would need to be treated with caution. The lanes in Melbourne are distinctive, yet they don't need particular theming to be attractive. Would this proposal align with visitors perceptions of Christchurch?
- The concept of a smart city (p108) is vital for today's international visitors and will be taken as a given in future. New Zealand is only catching up in the area of free Wi-Fi and UFB. Visitors are increasingly expecting to have access to wireless internet that is fast and free.
- The convention centre proposal (p110) is vital to tourism for a number of reasons. Conventions business is high value compared with holiday makers. Conventions provide good low and shoulder season business and improve the profitability

# Tourism Peer Review

of many tourism businesses. Conventions also have significant spill-over benefits to the business and scientific communities. Consequently early commitment will provide certainty for additional investment required for the visitor economy.

- In considering the redevelopment of the convention centre, careful thought must be given to city accommodation and transport issues. Redevelopment also needs to factor in the proposed national convention centre and international trends in the conventions and incentives market.

***Urban Life***

- New proposals such as a metro sports facility (p120) have the potential to be very positive for the visitor industry. New venues provide options for events that otherwise might not be possible. Combined with sufficient accommodation stock, Christchurch could significantly improve its attractiveness as a sports event destination.
- Art in the city (p126) would build on the previous attractors of the city such as the arts centre and the new art gallery. These are valuable from a visitor attraction perspective, and especially with the changing demographics of our visitors.
- The safe city concepts outlined (p135) will be of great benefit to the visitor industry. If they can be factored into the reconstruction then they represent a low cost method of satisfying an important visitor requirement of a destination.

***Distinctive City***

- While this section of the plan presents many choices it is unclear what the unifying element might be that will make the city distinctive. From a visitor perspective, it is often an iconic building such as the Sydney Opera House or New York's Statue of Liberty that comes to symbolise the city. This section does not appear to address such an approach.
- The section focuses on the earthquake risk and a desire for a low-rise city. From a visitor perspective this may create some economic issues in relation to the viability of hotel construction. Is there not a place for podium style buildings that are common in other earthquake susceptible destinations, or at the very least options for iconic high-rise buildings?
- The proposal to have identified precincts and neighbourhoods (p165), while a valuable mechanism for identity of particular areas of the city, does not appear to encompass any specific consideration of the need for new hotels and accommodation providers. This section does not discuss this issue and it is unclear whether there is an expectation of rebuilding on the same sites or an expectation of building within a tourism or residential precinct. Continued concentration of visitor accommodation in the CBD/Cathedral square area will depend on the economics of building and land costs. In addition, the location and scale of a new convention centre and other visitor attractions would be expected to influence accommodation locations.
- Given that many of the major buildings that need to be redeveloped are hotels, comprising some 7000 beds, more consideration needs to be given to the locational requirements of hotels and their traffic needs. In particular, coach traffic and drop off and collection points are important factors when considering redevelopment.
- Lanes and courtyards (p160) provide a distinctive feature in a number of cities and offer a diversity of experiences for visitors. The proposal to make this more of a feature of a redeveloped Christchurch would set the city apart from others in New Zealand.
- Retention of heritage (p172) is a positive attractor for visitors. Increasingly as the visitor population ages there is greater interest in heritage tourism.
- Reuse of heritage assets can be achieved in many ways and there are a number of hotels that now occupy previously industrial buildings. Innovation can be encouraged through financial incentives and other mechanisms as described in the Plan (p177).
- City landmarks are very valuable in the identity of locations for visitors and their roles are clearly articulated (p179). Measures proposed to retain and repair these icons will contribute to visitors' sense of place and ability to navigate the city through reconstruction.

***Transport Choice***

- Visitors, and in particular international visitors, have different needs to residents in relation to transport. Visitors use a more diverse set of transport modes, and also make cross modal changes frequently as part of their visit. Visitors are large users of public transport systems. The connections between the CBD and the airport, and public transport flows are important components of the visitor experience. This may be outside the brief of the CCP but the arterial connections need to be factored in to the overall transport plan.
- Christchurch is a gateway to the world and to the South Island for many domestic visitors. This means that the connection of the airport to other transport modes and also to the Central City is vital to ensure that the experience and appreciation of the city is maximised. The connection of the city to the airport does not appear as an issue in the Plan.

- Transport modes can in themselves present highly attractive visitor experiences – Christchurch Trams and the TranzAlpine train are two notable examples that require excellent connections and awareness to maximise their value.
- Light rail (p202) is well recognised internationally as an urban transport option. It is therefore likely to be readily used by visitors.
- The travel demands of visitors are quite different to those of residents. For example whereas many residents are expected to want to travel to and from the city on a radial network, it may be that visitors will want to travel more around the city in a circular pattern. Transport routes should accommodate the needs of visitors as well as residents.
- Clear signage and an understandable traffic pattern are important for visitors who do not have a detailed knowledge of the city.

## *Conclusion*

***The CBD plan as drafted focusses on Christchurch being a people-centred liveable city. These attributes will be positive for visitors. As a result, the draft Plan presents a very positive set of opportunities for tourism. Some matters warrant further consideration to improve the plans tourism functionality. These are:***

- An integrating concept of what will be the iconic nature of Christchurch.
- Hotel and visitor accommodation – location, traffic requirements and economics.
- Public transport patterns that accommodate visitor needs as well as residents.
- Early commitment to some visitor-related infrastructure, such as the convention centre to support private sector investment.
- Consideration of the arterial transport connections with the rest of the city. From a visitor perspective the airport-city connections are particularly important.

## *Attachment 1: Specific tourism activities or products that could be developed in the short, medium and long term for the Christchurch CBD to enable rapid development of the visitor economy of the city.*

***Short Term (within 12 months)***

- Research and develop an "Earthquake Guides Business" that provides a human face to the earthquake story. The opportunity could involve Cantabrians telling the story of the city and their personal stories. A small professional team, possibly supplemented by volunteers could lead this project. A pilot business could be started by October/November 2011 in association with the temporary Christchurch Visitor Centre in the Botanic Gardens next to the Canterbury Museum (p122). In the longer term, this option would dovetail well with a phone app/augmented reality experience.
- Build a Christchurch story into the education curriculum through geography and other subjects, and promote school visits to work through practical experiences as the rebuild process is occurring.
- Establish innovative events: For example, a Pop-up festival and food and drink – A WOMAD style event in Hagley Park could work for the coming summer and draw people into the CBD.
- CBD shopping week – combine promotional airfares, such as Air New Zealand Grabaseat promotions, with special events, such as a regional World of Wearable Art (WOW) event. This could take the form of a shopping week or month as is carried out in Singapore and many Asian cities as a drawcard for out of town visitation.
- Other events, such as a Fashion show such as iD Fashion week in Dunedin, to draw visitors to the CBD without the need for major infrastructure.
- Sporting events, such as duathlon, running cycling events around and through the CBD.
- Buy unique music events that can be held outdoors.

***Medium Term (1- 3 Years)***

- Focus on the small Conventions and Incentives market – say up to 200 delegates that can be accommodated with existing infrastructure. In particular the corporate meetings market that would have links to Christchurch companies could be the focus of the marketing effort.
- Depending on timing for the repair of the AMI stadium, significant sporting events become viable. In particular, winter and shoulder season events will support the economics of tourism businesses.
- Use the CBD as a hub for other more specialised tours and tourism. For example, with the growth in visitation from Asia golf tourism is a highly attractive option.

# Tourism Peer Review

- Reinstate the Ellerslie International Flower Show and satellite events in the CBD and beyond. This gives Christchurch recognition for its icons and its distinctive characteristics.
- Progress proposals to have an Antarctic Festival. Once facilities are available to host a significant conference ensure that Christchurch achieves recognition as the gateway to Antarctica.
- The airport remains fully operative and there may be an opportunity to partner with other areas of the city to bring an aviation event to the city – maybe an air show in late summer.
- Over this period there will be significant construction and development in the CBD. This time presents a great opportunity to use this construction for focussed trade shows and events around the construction industry as facilities are reinstated.

***Longer Term (3 years plus)***

- The NZ Government could offer to be the APEC host country for 2014 or 2015 or beyond (by then it will be around the time that NZ's turn will come again) and Christchurch could readily be the host city (once the convention centre is built). This would bring an international presence to Christchurch and over 30 scientific, technical and business meetings to the city.
- Depending on the timing and commitment to establishment of the sporting facilities, Christchurch could be in a position to host major sporting tournaments and events. In particular, events with high participation, such as the Masters Games would be valuable from an economic perspective. From 2015 onwards, New Zealand will be hosting the Cricket World Cup and the FIFA under 20 Men's World Cup. These and other sporting events will drive significant visitation.
- A focus on conventions business will support the visitor economy and early commitment to infrastructure combined with a timely well funded bidding programme would generate significant economic activity.
- Longer term, the CBD of Christchurch will return to hosting "normal" visitor activities. Events that accelerate this such as media familiarisation tours and ensuring that the industry is aware of what a rebuilt Christchurch has to offer will be vital to rapid recovery.
- Depending upon the final shape of the city and the attractions on offer, there are many new hosting and guiding opportunities. Examples include architecture tours, food and wine tours and behind the scenes tours of arts establishments. These will depend on what Christchurch establishes for itself as its distinctive attributes.
- Over the longer term, commitments to commemorate the earthquakes and buildings or other structures will be established. These will form part of the city's tourism opportunities and can be promoted as must see or must do parts of the city. Extending the length of stay of visitors will be as important as attracting new visitors over the longer term.

# Community wellbeing scoping framework

## *Central City Plan – Community Wellbeing workstream – scoping framework identifying key outcomes, measures and issues*

| Elements of Social Wellbeing* | Outcomes** | Measures*** | Issues**** |
|---|---|---|---|
| Housing, living space, neighbourhood and sense of place | Range and choice of housing accessible to all people<br><br>Affordable housing<br><br>Warm, comfortable and accessible housing<br><br>Attractive, well-designed neighbourhoods<br><br>Neighbourhoods with mixed demographic composition<br><br>An increase in mixed use housing areas | Housing composition and stock<br><br>Population numbers and density<br><br>Balance of Central City and UDS population<br><br>Household composition<br><br>Streetscapes and neighbourhood amenity<br><br>Walkability<br><br>Physical accessibility of housing for elderly and people with disabilities<br><br>Neighbourhood sustainability index<br><br>Home heating<br><br>Household energy efficiency<br><br>Home ownership/tenure<br><br>Housing market including values and sales<br><br>Housing affordability<br><br>Amount, quality and location of public spaces | · Achieving a mix and diversity of housing types, sizes tenures and densities<br><br>· Potential gentrification of existing housing areas<br><br>· Providing a range of affordable housing options including social housing<br><br>· Repair and replacement of damaged social housing<br><br>· Meeting the needs of displaced inner city residents including any temporary housing<br><br>· Meeting housing needs for the construction workforce<br><br>· Meeting housing needs for all – including universal design principles<br><br>· Provision of housing for the elderly<br><br>· Support for neighbourhood and other innovative initiatives around housing and the use of space<br><br>· Identifying what inner city housing needs to look like to attract residents:– space, design, proximity to services such as health and schools, home heating, residential character and amenities, etc<br><br>· Development of exemplar inner city housing<br><br>· Achieving mixed use zones and what attracts residents to them and any conflicts involved<br><br>· The roles of public and private investment in affordable and social housing<br><br>· Likely social-economic make up of residents in the new Central City |
| **Elements of Social Wellbeing*** | **Outcomes**** | **Measures***** | **Issues******** |

| | | | |
|---|---|---|---|
| Economy, business activity, income and employment | Opportunities for a wide variety of employment<br><br>Strong economic base in Central City<br><br>Attractive place to do business.<br><br>Innovative businesses<br><br>A vibrant and prosperous city centre.<br><br>Identifiable business precincts<br><br>Accessible and viable local shops | Employment counts/ participation<br><br>Business units<br><br>Size of business units<br><br>Types of business units<br><br>Tourist beds<br><br>Conferences held<br><br>Visitor bed nights and length of stay<br><br>Skills availability and gaps<br><br>Travel to work distances and modes<br><br>Participation in creative/ innovation sectors/labour productivity<br><br>Quality of working environment<br><br>Income & social-economic status<br><br>Global competitiveness measures<br><br>Internships/ apprenticeships completed | · Encouraging mixed business use developments (i.e. retail and residential)<br><br>· Encouraging building/rebuilding of 'local identity' retail/services (e.g. Piko, Ballantynes, Dux de Lux, Johnsons) and precincts<br><br>· Ensuring skills are available to meet diverse new demands<br><br>· Stimulating jobs growth and productivity<br><br>· Encouraging learning centres and businesses which encourage internships and apprenticeships to source employment and/or encourage capacity development - particularly to retain young people.<br><br>· Provision of adequate child care for Central City workers<br><br>· Creating linkages between Central City retail/ services and the wider city (especially those areas around the central city perimeter)<br><br>· How to prioritise investment in Central City versus elsewhere in city including benefits from clustering activity<br><br>· Encouraging an innovative, design-led, business sector, a preferred location for high-value, knowledge intensive activities<br><br>· Balancing property/use rights with public interest such as safety, sustainability, etc<br><br>· Potential loss of investment with insurance payouts<br><br>· Difficulty obtaining insurance for rebuilds<br><br>· Future role of big box retail inside/outside Central City<br><br>· Attracting large hotels back<br><br>· Size, shape and role of tourist precinct/s<br><br>· Identifying factors that make the Central City an attractive place to work and visit such as entertainment, arts, culture<br><br>· A city driving regional and national growth |
| **Elements of Social Wellbeing*** | **Outcomes**** | **Measures***** | **Issues******** |

# Community wellbeing scoping framework

| | | | |
|---|---|---|---|
| Transport and communications | A transport system that provides access to the full range of activities in and external to the Central City with excellent linkages throughout<br><br>A range of transport options with integration of transport modes<br><br>Well-located parking infrastructure (private and public)<br><br>High capacity and flexible digital communication | Travel to work time and costs<br><br>Accessibility of public transport<br><br>Ability to walk and cycle on dedicated infrastructure<br><br>Use of different transport modes<br><br>Accessibility of key destinations and services by transport mode (hospital, school, GP, food shopping, etc)<br><br>Parking availability and use<br><br>Broadband and WiFi connections and speed | · Exploring the range of public transport options and their accessibility and connectivity<br><br>· Developing a strategy for transitioning the transport model mix over time<br><br>· Designing and locating slower traffic environments that encourage walking and cycling<br><br>· Encouraging active transport options for improved health outcomes, and considering the health implications of all transport modes<br><br>· The role of pedestrian precincts<br><br>· Exploring the basis for and implications of a digital city including broadband and WiFi access<br><br>· Providing for disability access to all modes<br><br>· Developing a clear wayfinding system<br><br>· Clear communication about travel times and options and any travel difficulties |
| Goods and services, retail and commercial spaces | Land available for a mix of uses<br><br>Sustainable infrastructure<br><br>A wide range of services available in the central city | Retail floor areas<br><br>Distances to retail activity<br><br>Numbers, types of and distances to schools, health care and other services by location<br><br>Access to goods and services<br><br>Functional and social amenity of private and public facilities | · Identifying areas, or sites within areas, for mixed retail/commercial and residential uses<br><br>· Identifying and facilitating retail anchor points<br><br>· Encouraging a full range of retail activity including accessible supermarkets<br><br>· Designing retail spaces with high social amenity values such as public spaces and street interaction<br><br>· Reinvestment in the tourism and hospitality sector<br><br>· Investment in a new convention centre<br><br>· Providing a full range of services including attracting a full range of social services into the Central City |
| **Elements of Social Wellbeing*** | **Outcomes**** | **Measures***** | **Issues******** |

| | | | |
|---|---|---|---|
| Lifelong learning and education | Highly skilled and adaptable workforce<br><br>Skills for participation in society<br><br>Full range of education opportunities available in the Central City | Skills availability<br><br>Work readiness including literacy/numeracy<br><br>Participation in early childhood, primary, secondary, tertiary education<br><br>Tertiary providers and courses available<br><br>Lifelong learning participation<br><br>Internships/ apprenticeships undertaken<br><br>Extra-curricular course attendance<br><br>Central Library attendance/ use<br><br>Student beds in Central City | · Scoping an educational precinct or precincts, and what these need to include to achieve wider involvement of tertiary institutions<br><br>· Supporting equitable lifelong learning via community infrastructure, e.g. through locating childcare services in the central city area<br><br>· How best to integrate library services into central city community infrastructure<br><br>· Considering adult education needs<br><br>· Providing a range of school levels and types in the Central City<br><br>· Utilising school zoning as an incentive tool for residential intensification<br><br>· Establishing ways and locations for ongoing learning from the earthquakes and recovery programmes (e.g. through the EPI-Centre project |
| **Elements of Social Wellbeing*** | **Outcomes**** | **Measures***** | **Issues******** |

# Community wellbeing scoping framework

| | | | |
|---|---|---|---|
| Personal, community and public safety and freedom from risk | Communities are safe<br><br>Low levels of crime<br><br>Protection from natural hazards –<br><br>Preparedness for disasters<br><br>Low impacts from hazard events | Crimes committed/solved<br><br>Perception of safety<br><br>Occupation of commercial buildings by type and height<br><br>Safer Christchurch Partners feedback<br><br>Natural hazard concerns | · Recognition of crime and injury prevention principles and tools (CPTED and IPTED) in the rebuild/redesign of the central city at the design stage of developments<br><br>· Developing productive relationships and communication with Safer Christchurch partners<br><br>· CPTED assessments on areas/sites of notable concern – especially during the transitional stage.<br><br>· Determining the optimum numbers/diversity of people to live in the Central City and achieve social cohesion/reduce conflict<br><br>· Mitigating any re-emergence of previous issues, e.g. alcohol problems, violence, cruising<br><br>· Development of a Disaster Risk Reduction Strategy and review of procedures for preparedness and risk reduction for disasters<br><br>· Preparation and quality communication around natural disasters – including tsunamis, snow storms, earthquakes, cyclones, flooding, etc.<br><br>· Management of nuisance activities such as noise and loose rubbish<br><br>· Providing a safe environment for all workers and commuters, particularly at night<br><br>· Creating a safe and attractive environment for international students and all visitors<br><br>· Gaining access to geo-technical information and communicating it clearly to the public<br><br>· Developing buy-in from architects and developers about the importance of building safety and CPTED applications.<br><br>· Developing buy-in around quality building design and low-heights<br><br>· Recognition of future risks from climate change including storm surge, flooding and sea level rise, and catchment management<br><br>· Emergency Response criteria/practices/ guidelines/tools |
| **Elements of Social Wellbeing*** | **Outcomes**** | **Measures***** | **Issues******** |

| | | | |
|---|---|---|---|
| Physical and mental health | Public are physically healthy<br><br>Low levels of accident and injury<br><br>A safe transport system<br><br>Inclusion of people with health needs in city life<br><br>People have good mental wellbeing | Access to a range of health facilities (primary-tertiary)<br><br>Health status of population<br><br>Accident/injury/ACC rates<br><br>Respiratory illness<br><br>Provision of community services<br><br>Incidents of public health risk<br><br>Emissions and air quality | · Designing the CBD at a human scale<br><br>· Encouraging a diversity of people so that everyone feels the CBD is theirs including those with limited mobility, low income, new settlers or other vulnerable groups<br><br>· Attracting and retaining health services, and establishing the optimal composition and role of health precincts and services<br><br>· The role and balance of public and private health facilities<br><br>· The role and balance of primary and tertiary health care<br><br>· Public facilities which promote physical and mental wellbeing.<br><br>· Building public health into planning and design<br><br>· Ensuring safe design and disability access<br><br>· Providing food security with a wide range of fresh foods available |
| Outdoor areas, natural environment and open space | Water quality is protected or enhanced<br><br>Indigenous biodiversity is enhanced<br><br>Garden City image is retained<br><br>Adequate open space<br><br>Well-designed spaces | Biodiversity<br><br>Area and distribution of open space<br><br>Access to parks and open space<br><br>Use of parks and open space<br><br>Green buildings and adoption of the Build Green tool | · Integrating open and green space into retail and residential areas and streetscapes<br><br>· Incorporating biodiversity into the city centre including streams and stream margins<br><br>· Greening of brown sites during rebuild process<br><br>· Defining what creative uses should be planned for open space<br><br>· Making suitable space for events including temporary space<br><br>· Creating open space with high social amenity, such as seating and meeting places and areas for children to play<br><br>· Redefining the role of Cathedral Square and the Avon River corridor and margins |
| **Elements of Social Wellbeing*** | **Outcomes**** | **Measures***** | **Issues******** |

# Community wellbeing scoping framework

| | | | |
|---|---|---|---|
| Lifestyles, leisure and recreation | Arts and cultures thrive<br><br>Well-managed and well-used libraries and recreation facilities<br><br>Broad participation in sport and recreation | Availability of arts and cultural activity<br><br>Participation in recreation and sport<br><br>Use of recreation facilities<br><br>Use of arts and cultural facilities<br><br>Participation in arts<br><br>Activity in the creative sector | · Establishing the appropriate number, form and linkages of libraries, cultural facilities and recreation centres/facilities<br><br>· Investigating a metro sports facility and centre of excellence and its relationship to facilities in the rest of the city<br><br>· The role of the Botanic gardens and Hagley Park adjacent to a rebuilt city centre<br><br>· Ensuring accessibility for all to recreational facilities and activities<br><br>· Including the arts/culture sector in the Central City, and the form of a precinct/s<br><br>· Exploring multiple use facilities such as a rebuilt convention centre, performance space and Town Hall |
| Family, social attachment and support | People have a sense of belonging<br><br>Rich social networks<br><br>Cultural diversity is valued<br><br>Strong sense of community, neighbourhood and precinct<br><br>Ready access to social services | Social capital<br><br>Gaps in social services<br><br>Community based organisations and services<br><br>Household composition<br><br>Ethnicity of residents<br><br>Participation in community life<br><br>Volunteerism at a local level | · Support and encouragement for a wide range of local groups and associations<br><br>· Ensuring equity is taken into account in the central city rebuild<br><br>· Creating opportunities for cultural diversity<br><br>· Relocating/rebuilding the Community House model<br><br>· Supporting the role of schools, churches and related services as community focal points<br><br>· Attracting a range of social service delivery and agency HQs back into the city |
| **Elements of Social Wellbeing*** | **Outcomes**** | **Measures***** | **Issues******** |

| | | | |
|---|---|---|---|
| Participation in community and society | People are actively involved in communities and decision making<br><br>Leadership and clear strategic direction is evident<br><br>Ngāi Tahu are partners<br><br>Strong collaboration between key partners in the recovery process | Social equity<br><br>Cultural diversity/ethnic composition<br><br>Participation in Council plans and engagement processes<br><br>Involvement in decision making<br><br>Community leadership | · Fostering civic life, a sense of belonging<br><br>· Identifying opportunities for community engagement during (and after) the rebuild<br><br>· Building relationships and engagement with Ngāi Tahu and tauiwi<br><br>· Provision of community spaces for people to meet and engage with one another<br><br>· Collaborating with community based organisations including identifying any "missing" partners and building in their input<br><br>· Engaging with local communities and communities of interest throughout Plan development and implementation |

*Notes:*

*This framework was developed by members of the Community Wellbeing workstream*

** These elements of wellbeing can and have been applied and tested on a variety of projects and plans in NZ*

*** Outcomes are aspirational and where appropriate are consistent with existing CCC objectives*

**** Measures use available methods and data sets - counts would be disaggregated wherever possible by variables such location, demographics, etc*

***** Issues are areas of uncertainty for investigation and dialogue considered in respect to community wellbeing aspects of the Plan . The initial framework was used to guide development of the plan from a community wellbeing perspective. It was expanded based on consultation and analysis undertaken while preparing the draft plan and therefore reflects issues that emerged as the plan was developed.*

# Integrated wellbeing and sustainability assessment

## *Integrated wellbeing and sustainability assessment of the draft Central City Plan*

### *Report*

***For***

Christchurch City Council

Canterbury District Health Board

***From***

***Quigley and Watts Ltd and Martin Ward***

***Robert Quigley, Martin Ward***

September 2011

Canterbury District Health Board
Te Poari Hauora o Waitaha

# *Contents*

# Integrated wellbeing and sustainability assessment



**Suggested Citation:** Quigley R, Ward M (2011). Integrated Wellbeing and Sustainability Assessment of the draft Central City Plan. Provisional Report for Christchurch City Council and Canterbury DHB. Wellington: Quigley and Watts Ltd.

## *Acknowledgements*

The authors would like to acknowledge the ongoing support of the two lead agencies and their staff for this assessment process. Allowing a draft plan to be assessed by independent consultants and by prominent and wise Christchurch individuals is a brave undertaking and Christchurch City Council is to be commended for their openness to such a process.

***Key staff who have sponsored and guided the process deserve special thanks:***

- Tony Moore (Christchurch City Council)
- Anna Stevenson (Canterbury DHB)
- Nick Taylor (Christchurch City Council)
- Karen Banwell (Environment Canterbury)
- Eynon Phillips (Christchurch City Council)
- Alison Bourn (Canterbury DHB)

***Many others have contributed their time throughout the process:***

- Alan Bywater (Christchurch City Council)
- Ceciel DelaRue (Christchurch City Council)
- Ruth Foxon (Christchurch City Council)
- Matthew Freeman (Impact Project Management )
- Jocelyn Mahoney (Christchurch City Council)
- Adam Naiman (Christchurch City Council)
- David Price (Christchurch City Council)
- Richard Shaw (Christchurch City Council)
- David McDonald (Christchurch City Council)
- Dion Douglas (Christchurch City Council)

***We would also like to thank the participants of the workshop who gave up their time freely to help us assess the plan. Their wisdom and knowledge has ensured that the Council has a clear set of recommendations to help with their refinement of the plan. Participants were:***

- Peter Beck
- Vicki Buck
- Geoff Butcher
- Neil Challenger
- Elizabeth Cunningham
- Peri Drysdale
- Quinn Henderson
- Alistair Humphrey
- Sam Johnson
- Simon Kingham
- Rob Lawrence
- Jasper van der Lingen
- Di Lucas
- Jenny May
- Garth Nowland-Foreman

# Integrated wellbeing and sustainability assessment

- David O'Connell
- John Peet
- Harvey Perkins
- Mark Prain
- Mary Richardson
- Suzanne Vallance

***These people were invited but were unable to attend:***

- Andrea Lobb
- Paul Londsdale
- Colin Meurk
- Arihia Bennett
- Bob Blyth
- Rev Lapana Faletolu
- Judith Roper-Lindsay
- Simon Swaffield
- Simon Tam

## *1. Executive Summary*

This report records the process and outcome of a wellbeing and sustainability assessment of the Draft Central City Plan. It was commissioned by the Christchurch City Council and the Canterbury District Health Board. The assessment was against the five guiding principles set by the City Councillors at the commencement of the planning process and identified as being "vital to creating a vibrant and prosperous city".

The assessment process used here was developed and piloted in Canterbury to enable planners at an early stage in the planning process to check for unintended consequences and to identify where improvements can be made. The goal was to contribute to making the City more sustainable and able to support the health and wellbeing of its citizens. It was undertaken in two stages starting with the development of assessment criteria and scale descriptors and then assessment by a group of 21 respected Christchurch citizens invited for the purpose.

Thirty-seven assessment criteria were developed with reference to past assessments of this kind and national, regional and local frameworks, strategies and policies with assistance from Council and District Health Board staff. An initial trial of these led to adjustments before a final set of assessment criteria were taken into a one day workshop with the citizen assessors.

The assessment group were pleased to be invited to take part, complimented the process adopted and congratulated the Council and the District Health Board for providing the opportunity to assess the plan.

***The following recommendations were made for amendments to the Draft Central City Plan:***

1. Include an explicit statement about the processes for future collaboration[1] with communities of interest, including funding and council staff resources for capacity building of communities to participate. Some specific groups still feel under-represented in the existing consultation, and consideration should be given to targeted involvement and collaboration with communities of interest.
2. Review incentives to ensure that they contribute to all of the guiding principles and are effective. The concept of incentives was welcomed. However at present there is concern they include some incentives that are likely to be ineffective and others need to be added. There is also a perceived concern they could incentivise some businesses and outcomes which are less desirable, while there are no incentives for core community wellbeing requirements (GPs, primary schools, residential care services, social services, etc) and critical outcomes (land aggregation to make lot sizes viable and able to undertake innovative land uses and best practice design). Additional details are needed on how the incentives might work and how many people/organisations/businesses might be supported from them.
3. Include an explicit statement about the complementary (or not) of the plan and projects and wider recovery – that is the integration between city and suburbs. At present such integration is either absent or not explicit in the plan, despite this being a guiding principle to the plan development. Participants suggested a review of each project on the potential for integration, and bringing that information together in a single section at the front of the document (as there would likely be substantial overlap between projects).
4. Include urban design guides, urban design panels and style guides for character areas to ensure that a 'rules-based' approach is avoided, in preference for an approach where stakeholders and communities work together. The individual guides recommended for use on p78 must have procedures around them to ensure that they are actually used. Capacity building of staff in the use of the tools will be required, as will auditing of their use.
5. Confirm who and what agencie(s) are making the final decision on the plan.
6. Explicitly identify opportunities to continue to work with Ngāi Tahu, such as processes for shared governance, integrating cultural heritage into projects, and working with Ngāi Tahu as a developer.
7. Be clear about underlying assumptions or reasoning, i.e. moving away from cars, peak oil, climate change, building heights.
8. Reflect the multiple changes to the content of the plan (included in this report, p15-21) that help the plan provide more 'how to' for the council to achieve these aspirations. There was felt to be a good deal of 'where we want to be' but a lack of 'how to get there' for many of the aspects of the plan, which is of course what a plan is supposed to provide – 'how to get from where we are to where we want to be'. For example, planning responses for people with disabilities are silent in the 'how to'.
9. Reflect the multiple opportunities to support the plan recommended (included in this report p15-23). These opportunities are relevant to bylaw changes, development of other policies, or capacity building of staff.

The report records the assessment details, discussion at the assessment workshop and many additional minor recommendations.

[1] *Collaborate – to 'partner with the public in each aspect of the decision (IAP2).*

# Integrated wellbeing and sustainability assessment

### *2. Introduction*

Quigley and Watts and Martin Ward were contracted by the Canterbury District Health Board and Christchurch City Council to develop and facilitate an assessment process. The purpose was to assess how well the draft Central City Plan (which we refer to as, the plan) met the guiding principles as set out by elected Councillors and, in so doing, met sustainability and wellbeing goals (as expressed in various Council and District Health Board documents). In particular, the assessment aimed to identify where the plan could be further strengthened.

This assessment was completed within the period for public consultation and is to be presented to the council for its consideration in reviewing the plan.

## *Background information*

### *Principles of the Central City Plan*

***At the beginning of the planning process Christchurch City Councillors agreed a set of principles to guide the development of the plan. They were described as "vital to creating a vibrant and prosperous city" and have been used as the cornerstone for this assessment process. The principles are:***

1. A long-term view of the future
    a) Build-in safety and resilience to withstand natural disasters and climate change
    b) Promote a green and sustainable garden city
    c) Support a complementary balance between the central city and suburban centres
2. Easy to get around
    a) Promote a city that is easy and safe to get around
    b) Support a balance between walking, cycling, public transport and driving
3. Vibrant central city living
    a) Create an attractive and vibrant central city to attract people to live in Christchurch
    b) Encourage a healthy mix of housing, schools, entertainment, offices and shops in the central city
    c) Ensure that public spaces and buildings are people-friendly and liveable.
4. Foster business development
    a) Rebuild an economically viable and affordable city
    b) Attract new business and talent
    c) Support business through high quality and innovative infrastructure
5. Respect for the past
    a) Enhance the beautiful setting of Christchurch beside the Avon River and Hagley Park at the foot of the Port Hills
    b) Celebrate the city's culture and heritage for the future
    c) Respect the existing street pattern

### *Central City Plan*

***Under the Canterbury Earthquake Recovery Act 2011 the Christchurch City Council was given responsibility to develop a plan for the redevelopment of the central city. Since April 2011 the council has worked with key stakeholders and the community to develop a draft Central City Plan. The plan is based on the themes that emerged from the 'Share an Idea' project:***

- Green City
- Distinctive City
- City Life
- Transport Choice
- Market City

Christchurch City Council endorsed the plan for community consultation on 16 August 2011. Submissions on the plan closed on 16 September 2011 and hearings commenced on 3 October. A copy of the draft plan is available at *www.centralcityplan.org.nz*.

Other plans being developed for the suburban areas outside the central city (such as suburban master plans) were not covered by this assessment process.

# 3. Assessment approach

## Introduction

Assessment is undertaken to test and check planning and development. In particular, testing how processes were undertaken and whether the outputs created will help meet the pre-set goals. Assessment essentially tests/checks processes and outputs to further promote positive effects and help mitigate adverse effects or unintended consequences. In addition, they provide one form of quality assurance regarding the question "Does our plan reflect our objectives and guiding principles?" They are conducted at an early stage in the planning process so that if questions/problems are identified, further planning/changes to plans can be undertaken to avoid negatives, and positives can be further promoted.

For greatest benefit, assessment activities should be undertaken using skilled professionals to design and manage process; and include knowledgeable and experienced participants to judge the plan. We selected workshop participants from Canterbury and they provided substantial depth of understanding, knowledge and expertise in one or more areas. The workshop participants are listed in the Acknowledgements section.

## Development of the tool and assessment approach

An integrated project and plan appraisal tool that focused on wellbeing and sustainability was developed by Quigley and Watts Ltd and Martin Ward, in conjunction with Canterbury DHB and Christchurch City Council staff and consultants, to be used throughout the process. The process and tool needed to allow a complex plan to be transparently assessed in a pragmatic and effective manner for decision makers.

***There are well-established practices for assessing impacts across multiple criteria, however they are typically not undertaken in a single workshop and instead are undertaken as separate assessments, e.g. Assessment of Environmental Effects, Social Impact Assessment, Health Impact Assessment, Cost Benefit Analysis, etc. The approach used here developed assessment criterion and scoring scales before the workshop; and then in the workshop:***

- confirmed the assessment criteria and scoring scale for each
- set bottom lines and top lines
- scored the plan on the scale
- made recommendations to move the score nearer the top line (if required)

Undertaking these steps in one integrated meeting is no small task, and hence the need for a pragmatic approach that touches on the detail but does not result in a mire. The process was designed to provide a pragmatic assessment approach where identifiable gains could be made to the plan using limited time and human resources.

***Each assessment criterion consisted of:***

- Guiding Principle – from the Council's guiding principles
- Criterion and Description – selected issues that reflect one or more important aspect for each guiding principle.
- Scoring scales – a 5-point scale from negative (-1) through to strongly positive (+3), that sets out potential outcomes for the plan
- Bottom line - the position on the scale that is acceptable, but is as low as workshop participants would like to go. It is a minimum level of delivery participants would like to see from the plan. The bottom line might be a key threshold below which participants wouldn't go, or a minimum standard [denoted by a red circle]. A satisfactory achievement. These bottom lines were set during the workshop by the participants.
- Top line - the position on the scale that is aspirational, but is an achievable delivery that participants would like to see from the plan. The top line might be objectives or targets, or perhaps previous commitments [denoted by a blue square]. These were set by the workshop participants.
- Scores – the rating given by participants of the plan against the scoring scale [denoted by a black cross]. These were set by the workshop participants.

# Integrated wellbeing and sustainability assessment

***An example of one of the 37 assessment criteria is below.***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Build-in safety and resilience to withstand natural disasters and climate change | 4 | Safe and resilient city | The resilience of the new and refurbished city environment | The plan places barriers in the way of improving resilience of city | The plan does not acknowledge the possibility of natural hazard and disaster including climate change **X** | The plan encourages council to plan for the possibility of natural disasters | The plan clarifies funding arrangement for initiatives for reducing exposure to natural disasters. | The plan requires the council to implement initiatives to reduce exposure to natural disasters |

***To undertake the work, six supporting aspects were required:***

1. A set of principles against which the proposal could be assessed, in this case the guiding principles developed by Council to guide the plan development (already available).
2. Documents developed or used in Canterbury that could help guide which assessment criterion might be important for each of the guiding principles
3. A thorough understanding about the plan being assessed, in this case the draft Central City Plan (provided by the participants and augmented by hard-copies).
4. A thorough understanding of the decision-making process so that recommendations for change could be useful (provided by the participants).
5. Excellent working relationships between the key stakeholders.
6. Participation by people with appropriate knowledge and skills about Christchurch including a good understanding of economic, health, environmental, social and cultural issues and trends.

***The 37 assessment criteria (Table 1 below) were developed to cover the 14 elements of the Guiding Principles and these are presented below. The assessment criteria were developed from documents that were created and used in Canterbury:***

- Greater Christchurch Urban Development Strategy (UDS);
- Civil Defence Emergency Management Recovery Framework (CDEM);
- Health Promotion and Sustainability Through Environmental Design (HPSTED);
- Christchurch City Council Sustainability Policy;
- Integrated Recovery Planning Guide (IRG).

*Table 1. Domains and assessment criteria*

| Guiding principles | Assessment Criteria |
|---|---|
| Promote a green and sustainable garden city | Green buildings |
| | Green cover |
| | Surface water management and Avon River quality |
| Build-in safety and resilience to withstand natural disasters and climate change | Safe and resilient city |
| Support a complementary balance between the central city and suburban areas | Balance between central city and suburbs |
| | Demographic diversity is considered and catered for |
| Promote a city that is easy and safe to get around. | Permeable neighbourhoods that link within the four avenues |
| | Connectedness between destinations within the four avenues |
| | Use of Crime Prevention Through Environmental Design (CPTED) and Injury Prevention Through Environmental Design (IPTED) guidelines |
| Support a balance between walking, cycling, public transport and driving | Mode balance supports active transport |
| | Access for all to integrated public transport network |
| | Public transport modes future-proofed |
| | Car parking |
| | Transport connections to external network |
| Create an attractive and vibrant Central City to attract people to live in Christchurch | Community and civic spaces |
| | Provision of retail in core and precincts |
| | Provision of retail within 4 avenues for neighbourhood centres |
| | Community involvement and inclusion |
| Encourage a healthy mix of housing, schools, entertainment, offices and shops in the Central City. | Mix of space and activities |
| | Activities with special social, economic, health and community wellbeing interest |
| | Affordable, social housing and residential care |
| Ensure that public spaces and buildings are people friendly and liveable | Open space quality |
| | Universal Design principles and flexibility of buildings |
| | Connection between building structure and streetscape, and active frontages |
| | Diverse food outlets |
| Rebuild an economically viable and affordable city | Mixed use buildings for business |
| | Employment opportunities and income |
| | Education, research and training services |
| Attract new business and talent | Business hubs created |
| Support business through high quality and innovative infrastructure | Communications technology |
| | Renewable energy |
| Enhance the beautiful setting of Christchurch beside the Avon River, Hagley Park at the foot of the Port Hills | Use of space and links to the river |
| Celebrate the city's culture and heritage for the future | Way finding |
| | Sense of place |
| | Respect for Maori cultural values |
| | Remembrance |
| Respect the existing street pattern | Historic street pattern |

Assessment criteria were refined via a meeting with Community and Public Health staff and a separate pilot workshop attended

# Integrated wellbeing and sustainability assessment

primarily by council staff (chapter leaders who wrote the plan). The assessment criteria were tested for their fit against the plan and appropriate amendments to the assessment criteria were made.

### *Assessment workshop*

***The assessment process undertaken here comprised a number of steps of which the workshop was the culmination. Capturing the wisdom and experience of the large group of Christchurch citizens with many demands on their time required application of the assessment criteria to be restricted to a one day workshop. To effectively cover all 37 individual assessment criteria from the 14 Guiding Principle elements, the assessment criteria were divided into four groups of complementary content. The workshop participants were also grouped into four teams with similar but wide and complementary experience. The four groupings were:***

- 'social'
- 'transport'
- 'green city'
- 'business'.

Achieving integration in this process is a big challenge especially in time constrained circumstances. The development, selection and content of the assessment criteria contributed to integration. Process efficiency dictated the need to divide content but there was also a specific attempt to have some mixing to further support integrated thinking. For example, car parking was put in the business grouping rather than the transport grouping, and some participants were purposefully put into a group that did not reflect their core skill set to provide a different perspective to that group. The assessment team also made sure that work volume was even (i.e. number of assessment criteria per group). Integration was further promoted through review and discussion of each group's work by all other participants.

Regardless, tension remained between desire for integration and the practical constraints of having all participants working together on all 37 assessment criteria – for which, in normal circumstances, several days would have been required.

Many of the components that made up the guiding principles were difficult to objectively define or measure. Therefore the assessment criteria were further developed/refined by the workshop participants, before they set the top and bottom lines. Using these refined criteria the plan was scored by the participants. The process identified whether the plan, if implemented, was likely to meet or not meet the desired outcomes set by the participants. It was important at the scoring stage to record why a score was being made at a particular point, answer how the plan could be improved, and identify any further unintended impacts of the plan. The benefit of this situation is that the information produced is simple to understand and communicate, and it is highly likely to be useful to the decision maker.

Participants made it clear that they were assessing the plan's proposed actions for their consistency with the plan objectives, and were not assessing the feasibility of implementation of the plan.

The full day-long agenda is presented as Appendix 1.

# *4. Results*

Overarching findings, analysis and recommendations related to the whole plan and reiterated by participants in the plenary sessions are presented below. Findings, analysis and recommendations from the individual assessment criterion are presented in section 5 below. Sections 4 and 5 complement each other and should be read together for a complete understanding of the assessment and its recommendations.

Assessment criteria have been organised under the five guiding principles of the plan for the purpose of reporting results back to Council.

### *Process*

Participants engaged enthusiastically in the assessment process. Participants were pleased to be invited to take part and congratulated the Council and District Health Board for providing the opportunity to assess the plan in this invitation-only workshop.

The time allocations during the day for each task were sufficient to allow discussion and debate - some of which was spirited. Some issues remained unresolved and are noted as such in the discussion record of the relevant criterion. The pre-reading together with the staff resources provided at the workshop ensured that sufficient plan detail and related technical information

was on hand for the work. As expected there was discussion around the criteria scale descriptors and several were changed to better reflect the steps or stages along the scale, from less-well performing to strongly performing.

There was discussion at the start of the workshop about the challenges of achieving integration in the division/grouping of assessment criteria and in the division/grouping of participants – notwithstanding in both cases the assessment team created some overlap. By the end of the workshop participants were pleased with their ability throughout the day to comment on different subject areas covered by other groups. However, an observation by one participant was made that the workshop process was not achieving integration in her perspective and would be better described as a 'multidisciplinary workshop', rather than as an integrated workshop.

The comment was made that the criteria and scale descriptors above the +2 level reflected a strong sustainability approach. A strong body of literature sits behind "Strong Sustainability" and if the Plan is delivered to this level, it will represent a "step change" in the way the city functions, creating a more secure future for us all and providing a role model of sustainability for the world. Participants congratulated the assessment team and council for using this approach.

# *Findings*

## *Top and Bottom line setting*

The five step scoring scale adopted for this process sets a business as usual position at 0. Any deterioration from pre-quake conditions is set at -1. There are three positive steps of +1, +2, and +3. Workshop participants selected all bottom line positions (the acceptable minimum level of delivery, satisfactory achievement) at +1 or above, indicating that in general participants had an a desire to see the plan deliver outcomes in advance of those from business as usual.

The top line, aspirational positions were generally above +2 and in some cases above +3. In a few cases participants created a highly aspirational +4 position and scale description to reflect one further logical step on the scale. Some selections were between the scale steps and rarely the top and bottom line were agreed at the same position.

## *Scoring*

Scoring the draft plan required good understanding of both plan volumes. Council staff with a good knowledge of the regulations (an important instrument for delivering the plan outcomes) were present in the workshop to assist participants.

The scoring positions were selected to reflect what was proposed or committed to in the plan. These provided an anchor point for discussion on what could be recorded as recommendations to improve or support the plan and its delivery.

Of interest were scores that fell below the participants bottom line position, therefore providing room for improvement. There were three possible reasons for this. Firstly a score below the bottom line would arise if the matter covered by the criterion was not fully addressed in the plan. This was the case, for instance, for the assessment criterion relating to the adoption of Universal Design Principles (Criterion 23). A second reason was where the plan addressed a matter without a sufficient level of commitment to score highly. This was the case for Surface water management and Avon River water quality (Criterion 3) where stormwater collection and reuse was proposed for large developments (larger than most proposed for the City) and reference to this requirement for small developments was prefaced by the word "may". And finally, where the plan did not address an issue at all. This was the case for Safe and Resilient City (Criterion 4) relating to climate change, flooding, storm surge for rivers and how these may affect the central city.

## *General discussion*

Participants were pleased with the aspirational nature of the plan (volume 1) and the aspirations aligned with those of the participants. However, they identified tension between the aspiration in the plan and the planning commitments and mechanisms in the supporting volumes to back up the aspiration. Participants were concerned that the council would not be 'brave enough to go through with the plan', and wary about the lack of detail in the plan meaning council might not achieve the aspirational goals. Participants suggested that the plan needed greater clarity on 'how to' reach the aspirations. A concern was raised that when money is tight and through prioritisation processes, "green" activities are often dropped.

This lack of confidence partly reflected a lack of clarity about who (what organisation) was going to deliver these projects and where the leadership for plan delivery fell. While the plan implied that the Council and Mayor Parker was in charge, participants were less certain about this power given the roles of CERA, re-insurers, private sector and government. Clarification was requested. Concern was also raised about the potential lack of a democratic process - that the Minister of Earthquake Recovery was to approve the Council's plan and could review the plan and the Council's performance at 6 monthly intervals – by what democratic process?

A related issue was the level of effective community involvement/collaboration. Consultation in the process up to this point was considered to have been done well by Council by some participants, especially considering the difficult working conditions,

# Integrated wellbeing and sustainability assessment

but not so well by other participants. Some participants raised queries about some specific groups being less involved, such as social services and the many thousands of people who rent or own homes and apartments in the CBD representing central city neighbourhoods. Missing from the plan were details of future involvement and collaboration in the implementation process.

It was suggested people most affected by the decisions and projects needed to be included in the implementation of the projects (e.g. inner-city residents could be marginalised with an apparent focus on businesses and the central city). How future collaboration may happen was not explained in the plan and it was felt that the implementation chapter was vague on the process going forward. Given the working environment post February 22 2011 and extreme time constraints participants acknowledged Council had done very well to get the plan to the stage it currently is at. The rapidity of the planning process necessitates highly effective engagement with affected communities, and the process forward is as important, maybe more so and there will now need to be skilful facilitation across sectors to mitigate potential conflicts.

Participants also wanted to see more integration of the plan with the rest of the city outside the Four Avenues. While there was some integration across the boundaries of the Four Avenues in some of the projects, the complementary nature of the plan to the rest of Christchurch was judged to be limited, even for transport assessment criteria.

A substantial issue regarding the rental cost per square metre of new buildings was raised by participants. At around $300-450 per square metre (as advised by one participant), it was the proverbial 'elephant in the room', and participants did not believe it had been adequately addressed in the plan. Such a high cost could present massive challenges to achieving the goals wanted by council and participants, such as a city of diverse peoples and businesses. Participants believed the high cost of rebuilding could marginalise middle to low wealth people in residential housing (leading to gentrification) and marginalise small (non-chain) businesses in commercial buildings (leading to corporate chain tenants). Also, financial imperatives and increased urban living density goals are likely to push rebuilds for some neighbourhoods from 2-storey to 4-storey, and participants were clear that people previously living in those neighbourhoods may not want that type of development. Modest levels of insurance payouts (under insurance, depreciated value insurance, etc) may lead to limited capital being available for rebuilding, possibly leading to low cost/poorer quality construction. Participants did not believe there is enough detail or financial incentive within the plan to deliver high quality but affordable and liveable buildings.

Participants described the blanket rules (in Volume 2) as being less than helpful, and that more subtle regulatory changes for each neighbourhood (paying attention to the special character of places) would be useful. Volume 2 appears to adopt more generic, less flexible approaches (e.g. building height). Participants felt that more refinement was needed especially in building heights, but also commercial activity/mixed use zones to reflect the needs of existing residents and businesses in the central city. This could be complemented by local assessment panels (with a neighbourhood representative) and guidelines for development, rather than regulation.

Participants were very clear that the rebuild of the city should not be through the application of 'backward looking rules' but by creating and validating a new way of working through design principles and guidelines and the use of peer review panels to gain better design outcomes. Participants expressed a desire for leadership through good design processes. Discussion centred on the use of processes around the integrity of product - through creative design that is forward thinking via: accountability, transparency, aesthetics, and traceability. They expressed strong views that planning should not be prescriptive, but that it should be more adaptive, responsive and dynamic. Overall, participants did not support regulation as a means to achieve the outcomes (though acknowledging that they would likely remain), and believed a partnership approach is required and would be more successful.

Participants were interested in the underlying assumptions to the plan and believed that these should be made more explicit. Public discussion about the key assumptions, and about the assumed physical and economic environment (climate change, peak oil, geotechnical issues, insurance company responses) is needed to provide more clarity about the realities and to help prioritise projects (e.g. what projects are critical to address these key issues). Participants noted the underlying tension between modes of transport/parking availability and economic vitality and believed a case still had to be made about the underlying assumption that a mode shift away from private vehicles would be good for the vibrancy of the central city.

Participants were keen to argue for good community infrastructure to support 30,000 residents within the four avenues, particularly for services that are currently not mentioned within the plan e.g. community halls, diverse food outlets, schools, health, residential care services and social services.

## *Key recommendations*

***Councillors, council staff and the people of Christchurch are to be congratulated for putting forward such an aspirational and high quality plan under the most testing of conditions. The assessment participants recommend to council that the plan is amended to:***

1. Include an explicit statement about future collaboration[2] with communities of interest, including funding and council staff

[2] *Collaborate – taken from the International Association for Public Participation's IAP2 Public Participation Spectrum. Collaborate means to 'partner with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution. Communities will be looked to for direct advice and innovation in formulating solutions and incorporate their advice and recommendations into the decisions to the maximum*

resources for capacity building of communities to participate. Some specific groups still feel under-represented in the existing consultation, and consideration should be given to targeted involvement and collaboration with communities of interest.

2. Review incentives to ensure that they contribute to all of the guiding principles and are effective. The concept of incentives was welcomed. However at present there is concern they include some incentives that are likely to be ineffective and others need to be added. There is also a perceived concern they will incentivise some businesses and outcomes which are less desirable, while there are no incentives for core community requirements (GPs, primary schools, residential care services, etc) and critical outcomes (land aggregation to make lot sizes viable and able to undertake innovative land uses and best practice design). Additional details on how the incentives might work and how many people/organisations/businesses might be supported from them is needed.
3. Include an explicit statement about the complementary (or not) nature of the plan and projects – that is the integration between city and suburbs. At present such integration is unclear in the plan, despite this being a guiding principle to the plan development. Participants suggested a review of each project regarding potential integration, and bringing that information together in a single section at the front of the document (as there would likely be substantial overlap between projects).
4. Include urban design guides, urban design panels and style guides for character areas to ensure that a 'rules-based' approach is avoided, in preference for an approach where stakeholders and communities work together. The individual guides recommended for use on p78 must have procedures around them to ensure that they are actually used. Capacity building of staff in the use of the tools will be required, as will auditing of their use.
5. Confirm who is making the final decision on the plan.
6. Explicitly identify opportunities to continue to work with Ngāi Tahu, such as processes for shared governance, integrating cultural heritage into projects, and to continue working with Ngāi Tahu as a developer.
7. Be clear about underlying assumptions or reasoning, i.e. moving away from cars, peak oil, climate change, building heights.
8. Reflect the multiple changes to the content of the plan (below) that help the plan provide more 'how to' for the council to achieve these aspirations. There was felt to be a good deal of 'where we want to be' but a lack of 'how to get there' for many of the aspects of the plan, which is of course what a plan is supposed to provide – 'how to get from where we are to where we want to be'. For example, planning responses for people with disabilities are silent in the 'how to'.
9. Reflect the multiple opportunities to support the plan recommended below. These opportunities are relevant to bylaw changes, development of other policies, or capacity building of staff.

***Recommendations for each guiding principle***

| A long term view of the future |
|---|
| **Plan Integration** |
| The complementary (or not) nature of the plan and projects needs consideration. At present this aspect is unclear in the plan, despite this being a guiding principle to the plan development. Participants suggested a review of each project, and bringing that information together in a single section at the front of the document (as there would likely be substantial overlap between projects). |
| **Plan Incentives** |
| Improve incentives for building to 5/6 star levels. It is recommended that dedicated capital arrangements are made available for loans to cover the additional costs associated with building to a 5/6 star rating. Repayment of loans could be spread over a specified period, 8 to 10 years for example, from the savings incurred from the reduced energy costs. |
| Include incentives (preferably) or rules about water storage to reduce stormwater outputs. |
| Incentives and perhaps regulations, that require a minimum level of green performance, should be considered for residential buildings. |
| **Plan content changes** |
| Reduce the size threshold of properties to say 1000 square metres to include more properties in the requirement to manage stormwater and to encourage collaboration or block-wide responses to deliver economies of scale and improved design and environmental outcomes. |
| Be explicit about the issues of climate change storms, tide/storm surges on the river, flooding, sea-level rise and significant natural events such as earthquakes on Christchurch. These are underlying assumptions and need to be explicitly mentioned, and then the means of dealing with these needs to be integrated into the body of the plan. Issues arising from reduced rainfall in coastal Canterbury and the need for more water efficiencies including storing storm water for use within buildings or watering need addressing. |

*extent possible. Example techniques include citizen advisory committees, consensus building approaches, and participatory decision making approaches'.*

# Integrated wellbeing and sustainability assessment

| |
|---|
| Page 216 in Volume 2 states that the Council "may" require stormwater management approaches for smaller development lots (below 5000m2). Change to 'will'. |
| Develop and include a broad and inclusive definition of "green space". This would need to include private and public ownership, vertical elements and express different qualities and uses. |
| Biodiversity enhancement should be integral to Avon River projects for functioning ecosystems and to enable residents and visitors to get close to nature in the city. |
| Include an explicit description of the needs and solutions proposed for children, older people and ethnic groups in the 'A place for everyone' section. |
| **Recommendations to support the plan** |
| The Council work with the Green Building Council to build mutual trust in the ratings, for example via partnership or audit. Alternatively, Council should investigate leading a green rating system themselves and involve the Universities, central government or a partnership of all. Green credentials should include whole of life costs for a building – including the intended life time of the building itself. |
| As soon as data becomes available, be clear about the location of fault lines and natural levees within the city and manage buildings away from these wherever possible. |
| To aid future planning decisions – priority could be given to green spaces and amenity areas that are designed to deliver multi-purpose spaces, that target missing demographics in the city (such as children and elderly), and help to bridge current gaps in cultural expression (e.g. that reflect Maori heritage). |
| The Council should consider establishing the "true value" of green spaces in the city so that adequate resources are given to this aspect of the city. Demonstrating this value may help with private investments decisions for amenity and green areas. |
| The Council will need to consider maintenance issues for all aspects of green spaces. Often private landscaping is established, but not appropriately maintained. A range of trigger points and responses should be developed to facilitate better maintenance outcomes. Likewise, designs need to be considered for life-cycle considerations. Sustainability criteria could be developed to help considerations over design, material choices and operations. |
| Catchment management plans are needed for the Avon and Heathcote Rivers. |
| Ensure the Build Green Christchurch tool encourages rainwater collection and use for commercial properties. |
| Run-off and pollution treatments during the demolition and construction phases need to be considered, especially if resource consent processes are fast-tracked or not required. |
| The individual design guides recommended for use on p78 of the plan must have procedures around them to increase the likelihood that they are actually used. Capacity building of staff in the use of the tools will be required, as will auditing of their use. |
| Liaise with Universities and other academic organisations to undertake qualitative research on the projects proposed to determine how attractive they are to diverse demographic groups. |

| |
|---|
| **Easy to get around** |
| **Plan integration** |
| Plan needs to commit to an accessible and integrated public transport network throughout Christchurch for all people. |
| Transport projects need explicit links to rest of the city included. |
| Walking and cycling linkages beyond the Four Avenues should be addressed within the plan. |
| **Plan content changes** |
| Make a commitment to accessibility and universal design within relevant projects, or at the start of the plan. |
| Include an explicit description about the major destinations within the Four Avenues, and how the plan proposes to link these, especially via public transport. |
| Be explicit about the potential conflict between the objectives of greater priority for cycles and pedestrians against reduced parking, and how these relate to the objective of making the city a more attractive destination. |
| Commit to use of CPTED and IPTED principles in public spaces, and incentivised use within the private realm. |

| Commit to some low speed streets throughout the area encompassed by the Four Avenues, and not just within the core area, where pedestrians and cyclists have full priority in terms of design, layout and traffic management. |
|---|
| Maintain the requirement for few, and only absolutely essential, parking in the basement of buildings in the core. |
| Include explicit consideration of key connections and quality of connections for non car users in all relevant projects. |
| **Recommendations to support the plan** |
| A business case that accounts for all costs and benefits (health, air quality, congestion reduction, employment, energy savings etc) offered by a comprehensive integrated public transport system should be developed and well publicised. |
| Carry out a financial assessment of the true net cost of providing car parking in buildings and hence enabling additional retail/ office space and active street frontages. |

| **Vibrant city living** |
|---|
| **Plan incentives** |
| Incentives should be reviewed to consider how social service agencies (e.g. food banks, soup kitchens, citizens advice), schools, residential care facilities, community health services, and independent health providers (GPs, pharmacies, etc) are enticed back into the central city. |
| Incentives for particular activities should be re-considered, for example participants queried whether taxpayers would be providing incentives to government department staff (Council subsidising central government agencies), brothels, fast food chain outlets, gaming outlets and bars? |
| Incentives or regulatory trade-offs should be considered for developers, government agencies, co-operatives and third sector housing providers (and others) who group together and propose innovative mixed use developments. |
| Incentives for affordable housing and social housing should have more detail on the number of properties affected, and the detail on how funding will be sourced and such incentives work. Depending on the number of properties affected, Councillors may want to consider increasing and/or altering the way these subsidies work. |
| Incentives for supporting the building of green residential buildings should be explored. |
| Include incentives for the use of Universal Design principles in private residences, commercial spaces and mixed use buildings throughout the Four Avenues. |
| **Plan involvement and future collaboration** |
| An explicit statement about future involvement and collaboration processes for Plan implementation is required. |
| A commitment is needed to collaborating with communities of interest, 'missing partners of the plan' (e.g. primary schools, residential care sector), geographic communities and (existing and potential) inner city residents for all aspects of implementation and especially when designing local spaces. |
| A plan, resources and budget needs to be confirmed to build capacity of communities to participate in planning and implementation. |
| Future collaboration processes should build on the existing elected and non-elected groups that already exist (in some geographic areas, for some communities of interest), and support less-organised communities and geographic areas to participate in future processes. |
| Future collaboration should consider how community ideas on what options to explore, what questions should be asked, and identifying solutions, can be partnered with council ideas and processes. Participants also requested that in certain situations, funding and resources could be made available for communities to collaborate and make decisions themselves, or at the least resources are available to facilitate collaboration. |
| **Plan content changes** |
| Reconsider the requirement for retail outlets above 450sqm of floor space to need a resource consent. Consider multiple level apartment stores. |
| Temporary activation in the city should also be included in the plan as a priority - to help enliven the quake damaged city, but also over a longer time frame, to revitalise and transform the more industrial parts of the city. |
| Zoning rules need to be strengthened in the living areas to ensure only a complementary mix of commercial activity occurs in these areas |
| Commit to provision of spaces that are welcoming to all ethnic groups and socio-economic levels. |
| Commit to more internal spaces that support community development processes. |
| Name existing schools, playcentres and childcare centres within the school choice section. |
| Schools should be considered within a broader paradigm in the plan where they can become 24/7 community facilities. |

# Integrated wellbeing and sustainability assessment

| |
|---|
| Require Universal Design principles be used in public buildings and spaces throughout the four avenues. |
| Some definitions and explanations of the underlying rationale for some of the proposals and regulations would be helpful to make the plan more understandable to non-planners. |
| A farmers market that is focussed on everyday foods is committed to and funded within the plan |
| Planning approaches need to be developed to spatially control less desirable businesses (alcohol outlets, gaming venues, brothels, fast food outlets) within the plan area. |
| The plan should acknowledge the wider destruction of social housing in the city and commit to rebuilding all social housing, not just that within the Four Avenues. Confirmation of how this will be paid for is required as currently rebuilding has $0 allocated. |
| **Recommendations to support the plan** |
| Councillors involved in discussions regarding the red zone housing areas, outside of the city centre, should ask for consideration be given to using these (in part at least) as food production areas. |
| Implementation must also protect views to the Port Hills, Southern Alps, Avon River and to heritage buildings and other important land marks |
| Commit to undertake a review of existing bylaws regarding the distribution and spatial spread of outlets, and the continued use of smart policies such as one-way-door policies for bars and nightclubs. |
| Develop new policies and bylaws relevant to the spatial distribution of fast food outlets. |

| |
|---|
| **Foster business development** |
| **Plan involvement and future collaboration** |
| Greater collaboration with residential sector in the development of mixed use is recommended. |
| Work with private and public sector for provision of child-care services within close proximity to the central city. |
| Actively seek out and be clear about provision of primary schools and childcare centres within the central city |
| **Plan incentives** |
| Put in place a facility or subsidy to ensure there is diversity of business and activity within the central city core in particular, or alter the eligibility criteria of existing incentives to target desirable businesses rather than all businesses. |
| Plan content changes |
| Develop clear mechanisms for the aggregation of land that could provide for mix-use purposes/ opportunities and to include residential. |
| Place substantially greater emphasis on design by using design principles and guidelines that are assessed by peer review design panels (that also involve local community representatives). |
| Be explicit about the importance of linkages between the central core and the rest of the city within the Four Avenues. |
| The regulation for maximum retail space of 450m2 is too-coarse and should be removed. |
| Investigate a hub for exceptional sustainable business. |
| Investigate whether Wi-Fi is the highest technical aspiration available. |
| Define renewable energy. |
| Wider consideration of renewable energy solutions is needed – centralised and decentralised (small scale on-site) options should be considered for buildings, along with the use of biofuels |
| Apply green building tools more widely to go beyond the commercial core and fringe, and to apply to existing buildings. |
| **Recommendations to support the plan** |
| Consider ways of improving the quality of new and existing homes. |

| |
|---|
| **Respect for the past** |
| **Plan content changes** |
| An Urban Design Panel is vital. Sufficient resources should be allocated to allow the panel to review significant building proposals. |
| Ensure 30m set backs along the Avon River are publically accessible and available to utility companies i.e. not cut off by private development. |
| The CBD Road Hierarchy (Volume 2 - MAP) needs another classification for pedestrian areas - “Way” is too broad. |

| |
|---|
| The edges of the Avon River from Armagh Street to the Hospital should be designated as Pedestrian Priority Areas (needing road closures during the day). |
| Promote a range of public and privately run activities along the Avon River. The plan is silent on private opportunities such as hospitality, punting and entertainment. |
| A hierarchy of wayfinding importance is required, wayfinding should encompass as much about design and layout as signage, and international signs should be used. |
| Aim to integrate character elements throughout the plan in appropriate projects. |
| Identify processes in the Plan for shared governance, and have projects that embody a living Maori culture, e.g. Te Reo Village. |
| Opportunities to integrate diverse cultural heritage in projects should be explored through a partnership with Maori (and with other cultures) – for example in the development of the Central Library, Avon River, Pocket Parks, Community Gardens, Convention Centre and Town Hall, public art and events. |
| Special considerations will need to be given to the disadvantaged members in our society (often Maori fall into this group) to consider the socio-economic aspects of the plan. Affordability and equitable access would be two key considerations for future collaboration. |
| Focus on the quality of memorials and their relevance over time, rather than the number. Experiential memorials are preferable to static displays. |
| Consider process by which memorials will be identified and developed. |
| The need to remember people/community sprit/courage and resilience rather than the "disaster." |
| **Recommendations to support the plan** |
| Engage with Ngāi Tahu as a development partner for key projects. |
| Link with schools and communities to help care for and study the Avon River. |
| Consider the development of style guides that are particular to defined character areas. Precincts could have their own special character to help with legibility. |

# *5. Results for each assessment criterion*

For each assessment criterion the top and bottom line and score; and findings, analysis and recommendations are presented. The bottom line is denoted by a red circle, the top line is denoted by a blue square and the score is denoted by a black cross. Please note that where they fall exactly on a line, the participants were signaling a score in between two of the scales.

The assessment team have been careful to explain why a score may be low or high. This is important as a small number of the 'low scores' are because the plan did not relate directly to the assessment criteria and scoring scales, yet had some positive related aspects. Regardless, suggestions for improvement were made.

***Guiding principle 1 - A long term view of the future – results and discussion***

a) Build-in safety and resilience to withstand natural disasters and climate change
   - Assessment criterion: Safe and resilient city (4)

b) Promote a green and sustainable garden city
   - Assessment criterion: Green Buildings (1)
   - Assessment criterion: Green cover (2)
   - Assessment criterion: Surface water management and Avon River quality (3)

c) Support a complementary balance between the central city and suburban centres
   - Assessment criterion: Balance between central city and suburbs (5)
   - Assessment criterion: Demographic diversity is considered and catered for (6)

# Integrated wellbeing and sustainability assessment

***Safe and resilient city (4)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Build-in safety and resilience to withstand natural disasters and climate change | 4 | Safe and resilient city | The resilience of the new and refurbished city environment | The plan places barriers in the way of improving resilience of city | The plan does not acknowledge the possibility of natural hazard and disaster including climate change **X** | The plan encourages council to plan for the possibility of natural disasters | The plan clarifies funding arrangement for initiatives for reducing exposure to natural disasters. | The plan requires the council to implement initiatives to reduce exposure to natural disasters |

## *Discussion*

The participants generated this criterion on the day of the workshop as the original criterion was about resilient buildings and that was considered to be out of scope for the plan and rested entirely on the building code. Instead, the participants were very clear that safety and resilience was a city-wide issue - about making the city environment safe over the longer term. Discussions included the threats associated with climate change, storms, earthquake induced rupture of levees and flooding, as well as significant natural events such as earthquakes. There was significant comment about the lack of discussion around climate change and what was being done to deal with issues of flooding and storm surge for the rivers and how this affected the central city. It was acknowledged that this was a central city plan the issue that may be covered elsewhere. Given one of the five guiding principles was A long-term view of the future – build in safety and resilience to withstand natural disasters and climate change, little attention was paid to climate change within the plan itself. The links to water storage and water efficiency and reduced rainfall in this part of Canterbury was not addressed at all. The issue of fault-lines within the central city is also not clearly addressed.

Security of supply of energy and water are all important for resilience, the plan is silent on these, as well as the need to be more carbon neutral.

One of the underlying assumptions missing from the text within the document is the need for integration of the central city into the rest of the city, that planning for the central city cannot be done in isolation from the rest of the urban area. The central city also belongs to the region.

It is for these reasons the plan was assigned the score of neutral or 0.

***What recommendations can we make to the plan?***

- Clearer leadership around climate change – CERA, the Council and rest of central government together.
- Integrate the means of dealing with climate change into the body of the plan.
- Address the issues of climate change and reduced rainfall in coastal Canterbury and the need for more water efficiencies including storing stormwater for use within buildings or watering.
- Address issues associated with storm surges/high tides etc and influence, if any, on the river.
- Be clear about the location of fault lines and natural levees within the city and manage buildings away from these.

*Green buildings (1)*

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Promote a green and sustainable garden city | 1 | Green buildings | Energy and water efficient new and refurbished buildings (using a reputable environmental rating scheme such as green star buildings). | The plan presents barriers to the development of energy and water efficient buildings | The plan makes no mention of energy and water efficiency of buildings. | The plan sets targets for energy and water efficient new buildings but fails to address implementation issues or address refurbished buildings | The plan provides incentives for new and refurbished commercial green buildings, scaled to match the quality (star rating) of buildings being developed X | The plan encourages creative high quality design new and refurbished green buildings through the full range of advocacy, leadership, incentives and regulation of domestic and commercial buildings |

## *Discussion*

The participants were encouraged by the green focus of the Plan and discussed their desire for the city to rise as an international showpiece for sustainability. They felt that if the plan was fully implemented it may meet this desire, however, due to weak incentives and no clear direction around leadership issues they felt that the plan did not quite meet their bottom line criterion and assigned a score of +1/+2.

The Business Group spent considerable time discussing incentives for rebuilding/refurbishing buildings to achieve a 5/6 star rating. The conclusion was that the incentives provided in the plan are relatively limited and don't address the chief issue. Building to a 5/6 star rating can add as much as 30% more cost to a conventional building built to meet the building code. Insurance payouts will only be made available to meet the building code thereby creating a significant funding shortfall. Discussions centred on the Council having to be more creative in its commitment to supporting 5/6 star buildings.

To make a strong and positive impact for producing green and good design requires strong and clear leadership with initiatives that encourage new high quality design. The participants felt the Council was placed to be this leader in helping others to follow their example of building to the maximum green star capability. Participants were very supportive and positive about how the Council is leading the building of green buildings (citing the Council head offices and libraries) but discussed how it could do more to support others.

Participants also noted that use of green buildings for residential was equally as important, if not more important, as office buildings. Although potential conflicts with affordability need to be examined and addressed. While the building code provides a good basis for new buildings, many will only need repair and this is not covered by the building code. Therefore participants suggested that incentives and perhaps regulations that require a minimum level of green performance should be considered for residential buildings.

Participants also expressed concerns about using the Green Building Council – this organisation is privately funded and therefore may not be truly independent. Examples were given of other rating organisations and how they skew ratings. The participants discussed encouraging the Council to be the lead in developing a more independent rating party.

Concerns were raised that the plan could have gone further in the management of water. Participants were happy to see management of stormwater from roads and hard surfaces – including the treatment of stormwater, but felt that stormwater storage was missing.

***What recommendations can we make to the plan?***

- Improve incentives for building to 5/6 star levels. It is recommended that dedicated capital arrangements are made available for loans to cover the additional costs associated with building to a 5/6 star rating. Repayment of loans could be spread over a specified period, eight to 10 years for example, from the savings incurred from the reduced energy costs.

# Integrated wellbeing and sustainability assessment

- The Council to investigate leading a green rating system; one that is not provided by the private sector. This could be set up by the Council itself, the Universities, central government or a partnership of all. Green credentials should include whole of life costs for a building – including intended life time of the building itself.
- More incentives/rules about water storage to reduce stormwater outputs, i.e. tank storage of roof water for flushing and watering, etc.
- The green building tool should be more widely available – at least to all commercial, properties within the Four Avenues, but ideally to greater Christchurch.
- Incentives for green buildings should also apply to existing commercial buildings.
- Approaches should be considered to promote green options for new and existing homes.
- The green building tool also needs to promote "health and wellbeing" aspects of the building design and performance
- Universal design elements need to be considered.

***Green cover (2)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Promote a green and sustainable garden city | 2 | Green cover | Extent of green spaces within the Central City (excluding Hagley Park) | The plan describes a loss of green spaces and trees within Central City | The plan shows no change to pre-existing green spaces and trees within Central City | Plan shows small increase in green cover within Central City with no description of new plantings | Plan shows moderate increase in green cover on public and private land within Central City with description of new plantings being locally native. | Plan shows large increase in green cover within Central City and explicit description of continuous connection/ biodiversity corridors **X** |

## *Discussion*

What is meant by "green" was discussed. The participants felt that "green" was not simply about trees, grass and shrubs – but about high quality, inclusive and enjoyable open spaces. It also included both private and public property and vertical elements (e.g. trees overhead, green walls, roofs and planter boxes on balconies and in court yards). The REAL value of "green" was not captured by the plan (e.g. quality of life, health, tourism, business and reinvestment). The participants felt that if the Council was more certain about the areas of green space and the improvements to the exiting green areas this would provide more certainty and confidence. Quality green areas would become a catalyst for re-investment in the city.

Participants agreed that increasing the amount of green space will be most effective when both public and private land is considered (not just public green spaces). Participants felt that because of the large public response received through 'Share an Idea' a large increase in green space was a minimum requirement, i.e. +3 as the bottom line. The discussion moved from placing the bottom line at +3 back to +1, because participants agreed that a compromise could be made between the area of green space and the availability of other types of amenity and quality enhancements. For example, participants were happy to compromise green space, if land was required to support projects that supported affordable housing, walking, cycling, and access by all to the CBD, its shops and services.

Participants were sceptical about the actual ability/commitment to deliver more green space in central Christchurch. It was acknowledged that the Avon River project was likely to proceed because of geotechnical issues, but that other land purchases for pocket parks and family-friendly parks were less certain. The CCC may need to find ways to address such scepticism. Project Plans must provide more certainty for the community and outline the level of involvement stakeholders can have in the delivery process. Community involvement with the implementation was strongly recommended. Council facilitation of block-

wide solutions to encourage more open spaces and green areas was needed, to provide ways to deliver benefits to all tenants (residents and offices), customers (retail, cafes) and economies of scale (viability).

***What recommendations can we make to the plan?***

- The Council could consider developing a broad and inclusive definition of "green space." This would need to include private and public ownership, vertical elements and express different qualities and uses.
- The Council may want to consider the "true value" of green spaces in the city so that adequate resources are given to this aspect of the city. Demonstrating this value may help with private investments decisions for amenity and green areas.
- The Council will need to consider maintenance issues for all aspects of green spaces. Often private landscaping is established, but not properly maintained. A range of trigger points and responses should be developed to facilitate better maintenance outcomes. Likewise, designs need to be considered for life-cycle considerations. Sustainability criteria could be developed to help considerations over design, material choices and operations.
- To aid planning decisions priority could be given to green spaces and amenity areas that are designed to deliver multi-purpose spaces, that target missing demographics in the city (such as children and elderly), and help to bridge current gaps in cultural expression (e.g. that reflect Maori heritage).

***Surface water management and Avon River water quality (3)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | –1 | 0 | +1 | +2 | +3 |
| Promote a green and sustainable garden city | 3 | Surface water management and Avon River water quality | Surface water management and Avon River water quality | The plan reduces opportunities for storm water capture, use and treatment and negatively affects Avon River water quality | The plan proposes no change to current storm water use, reuse and treatment, nor to Avon River water quality | Storm water collection and use addressed throughout relevant projects, and some tangible actions are explicit with a small increase in Avon River water quality **X** | Storm water collection and reuse explicitly described with a specific project, and mentioned throughout other relevant projects with many tangible actions and a moderate increase in Avon River water quality | Storm water collection and reuse widely required via regulation throughout all relevant projects with a large increase in Avon River water quality |

## *Discussion*

Improving the Avon River was a key response from the public in the Share an Idea engagement. So a high level of performance was expected for this criterion. The re-focus of the city toward the Avon, which is overarching in the plan, implies that the water in the Avon needs to be significantly improved.

There is a need to manage rainwater falling on private land and buildings as well as public spaces. The plan fails to make connections with wider catchment issues. River quality is dependant on upstream issues (e.g. the Addington Drain) and overall river quality is influenced by what happens down stream to the sea (red zone area). Although this is a Central City Plan the Avon River clearly flows from and beyond the plan boundary and this requires recognition.

There is a concern that the plan does not recognise water as a vital asset, rainfall appears to be treated as a waste issue rather than as an asset and that we need to actively promote its on-site usage so that it is caught and beneficially used before reaching the Avon. Once it reaches the Avon it was seen as a diminishing asset. Rainwater collection for toilet flushing, irrigation and infiltration needs to be promoted. This is especially important if Christchurch is to become the "garden city" or "city in a garden" and in light of climate change where less rainfall is projected to fall, but in more extreme storm bursts.

Page 216 in Volume 2 states that the Council "may" require stormwater management approaches for smaller development lots (below 5000m2). If the wording was more positive (e.g. "will" require) this criterion would score more highly. Focus appears to be

# Integrated wellbeing and sustainability assessment

on very large (above 5000m2) commercial developments only. Few of these developments are proposed in the more compact city. Participants suggested reducing the size threshold to include more properties in the requirement to manage stormwater, and to encourage collaboration or block-wise responses to deliver economies of scale and improved design and environmental outcomes.

Discussions also included the threats associated with climate change, storms, flooding, and sea-level rise as well as significant natural events such as earthquakes. There was comment about the lack of discussion around climate change in the plan and what was being done to deal with issues of flooding and storm surge for the rivers and how this affected the city.

Eco-streets were seen as a major improvement to the collection and treatment of water in public spaces.

***What recommendations can we make to the plan?***

- Reduce the size threshold to include more properties in the requirement to manage storm water and to encourage collaboration or block-wise responses to deliver economies of scale and improved design and environmental outcomes.
- Be explicit about the impact of climate change, storms, flooding, and sea-level rise as well as significant natural events such as earthquakes on Christchurch.
- Prepare catchment management plans for the Avon and Heathcote Rivers.
- Ensure the Build Green Christchurch tool encourages rainwater collection and use for commercial properties.
- Biodiversity enhancement should be integral to Avon River projects to enable residents and visitors to get close to nature in the city.
- Consider run-off and pollution treatments during the demolition and construction phases, especially if resource consent processes are fast-tracked or not required (permitted activity).

***Balance between central city and suburbs (5)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support a complementary balance between the central city and suburban areas | 5 | Balance between central city and suburbs | Resources, services, activities, and character in central city and suburbs are complementary. | The plan presents an imbalance between Central City and suburban resources, services and activities. | The plan makes no mention of interaction or the complementary nature of resources, services and activities between the Central City and the suburbs. X | The plan identifies need for complementary resources, services and activities with one or two tangible examples of measures to complement suburban and central city development | The plan identifies inter-relationships and the need for complementary resources, services and activities with many tangible examples within many projects | The plan explicitly addresses inter relationships and the need for complementary resources, projects services and activities across all relevant projects. |

## *Discussion*

Participants scored this criterion 0.5. While there were one or two project examples of resources complementing between suburban and central city, there was little or no mention of the need or importance of complementary resources, services and activities. The examples that participants congratulated the Council for considering beyond the central city were all transport related, such as light rail (p89) and buses (p 91). Otherwise, there was no discussion about how the projects in the other chapters might complement or detract from suburban areas. Most projects have some inter-relationship with suburban areas but these are not addressed. Participants noted that there was a planned restriction on urban development (p 108) (outside the central city) but were unclear about how that was going to be regulated.

***What recommendations can we make to the plan?***

- The complementary (or not) nature of the plan and projects needs consideration. At present this aspect is largely unclear in the plan, despite this being a guiding principle to the plan development. Participants suggested a review of each project, and bringing that information together in a single section at the front of the document (as there would likely be substantial overlap between projects).

***Demographic diversity is considered and catered for (6)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support a complementary balance between the central city and suburban areas | 6 | Demographic diversity is considered and catered for | Central City urban form, services and activities cater to diverse demographics | The plan explicitly privileges specific demographic groups | The plan makes no attempt to address access for demographically diverse groups in the central city | Plan provides opportunities for central city living that are attractive and accessible (via best practice design) to demographically diverse groups X | Plan shows that urban form, services and activities are explicitly designed via best practice to attract demographically diverse groups | The plan encourages use and living in central city by demographically diverse groups through the full range of advocacy, leadership, best practice design, services and activities. |

## *Discussion*

The plan has substantial amounts to say about families and the participants congratulated the council for this. But participants also wanted to see discussion about the needs and solutions for older people (beyond the use of the WHO age friendly cities guide), children (beyond the schools and playground), people with disability and ethnic minority groups. Participants noted the aspirational intent of the plan, particularly in the introduction to the city life chapter (p 66), but wanted to see that aspiration reflected throughout the plan and into the projects. For example, ethnic groups are only mentioned one other time in the plan or projects beyond the introduction, as 'ethnic food retailers' in the covered market (p 110). And older people are also mentioned in the introduction of market city, but then just once more when 'providing ample seating for older people' in greening cathedral square (p35). While the WHO age friendly cities guidelines (p78) are excellent, the use of guides is voluntary, and wholly dependent on individual planners and designers. This passive approach is highly unlikely to ensure excellent outcomes for older people, and instead it is more likely to result in patchy and incomplete application of important design principles.

Participants also wanted Council to emphasise that the central city is not just for those people who live in the central city, and therefore when undertaking design work as mentioned below, that groups of interest from throughout the city and region would be considered.

Finally, participants queried how the council knows whether the projects proposed are attractive to diverse demographic groups. While the submission analysis is one way to collect such information, participants suggested direct questioning of demographic groups by skilled qualitative researchers to ensure that all views were captured.

***What recommendations can we make to the plan?***

- The individual guides recommended for use on p78 must have procedures around them to ensure that they are actually used. Capacity building of staff in the use of the tools will be required, as will auditing of their use.
- Explicit description of the needs and solutions proposed for children, older people and ethnic groups in the 'A place for everyone' section.
- Undertake qualitative research to determine how attractive the projects proposed are to diverse demographic groups.
- Ensure implementation and delivery of projects involves key stakeholders to embrace different needs, perspectives demographics and cultures.

***Guiding principle 2 - Easy to get around – results and discussion***

# Integrated wellbeing and sustainability assessment

c) Promote a city that is easy and safe to get around

- Assessment criterion: Permeable neighbourhoods that link within the four avenues (7)
- Assessment criterion: Connectedness between destinations within the four avenues (8)
- Assessment criterion: Use of Crime Prevention Through Environmental Design (CPTED) and Injury Prevention Through Environmental Design (IPTED) principles (9)

d) Support a balance between walking, cycling, public transport and driving

- Assessment criterion: Mode balance supports active transport (10)
- Assessment criterion: Access for all to integrated public transport network (11)
- Assessment criterion: Public transport modes future-proofed (12)
- Assessment criterion: Car parking (14)
- Assessment criterion: Transport connections to external network (16)

***Permeable neighbourhoods that link within the Four Avenues (7)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Promote a city that is easy and safe to get around. | 7 | Permeable neighbourhoods that link within the four avenues | Permeability of Central City neighbourhoods to walking, cycling and incidental activity, disability access, and vertical permeability within multi-story buildings | The plan describes street pattern and public and private realm with less permeability than before the earthquake | The plan makes no attempt to change Central City permeability | Street pattern and public and private realm encourages disability access, walking and cycling within the core | Street pattern and public and private realm encourages disability access, walking and cycling within the core and has some permeability within the Four Avenues X | Street pattern and public and private realm encourages walking and cycling within the core and seamless disability access, pedestrian/ cycling permeability within the Four Avenues |

## *Discussion*

Participants scored this criterion +2 because of the good walking, cycling and accessibility links within the core as described in many aspects of the plan. Also the plan has a number of projects throughout the four avenues that support movement of people via walking, cycling and incidental activity.

Participants voiced substantial concern at the lack of discussion around accessibility for people with disability, and believed this should have a higher presence in the project descriptions, or at least in a separate section describing the need for universal design throughout all projects. For example, the plan mentions that New Zealand Standard 4121 - "a design standard for access and mobility will be used, making buildings, facilities within buildings and exterior features (e.g. car parks) accessible to and useable by people with disabilities". This appears to be the only mention relevant to disability, and the use of such a standard is a very passive approach (as it may or may not be used), and according to the standard only applies to a small part of the urban environment. There are aspirational statements regarding the importance of disability access in the introduction of distinctive city and transport choice, but these are not followed through with any actions throughout the chapters or projects.

Participants commented that while the permeability within the four avenues was good, they were concerned that the plan did not mention linkages outside of the four avenues. While they understood that this was due to it being a 'central city plan', they believed that substantial consideration of linkages and effects beyond the four avenues needed to be included in the plan.

***What recommendations can we make to the plan?***

- Commit to accessibility and universal design within relevant projects or at the start of each chapter.
- Walking and cycling linkages beyond the Four Avenues should be addressed within the plan.

***Connectedness between destinations within the four avenues (8)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Promote a city that is easy and safe to get around. | 8 | Connectedness between destinations within the four avenues | Accessibility to major destinations and facilities (eg supermarkets, hospital, sports facilities, library, schools, central parks etc) sited within the four avenues | The plan describes loss of connection to major destinations and facilities | The plan maintains pre-earthquake connection to major destinations and facilities | Plan explicitly labels major destinations and discusses importance of accessibility to them, with one or two tangible measures to address the issue **X** | Plan discusses importance of accessibility to major destinations, with three or more tangible measures to address the issue | Plan discusses importance of accessibility to major destinations, with tangible measures to address the issue in all relevant projects |

## *Discussion*

Participants noted that before the earthquake the focus of access to major destinations within the four avenues was on car travel. Connecting within the four avenues by public transport was problematic, while cyclists and walkers took a distant second place to cars where safety and traffic management was concerned. In the draft plan there is a clear intention to prioritise walking and cycling within the core of the central city and improve public transport options in the outer zones of the central city which the participants applauded. It was less clear that connectedness between major destinations had been explicitly addressed for all users (families with small children, disabled people, elderly, teenagers etc). Participants wished to add in a +4 criterion which would read: Plan discusses importance of accessibility to major destinations without the need for a car, with tangible measures to address the issue in all relevant projects.

Participants scored this a +1 because they felt the issue of connectedness had not been clearly addressed in the plan. Further, they felt that consistent with the intention of the plan, such connectedness should be able to be achieved without the need for private vehicle transport and this should be explicitly stated and planned for.

***What recommendations can we make to the plan?***

- Discuss the importance of accessibility to major destinations within the four avenues (via public transport, cycling and walking) with tangible measures to address the issue in all relevant projects.
- Discuss the potential conflict between this objective and the objective of making the city a more attractive destination, given that a large proportion of the population prefer to travel by car.
- Attention is needed to the ensure the severance effect of the greater volumes of traffic on the four avenues on pedestrians, cyclists, vehicles in the neighbouring areas

# Integrated wellbeing and sustainability assessment

***Use of CPTED and IPTED principles (9)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Promote a city that is easy and safe to get around. | 9 | Crime Prevention Through Environmental Design (CPTED) and Injury Prevention Through Environmental Design (IPTED) | Use of CPTED and IPTED principles | The plan shows evidence of measures contrary to CPTED and IPTED principles. | The plan has no mention of CPTED and IPTED principles<br>X | Use of CPTED and IPTED principles advocated in plan for public and private realm | CPTED and IPTED principles required for public spaces (e.g. open spaces, streetscapes, public transport) and advocated for in private realm | Use of CPTED and IPTED principles required for public spaces and incentivised for the private realm. |

## *Discussion*

Participants discussed the implications for development costs of requiring the use of CPTED and IPTED principles. It was accepted that many design changes would add minimal cost to developments and that while some design modifications would require more thought at the design stage (e.g. the appropriate plantings for a public park) they would not necessarily cost more in the implementation phase. There was agreement that such principles should be mandatory for public spaces but less agreement over requiring them for private spaces. Although some such modifications are already legislatively required (such as fences for swimming pools) the extent of state 'interference' in private development design choices was queried. The balance between an authoritarian versus a libertarian design code is difficult to achieve consensus on and participants believed that the value case for regulated CPTED and IPTED design changes in the private realm was potentially different to the case in the public realm.

Participants also queried whether design changes that supported CPTED and IPTED would apply to new builds/designs of areas/buildings alone, or include retrofits/ renovations. Participants scored this o because while the plan discusses the use of CPTED it is silent on IPTED, and both need to be included in the regulations.

***What recommendations can we make to the plan?***

- Plan commits to use of CPTED and IPTED principles in public spaces and incentivised for the private realm.

***Mode balance supports active transport (10)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support a balance between walking, cycling, public transport and driving | 10 | Mode balance supports active transport | Central City provision for pedestrians and cyclists. | The plan describes a loss of mode balance from pre-earthquake arrangements | The plan shows no change to design for or control of different transport modes | Plan shows low speed streets in core area that have equal design, layout and priority for all users. | Plan shows low speed streets in core where pedestrians and cyclists have full design, layout and priority. | Plan shows low speed streets in core and key areas within the four avenues where pedestrians and cyclists have full design, layout and priority<br>X |

## *Discussion*

Broadly, the plan clearly supports the call from Share an Idea participants for a stronger focus on walking and cycling in the central city. Participants in this assessment were clear that to enable the level of active transport envisaged, pedestrians and cyclists needed to be advantaged in the plan rather than given equal priority with other modes. Further, acknowledging the

implications of peak oil and subsequent rising energy costs participants felt there was a need to plan for the effects of less driving, as well as planning simply for less driving and hence less road capacity. This would mean, for example, considering how to ensure inner city residents who are car-less can still get a week's worth of groceries. Planning needs to start early for innovative delivery mechanisms that support shoppers and local business.

There were some concerns that the regulations in Volume Two may not fully support the articulated vision in Volume One. For example, when looking at the transport plan for the inner city there was no detail on how non-residents' vehicles might be discouraged from using some routes, though participants also discussed whether such detail is appropriate for the plan. Participants understood that a key project in the plan is a Streetscape Plan, which would have detailed cross sections and a range of devices and measures, some of which would actively discourage non-local traffic. Again, the overall vision of the plan was applauded, but participants felt that similar visions for public transport and active transport had been developed and articulated in the past by Council and, for a variety of reasons, not implemented. Participants supported the aspiration of Council and hoped that, buoyed by the strong support from share-an-idea participants, Council would have confidence to implement the desired changes.

Participants scored this as a +3 because they felt the criterion as stated was reflected in the plan.

***What recommendations can we make to the plan?***

- The plan should commit to some low speed streets throughout the four avenues, and not just within the core area, where pedestrians and cyclists have full priority in terms of design, layout and traffic management.

***Access for all to integrated public transport network (11)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support a balance between walking, cycling, public transport and driving | 11 | Access for all to integrated public transport network | Access for all people (particularly people with a disability, those with bikes/prams, and low income) to an integrated public transport network | The plan hinders specific provision for an integrated public transport network | The plan shows access to an integrated public transport network within the city is the same as pre-earthquake | Plan makes provision for accessible and integrated public transport network within the core for all people | Plan makes provision for accessible and integrated public transport network within the Four Avenues for all people | Plan commits to accessible and integrated public transport network within the Four Avenues for all people X |

## *Discussion*

Participants were clear that they were scoring the plan, not the implementation potential of the plan. Concern was expressed, however, that if this plan was fully implemented Christchurch could end up as a 'donut city', i.e. a central zone where active and public transport is prioritised surrounded by heavy vehicular traffic. The vision for, and indeed necessity for, an integrated public transport system throughout the whole city (central and peripheral) was acknowledged but participants recognised the difficulty of this plan fully addressing the issues related to public transport, as this falls within Environment Canterbury's remit. Nevertheless, it was felt that the plan did not adequately describe possible links between the central and suburban areas of the city. Within the central city itself it seemed unclear where public transport stops would be and there was concern about clarity of signage especially for new users.

Participants wished to add in a +4 criterion which would read: Plan commits to accessible and public transport network throughout Christchurch for all people. Participants scored this criterion +3 because there is a clear intention signalled in the plan to providing accessible and integrated public transport networks within the central city.

***What recommendations can we make to the plan?***

- Commit to accessible and integrated public transport network throughout Christchurch for all people.
- Needs explicit links to rest of the city.

# Integrated wellbeing and sustainability assessment

***Public transport modes future-proofed (12)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support a balance between walking, cycling, public transport and driving | 12 | Public transport modes future-proofed | PT corridors able to cater for light rail or future transport systems | The plan takes light rail or future transport systems off the planning horizon | Light rail or future transport systems not addressed in the plan | Principal transport corridors provide for light rail or future transport systems | Light rail or future transport system proposed **X** | Light rail or future transport system proposed and funding sources identified |

## *Discussion*

Participants described that to future-proof transport modes, it was not necessary to know the scheme or technology but land corridors must be protected to ensure their availability when the transport system of the future was agreed on. An integrated public transport system is essential if the vision of the plan is to be achieved.

There was discussion about the expense of the light rail system discussed in the plan and it was clarified for participants that this cost included start–up, associated infrastructure and ongoing maintenance costs and that the marginal cost was $15 million per km. While not opposing light rail, participants were not convinced that this was either cost-effective or the only possible option. Participants scored the plan at +2 as the plan proposes a light rail system but does not clearly identify where funding for this might come from.

## *What recommendations can we make to the plan?*

- A business case that accounts for all costs and benefits (health, air quality, congestion reduction, employment, energy savings, etc) offered by a comprehensive integrated public transport system should be developed and well publicised.
- The plan must protect strategic corridors and future options for transport and infrastructure.
- Commuter rail options should be tested first on an enhanced existing network.

***Car parking (14)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support a balance between walking, cycling, public transport and driving | 14 | Car parking | Car parking requirements | The plan increases the total number of car parks than pre-earthquake within the city | The plan leaves the total number of car parks unchanged compared to pre-earthquake levels within the city | Total number of car parks is slightly lower within core compared to pre-earthquake levels. | Total number of car parks is substantially lower within core **X** | Total number of car parks is dramatically lower within the core |

## *Discussion*

There was long discussion around car parking. Participants were less concerned about car parking buildings outside of the core of the city, and supported what was outlined within the plan about this. With one exception the participants, were very clear that parking should be at an absolute minimum in the basements of new buildings within the core[3]. Strong reasons were given

[3] *The dissenting participant was concerned that parking policy was inadequately justified and may run counter to objectives of commercial viability and a vibrant city centre, and who did not believe that council would be able to force businesses to spend the saved money on sustainability and social outcomes.*

for this – both social and economic. Participants discussed the cost required to build parking into the basement or lower floors of new buildings, but importantly how much valuable floor space went into car parking. They identified that this money could be directed to providing improved sustainability and social outcomes for the buildings. Participants believed it was important to change the perceptions and behaviours of building owners and senior management and staff. By actively encouraging those who drive directly from home into their car parks at their place of work to walking from car parks outside the core would promote greater social interaction as well as generate more interaction with retail and services on route as people walked to their place of work. There was also a brief discussion about providing, although minimal, some exercise.

All supported the visual requirements of car parking to the rear of buildings to ensure more active spaces available at street level. The score of +2 reflected agreement with the plan to reduce car parking in the central core.

***What recommendations can we make to the plan?***

- Maintain the requirement for little and only absolutely essential parking in the basement of buildings.
- Carry out a financial assessment of the true cost of providing car parking in buildings over providing additional retail/ office space and active street frontages.
- Take account of the needs of the elderly, those with disabilities and parents with pre-school aged children in vehicle parking approaches and building design.

***Transport connections to external network (16)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | –1 | 0 | +1 | +2 | +3 |
| Create an attractive and vibrant Central City to attract people to live in Christchurch | 16 | Transport connections to external network | Transport services between Central City and key destinations outside it. E.g. airport, university, suburbs, other metropolitan cities | The plan hinders connectivity to key destinations outside the city | The plan describes connectivity to key destinations is unchanged compared with prior to earthquake **X** | Key destinations described in plan with some discussion about quality or speed of connections in one or two tangible examples | Key destinations explicitly described with a specific project, and mentioned throughout other relevant projects with many tangible actions in many projects. | The plan includes explicit consideration of key connections and quality of connections in all relevant projects |

## *Discussion*

While acknowledging that the plan is only for the Central City with no mandate beyond that, participants believed that linkages between the central city and priority external links were extremely important. The plan did not clearly identify what key destinations within or beyond the city might be, nor who the users might be. Participants wished to add in a +4 criterion which would read: Plan includes explicit consideration of key connections and quality of connections for non car users in all relevant projects.

Understanding the needs of the proposed residents of the central city and their destinations of choice is important, e.g. how would a central city family get to McLeans Island or Orana Park, or to Sumner Beach without access to a car? Further afield, the needs of a family travelling to another city centre in the South Island via bus are different to the needs of a business person travelling between the airport and central city.

Participants scored the plan 0 because key destinations outside the central city (other than the university and the airport) were not explicitly identified and addressed. One participant dissented with this score (preferring +1), believing the plan did give a clear indication of an integrated, multi-model approach to public transport within the city (yet specific destinations were not detailed).

***What recommendations can we make to the plan?***

- Include explicit considerations of key connections and quality of connections for non car users in all relevant projects.

# Integrated wellbeing and sustainability assessment

***Guiding principle 3 - Vibrant central city living – results and discussion***

d) Create an attractive and vibrant central city to attract people to live in Christchurch

- Assessment criterion: Community and civic spaces (15)
- Assessment criterion: Provision of retail in core and precincts (17)
- Assessment criterion: Provision of retail within four avenues for neighbourhood centres (18)
- Assessment criterion: Community involvement and inclusion (19)

e) Encourage a healthy mix of housing, schools, entertainment, offices and shops in the central city

- Assessment criterion: Mix of space and activities (20)
- Assessment criterion: Activities with special social, economic, health and community wellbeing interest (21)
- Assessment criterion: Affordable housing, social housing and residential care services (22)

f) Ensure that public spaces and buildings are people-friendly and liveable.

- Assessment criterion: Open space quality (13)
- Assessment criterion: Universal Design principles and flexibility of buildings (23a and 23b)
- Assessment criterion: Connection between building structure and streetscape, and active frontages (24)
- Assessment criterion: Diverse food outlets (25)

***Community and civic spaces (15)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Create an attractive and vibrant Central City to attract people to live in Christchurch | 15 | Community and civic spaces | Explicit spaces for community gatherings/ meetings, art and the celebration of the community's identity and culture | The plan reduces spaces for gatherings, art and community activities | The plan presents no change to the number or quality of spaces | Plan has small increase in number and quality of spaces that celebrate community identity, art and community activities | Plan has modest increase in number and quality of spaces that celebrate community identity, art and community activities X | Plan has multiple multi-use and multi-cultural, external and internal facilities for gatherings, meetings, art and the celebration of the community's identity and culture in public and private spaces. |

## *Discussion*

Participants were very positive about the number of outdoor spaces, arts and craft spaces and market spaces that are envisioned in this plan. It was felt that those on tight budgets might not be able to access many of the proposed spaces. The loss of community houses and recognition of the number and array of NGO and volunteer agencies that (used to) work out of these was recognised – the support of the council for the Christchurch Community House was applauded but it was felt that given economic realities and recovery issues more attention to this demographic was required. Many of the proposals for community and civic spaces did not seem to address adequately the multi-cultural city that we are becoming. An explicit mandate to develop such spaces using universal design principles so as to ensure they were accessible to as many people as possible was also discussed.

Participants scored this criterion +2 because it was felt the plan could commit to more multi-cultural and internal spaces that support community development and celebration of different identities.

***What recommendations can we make to the plan?***

- Commit to provision of spaces that are welcoming to all ethnic groups and socio-economic levels.
- Provide for more internal spaces that support community development processes.

- Commit to the use of an Equity Assessment Tool (e.g. *www.pha.org.nz/documents/health-equity-assessment-tool-guide1.pdf*) and engaging with the communities of interest when designing spaces would help ensure spaces achieve the goals for all citizens of Christchurch.

***Provision of retail in core and precincts (17)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Create an attractive and vibrant Central City to attract people to live in Christchurch | 17 | Provision of retail in core and precincts | Appropriate retail services reflecting a unique central city destination | The plan promotes uniform and large scale retailing within the core | The plan presents no change to the retail mix in the core | The plan aspires to a diverse mix of retail with active frontages and wide pedestrian footpaths in core and precincts | The plan incentivises a diverse mix of retail with active frontages and wide pedestrian footpaths in core and precincts X | The plan requires a diverse mix of retail with active frontages and wide pedestrian footpaths in core and precincts |

## *Discussion*

Concern was raised about the affordability of retail spaces. Higher rentals were seen as potentially forcing out the more eclectic and creative stores which add diversity and a uniqueness to the city. The covered market was seen as a good way to respond, but other methods should be considered. International examples of temporary uses for vacant buildings and sites (such as renew Adelaide and Meanwhile projects in the UK) show that the creative and artistic community can be supported in low cost locations and help to activate and revitalise the city. Because of this potential the transitional projects in the Central City Plan should be given prominence - not only in the early stages, but as a means of urban regeneration and transformation particularly in the more industrial parts of the city.

***What recommendations can we make to the plan?***

- Reconsider the requirement for retail outlets above 450sqm of floor space to need a resource consent. Consider multiple level apartment stores.
- Encourage temporary activation in the city to help enliven the quake damaged city, but also over a longer time frame, to revitalise and transform the more industrial parts of the city.

***Provision of retail within four avenues for neighbourhood centres (18)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Create an attractive and vibrant Central City to attract people to live in Christchurch | 18 | Provision of retail within 4 avenues for neighbourhood centres | Appropriate retail services reflecting a neighbourhood centre | The plan promotes big box retail within neighbourhood centres | The plan presents no change to the retail mix in neighbourhood centres | The plan aspires to a diverse mix of retail with active frontages and wide pedestrian footpaths in neighbourhood centres X | The plan incentivises a diverse mix of retail with active frontages and wide pedestrian footpaths in neighbourhood centres | The plan requires a diverse mix of retail with active frontages and wide pedestrian footpaths in neighbourhood centres |

# Integrated wellbeing and sustainability assessment

## *Discussion*

Unique urban villages were seen as a sound concept. They provide character and services for surrounding communities. The plan provides for five neighbourhood centres to increase amenity and accessibility for central city residents. However few (if any) incentives or tools are provided to establish these centres. If the Plan wants to deliver more inner-city living it must provide a high level of amenity and services for those living within the four avenues. Also, because of the potentially high rentals within the core and fringe of the city, commercial activity is likely to creep into the living zones. To give owners and potential residential investors' confidence for investment, zoning rules need to be strengthened in the living areas to ensure only a complementary mix of commercial activity occurs in these areas.

It was noted that there is little mention of the 9000 residents who are already living in this area and who have already invested heavily (both financially and personally) in inner city living. It would be important not to drive these people out. Implementation must include a greater level of collaboration (see International Association of Public Participation's "Public Participation Spectrum") with existing and potential inner-city residents.

***What recommendations can we make to the plan?***

- Provide a high level of amenity and services for those living within the four avenues.
- Zoning rules need to be strengthened in the living areas to ensure a complementary mix of commercial activity occurs in these areas.
- Implementation must include a greater level of involvement with existing and potential inner-city residents.

***Community involvement and inclusion (19)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Create an attractive and vibrant Central City to attract people to live in Christchurch | 19 | Community involvement and inclusion | Use of an appropriate community involvement process in city planning | The plan discourages community involvement in future planning | The plan does not mention future community involvement processes X | Future process of community involvement is explicitly described | Future process of active community involvement is explicitly described and under-represented groups explicitly targeted for their input | Future process of active community involvement is explicitly described, under-represented groups explicitly targeted for their input and plan describes approach to respond to community input |

## *Discussion*

Participants began the discussion by noting that community involvement should include communities of interest and that these are not just geographic communities. Also it was acknowledged that communities have substantially changed in the last 12 months – in some cases very strong bonds have been built up and these can be built upon. Participants noted there were several good examples of communities that have built capacity and skills to respond to any potential future council engagement, such as Moa and Peterborough village. The communities are organised, sometimes including elected officials, such as community boards, and sometimes via non-elected groups.

Participants agreed that involvement of communities of interest in the future development of the plan would potentially make or break the plan. Participants strongly voiced that without ongoing community involvement, and drawing on the skills of the community, the desired outcomes of the plan are unlikely to be met. While participants acknowledged many decisions still needed to be taken by the elected decision makers, the community can provide excellent ideas on options to explore, assisting in what questions should be asked, and helping identify solutions Defined as 'collaboration' in the International Association of Public Participation's Spectrum). Collaboration models where the community are part of the decision making processes, especially for local level decisions is a very powerful way to maintain support for a vision. Any involvement that is passive is highly likely to ensure those without a typical voice in council processes will remain without a voice in this process.

Participants scored the plan at 0 / +1 because while the plan does mention a consultation process, consultation is only described until the end of the plan submission process, and not into the future. Participants acknowledged that the foreword by Mayor Parker

says 'It is the beginning of the next community conversation, not the end of the process'. The participants share Mayor Parker's vision and would like to see a description of the process, or at least an acknowledgement that the process is being developed, within the plan itself. The score reflects the lack of future detail in the plan, not necessarily the intention of the Council.

Participants congratulated the council on its previous and current consultation efforts, but were unsure about the level of involvement of children, older people, minority groups and inner city residents; and would like the plan to say how specific voices were targeted.

***What recommendations can we make to the plan?***

- An explicit statement about future engagement processes is required.
- Funding should be set aside, as well as identifying council staff resources for capacity building of communities to participate.
- Communities of interest should be included, not just geographic communities.
- Future engagement processes should build on the existing elected and non-elected groups that already exist (in some geographic areas, for some communities of interest), and support less-organised communities and geographic areas to participate in future processes.
- Future engagement should consider how community ideas on what options to explore, what questions should be asked, and identifying solutions, can be partnered with council ideas and processes. Participants also requested that in certain situations, funding and resources could be made available for communities to undertake engagement and make decisions themselves, or at the least resources to facilitate engagement.

***Mix of space and activities (20)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Encourage a healthy mix of housing, schools, entertainment, offices and shops in the Central City. | 20 | Mix of space and activities | Mix of land uses for housing, schools, offices, retail and recreation spaces to meet daily/ weekly needs. | The plan hinders a mix of land uses; promotes large spatial areas of single use, eg hubs are recognisable but exclusive in their land use; or the plan provides for conflicting land uses. | The plan describes a mix of land uses that are the same compared to prior to the earthquake within the Four Avenues **X** | The plan makes provision for unique hubs and complementary mix of land uses within each hub | The plan makes regulatory provisions and incentivises unique hubs and complementary mix of land uses within each hub | The plan makes regulatory and financial provisions, and incentivises unique hubs and complementary mix of land uses within each hub, includes vertical mix as well as horizontal mix and manages the interface between mixes. |

## *Discussion*

Participants believed that the plots of land in the central city are too small to generate innovative configurations of housing and other uses. Neither the plan (Volume 1) nor regulations (Volume 2) offer trade-offs (or other incentives) for landowners who amalgamated properties versus those who did not, so participants believed there was little incentive to do so. Participants did not believe the regulations would achieve the outcomes desired. The outcome of mixed use is not just about regulatory incentives but finding ways of making improved design happen, e.g. to retain heritage you need the ability to sell airspace for a component of the site, or not having to meet parking or other requirements around lot sizes, set backs, etc, to make it financially viable. Furthermore, participants believed there was a need to find ways to encourage boutique type shops – for instance provide for these in each building, or through the interactive street frontage, or other incentives to small businesses (verses less incentives for chain stores).

The plan had too little mention of schools given the importance of them as community hubs and as part of a healthy mix to the central city and widening school zones implies key schools will be provided outside the city centre. Participants noted the incentives available to developers, and only priority consenting appeared relevant to achieving a desirable mix.

The participants scored 0 for this assessment criterion because while the plan talked about hubs, there was little about how these would occur. Participants congratulated the council for aspiring to such a mix, but desired more detail on how it was to

# Integrated wellbeing and sustainability assessment

be achieved. The discussion in the plan on city blocks, lanes and courtyards were welcomed by participants; as was the map showing location of key projects, but again the participants scored this criterion low because of the lack of description regarding schools (see education criterion - 28), social agencies and residential care (see criterion 22). Participants could see the council aspiring to the same goals as themselves, but the plan was not explicit enough across all areas of interest and provided little detail on how it would happen.

Participants also believed there was a lack of integration between what the Council was putting forward for the uses of land, and what the landowners were intending to use the land for. Further engagement with landowners on this issue was seen to be important.

***What recommendations can we make to the plan?***

- Incentives should be reviewed to consider how schools, social service agencies, residential care facilities, community health services, and independent health providers (GPs, pharmacies, etc) are enticed back into the central city.
- Incentives for particular activities should be re-considered, for example participants queried whether taxpayers would be providing incentives to government department staff, brothels, fast food chain outlets, gaming outlets and bars?
- Incentives or regulatory trade-offs should be considered for developers who group together and propose innovative mixed use developments.
- Existing schools, playcentres and childcare centres should be named within the school choice section, and options to entice these back into the city centre is required.
- Schools should be considered within a broader paradigm in the plan where they can become 24/7 community facilities.
- A plan and resources are required to engage with the 'missing partners' described above.

***Activities with special social, economic, health and community wellbeing interest (21).***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Encourage a healthy mix of housing, schools, entertainment, offices and shops in the Central City. | 21 | Activities with special social, economic, health and community wellbeing interest | Consideration given to number and location of gambling, alcohol, sex industry and fast food outlets, and smokefree | The plan promotes gambling, alcohol or fast food outlets, fails to address smoking in public places and ignores the sex industry<br>**X** | The plan does not address Council policies relevant to gambling, alcohol and the sex industry; and does not address fast food outlets or smokefree public places | The plan acknowledges and strengthens current council policies relevant to gambling, alcohol and the sex industry | The plan acknowledges and strengthens current council policies relevant to gambling, alcohol, the sex industry, and introduces new policies to spatially control fast food outlets and promote smokefree public places in the core area. | The plan actively strengthens current council policies relevant to gambling, alcohol, the sex industry, and introduces new policies to spatially control fast food outlets and promote smokefree public places within the Four Avenues. |

## *Discussion*

This assessment criterion was initially considered unimportant by participants, especially in a planning context, but after discussion participants had strong views that not only was the assessment criterion important, but that there were several opportunities for planners and council to take a leadership role in this area.

The assessment criterion covered five distinct activities. The participants noted that all are lawful activities, should not be demonised and could occur throughout the city. However, participants were also aware of the substantial economic, social and health toll placed on communities by these issues; and that while they may contribute to a vibrant city, they can often detract from a vibrant city. Participants talked about a balance needing to be struck, and at present there was little ability for a community or council to counteract imbalances. Participants believed that imbalances were most likely to occur when the density of alcohol, gaming, brothels and fast food outlets was 'too high' in any given area, or were placed inappropriately close

to community facilities such as schools, places of worship, etc. There is strong evidence that the 'more you have of these outlets, the higher the consumption is, and the higher the economic, social and health costs'. It was also noted that with the decline in number of alcohol venues post earthquake the hospital Emergency Department were seeing far fewer alcohol related admissions.

It was noted that Queen Street in Auckland now had 30 chain restaurants in less than a 1000m stretch. Auckland City Council has recently spent $87 million on an urban design upgrade of the area and their urban design champion Ludo Campbell-Reid is 'embarrassed at the proliferation of fast food outlets' and is quoted as saying 'the goal was to restore the allure of Queen Street as the country's premier retail district, and when you compare us to Sydney or Melbourne high streets we need to lift our game' (NZ Herald, 18 July 2011).

The score of -1 was awarded because gaming machines, sex industry, fast food and smokefree initiatives are completely absent in the plan, and that such a passive approach would likely promote activities that can be detrimental to health and wellbeing. There is a small section on alcohol in the plan that keeps the current policies (but with no spatial controls). Participants noted that 'restaurants' were mentioned in the plan in several instances, but were hopeful that the Council were not just thinking of fast food chain restaurants, which if left to the free market (especially with the higher rents per square metre that are likely) such chains may well dominate the look and feel of the core area.

Participants were keen to ensure that the policies and bylaws were city wide, as they did not want to see activities pushed into suburban areas, but participants did want to see the likely imbalances controlled.

***What recommendations can we make to the plan?***

- Acknowledge the importance of these issues to the community.
- Commit to undertake a review of existing bylaws regarding the distribution and spatial spread of outlets, and the continued use of smart policies such as one-way-door policies for bars and nightclubs.
- Develop new policies and bylaws relevant to the spatial distribution of fast food outlets consistent with the plan.

***Affordable housing, social housing and residential care services (22)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Encourage a healthy mix of housing, schools, entertainment, offices and shops in the Central City. | 22 | Affordable housing, social housing and residential care services | Provision of public and private affordable housing, social housing and residential care services within the city | The plan places barriers to a healthy mix of housing within the city | The plan presents no Change in a healthy mix of housing within the city X | Plan sets targets for public provision of new affordable housing, replacement of social housing destroyed, and private provision of residential care services | Plan incentivises public provision of new affordable housing, replacement of social housing destroyed, and private provision of residential care services | Plan incentivises, and regulates for public provision of new affordable housing, replacement of social housing destroyed, and private provision of residential care services |

## *Discussion*

Participants acknowledged the council for the aspiration towards affordable housing. The participants wanted to reaffirm that getting a mix of people living in the city centre was critical for achieving the long term goals of council and community. Participants were fully aware of the huge challenges facing Council and developers to build affordable housing, especially given the likely high cost of rebuilding and small lot sizes.

This criterion was scored as 0. The plan provided some information on funding for incentives purposefully set aside for affordable housing - residential developer rebates (up to $4 million per year) and home buyer assistance (up to $0.5 million per year) (p132). However participants wanted more information about how many unit developments and how many homes would be assisted with the incentives, as on face value participants did not perceive it to be a substantial number – especially for the

# Integrated wellbeing and sustainability assessment

home buyers assistance package. The plan for a new Housing Agency (p81) that will buy homes off-the-plans and on-sell was congratulated by participants, however the funding to undertake this at $15 million was considered to be particularly small and again participants were unclear how many people this was expected to help into buying their own homes. Participants were interested in the details of this scheme and would appreciate those being made available (online is OK).

Participants believed that the plots of land in the central city are too small to generate innovative configurations of housing. The regulations or plan offered no trade-offs for landowners who amalgamated versus those who did not, so participants believed there was little incentive to do so.

The plan did specify that existing social housing was to be rebuilt (p81) and the participants congratulated council for this move. Participants knew that 170 social housing units had been destroyed city wide and noted the plan mentioned only those 40 in the central city would be rebuilt. Participants wanted reassurance in the plan that all destroyed social housing throughout the city would be rebuilt. While much of the social housing may not be geographically located in the central city, it was still felt by participants to be important enough to include. Participants were also wary that no funding had been set aside for this project and sought clarification in the plan that rebuilding would be paid for by insurance. Subsequent investigations by the authors have identified that the insurance from damaged units will be reinvested back into new units or repairs, and hence there is no new capital allocated by Council.

The plan made little mention of residential care services, e.g. aged care facilities; yet these facilities have also been substantially affected by the earthquake, and participants wanted reassurance that the people who would normally live in such facilities would be able to choose such facilities in the central city in the future. Working with private landlords and social agencies to identify what support is required for these facilities to return should be described in the plan.

***What recommendations can we make to the plan?***

- The incentives for affordable housing and social housing should have more detail on the number of properties affected, and the detail on how such incentives should work (online for detail is OK). Depending on the number of properties affected, councillors may want to consider increasing and/or altering the way these subsidies work.
- The plan should acknowledge the wider destruction of social housing in the city and commit to rebuilding all social housing, not just that within the Four Avenues. Confirmation of how this will be paid for is required as currently rebuilding has $0 allocated.
- Commit to working with the residential care sector (private and NGO) to identify what support is required for these facilities to return to the CBD.

***Open space quality (13)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Ensure that public spaces are people friendly and liveable | 13 | Open space quality | Quality of open spaces (quality reflects variety, use, access, and biodiversity) | The plan describes reduced quality of open spaces | The plan does not change the quality of open spaces from pre-earthquake. | Functional open spaces in accessible locations with extensive use of plants, greenspaces and playspaces. | Functional open spaces in accessible locations with extensive use of plants, greenspaces and playspaces and that meet the needs of different groups (age, culture, ability). X | 2+ and open spaces have green linkages, reflect local biodiversity and permeate into private spaces |

## *Discussion*

The plan proposes a wide range of open spaces – sizes, uses, for a wider range of age groups and cultures than is currently provided for (e.g. native edible plants with a traditional Maori values reflected in a proposed community garden). A key to success will be the integration of these spaces throughout the city and with private land and uses. For example the Avon River park is well defined, but how well it will connect with adjacent properties and uses (e.g. will cafes be able to place tables and umbrellas on the public spaces, will people visiting the City Library be able to sit outside along the river – indoor/outdoor

flow?). The Avon River park and pocket parks must also flow into the wider city through networks of streets and lanes. Quality open spaces must be encouraged on private land as well (since the majority of land in the city is privately owned).

Open space projects have less emphasis on biodiversity and ecological functioning.

Participants discussed the need for active seeking out about what children want, and queried whether a Children's Strategy was needed. However it was pointed out that substantial work regarding children already exists and was used in the plan preparation (see *www.ccc.govt.nz/thecouncil/policiesreportsstrategies/strategies/childrenstrategy.aspx*). Participants supported the multi-functional use of spaces.

***What recommendations can we make to the plan?***

- Implementation must also protect views to the Port Hills, Southern Alps, Avon River and to heritage buildings and other important land marks.
- Also see Criterion 2 for discussion and recommendations.

***Universal Design principles and flexibility of buildings (23a and 23b)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Ensure that public spaces and buildings are people friendly and liveable | 23a | Universal Design principles and flexibility of public buildings | Accessible building design and adaptable residences and buildings for the different life stages of people | The plan hinders Universal Design principles | The plan has no comment on Universal Design principles X | The plan identifies the need for Universal Design principles in public buildings with one or two tangible examples of measures to implement | The plan incentivises Universal Design principles in public residences and buildings throughout the 4 avenues | Plan requires Universal Design principles in public buildings and spaces throughout the four avenues. |

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Ensure that public spaces and buildings are people friendly and liveable | 23b | Universal Design principles and flexibility of private buildings | Accessible building design and adaptable residences and buildings for the different life stages of people | The plan hinders Universal Design principles | The plan has no comment on Universal Design principles X | The plan identifies the need for Universal Design principles in public buildings with one or two tangible examples of measures to implement | The plan incentivises Universal Design principles in private residences and buildings throughout the 4 avenues | Plan requires Universal Design principles in private buildings and spaces throughout the four avenues. |

## *Discussion*

Participants began by developing a split in the criterion, separating public and private into two separate criterion. Participants believed the plan should describe what Universal Design is, and use practical examples, e.g. globe door handles are extremely difficult for individuals with limited hand strength to use whereas lever handles enable access by a much greater range of people at little or no extra cost. Participants noted that LifeMark (for residential housing) is a good example of a design code that ensures housing is suitable for everyone throughout their life, for example as able-bodied adults, when people become injured,

# Integrated wellbeing and sustainability assessment

as people become disabled or if ability declines with age, or as a child. Cost benefit analyses of universal design in housing and transport projects have shown excellent returns (see *www.lifemark.co.nz/LinkClick.aspx?fileticket=TXO16WCOpUg%3D&tabid=227*) and this has led participants to recommend that universal design principles be made compulsory in all publicly funded projects.

Participants scored the plan o because there was no explicit mention of Universal Design or relevant concepts.

***What recommendations can we make to the plan?***

- The plan should include a requirement for Universal Design principles to be used in public buildings and spaces throughout the four avenues.
- Incentives are needed for the adoption of Universal Design principles in private residences, commercial spaces and mixed use buildings throughout the four avenues.

***Connection between building structure and streetscape, and active frontages (24)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Ensure that public spaces and buildings are people friendly and liveable | 24 | Connection between building structure and streetscape, and active frontages | New building heights and designs that facilitate a sense of connection to the street. | The plan rejects the notion of building height and design criteria for human scale and active frontages. | The plan has no mention of new building heights and designs for human scale that facilitate a connection with the street or active frontages | The plan identifies the need for appropriate building heights and human scale, and active frontages with one or two tangible examples of measures to implement | The plan includes consideration of the need for appropriate building heights and human scale, and active frontages within some projects | The plan explicitly requires and incentivises the need for appropriate building heights and human scale, and active frontages throughout all relevant projects. **X** |

## *Discussion*

Participants found some of the wording in this criterion difficult to understand (as they were not professional planners) and were not clear what the underlying assumptions behind this criterion were. There was discussion about the definition of active frontages which, it was agreed, included elements of visual contact between those inside and outside buildings, safety, crime prevention, and vibrancy. There was some discussion about the need for a good urban design code that allowed for variety but ensured adherence to a core value set that enabled the vision of the plan to be fulfilled.

Participants scored this a +3 because they believed the relevant wording was found in the plan.

***What recommendations can we make to the plan?***

- Some of the plan is written in ways that are not easily understood by non-planners. Some definitions and explanations of the underlying rationale for some of the proposals and regulations would be helpful.

*Diverse food outlets (25)*

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Ensure that public spaces and buildings are people friendly and liveable | 25 | Diverse food outlets | Multiple outlets for healthy and affordable food (supermarkets, farmers markets, covered market, food banks) and local production (fruit and nut trees, community gardens) | The plan provides for supermarkets alone as an answer to accessible healthy and affordable food. | The plan leaves outlet type and local production unchanged compared to prior to the earthquake | Plan provides for the opportunity to create multiple outlets, local production and social service provision | Specific provision made for multiple outlets, local production and social service provision X | Plan commits land and incentivises multiple outlets, local production and social service provision |

## *Discussion*

This assessment criterion drew substantial discussion from the participants. Some believed that local production (community gardens, fruit and nut trees) was 'just bullshit' and unimportant while others believed that local production was not only strongly requested by large numbers in Share an Idea, but fitted in well with a green and garden city concepts while also making small inroads into concerns regarding climate change and food security. All agreed that diverse food outlets were important, and supported the need for supermarkets, greengrocers, dairies and convenience stores. Perceptions of farmers markets were mixed. Participants believed that they could be 'trendy and high priced', but some farmers markets provide everyday foods that are 'very cheap'. Certainly there is a mix of types of market, and participants were keen to support a farmers market that aimed to attract stallholders selling everyday foods.

Participants also noted that the central city required spaces for food banks and soup kitchens as these were now a common feature of New Zealand society, and were an important source of food for an increasing number of individuals and families.

The participants scored the plan +2 because of the Council's commitment in the plan to supermarkets, a covered market and community gardens. The presence of fruit and nut trees in the community gardens section of the plan was applauded by most participants, and some wanted to see them used throughout the city, where appropriate. Participants congratulated the council for these efforts and have made some suggestions for further improvement.

***What recommendations can we make to the plan?***

- A farmers market that is focussed on everyday foods is committed to and funded within the plan.
- Food banks and soup kitchens are included in the social service mix that needs to be planned for and enticed back into the central city.
- Any councillors involved in discussions regarding the red zone housing areas, outside of the city centre, should ask for consideration be given to using these (in part at least) as food production areas.
- Encourage the availability of healthy food options across the central city. Precincts must contain sufficient retail diversity to allow residents, workers and visitors to easily access every day goods and services.

***Guiding principle 4 - Foster business development – results and discussion***

d) Rebuild an economically viable and affordable city

- Mixed use buildings for business(26)
- Employment opportunities and income (27)
- Education, research and training services (28)

e) Attract new business and talent

- Business hubs created (29)

# Integrated wellbeing and sustainability assessment

f) Support business through high quality and innovative infrastructure

- Communications technology (30)
- Renewable energy (31)

***Mixed use buildings for business (26)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Rebuild an economically viable and affordable city | 26 | Mixed use buildings for business | Attracts new investment in office buildings for a mix of small and large businesses | The plan presents barriers to the need for buildings to support a mix of small, medium and large businesses | The plan has no mention of the need for buildings that can house a mix of small, medium and large businesses | Opportunity is possible for buildings that can house a mix of small, medium and large businesses X | Specific provision made for buildings that can house a mix of small, medium and large businesses, and considers vertical mix | Plan requires buildings that can house a mix of small, medium and large businesses, and requires vertical mix |

## *Discussion*

The participants felt the plan was not clear about and fails to deliver on the potential mechanisms on how to aggregate land to enable mixed use.

There were also major concerns with the anticipated high cost of floor space within new buildings and how this would eliminate the ability of lower income service industries and retail to occupy spaces, particularly the ground floor retail spaces. The participants were keen to see clear incentives provided for ground floor tenants (butcher, coffee house, shoe repairer, sandwich shop) in purpose built office buildings. The potential lack of diversity within and between sites was the centre of long discussions. This led on to a fear about lack of equity in the rebuilding of the city where some businesses would be excluded from the central core, particularly those who required high foot traffic and who also provided services to those working within the core and surrounds.

This criterion was scored +1 the same as the top and bottom-line because the usage of the building was seen as the responsibility of the building owner. It was agreed that this had to happen organically and that regulatory mechanisms to direct mix-use would be counter to what could be achieved. Participants felt that the Council could work with building owners and provide subsidies /financial incentives to lower-income tenants that provide interest and services. Discussions also centred on the need for greater leadership and engagement by the Council with business leaders and owners.

Participants were very clear that if the central city was to be revitalised that it should reflect local community sense of place and that mixed use also included residential which was separate from business.

***What recommendations can we make to the plan?***

- Put in place a facility or subsidy to ensure there was diversity of business and activity within the central city core in particular, or alter the eligibility criterion of existing subsidies to target desirable businesses rather than all businesses.
- Develop clear mechanisms for the aggregation of land that could provide for mix-use purposes/ opportunities and to include residential.
- Greater engagement with residential sector in the development of mixed use.

***Employment opportunities and income (27)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Rebuild an economically viable and affordable city | 27 | Employment opportunities and income | Attract high-worth[4] businesses back into the Central City | The plan presents barriers to attract high-worth businesses back to the Central City. | The plan has no mention of the need to attract high-worth businesses back to the Central City | Plan identifies for the opportunity to attract high-worth businesses back to the Central City. | Plan makes specific provision to attract high-worth businesses back to the Central City. X | The plan commits to attracting high-worth businesses back to the Central City through the full range of design, advocacy, leadership and incentives available. |

## *Discussion*

The plan makes specific reference of the need for high worth business to go back into the central city so a score of +2 was given. Although there was apprehension about specific regulations and what appears to be lack of leadership with parts of the business community particularly those outside of the CBD. A number of members of this group also felt that the Council should have already gained absolute commitment by central governments agencies for their return to the central city, including those who had left over the years prior to the earthquake.

There was considerable concern about bigger picture issues for this criterion. There was a clear understanding that the Plan is trying to avoid big box retail within the Central City. The unintended consequences, however, of the regulatory requirements of 450m2 as maximum retail footprint will be to exclude those larger shops such as Whitcoulls, Mackenzie and Willis and Nood etc on which the city also relies and who provide substantial interest in the retail sector.

The value of quality design and using design values was discussed at length. All members of the 'business' group were very clear that the rebuild of the city should not be through the application of backward looking rules but by creating and validating a new way of working through design principles and guidelines and the use of peer review panels to gain better design outcomes. They felt this would create better places and spaces for employment opportunities. They were very dismissive of the focus on Plan rules and expressed a desire for leadership through good design processes. Discussion centred on the use of processes around the integrity of product - through creative design that is forward thinking via: accountability, transparency, aesthetics and traceability. They expressed strong views that planning should not be prescriptive, but that it should be more adaptive, responsive and dynamic.

There was also concern raised about what would seem to be a lack of engagement with businesses that are on the outside of the central city core. Within this group there had been discussions with business owners who felt those business and landowners within the core were receiving special status. Many felt that they had been excluded, or there had been given insufficient engagement with them and insufficient effort made on the area outside of the core – they had fears that the fringe of the CBD could die if this was not thought about more and integrated into planning processes.

***What recommendations can we make to the plan?***

- Greater emphasis is placed on design by using design principles and guidelines that are assessed by peer review design panels.
- Design panels incorporate local community members.
- Be clearer about the importance of linkages between the central core and the rest of the city within the Four Avenues.
- The regulation for maximum retail space of 450m$^2$ is too-coarse and should be removed.

[4] *Businesses that create substantial earnings/person employed.*

# Integrated wellbeing and sustainability assessment

***Education, research and training services (28)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Rebuild an economically viable and affordable city | 28 | Education, research and training services | Access to diverse education, research and training services. [5] | The plan reduces educational, training and research service span in Central city | The plan proposes no change in span of education, training and research services within Central City, nor life-stage or type of requirement X | Education, training and research services within Central City span life stage requirements but not type of educational requirement | Education, training and research services within Central City span life stage requirements and type of educational requirement | Education, training and research services within Central City span life stage requirements and type of educational requirement, and offer centres of excellence for several services. |

## *Discussion*

There was concern that there were no specific initiatives in the plan to deal with the loss of primary schools within the Central City. If families are to be a target for central city living there is a need for more explicit planning around education. Greater certainty is required for primary school arrangements. The focus appears to be on high school and zoning.

There was a lack of initiatives for the provision of child care or preschools within the central city/four avenues. If the Council is to support the return of workers to the Central City then recognition is required of the need for child care arrangements. The Council needs to be the lead for this initiative. Given the number of women in the workforce, particularly those who work in government departments – who are identified as leading the return to the city, in retail and administration and all of which have large numbers of female employees, then child-care needs to be addressed in the plan.

The participants scored the plan at 0 due to the lack of provision for a span of education services and silence on other training education services, for example, adult education. They did however fully support the greater interaction of tertiary institutions incorporated into city life and space.

***What recommendations can we make to the plan?***

- Work with private and public sector for provision of child-care services within close proximity to the Central City.
- Actively seek out and be clear about provision of primary schools within the Central City.

***Business hubs created (29)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Attract new business and talent | 29 | Business hubs created | Create spaces where businesses can interact, create and be innovative with like and different businesses | The plan reduces co-locational benefits that previously existed within the 4 avenues | The plan proposes no consideration of co-location of businesses | Plan provides for like businesses being able to co-locate and have some access to different businesses X | Plan provides for and incentivises like businesses being able to co-locate and have some access to different businesses | Plan commits to like businesses being able to co-locate and have good seamless access to different businesses |

[5] *Full breadth of life-stage from child-care to adult education; type of education from childcare to tertiary to research to wananga.*

## *Discussion*

All participants were clear that the role of the Council is to facilitate rather than determine the formation of business hubs. There was lengthy discussion about EPIC and how similar groups of business could be facilitated by other like businesses within the Central City, although it was thought that some business hub growth would happen organically - the Council should support smoothing the progress of these. Participants recognised the difficulties with managing the interests of the current land and building owners and the need for change.

An important feature discussed was the need for Council to support the infrastructure necessary for some businesses which have very specific requirements; this support is through ensuring there are reliable volumes of water, electricity and broadband. This was seen as important for actively supporting the co-location of like businesses as well as Council investment in infrastructure that could support a hub, e.g. the metro sports hub.

The score of +1 was given, although there was discussion about how far it was possible for the Council to manipulate the development of business hubs.

***What recommendations can we make to the plan?***

- Investigate a hub of exceptional sustainable business.

***Communications technology (30)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support business through high quality and innovative infrastructure | 30 | Communications technology | Ultrafast broadband (100MB/Second) and future communications technology | The plan takes ultrafast broadband or future communications technology off the planning horizon | The plan makes no mention of ultrafast broadband or future communications technology | Ultrafast broadband access within 4 avenues with Wi-Fi in all public places and in many private spaces | Future communications technology proposed X | Future communications technology proposed and funding sources identified |

## *Discussion*

Participants believed the assessment criterion was set too high here The group was not sure what +2/+3 future communications technology would actually mean, even though participants wanted to see this as a top line. But as the Plan meets community expectations about free Wi-Fi and ultrafast broadband within the four avenues it was seen as successful and they considered the Plan was actually achieving well. Participants wished to see the Central City achieve the highest hi-tech arrangements possible.

***What recommendations can we make to the plan?***

- Investigate whether Wi-Fi is the highest technical aspiration available.

# Integrated wellbeing and sustainability assessment

***Renewable energy (31)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Support business through high quality and innovative infrastructure | 31 | Renewable energy | Use of renewable energy generated from across the city, with additional generation and distribution | The plan presents barriers to the development and distribution of renewable energy across the city | The plan<br><br>makes no mention of local renewable energy generation and distribution | The plan proposes renewable energy is generated across the wider city and distributed within the Four Avenues<br><br>**X** | The plan provides incentives for renewable energy to be generated and distributed across the wider city and within the Four Avenues. | The plan encourages renewable energy to be generated and/or distributed across the wider city and within the Four Avenues, via a range of advocacy, leadership, incentives, regulation & investment. |

## *Discussion*

Discussion included concern about what is meant by 'renewable energy'. Small scale on-site renewable energy generation (solar water heating and passive solar) is absent in the plan – only large scale and expensive technology is proposed (district heating). It was felt that small scale and localised solutions would add more resilience than a centralised and underground piped network (more self-sufficient and less emissions, especially important for air quality). Burning wood and biomass in a distant centralised energy plant will still result in carbon emissions. People wanted solar energy solutions through the share an idea, but this appears to be absent in the Plan. Access to the sun is considered, but could be strengthened considerably – especially for living zones (e.g. access to a minimum of three hours sunlight in winter for residential living spaces is proposed).

Build Green Christchurch only applies to new commercial buildings. It is also important to consider the performance of new homes but even more importantly the renovation of existing homes many of which would be considered to be cold, damp and poorly performing. Renovation of the existing built home environments provides an extraordinary opportunity to improve health, wellbeing and sustainability objectives.

***What recommendations can we make to the plan?***

- Provide a definition of renewable energy.
- Include projects to encourage small scale on-site renewable energy solutions.
- Apply green building tools more widely to go beyond the commercial core and fringe, and to apply to existing buildings.
- Consider ways of improving the quality of new and existing homes.

***Guiding principle 5 - Respect for the past – results and discussion***

d) Enhance the beautiful setting of Christchurch beside the Avon River and Hagley Park at the foot of the Port Hills
   - Use of space and links to the river (32)

e) Celebrate the city's culture and heritage for the future
   - Wayfinding (33)
   - Sense of place (34)
   - Respect for Maori cultural values (35)
   - Remembrance (37)

f) Respect the existing street pattern
   - Historic street pattern (36)

*Use of space and links to the river (32)*

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Enhance the beautiful setting of Christchurch beside the Avon River, Hagley Park at the foot of the Port Hills | 32 | Use of space and links to the river | Use of space along the river and green links to the river | The plan describes a loss of connections to and along the river | The plan maintains existing connections to and along the river | Planned green spaces link to and along the river to create an extended linear park and river is made more accessible for people of all abilities | Planned green spaces link to and along the river to create an extended linear park; and river is made more accessible for people of all abilities; and history and cultural importance of the river explicitly revealed | Planned green spaces link to and along the river to create an extended linear park; and river is made more accessible for people of all abilities; and history and cultural importance of the river explicitly revealed; and river corridor width substantially increased. X |

## *Discussion*

Participants agreed the plan was excellent to raise the profile and increase the use of the Avon River – a vital part of the city's heritage and amenity. Participants wanted to confirm that if 30m set backs are imposed they must also be publically accessible (not cut off by private development). Participants were pleased to see the Avon River corridor being created in Volume 2. However, the use of this newly zoned land is not clear. Much of the land surrounding the river is currently road and foot paths. It was suggested that the CBD Road Hierarchy (Volume 2 - MAP) needs another classification for pedestrian areas - "Way" is too broad. Cashel Mall and Worcester Boulevard are considered "ways" as are Victoria Street and Ferry Road. These areas do not have the same uses. "Pedestrian Priority Area" is proposed to reflect that vehicles still may travel in these spaces (perhaps only after hours for servicing), but the focus of these areas is walking and cycling (e.g. Worcester Boulevard). The edges of the Avon River from Armagh Street to the Hospital should be designated as Pedestrian Priority Areas (needing road closures during the day).

The activities permitted along the Avon River Corridor are not clear. The Plan should promote a range of public and privately run activities along the Avon River. The plan is silent on private opportunities such as hospitality, punting and entertainment within the river corridor.

More links could be made with schools and communities to help care for and study the Avon River. Examples include schools adjacent to the river "adopting" a portion of the river for care (e.g. Coast Care and Love Your Coast) and Universities helping to gather data of biodiversity and quality etc. Educational elements could also be built into interpretation boards and displays.

***What recommendations can we make to the plan?***

- Ensure 30m set backs are publically accessible i.e. not cut off by private development and available to utility companies.
- The CBD Road Hierarchy (Volume 2 - MAP) needs another classification for pedestrian areas - "Way" is too broad.
- The edges of the Avon River from Armagh Street to the Hospital should be designated as Pedestrian Priority Areas (needing road closures during the day).
- Promote a range of public and privately run activities along the Avon River. The plan is silent on private opportunities, such as hospitality, punting and entertainment.
- Link with schools and communities to help care for and study the Avon River.

# Integrated wellbeing and sustainability assessment

***Wayfinding (33)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Celebrate the city's culture and heritage for the future | 33 | Way finding | Street design, layout and signage (international signs, English, Te Reo, Braille) is clear for people moving within the city | The plan hinders wayfinding | The plan makes no mention of wayfinding | Prominent safety issues within the Four Avenues are identified by necessary measures (design, layout, signage) | Routes to key destinations and prominent safety issues identified by necessary measures (design, layout, signage) X | All aspects within the Four Avenues, routes to key destinations and prominent safety issues identified by necessary measures (design, layout, signage) |

## *Discussion*

Participants scored this criterion broadly, from 0 to +3 (an average or +1/+2), because while there was a good section on wayfinding in the plan, it did not fit well to the scoring scale developed by participants. For example, the wayfinding section of the plan talks mostly about signage, whereas participants gave substantial weight to street design and layout as well. For example, colour of paving can have a substantial influence on where people walk and what mode of transport is perceived to have right of way. Participants were pleased to see recognition of the importance of tourists and their ability to wayfind.

The participants also noted there was no discussion of using internationally recognisable signs, which the participants believed should be the starting point for all signage where appropriate. For example, hospital is denoted by a white cross. To complement the international signs, participants also noted that English, Te Reo and Braille should be used where appropriate, and again this is not mentioned.

Participants also suggested a hierarchy of wayfinding importance with safety having a higher priority than destination finding. For example, wayfinding along the river must be safe for all, including the visually impaired; wayfinding to a destination such as the hospital is more critical than wayfinding to an entertainment centre.

***What recommendations can we make to the plan?***

- A hierarchy of wayfinding importance is included, with safety being the priority.
- Wayfinding should encompass as much about design and layout, as signage.
- International signs should be used, and these should be complemented with English, Te Reo and Braille where appropriate.

*Sense of place (34)*

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Celebrate the city's culture and heritage for the future | 34 | Sense of place | Clear evidence of Christchurch's unique heritage, cultures and geography including commercial buildings and homes | The plan hinders design, art, visual aesthetics and sense of place. Christchurch could be any number of western cities in the world. | The plan has no consideration of design, art, visual aesthetics and sense of place. | The plan provides for design, art, visual aesthetics and sense of place that has regard for the unique heritage, multicultural nature and geography of Christchurch with one or two tangible examples | The plan includes design, art, visual aesthetics and sense of place that has regard for the unique heritage, multicultural nature and geography of Christchurch within many projects that people do. X | The plan requires supports, encourages, celebrates design, art, visual aesthetics and sense of place that has explicit celebration of the unique heritage, multicultural nature and geography of Christchurch within all relevant projects. |

## *Discussion*

The use of the Urban Design Panel was seen as a vital way to provide quality design outcomes for the city. The development of style guides for Christchurch, specific to the defined precincts and character areas was seen as a necessary way to reinforce the "style" of a particular area. Sense of place needs greater inclusion in more projects (integrated throughout the plan). Success for this criterion is less about a few iconic buildings, sculptures or festivals (all of which are useful), it is more about a broad and tangible reflection of our character – natural and cultural heritage throughout the city. All journeys around the city should allow residents and visitors to see the various layers that make up who we are and show our particular place in the world.

***What recommendations can we make to the plan?***

- An Urban Design Panel was seen as vital, sufficient resources should be allocated to allow the panel to review significant building proposals, and health/wellbeing and sustainability concerns should be reflected in the panels members.
- Aim to integrate character elements throughout the plan in appropriate projects.
- Consider the development of style guides that are particular to defined character areas. Precincts could have their own special character to help with legibility.

# Integrated wellbeing and sustainability assessment

***Respect for Maori cultural values (35)***

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Celebrate the city's culture and heritage for the future | 35 | Respect for Maori cultural values | Respect for spiritual, cultural and natural heritage values. For example, why tape, urea indigenous plantings, waterways, and Maori. | The plan undermines Maori cultural, spiritual and natural heritage values | The plan has no consideration for Maori cultural, spiritual and natural heritage values. | Plan provides for consideration of Maori cultural, spiritual and natural heritage values in some projects with one or two tangible examples<br>**X** | Plan provides for consideration of Maori cultural, spiritual and natural heritage values in many projects with several tangible examples | Plan commits to Maori cultural, spiritual and natural heritage values in the vision of the plan, objectives and throughout all relevant projects |

## *Discussion*

The plan provides a good foundation to engage with local Maori – but through genuine engagement and partnerships much more could be achieved. Important sites to Maori and to our city's heritage should be revealed and celebrated – for example beneath the Central Library is an urupa (Maori Burial site) and the Central Fire Station was a seasonal dwelling of Ngāi Tahu chief Te Potiki Tautahi. This site gave our city its name Ōtautahi ("the place of Tautahi"). In partnership with Ngāi Tahu these stories can be brought to life and shared with residents and visitors – helping to create a uniquely Christchurch experience for all, and helping to balance the tangible evidence of cultural expression in the city. Other examples include the naming of important sites, street names, interpretation boards, the use of native plants, recognition of traditional gathering sites for food (eel) and material (flax), cultural celebrations (Matariki), public artworks, building design elements in public buildings (like the Civic Offices), etc.

Other recovery matters need to be considered from a Maori perspective as well. Issues around equity, health and social wellbeing should be considered as Maori are often more disadvantaged, or with respect to engagement processes have different social networks and methods for responding.

Participants believed more could be made of working with Ngāi Tahu as a development partner. They have considerable resources and a strong commitment to green and social outcomes.

Minor point – in Volume 2 the Avon River Park does not contain the Maori name.

***What recommendations can we make to the plan?***

- The plan requires processes for shared governance, and has projects that embody a living Maori culture, e.g. Te Reo Village.
- Opportunities to integrate our diverse cultural heritage in projects should be explored through a partnership with Maori (and with other cultures) – for example in the development of the Central Library, Avon River, Pocket Parks, Community Gardens, Convention Centre and Town Hall, public art and events.
- Engage with Ngāi Tahu as a development partner for key projects.
- Special considerations will need to be given to the disadvantaged members in our society (often Maori fall into this group) to consider the socio-economic aspects of the plan. Affordability and equitable access would be two key considerations.

*Remembrance (37)*

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Celebrate the city's culture and heritage for the future | 37 | Remembrance | Acknowledging the earthquakes to inform, and as a part of, the future city | The plan actively disregards the earthquakes | The plan does not consider the earthquakes or how they might inform or be a part of the future city | The plan has a one dimensional memorial to the city and our community | The plan has multiple ways of remembering the earthquakes throughout the city and our community. | The plan has multiple ways of remembering the earthquakes that are appropriate and sensitive to the past, and set an international standard. X |

## *Discussion*

This was viewed as one of the strongest sections of the plan. Participants described it as a very thoughtful and well crafted section. Some discussion was generated around whether there was a need for multiple sites and a range of activities to remember the quake events. The participants felt that fewer high quality installations with multiple purposes was preferred over a greater number of single purpose sites. Special emphasis was placed on the need to remember the people/community sprit/ courage and resilience rather than the "disaster". It was noted that one memorial could have multiple ways of remembering (Epi-Centre was seen as a good example of this), so the bottom line was placed at +1.

***What recommendations can we make to the plan?***

- Focus on the quality of memorials and their relevance over time, rather than the number. Experiential memorials were preferred over static displays.
- Need to think about the process by which memorials will be identified and developed.
- The need to remember the people/community sprit/courage and resilience rather than the "disaster."

*Historic street pattern (36)*

| Guiding Principles | Criterion | | Description | Small negative impact | Neutral impact | Small Positive impact | Moderate positive impact | Strong positive impact |
|---|---|---|---|---|---|---|---|---|
| | | | | −1 | 0 | +1 | +2 | +3 |
| Respect the existing street pattern | 36 | Historic street pattern | Respect for the historic grid, road and avenue layout of the city established about 1850s. | The plan disrupts historic street pattern. | The plan has no consideration in plan given to historic street pattern | Historic street pattern reflected positively in plan | Historic street pattern reflected positively in plan and grid-connections are re-made and strengthened X | Historic street pattern reflected positively in plan, grid connections are strengthened, and non-grid connections such as the river further enhanced |

## *Discussion*

The group recognised the need to respect and reuse existing infrastructure by maintaining the street pattern. There was also much positive recognition of the identified opportunity to replace, redevelop and create new lanes and other spaces for public use and access between and within the existing street networks.

# Integrated wellbeing and sustainability assessment

***What recommendations can we make to the plan?***

- None.

## *6. Summary graphs of assessment positions*

Figure 1 presents the summary of the workshop outcomes for 18 criteria, and Figure 2 presents the summary for the remaining 20 criteria. The figures show all assessment criteria, the agreed top and bottom lines for each criterion and the scores given to each criterion. It can be seen from these scores that generally the workshop scored no criterion below neutral (no impact/neutral/no change/improvement/decline) but also few criterion reached the "top line" or aspirational goals that the participants set. The results show there is plenty of room to improve aspects of the plan, and the way the plan is presented in the final version, along with strong directions for implementation of the plan once it is approved.

**Figure 1. Top and bottom lines with criteria scores**

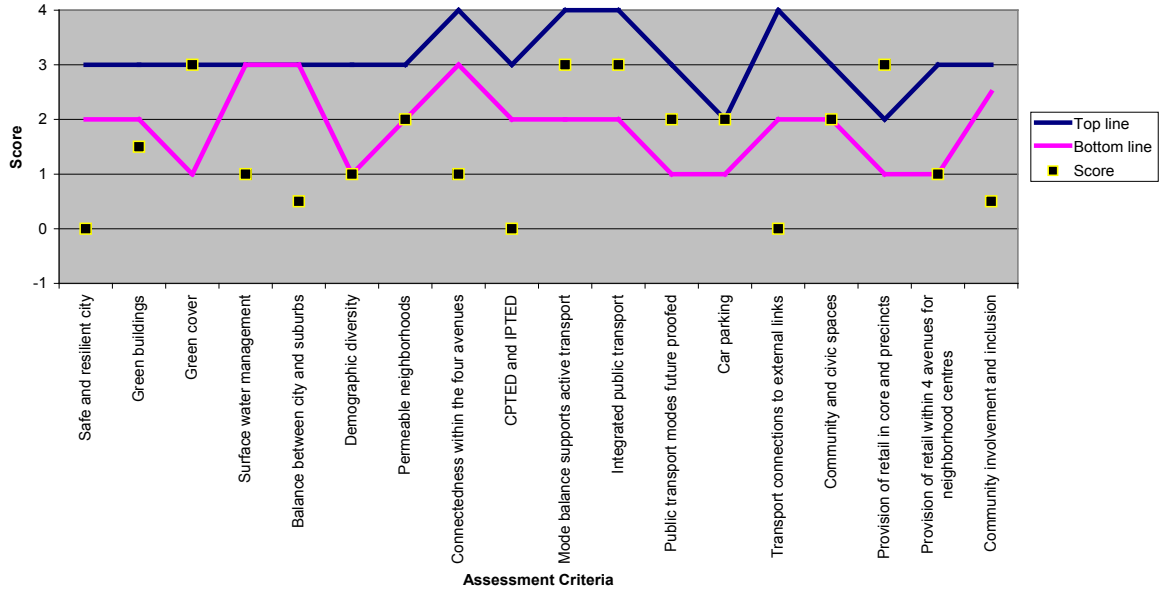
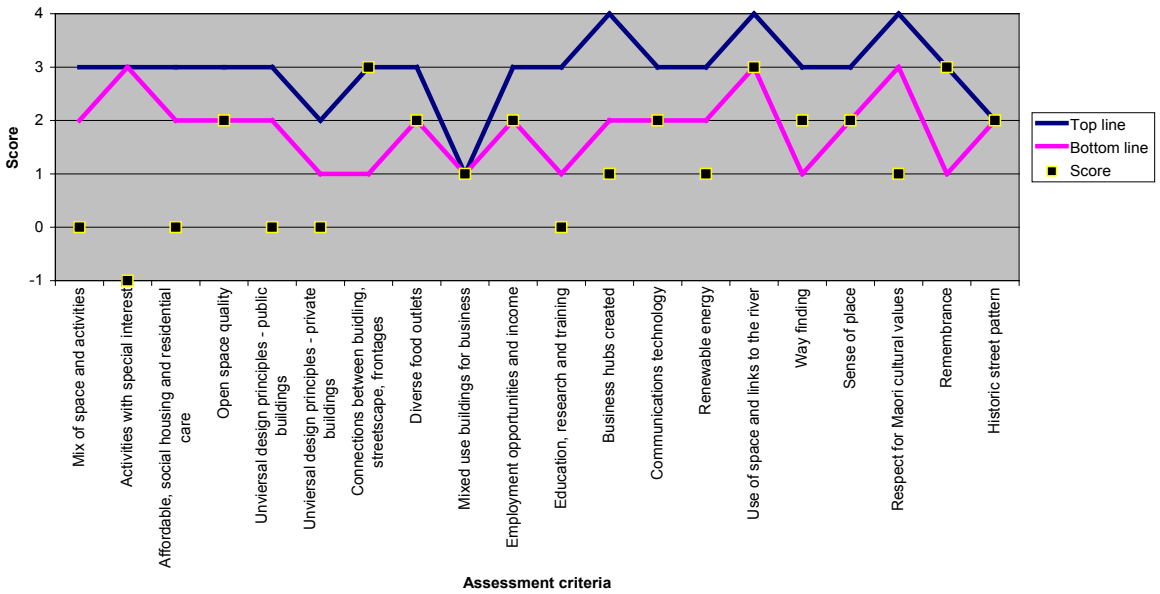



**Figure 2. Top and bottom lines with criteria scores**



## *Appendix 1 – Agenda for scoring workshop*

**8.30am** **Coffee and tea available**

**9.00am.** **Introduction (plenary)**
Open with prayer. Welcome by Tony Moore and Anna Stevenson. Martin Ward explains the method has been used before, and the role of different participants.

**9.20am.** **Assessment Criteria Introduction (plenary)**
Rob Quigley introduces the assessment criteria, the process of setting top and bottom lines and the role of technical advisors in assisting them.

**9.40am** **Small group tasks**

1. Review and become familiar with assessment criteria for this particular group of criteria. Is the scale about right?
1. Select Top and Bottom lines (see above for description of top and bottom lines)
2. Coffee available during this time.

**11.30am** **Plenary feedback from each Chapter Group** - Martin Ward.

**12.30pm** **Lunch**

**1.00pm** **Score the Plan** - Rob Quigley.
Facilitators will have a set of large-format assessment criteria each, and will ask their group 'where the Draft Central City Plan as a whole sits on the scale descriptors for each criterion'? Facilitators will record any discussion around:

2. why the plan has been scored at that point
3. any suggested improvements to the plan
4. any potential unintended impacts/outcomes identified by participants.

**3.00pm** **Afternoon tea**

**3.15pm** **Walk about** - Alison Bourn.
Participants move about the room and comment on the other groups that they have an interest in. Facilitators stay beside each score sheet to discuss/defend/make changes to scores, and be prepared to feedback on any major changes/points of disagreement.

**3.45pm** **Plenary feedback by facilitators of any changes and final comments from the floor** - Rob Quigley.

**4.15pm** **Next steps and wrap up** - Rob Quigley
Tony Moore and Anna Stevenson to close.
Close with prayer

# Transport Demand Analysis

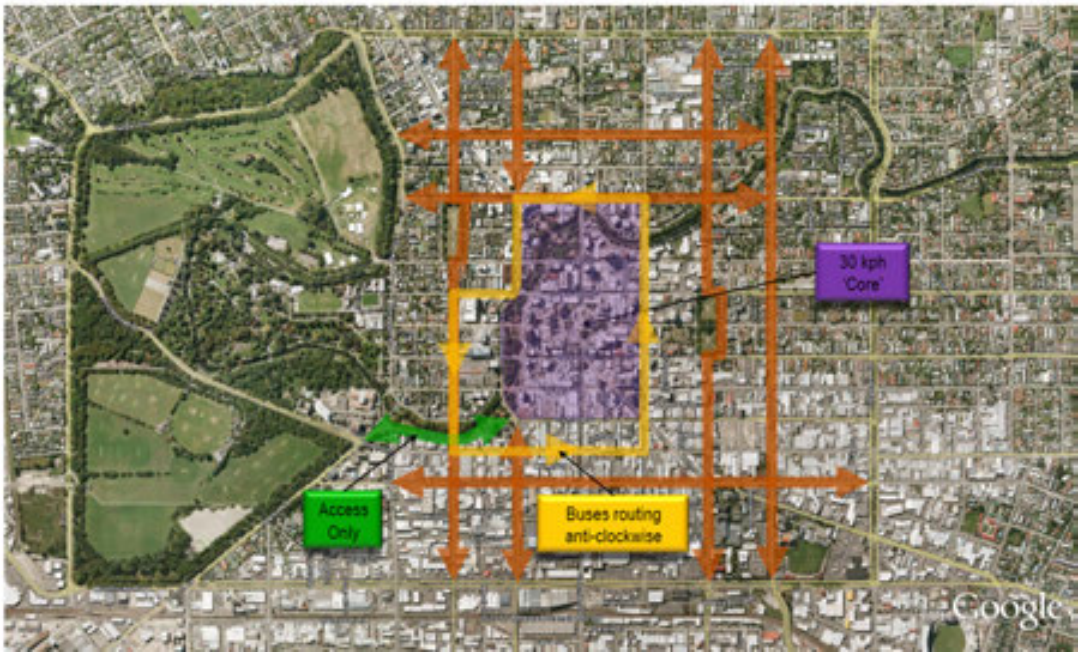
## Preliminary Traffic Network Analysis

## Key Assumptions

- That proposed changes to the Central City's transport networks in the Central City Plan should be configured to enable key economic, land use, environmental and lifestyle changes featuring in the Central City Plan to be realised.
- That as far as possible, and given uncertainties surrounding changed and changing land use patterns across Greater Christchurch following the 2010 and 2011 earthquake events; Central City transport objectives and projects should be viewed and tested in the context of city-wide networks pre-earthquakes and broad Urban Development Strategy proposed land use changes.
- That future transport network modelling assessments should take account of the above factors along with scenarios assuming a range of potential shifts in mode choice from the car to public transport, walking and cycling - i.e. moving towards meeting key transport performance targets associated with an integrated transport package.
- That the integrated transport package should strive to remain in broad conformity with UDS objectives.
- That detailed modelling of the transportation access effects for individually significant Central City land use proposals will await broad conformation or otherwise of their likely place in the Plan through the consultation processes for the Draft Plan.

# Transport Demand Analysis

## Base Traffic Network Components



## Preliminary Traffic Network Impact Assessments

Base network testing assumed 2010 base (pre-quake) Central City traffic loadings – and then scenarios to 2041 based upon broad UDS land use and transport projections, along with mode share assumptions to meet key Central City Plan transport targets.

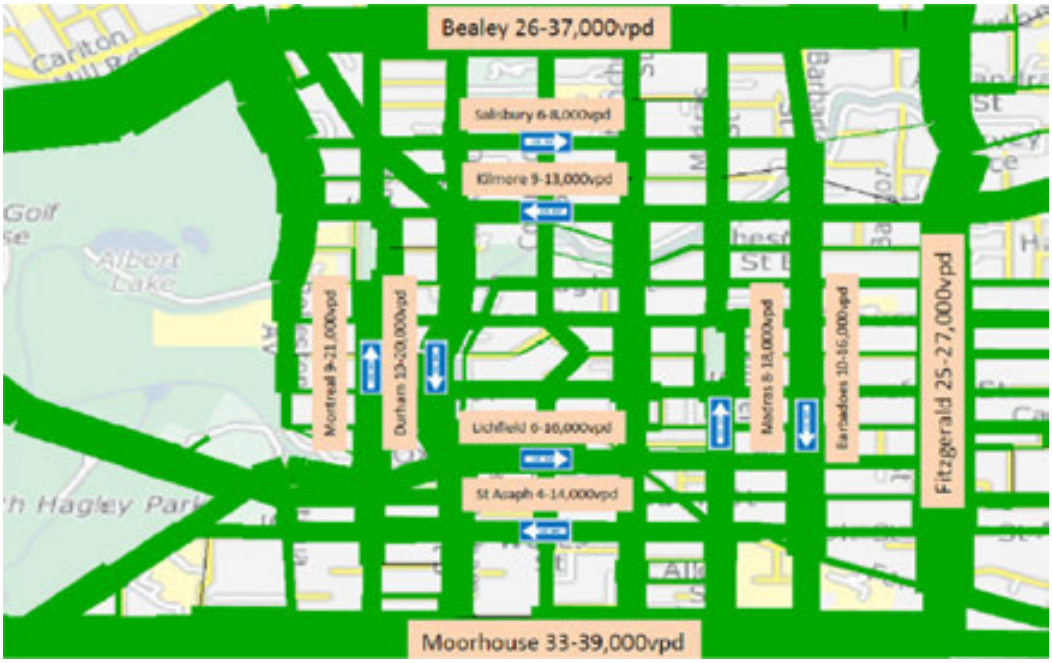
**Assessed network changes were based upon the Draft Central City Plan proposed transport network and include:**

- 30km/h slow core of streets in core of the Central City
- Oxford and Cambridge terraces open to access and emergency vehicles only
- Bus gate measures to stop through-traffic on Manchester Street and Durham Street/Cambridge Terrace
- Bus services use the streets around the slow core
- All one-way streets converted to two-way
- Park Terrace reduced to one lane and slowed
- Two-lane approaches at all two-way intersections to maximise cycling and walking provision
- No changes to the Avenues

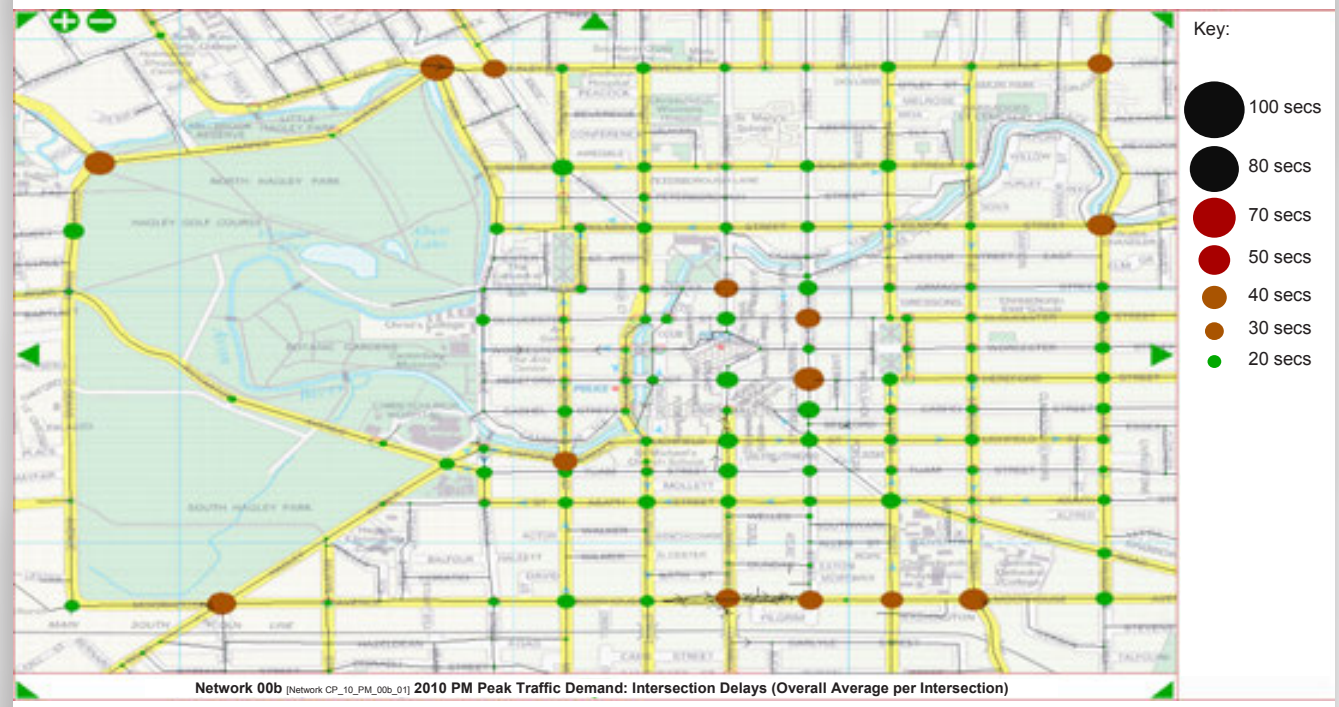
Variants of this network and alternative networks were also tested.

# Transport Demand Analysis

## 2010 Pre-Earthquake Network and Traffic Demand Daily Traffic Volumes



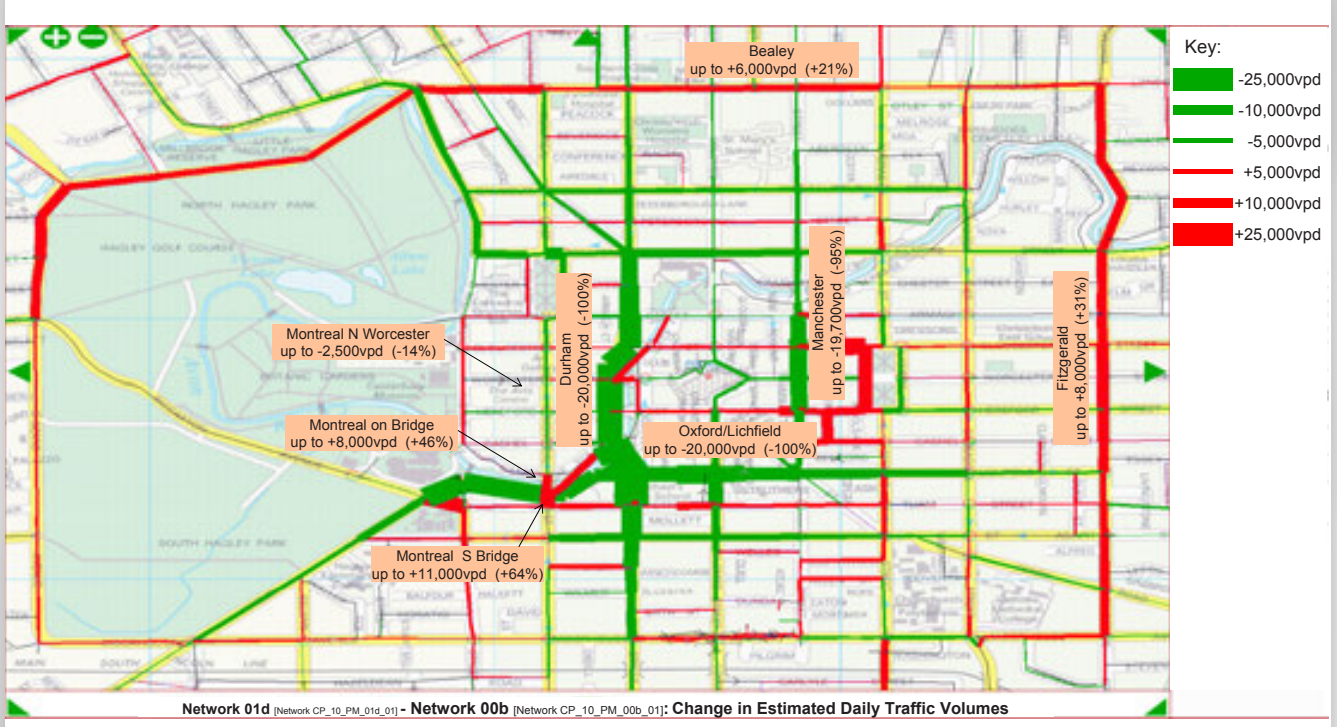
## 2010 Pre-Earthquake Network and Traffic Demand
## PM Peak Intersection Delays




Network 00b [Network CP_10_PM_00b_01] 2010 PM Peak Traffic Demand: Intersection Delays (Overall Average per Intersection)

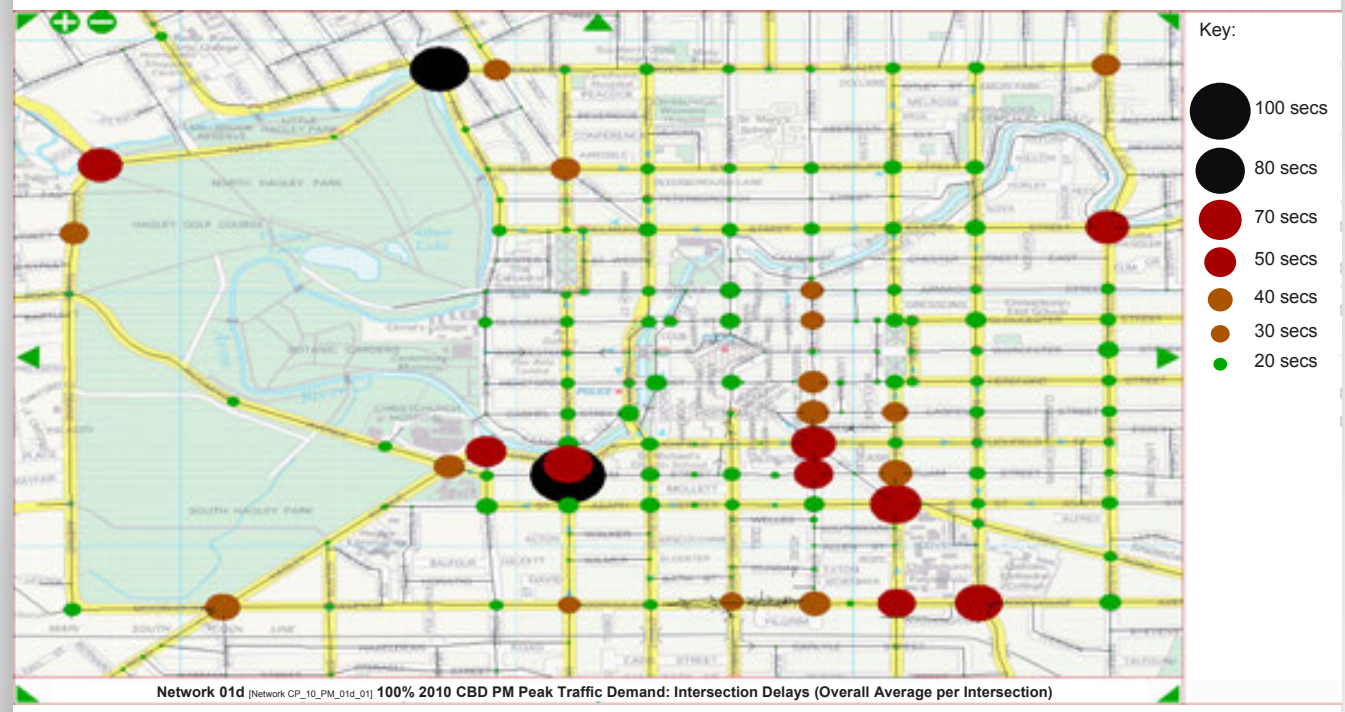
# Transport Demand Analysis

## Draft CCP Network, 2010 Traffic Demand Change in Daily Traffic Volumes




**Network 01d** [Network CP_10_PM_01d_01] **- Network 00b** [Network CP_10_PM_00b_01]**: Change in Estimated Daily Traffic Volumes**

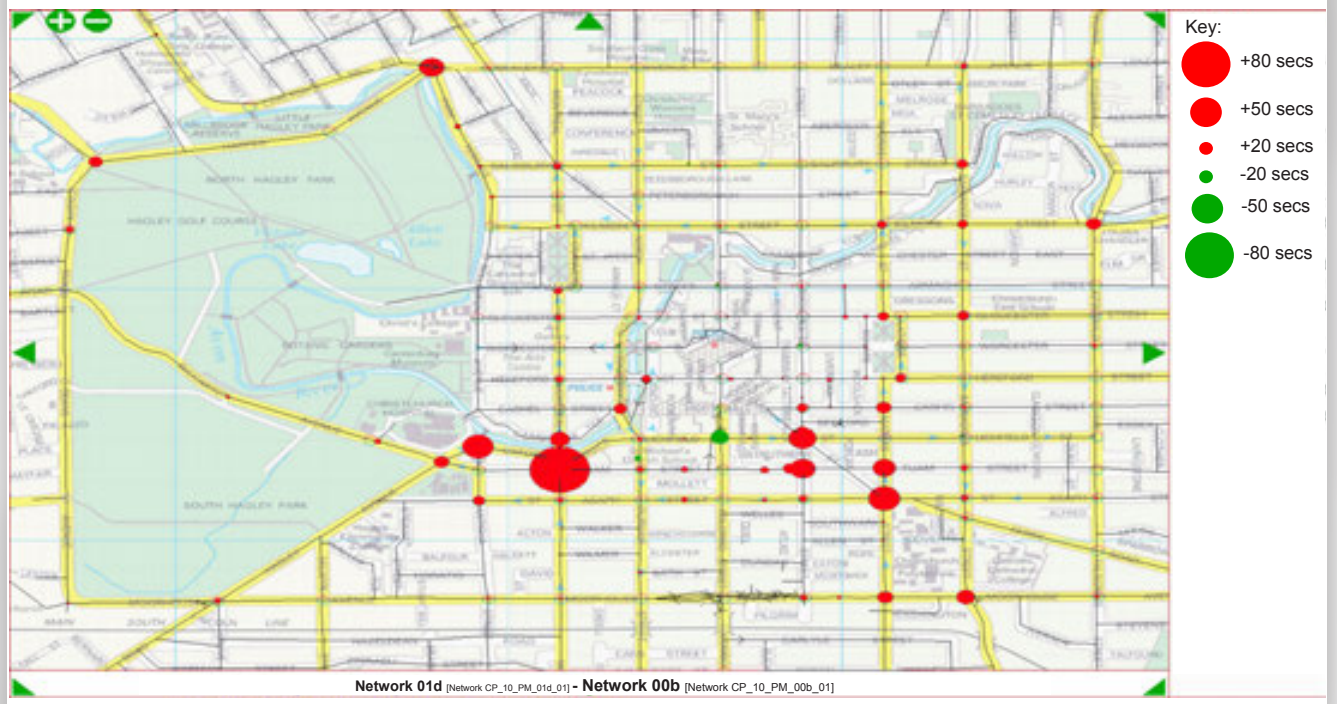
## Draft CCP Network , 2010 Traffic Demand
## PM Peak Intersection Delays



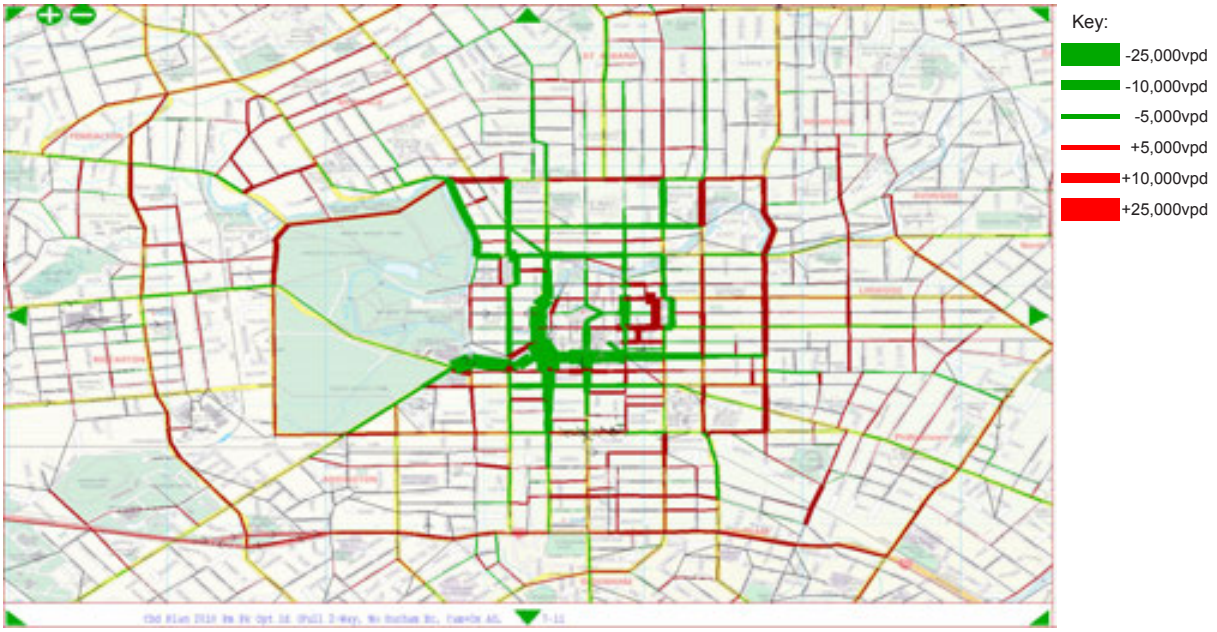

Network 01d [Network CP_10_PM_01d_01] 100% 2010 CBD PM Peak Traffic Demand: Intersection Delays (Overall Average per Intersection)

# Transport Demand Analysis

## Draft CCP Network , 2010 Traffic Demand Change in PM Peak Intersection Delays

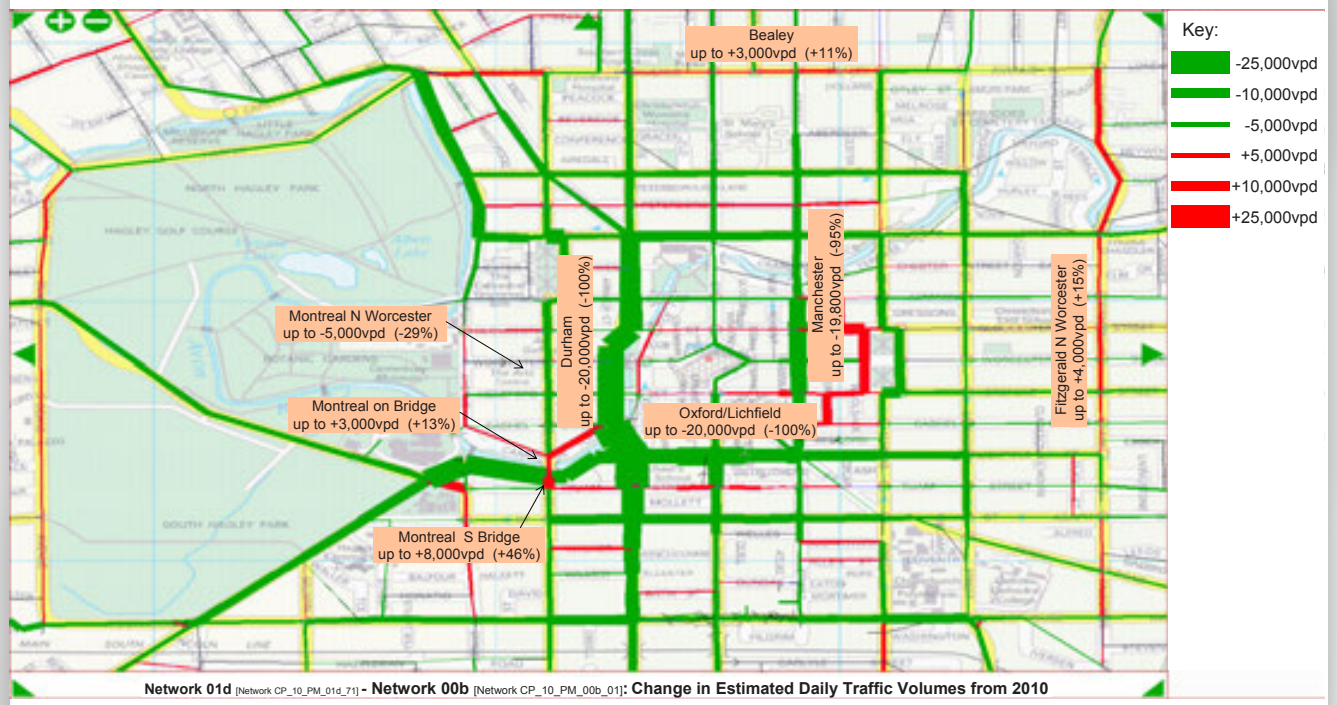


## Draft CCP Network , 2010 Traffic Demand
## Wider Network Changes



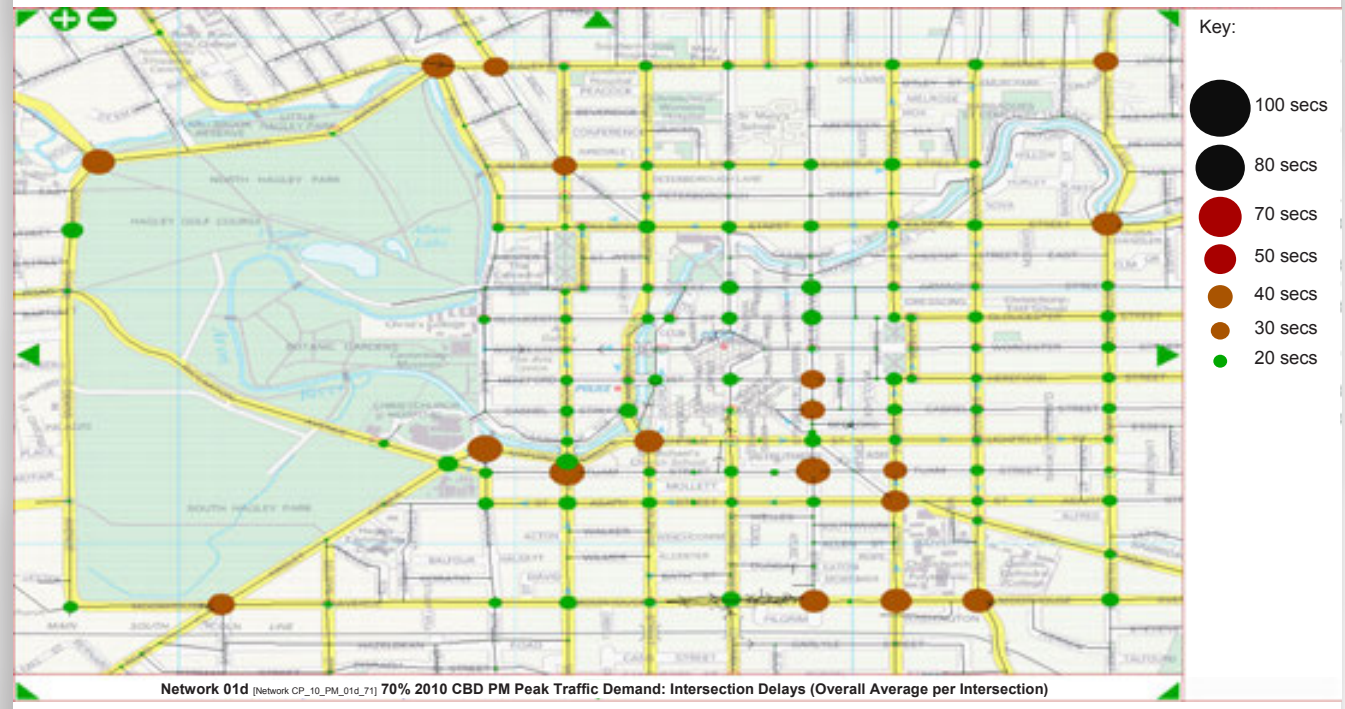
# Transport Demand Analysis

## Draft CCP Network , Target Mode Split
## Change in Daily Traffic Volumes



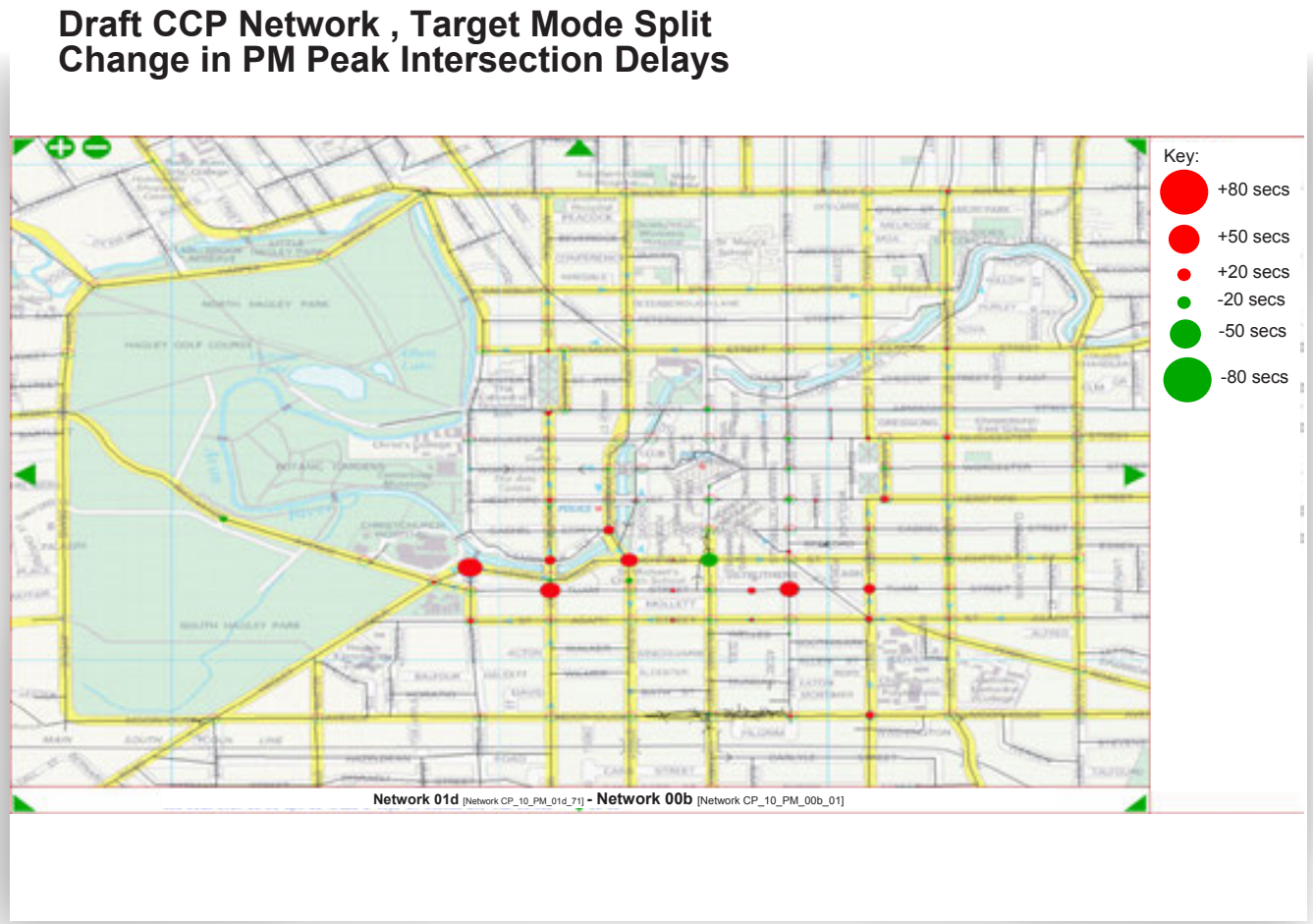

**Network 01d** [Network CP_10_PM_01d_71] **- Network 00b** [Network CP_10_PM_00b_01]**: Change in Estimated Daily Traffic Volumes from 2010**

## Draft CCP Network , Target Mode Split
## PM Peak Intersection Delays



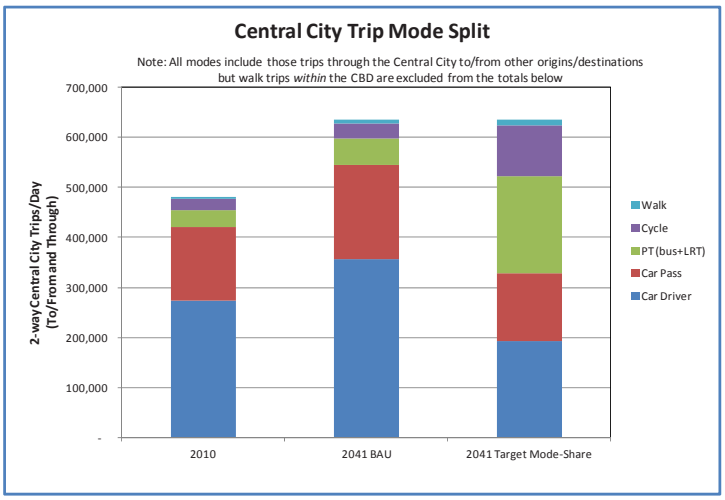

Network 01d [Network CP_10_PM_01d_71] 70% 2010 CBD PM Peak Traffic Demand: Intersection Delays (Overall Average per Intersection)

# Transport Demand Analysis



## Mode Shifts – key changes

- Substantial shifts would be required towards non-car modes to maintain broad network efficiency, **if** the UDS projected 2041 Central City activity levels are to be achieved with the full package of Central City Plan changes.
- To achieve a 70 per cent 'pre-earthquake' car demand loading a **5 to 6 fold increase** would be required by 2041 in pre-earthquake public transport patronage. **Public transport network needs to be designed for this.**
- If 'only' 2010 Central City pre-quake activity levels were restored in the Central City over the next 30 years, a doubling in public transport, walking and cycling trips is **still required.**



# Transport Demand Analysis

## Traffic Network Analyses - Next Steps/Further Studies

When the Draft Central City Plan is adopted, further analyses, using CAST as well as other models, will include the following:

- Network capacity, delay and economic analyses of base transportation network, with necessary testing of appropriate phasing/staging options for those network changes.
- Analysis of effects on those scenarios of high level mode share (Travel Demand Management) effects, and necessary TDM led programmes and activities to support wider mode shift changes that may be prompted by the total Central City Plan programmes.
- Assessments at high order of city-wide impacts of those network and key land use changes – implications for other transportation network changes (i.e. beyond Central City) as possibly affecting future Regional Land Transport Plan/Long-Term Plan programmes.
- Integrated Transport Assessments of individual key central city land use changes, to assess mode share, trip generation and local access implications of key central city land use changes, including remaining optional locations and staging.

# Public Transport Demand Analysis

**People on Public Transport**

**The Potential Role of Rail Services**

## Why Rail?

### Potential economic benefits of light rail type systems

**Examples of light rail/reintroduced modern commuter rail systems have demonstrated**:

• Employed by some cities as part of urban and economic regeneration

• Increased property values near to stations – for every $1 in construction cost, understood in successful examples, to typically attract $2 to $3 in property investment

•Can attract employers to set up businesses close to lines/stations

•Can attract property developments and businesses to cluster in and around stations (significantly more so than bus mode)

• Typically attract visitor, entertainment, retail and residential developments close to such “hubs”

• “Hub” growth near to stations in turn supports patronage growth on systems

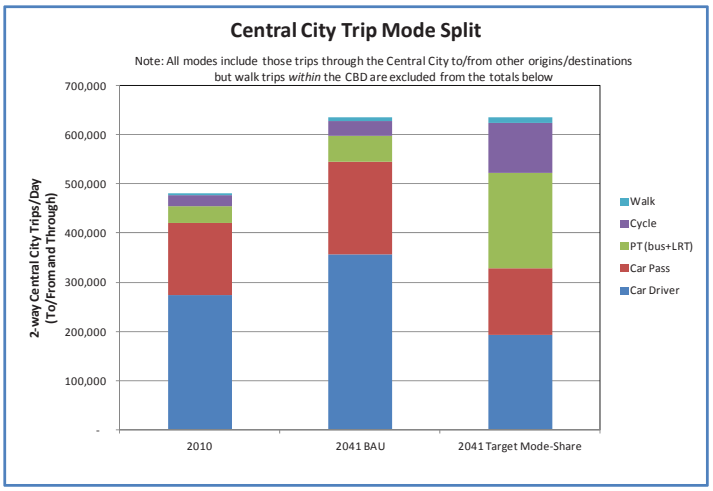
**Additionally, for Greater Christchurch:**

Some form of light rail system, especially linking the city with the airport would achieve good synergy with international visitor expectations of the Pure NZ branding, where international expectations of environmentally friendly public transport systems are high and increasing

# Public Transport Demand Analysis

### The potential role of rail services in supporting travel mode change

• The Draft Canterbury Regional Land Transport Strategy (2012 – 2042) signals significant required shifts in travel mode choice (notably away from the private vehicle) over that timeframe to maintain broad travel network efficiencies while accommodating expected increases in economy, population and associated activity levels.
• Land use and consequential travel activity levels underpinning these shifts reflect in turn the Greater Christchurch Urban Development Strategy (UDS) land use projections
• Although some land uses across the region are subject to change post the earthquake events, the Central City Plan has assumed similar contributory mode share changes will be required for travel to and within the Central City over a similar 30 year timeframe.
• A large proportionof the aimed for regional and central city mode share changes (which are themselves significant over the 30 year timeframe) would be expected to be achieved with a significantly increased uptake of high quality public passenger transport services.
• It is logical to assume that some of the increased mode share to public transport services might be accommodated on a rail based system of some form, fully integrated with bus based public transport services




Outline Public Transport Corridor Study
Potential Rapid Transport and Rail Routes
NORTH
Rangiora
Belfast
Airport
New Brighton
Central City
SOUTH
Rolleston
Hornby
Heathcote
Lyttelton
New Rail
Existing Heavy Rail

# Public Transport Demand Analysis

**Potential Rail/Light Rail Corridors for Greater Christchurch**

• Airport ◊ University ◊ Hospital ◊ City
*(majority on-street running)*

• (Rolleston) ◊ Templeton ◊ Hornby ◊ Tower Junction ◊ City
*(using some existing rail corridor)*

•(Rangiora) ◊ Belfast ◊ Papanui ◊ Fendalton ◊ City Centre
*(using some existing rail corridor)*

•New Brighton ◊ Aranui ◊ Linwood ◊ City
*(majority on-street running)*

•Lyttelton ◊ Heathcote ◊ Ferry Road ◊ City
*(using some existing rail corridor)*

## Outline System (Engineering) Costs

From an outline project investigation, the outline cost of achieving rail/light rail-based services on some five corridors for Greater Christchurch is estimated at $1.72b*.

**Route–by–route outline costings* are as follows:**

| Route | Outline capital cost estimate* | Outline Operational Cost** |
|---|---|---|
| East (New Brighton) | 450 | $xx per annum for entire system |
| North (via Belfast) | 340 | |
| South East (Lyttelton) | 180 | |
| South West (via Hornby) | 220 | |
| Airport (via university) | 530 | |
| Totals | $1.72b | |

*Figures based on outline assumptions only about system type (e.g. diesel and/or electric services) and some deployment of existing rail corridors. Take no account of land acquisition or property purchase, detailed utilities alterations that may be required. System costs also assume routes may be delivered individually – some economies may be possible if entire system delivery assumed in phased manner.

**Assumptions on opex costs?

# Public Transport Demand Analysis

### Further Detailed Study Requirements for a Greater Christchurch Rail System

**The key components and outputs of a detailed study of the potential for and operational requirements of a Greater Christchurch rail system (of whatever form) would be expected to include:**

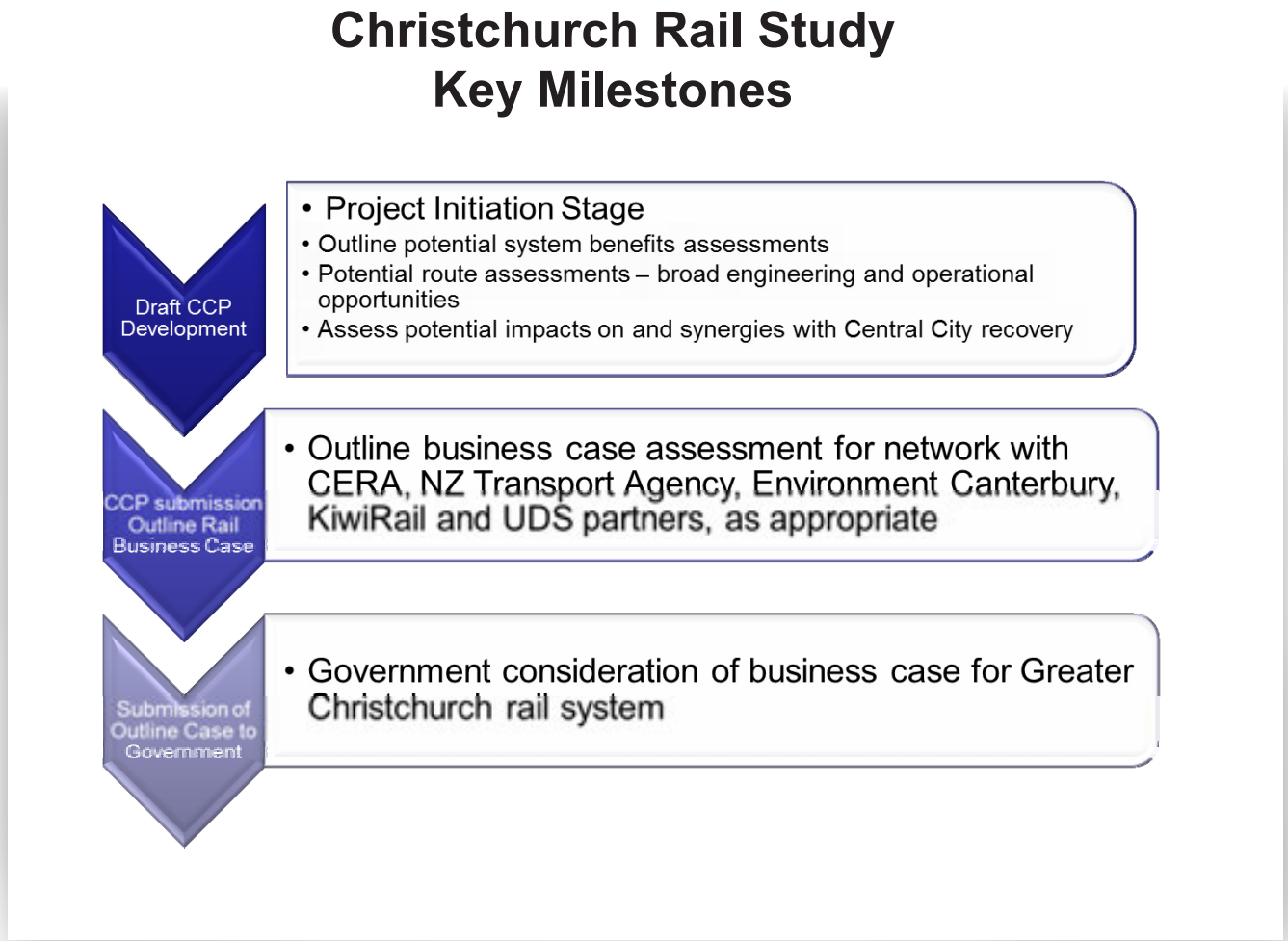
• Considerably more detailed business case, economic and patronage analyses, along with engineering and operational investigations. These desirably undertaken jointly between the Council, CERA, NZ Transport Agency, Environment Canterbury, Kiwi Rail and the Urban Development Strategy Partnership

•Such studies to examine both total system requirements and detailed analyses of some five potential corridors identified by the Council as worthy of further detailed investigations

• An early output of further studies to focus on a detailed research investigation of system-wide costs (capital, operational and maintenance), funding opportunities and, most importantly, a projected business case analysis, based in part upon economic benefits/regeneration for a Greater Christchurch rail network

• The estimated value of such a system-wide study project is estimated at $2 million, with delivery of study outputs in a staged manner to ensure value for money of such investigations from the outset

• (A further $2m has been notionally estimated to be required for the detailed route investigation and analysis of any stage A system)


Christchurch Rail Study
Key Milestones
Draft CCP Development
• Project Initiation Stage
• Outline potential system benefits assessments
• Potential route assessments – broad engineering and operational opportunities
• Assess potential impacts on and synergies with Central City recovery
CCP submission Outline Rail Business Case
• Outline business case assessment for network with CERA, NZ Transport Agency, Environment Canterbury, KiwiRail and UDS partners, as appropriate
Submission of Outline Case to Government
• Government consideration of business case for Greater Christchurch rail system

# Parking Plan Analysis

## *Parking Analysis*

# Historic Central City Parking Provision

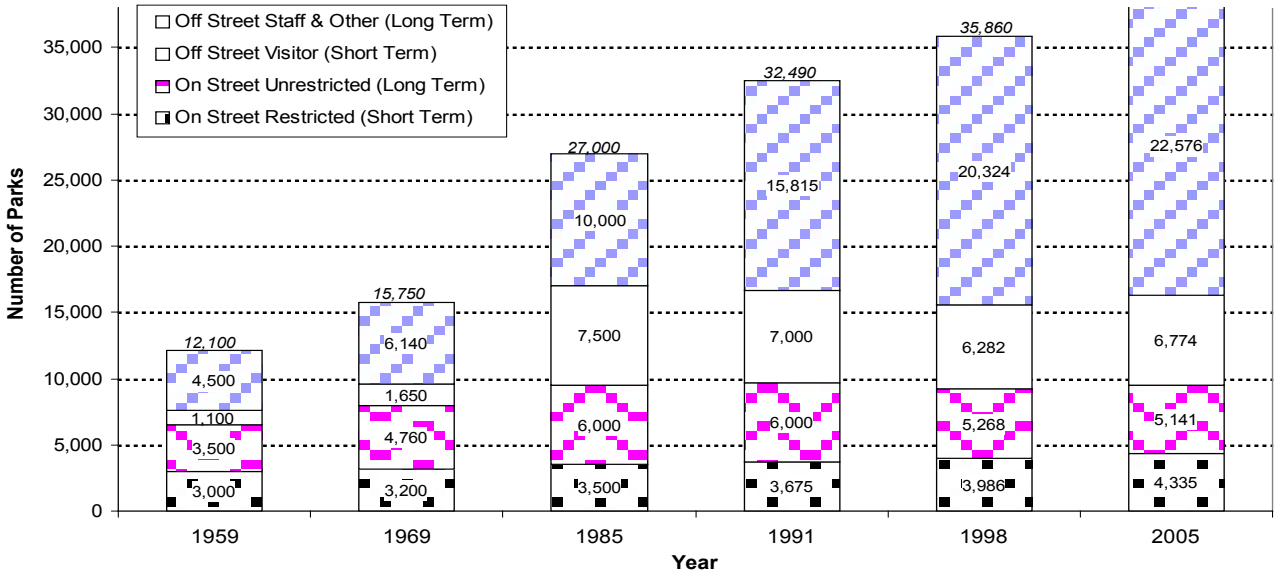



*Figure 1 City Centre Total Parking Supply 1959 to 2005 from the Christchurch City Council's Central City Parking Survey*

As shown in Figure 1 there has been a significant increase in the number of parking spaces in the Central City between 1959 and 2005. However in the past 25 years (since 1985) there has been a slight decrease in the number of off-street short-term parking spaces. Short-term parking spaces are used by visitors, shoppers and those in the CBD for business office appointments. These people provide significant income for Central City activities.

# Parking Plan Analysis

## *Proposed Parking Plan in Volume one of the Draft Central City Plan*

***As shown in Table 1 most of the Council-managed parking facilities have suffered earthquake damage and some significant facilities may need to be demolished.***

***Table 1 – Status of Council-managed off-street parking***

| Council – Managed off-street parking location | No of spaces | Inside core | Owned by CCC | Leased by CCC | Current status | Parking Building? | Comments on damage/ status |
|---|---|---|---|---|---|---|---|
| Farmers | 438 | yes | Yes (270 spaces) | Yes remaining | closed | yes | Likely to be demolished |
| Lichfield | 878 | yes | Yes (part) | Yes (part) | closed | yes | Part repairable, part demolished |
| Crossing | 203 | yes | yes | | closed | yes | Uncertain |
| Oxford Terrace | 327 | yes | No | yes | closed | yes | Repairable lease expires 2015 |
| Tuam | 123 | no | yes | | closed | no | No longer public car park |
| Kilmore | 205 | no | Land owned by ccc | | closed | yes | To be demolished |
| Art Gallery | 123 | no | yes | | closed to the public | Yes (basement only) | Internal leasing arrangements, retain |
| Manchester | 359 | no | Yes (joint with Orion) | | closed | yes | Repairable retain |
| Hospital | 356 | no | No (land owned by the Canterbury District Health Board) | Yes (hospital parking ltd) | closed | yes | Repairable, retain |
| Rolleston Ave | n/a | no | yes | | open | no | Ok, retain |

The Central City Plan proposes to build new parking facilities in locations on the edge or just outside of the slow core (Compact CBD) to ensure that there is a good supply of available public parking within an easy walk of most of the key land uses in the Central City, see Figure 2.

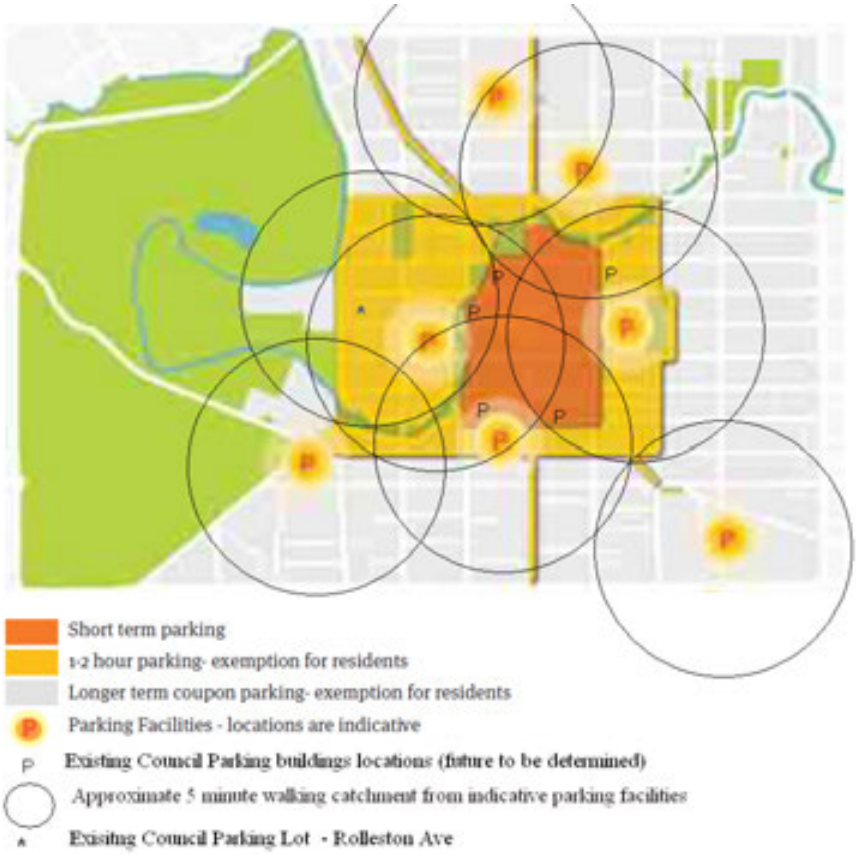



*Figure 2 – Approximate five-minute walking catchments from the indicative parking facilities.*

***The reason for locating new parking buildings just outside of the slow core is to reduce the impact of traffic in the area; parking buildings generate high amounts of traffic. The Central City Plan also proposes to address the decrease in off-street short-term parking spaces during the past 25 years, by increasing the area of on-street short -term parking.***

# *Parking standards in the Regulatory Framework*

The Regulatory Framework proposes to remove the minimum parking standards (except for residential activities in the Living Zones) and restrict parking areas to be no more than 50 per cent of the Gross Leaseable Floor Area of any building on the site.

# *Reasons for removing the minimum parking standards*

Minimum parking standards can cause a number of negative consequences. Providing more parking encourages car use and discourages walking, cycling and public transport use. By generating more car trips, minimum parking standards contribute to increased air pollution and reduced physical activity. Requiring developers to provide off-street parking also significantly adds to the cost a of new development, especially in urban areas where land costs and competing commercial uses of land are high. Costs of providing a car park in a development can range from $2000 to 5000 for surface parking through to $20,000 to 30,000[1] for structured or underground parking. These costs are typically passed to consumers, through higher housing prices and rents for all types of premises. Therefore, removing minimum parking standards leaves the market to decide whether parking is provided or not.

One of the main reasons for having minimum parking standards is to reduce the amount of on-street parking and thus the impact that on-street parking can have on traffic efficiency and safety. Removing minimum parking standards could increase on-street parking, however impacts on traffic efficiency and safety can be addressed through on-street parking controls and enforcement.

*1Rawlinsons (2010) Construction Cost Guide.*

# Parking Plan Analysis

## *Reasons for introducing parking controls*

Striking a balance between managing the transport and amenity effects of parking, while enabling the economic benefits from the provision of parking, is something that many cities have grappled with. Many cities, including Auckland and Wellington, have introduced parking controls, and have found that they have been able to manage parking while still enabling development and economic vitality. The Regulatory Framework proposes to follow their example by introducing parking controls, for a number of reasons, including:

### *1) Enhancing economic activity, by increasing foot traffic*

It is proposed in Volume 1 to create a new vibrant heart of the city where it is easy for people to walk between shops and businesses. This resonates with community feedback through Share an Idea. Parking would therefore be located on the edge of the slow core where people can safely walk to shops in the area. This approach does not hinder economic activity, but rather seeks to encourage it. Most shopping malls are designed on a similar basis. Parking is located on the edge of the mall, anchor tenants are located in the centre of the mall, and the smaller shops are located in between where there is high foot traffic. If anchor tenants provide all their own parking with direct access, then the smaller shops would suffer and the whole economic vitality of the centre would be reduced. A recent survey of retailers in Christchurch's CBD identified that an increase in foot traffic would have the most positive influence on stimulating retail growth. The survey indicated that it would have a more positive impact than increasing car parking[1].

### *2) Enabling the 'greening' of the city, while still ensuring that it is easy to get around*

Many of the projects in the Central City Plan (i.e. narrowing of roads along the Avon River/Ōtakaro, the Slow Core, development of Eco Streets, changing the one-way streets to two-way, etc) will reduce the capacity of the Central City's roading network. In order to continue to make the Central City easy to get around, without congestion, there will need to be a reduction in some car use. Parking controls will help discourage non-essential car use, enabling vehicles that need to be in the Central City will be able to travel about with relative ease. Thus without a mode shift away from car use there will be difficulties in delivering many of the projects (Papawai Ōtakaro/Avon River Park, slow core, and Eco Streets) that have received widespread public support. It has been suggested that parking controls will reduce access to the city. In fact the opposite is likely to be true. If parking controls are not implemented to control increases in car use, predicted increases in congestion will have a far greater affect on limiting car access to the Central City by increasing effects of journey time delays and congestion.

### *3) Supporting the investment in active and public transport*

The Central City Plan proposes significant investment in active and public transport. Parking controls will encourage greater use of these modes. Having no controls on parking could risk undermining the investment in active and public transport.

### *4) There is a lack of evidence that parking regulations hinder economic activity*

It is commonly claimed that reducing parking supply will result in decreased economic activity, but there appears to be no conclusive evidence to this effect. Research on the economic effects of parking constraints undertaken by Ben Still and David Simmonds (in Shoup, 2005) concluded that: "There is no clear evidence from aggregate statistical studies that parking is clearly linked to retail or other sector economic vitality... There is no systematic evidence to suggest that either lax parking standards encourage or that strict standards discourage economic growth." Shoup (2005)[2], therefore concludes that: "if restraints on the parking supply really did limit economic vitality, one would expect to find some evidence, but there is none.

Similar conclusions were also reached by Booz-Allen Hamilton's (2006)[3] study on parking restraint on business vitality in and around Auckland City. In addition Shoup (2005), highlighted a study undertaken by Oxford University economist Robert Bacon who developed a model showing that: "While bundled parking increases vehicle travel and traffic congestion, it may, perversely not increase the total sales of shopping centres."

[1] *CBD Survey of Retailers undertaken by Rosie Heaney, the Property Group, Commerce Faculty, Lincoln University, 27 May 2010*

[2] *Shoup, D.2005. The High Cost of Free Parking. American Planning Association Planners Press. Chicago, Washington, D.C.*

[3] *Booz Allen Hamilton. 2006. International approaches to tackling congestion: Paper (2) final: Parking restraint measures: Victorian Competition and Efficiency Commission.*

### *5) Parking controls are widely used throughout the world*

Parking controls are common practice in many cities. Parking controls have been used successfully in the Europe, the USA and Australia for some years. Of New Zealand's three main cities, Christchurch is the only city without maximum parking controls. Auckland and Wellington have been using parking maximums to control parking for a number of years, while still maintaining economic growth.

## *How the level of parking control is determined*

In order to determine the appropriate level for the parking control the existing parking provision in the Central City was analysed with the assistance of Central City building owners and tenants. Table 2 summaries data provided to the Council by central city landowners and business leaders on parking provision within 19 buildings in the Central City. In order to calculate the size of the parking area compared to the floor area, it has been assumed that the size of parking area is on average 25m$^2$ per carpark.

*Table 2 Existing Central City Business Parking Provision*

| Property Address | Approximate floor area | Number of on site car parks | Parking Area size compared with floor area |
|---|---|---|---|
| Te Waipounamu House, 158 Hereford Street | 8900 | 25 | 7% |
| Golden House, 728 Colombo Street | 2500 | 8 | 8% |
| 137 Armagh Street | 4600 | 21 | 11% |
| Union House, 193 Cashel Street | 4100 | 22 | 13% |
| 79-81 Lichfield Street | 2500 | 18 | 18% |
| 133 Victoria Street | 2100 | 16 | 19% |
| Clarendon Tower, 78 Worcester Boulevard | 14600 | 110 | 19% |
| PWC Building, 119 Armagh Street | 19400 | 157 | 20% |
| Fairfax Building, 160 Gloucester Street | 5100 | 50 | 25% |
| BDO Spicer House, 148 Victoria Street | 5400 | 65 | 30% |
| Markhams House, 144 Kilmore Street | 2300 | 29 | 32% |
| 129 Kilmore Street | 1600 | 22 | 34% |
| Christchurch City Council, 53 Hereford Street | 22800 | 31 | 3% |
| Radio Networks House, 155 Worcester Street | 7200 | 54 | 19% |
| AMI Building, 29 Latimer Square | 3800 | 33 | 22% |
| Chas Luney House, 250 Oxford Terrace | 6000 | 53 | 22% |
| Ernst & Young House, 229 Cambridge Tce | 3200 | 36 | 28% |
| HSBC Tower, Worcester Boulevard | 5100 | 87 | 43% |

As is shown by Table 2 , the proposed parking controls of a parking area no larger than 50 per cent of the floor area has been set at a level that will allow for more parking than was typically provided by the market before the earthquake. Therefore, parking controls would not unnecessarily restrict development. The controls are not proposed to restrict commercial development, but rather are proposed to discourage the provision of more parking then was typically previously provided before the earthquake and to help achieve a shift of emphasis towards improved availability of short-term parking near the core of the city centre.

As is shown by Table 3 and Figure 3, the parking controls has been also set at a level that will enable more parking to be provided than the maximum parking standards in Auckland and Wellington, to discourage development moving to Auckland and Wellington on the basis of parking restrictions.

# Parking Plan Analysis

***Table 3 Maximum parking rates in Auckland and Wellington***

| City | Maximum Parking Rate |
|---|---|
| Auckland | 1/105m2 – 1/200m² [4] |
| Wellington | 1/100m² (capped at 70 spaces) |

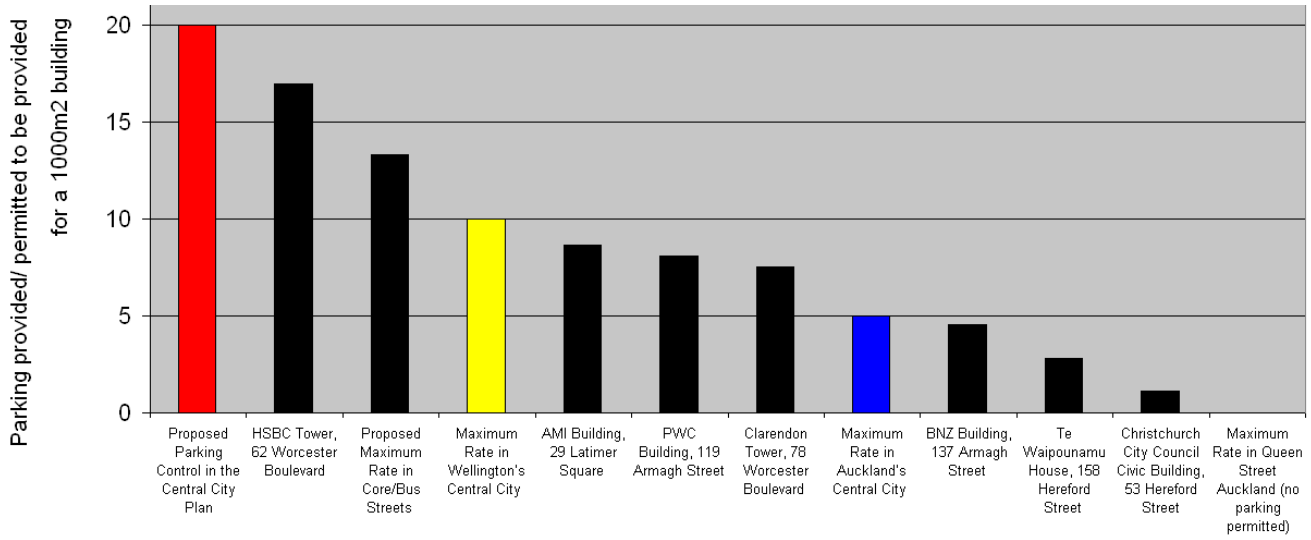



*Figure 3 Comparison of the proposed Parking Controls with the Maximum Parking rates in Auckland and Wellington and provision of parking in Central City buildings*

*The maximum parking rate depends on the road that the development is located on. Developments on main retail roads (i.e. Queen Street) are not permitted to have any parking.*

# Appendix O. Parking Plan Analysis

# Introduction

***Project Implementation Plans have been developed for each project within the Central City Plan. These implementation plans are representative of a concept stage in the project lifecycle. The implementation plans in Appendix P detail the following:***

1. An overview of the project including cost, implementation timeframe and, if applicable, a sketch or further project details.
2. A review of International or local best practice examples of similar projects that have been implemented, with a view to capturing examples of best practice in the Central City Plan's projects.
3. An initial summary of project-specific stakeholders, from the public and private sector and community/business groups.

NB: While all efforts have been made to correctly link all stakeholders against each project(s) of interest, there may be some omissions in these lists. These stakeholder lists will be further checked and updated before the start of each project.

# Remembering

## *Earthquake Memorial*

| | | | |
|---|---|---|---|
| **Central City Plan** | | | |
| **Project Ref No:** | | **Aconex Reference No:** | |
| **1. Implementation Overview** | | | |
| **Project Title: Earthquake memorial** | | | |
| | | | |
| **Project Cost:** | **NZD $8 million** | **Project Schedule:** | **2012–2018** |
| | | | |
| **CCC Project Manager/ Rep** | **Jocelyn Mahoney** | **Transitional City Elements:** | **Yes –e.g. Cherry trees from Japan** |
| | | | |
| **Project Description** | This project is to create a memorial to the earthquakes. The form and location of the memorial is critical to its success and a rigorous process of design procurement is essential for assuring the best outcome. It must be recognised that this will take some time.<br><br>It will be located on a Central City site and will be used for a range of memorial activities from casual day-to-day visits by individuals through to national memorial services. | | |
| | | | |
| **Project Aims** | 1. To aid in the recovery of the city through providing a focus for remembering.<br><br>2. To achieve a high standard of design through an appropriate process, e.g. design competition.<br><br>3. To establish a memorial which expresses the magnitude of the events and is an enduring legacy that the city is proud of.<br><br>4. To consult widely to ensure that the design responds to the needs of both the local and international victims' communities.<br><br>5. To accommodate a wide range of users through an accessible design that can inspire a range of interpretations and meanings. | | |
| | | | |
| **Sketch Ref:** | **Site to be confirmed through the steering group stage** | | |

| Central City Plan | |
|---|---|
| Project Ref No: | Aconex Reference No: |
| 2. International/Local Best Practice Examples (or examples of bad practice not to be followed) | |
| Project Title: Earthquake memorial | |

| Ground Zero, Manhattan, New York | Aspects Applicable to CCP Project | Lessons Learnt Applicable to Project | How we capture these in the CCP Project |
|---|---|---|---|
| The national memorial to the 9/11 attacks. The result of an open international competition that attracted over 5000 entries, won by Israeli-American architect Michael Arad. The competition began just over a year after the tragedy, but the memorial itself was not completed until the 10th anniversary. The design includes two large voids on the footprints of the fallen towers, each lined with waterfalls and the names of the victims. The plaza area is covered with a 'forest' of trees. The memorial is so popular that it is necessary to pre-reserve a visitor pass to be able to enter the site.  | The process and outcome highlights the value of a competition in generating a wide range of design possibilities. Questions debated throughout the process are applicable to the Earthquake Memorial, such as how to arrange victims' names, what kind of symbolism is appropriate and how it relates to other facilities, such as a museum. | The period of time for the realisation of the memorial reflects in part the difficulties with accommodating the breadth of opinion. The mix of public and private ownership had implications for the way in which the site was developed. The winning competition entry required significant design development, with the young architect who won being subsequently teamed with an established practice (Peter Walker). | A steering group will help to capture the breadth of opinion and shape it into a coherent approach. Thorough and on-going liaison with stakeholders is essential to ensure that progress will not be delayed through conflicts or misunderstandings. A competition can yield exciting and innovative designs, but it is also important to consider the implications of the different kinds of competition approaches. |
| **Memorial to the Murdered Jews of Europe, Berlin** | **Aspects Applicable to CCP Project** | **Lessons Learnt Applicable to Project** | **How we capture these in the CCP Project** |
| A memorial that occupies a former square in the centre of Berlin. The result of a two-stage competition, won by American architect Peter Eisenman. The design is intentionally abstract and focuses more on affecting the experience of visitors than providing them with specific information. Completed in 2004, 60 years after the end of World War II.  | The memorial expresses contemporary ideas on design. It is open to a range of interpretations rather than imposing any fixed meanings or readings on visitors. The memorial has an experiential and emotional dimension that means it involves the visitor. | The two -stage competition allowed for considerable debate over the form and nature of a memorial. The competition was not without controversy, but allowed for the range of positions to be openly canvassed. An experienced and vocal design jury ensured that the debate was constructive. Competitions inevitably produce the most contemporary design solution. | A design competition promotes a democratic response to design. The range of competition approaches allows for a process that best suits the Earthquake Memorial Project to be developed. Ensure that the process is transparent and encourages healthy debate, rather than being secretive and exclusionary. |

# Remembering

| Vietnam Veterans Memorial, Washington DC | Aspects Applicable to CPP Project | Lessons Learnt Applicable to Project | How we capture these in the CCP Project |
|---|---|---|---|
| Memorial to soldiers who died in service during the Vietnam War. One of the most innovative memorials worldwide, and in 2007 was ranked 10th in the American Institutes of Architecture's list of the public's favourite architecture. The result of a design competition which attracted 1421 entries and was won by a young architecture student, Maya Lin. Consists of a long granite wall in a V-shape, set into the ground. Visitors follow a gently sloping ramp into and out of the memorial.<br>  | The memorial has the potential to accommodate large groups for memorial services, but also works well when only a few people are visiting. It engages visitors physically, through the way in which they walk down into the site, and can see themselves reflected in the granite wall which bears the names of the dead. As a well-designed site, it has become an important attraction, with over four million visitors annually, placing it 11th on the ranking of visitors for sites administered by the National Parks System. | The design competition resulted in an unexpected and original vision which has become an international icon in memorial design.<br><br>Setting the memorial into the ground not only creates an experience in moving into it, but creates a tranquil space for contemplation. The potential for a memorial to become a major visitor attraction is an important consideration of the design. | A design competition and an open mind to possibilities allow for innovation to be maximised. It is necessary to be clear about the type of competition and the expectations of winners (i.e. should they be expected to carry the design through to implementation, or will it be taken over by other design professionals). Recognising the strength of simplicity in a memorial is vital and this is captured through resisting pressure to include too many programmatic aspects or additions to the site. |

| Central City Plan | | | | |
|---|---|---|---|---|
| **Project Ref No:** | | | **Aconex Ref No:** | |
| **3. Specific Project Interfaces/Stakeholders** | | | | |
| **Project Title: Earthquake memorial** | | | | |
| | | | | |
| **Project Affected Public Stakeholders** | | | **Consultation Commenced (y/n)** | **Submission Received (y/n)?** |
| 1. | Christchurch City Council | Manager, Transport and Greenspace | | NA |
| 2. | Christchurch City Council | Civic and International Relations | | NA |
| 3. | Central Government | Applicable ministries | | |
| 6. | Ngāi Tahu | | Yes – initial contact made | |
| 7. | Tourism New Zealand | | No | |
| 8. | Christchurch and Canterbury Tourism | | No | yes |
| | | | | |
| **Project Affected Private Stakeholders** | | | **Consultation Commenced (y/n)** | **Submission Received (y/n)?** |
| 9. | Land owners of site and in vicinity | Site owner | Yes – initial inquiries regarding land status on one potential site | NA |
| 10. | Workers and users of this area of the City | | No | NA |
| 11. | Local business | Business owners | No | NA |
| | | | | |
| **Affected Community and Business Groups** | | | **Consultation Commenced (y/n)** | **Submission Received (y/n)?** |
| 12. | Bereaved Families | | No | Not formally as a group but some individuals identified themselves<br><br>19985 |
| 13. | Tangata whenua | | Yes- for Ngāi Tahu | Yes - Mahaanui Kurataiao Ltd. (MKT)<br><br>21615<br><br>Te Rūnanga o Ngāi tahu<br><br>21890 |
| 14. | Affected Ethnic Organisations | | No | Yes some reference to specific ethnic recognition<br><br>21844, 22073 |
| 15. | CERA | | | |
| 16. | Police | | No | |
| 17. | USAR | | No | |
| 18. | Church Groups | | No | |

# Transistional City

| | | | |
|---|---|---|---|
| **Central City Plan** | | | |
| **Project Ref No:** | | **Aconex Reference No:** | |
| **1. Implementation Overview** | | | |
| **Project Title: Transitional City** | | | |
| | | | |
| **Project Cost:** | **NZD $15.4 million** | **Project Schedule:** | **2012–2015** |
| | | | |
| **CCC Project Manager** | **Lizzy Pearson** | **Transitional City Elements:** | **Yes** |
| | | | |
| **Project Description** | In the early stages of recovery a number of projects will be developed to ensure the successful transition of the Central City as it develops post-demolition. The following projects are proposed:<br><br>1) Temporary components of the following end game recovery projects:<br>· Papawai Ōtakaro<br>· EPI Centre and i-Site<br>· Greening Cathedral Square<br>· One-way to two-way<br>· Slow core<br>· Main streets<br>· Wayfinding<br>· EPIC<br>· Arts and studio assistance<br>· Community performance and rehearsal facilities<br><br>2) Setting up a Transitional City Project Fund which would fund temporary projects, such as public information and art works on hoardings, fabric drops to provide interpretation and add vibrancy to the transitional streetscape, temporary markets, temporary Central City facilities, temporary street beatification projects, events, initiatives to encourage volunteers, phone applications, plantings, etc.<br><br>3) Supporting larger temporary projects e.g.<br><br>a) Establishing an Arts Circus. Development of a dedicated arts and entertainment based area in the Central City. The Arts Circus will be a home to the majority of the city's festivals, as well as introducing new events. (Taking over from the Events Village in Hagley Park)<br><br>b) Establishing a Life in Vacant Spaces broker. The broker/s will match vacant property and sites with projects and creative enterprises, acting as a facilitator between property and project enterprise owners. It will build strong relationships with both, and address property owners concerns, including liability insurance, legal agreements and health and safety. By removing risks from property owners, it will drive the active use of vacant space and support the recovery of the Central City.<br><br>4) Undertaking Transitional policy and planning work (such as recovery coordination, assessing delivery structures, reviewing Council processes, Tenant strategy and running Property Development 101 courses) | | |

| | | | |
|---|---|---|---|
| **Project Objectives** | · Quickly establish projects that begin to rebuild the Central City<br>· Support a smooth transition from post-demolition to the Central City Plan rebuild<br>· Allow the testing of initiatives<br>· Make the city an attractive environment to live, work, play and visit<br>· Increase foot traffic in the Central City<br>· Increase public confidence in an area as a result of energy and activity – the 'buzz' that temporary projects can create.<br>· Create an environment in which new businesses and enterprise can more easily be established. | | |
| | | | |
| **Sketch Ref:** | | | |

# Transistional City

| Central City Plan | | |
|---|---|---|
| **Project Ref No:** | | **Aconex Reference No:** |
| **4. Project Components, relationships with other CCP projects and actions required** | | |
| **Project Title: Transitional City** | | |
| | | |
| **Project Component and Description** | **Relationship with other CCP projects** | **Actions required** |
| **Temporary components of end game recovery projects** | | |
| **Temporary Papawai Ōtakaro improvements** | Papawai Ōtakaro | Temporary actions to bring the existing park and river corridor to a high standard, could include plantings, art works, river bells, lighting, interpretation and renewal of footpaths/park assets where appropriate, repairing earthquake damaged (such as Antigua bridge). |
| **Temporary combination of the EPI Centre and i-Site Centre** | EPI Centre<br><br>Visitor Information Centre | Temporarily combine aspects of the EPI Centre project with a visitor centre, so that public interest in earthquake and tourist information is met while the longer term projects are underway. Projects such as a containerised display project.<br><br>Facilitate a steering group, include representatives from CCC, CERA, University of Canterbury, CPIT and Canterbury Museum.<br><br>The other end game recovery projects in the remembering chapter need to link closely to the Transitional City projects for timing. |
| **Temporary Cathedral Square improvements** | Greening Cathedral Square | While detailed design work for Cathedral Square is being developed, work is needed to develop a vision with the property/business owners and to bring the existing Square up to a high standard. This could involve plantings, art work, lighting, interpretation and renewal of some of the assets where appropriate. |
| **Temporary one-way street improvements** | One-way to two-way | Temporary cycle lanes, traffic calming and streetscape improvements, such as tree planters, may be put in place, before the full street upgrades are undertaken.<br><br>Identify opportunities to make temporary improvements. |
| **Temporary Slow core installation** | Slow core | The streets within the slow core that are not being rebuilt immediately will require temporary treatment to support a lower speed limit, this is a legal requirement. This could include off the shelve solutions, such as traffic calming devices, planter boxes or other objects that create chicanes/ narrowings, temporary gateway features to the slow core (signage, road surfacing treatment, or art installations), signal timing changes, etc.<br><br>Identify opportunities to make temporary improvements.<br><br>Change speed limit to 30 km/hr<br><br>Change on-street parking time limits to 30 minutes |

| | | |
|---|---|---|
| **Temporary main Streets Improvements** | Main streets | The Main streets within the Central City that are not be rebuilt immediately could be improved – create greenery, traffic calming and overall interest (such as the installation of large planter boxes, road surfacing treatment – colour and or texture – to identify main streets from other streets).<br><br>Identify opportunities to make temporary improvements. |
| **Temporary wayfinding** | Wayfinding | Temporary and flexible wayfinding signage and interpretative mapping will be needed to assist motorists, cyclists and pedestrians to find their way around the Central City, as the road network changes to accommodate buildings repairs/ constructions. |
| **EPIC Sanctuary** | EPIC | The CCP EPIC project is currently scheduled to start in 2015. In the meantime, Council has agreed a short-term lease of land to facilitate the temporary location of EPIC Sanctuary, before the permanent EPIC Sigma is built. |
| **Temporary arts and studio assistance** | Arts and studio assistance | Work with partners to facilitate the creative sector using vacant Central City properties until they become commercially viable or are redeveloped. As part of this work, investigate the Renew Newcastle model. |
| **Community performance and rehearsal facilities** | Isaac Theatre Royal fast-tracking | Council is committed to fast-tracking the rebuild of the Isaac Theatre Royal, with improvements to allow larger performances to be accommodated. |
| **Transitional City Project Fund** | Various projects | · Set up a Transitional City Project Fund<br>· Create criteria to assess funding applications<br>· Process funding application |
| **Arts Circus** | Arts in the City – interface<br><br>community performance and rehearsal – interface<br><br>arts and crafts studio assistance –interface | · Provide land for the establishment of the Arts Circus, such as the Tuam Street car park<br>· Provide capital and operational funding for the Arts Circus<br>· Facilitate an Arts Circus working group, include representatives from CCC, CERA, Ministry of Culture & Heritage, Arts Voice and Isaac Theatre Royal Trust<br>· Run some CCC-managed events/festivals at the Arts Circus. |
| **Life in Vacant Spaces broker** | Public arts network - interface<br><br>Good urban design - interface<br><br>Earthquake interpretation – interface safety<br><br>Wayfinding – improved signage | · Set up and fund a trust to oversee Life in Vacant Spaces projects (Gap Filler, Greening the Rubble, Community gardens, etc). The Trust will employee 2.5 FTEs to act as a broker between initiatives and landowners.<br>· Provide a dedicated 'account manager' to work through processes/consents for any activities on Council-owned land<br>· Offer advice about Council process<br>· Marketing of Life in Vacant Spaces events<br>· Make connections with other Council events and activities<br>· Investigate providing storage area on Council land for materials<br>· Temporarily lend assets, park benches, planter boxes, etc, to support Life in Vacant Spaces projects |

# Transistional City

| | | |
|---|---|---|
| **Transitional policy and planning work** | Various projects | • Divide the Central City into about six recovery zones<br>• Appoint a Recovery coordinator for each zone<br>• The Recovery coordinator will act as a Council point of contact for landowners/tenants in the zone and support them to recover.<br><br>Undertake other policy and planning work, such as establishing a tenant strategy, assessing delivery structures and reviewing Council processes<br><br>Run a Property Development 101 Course |

| Central City Plan | | | |
|---|---|---|---|
| **Project Ref No:** | | **Aconex Reference No:** | |
| **2. International/Local Best Practice Examples (or examples of bad practice not to be followed)** | | | |
| **Project Title:** | | | |
| | | | |
| **Renew Newcastle, Newcastle, Australia** | **Aspects Applicable to Central City Plan Project** | **Lessons Learnt Applicable to Project** | **How we capture these in the Central City Plan Project** |
| Renew Newcastle finds vacant retail spaces and organises 30-day rolling 'License to Access' agreements so property owners can keep searching for long-term commercial tenants while their sites are being temporarily used. Sites are offered rent-free for creative uses, such as art galleries or studio space, or creative businesses where people make what they sell, fashion designers, photographers, graphic designers, etc. If the activity becomes viable, a rent can be employed. | Renew Newcastle's success at urban regeneration is tangible and quantifiable, establishing unique and original shops, galleries, etc, that offer a point of difference to the suburban malls. The cost is low since Renew is purely an intermediary organisation. | Every project idea must be fully realised by the group or individual proposing it. Renew does not assist in project delivery.<br><br>On a subscription basis, Renew provides extremely cheap access to Public Liability Insurance cover for each project, lowering the barriers to the project's realisation.<br><br>Projects on private land and buildings must be hassle-free and cost-neutral for property owners.<br><br>Renew has a fund available for minor expenditure to make suitable sites "project-ready", such as any required modifications to make a site safe to work in (up to $5000 per site).<br><br>The most tangible results from activating vacant space have occurred by focusing on a defined area of the city.<br><br>Longer-term and commercial projects have the most tangible results in terms of stimulating viable ongoing development.<br><br>It is important that property owners understand the benefits and do not consider to be doing the community a favour. | Set up Life in Vacant Spaces (LiVS) coordinating team/ organisation. The overall aim of the coordinating team will be to connect spaces offered by property owners with projects and ideas. It will liaise with landowners, space users and delivery partners, as well as the Council.<br><br>Council will work with partners to facilitate the creative sector using vacant space. |

# Transistional City

| Tollwood, Munich Germany | Aspects Applicable to Central City Plan Project | Lessons Learnt Applicable to Project | How we capture these in the Central City Plan Project |
|---|---|---|---|
| The Tollwood Festival is a twice-yearly festival in Munich, held in the Olympic Park, in summer, and on the Theresienwiese in winter.<br><br>The festival takes place on about 30,000 square meters and has about 850,000 visitors in the summer, and about 600,000 in winter. Tickets provide about 40 per cent of the income, another 40 per cent comes from rents and 20 per cent from sponsorship. There are no public subsidies.<br><br>The event is a three-pillar model: market of ideas, a certified organic food festival and a cultural programme of music, various forms of theatre performances and visual arts. The festival offers a broad musical spectrum from rock, singer-songwriters, jazz and blues. Theatrical and artistic performances also take place. | Arts Circus | The project has become successful. | A temporary venue can be successful. |
| **Sidney Myer, Melbourne, Australia** | **Aspects Applicable to Central City Plan Project** | **Lessons Learnt Applicable to Project** | **How we capture these in the Central City Plan Project** |
| The Sidney Myer Music Bowl is an outdoor performance venue in Melbourne, Australia. It is located in the lawns and gardens of Kings Domain, close to the Arts Centre and the Southbank entertainment precinct. It was officially opened in 1959. The bowl has capacity for up to 25,000 people (2150 fixed seats, remainder on sloping grass) and has a 4055m2 canopy covering the stage and some of the seats | Arts Circus | The venue has become a permanent fixture in Melbourne for more than 50 years. | A temporary venue does not have to just be temporary. |

| Central City Plan | | | | |
|---|---|---|---|---|
| **Project Ref No:** | | | **Aconex Ref No:** | |
| **3. Specific Project Interfaces/Stakeholders** | | | | |
| **Project Title: Transitional City** | | | | |
| The following stakeholders are for the Art Circus project. For other transitional projects a list of stakeholders can be found in the project implementation plans for the related long term project or either full public consultation will be undertaken or a specific stakeholder list will be developed. | | | | |
| | | | | |
| **Project Affected Public Stakeholders** | | | **Consultation Commenced (y/n)** | **Submission Received (y/n)?** |
| 1. | Christchurch City Council: Central City Plan Team | Applicable units | | |
| 2. | Arts Voice | James Caygill | Y | 21554 |
| 3. | The Arts Circus | Deane Simmonds<br>Dr George Parker | Y | n/a |
| 4. | Creative New Zealand | Elizabeth Beale<br><br>Chris Herbert ( ChCh Adviser) | Y | 21960 |
| 5. | CPIT | CEO Ms. Kay Giles,<br>Dr Jane Gregg<br><br>Deane Simmonds<br><br>Tom Rainey | Y | 22086 |
| 6. | Isaac Theatre Royal | Neil Cox | Y | n/a |
| 7. | University of Canterbury | Ed Adelson,<br>Amanda Morris,<br>Mark Billinghurst (HITLAB) | N | n/a |
| 8. | Te Rūnanga O Ngāi Tahu | Phil Tumataroa,<br>Communications Manager<br>Puamiria Parata-Goodall,<br>Office of Te Rūnanga o Ngāi Tahu | N | 21890 |
| 9. | Te Puni Kōkiri (Ministry of Māori Development) | | N | n/a |
| 10. | Ministry for Culture and Heritage | Huia Lambie<br>Jeremy Winter | Y | n/a |
| 11. | CERA | Huia Lambie, Sue Turner, | Y | n/a |
| 12. | Tourism New Zealand | Karen Thompson, | N | n/a |
| 13. | CPIT/Artbox | Martin Trusttum | Y | 20044 |

# Transistional City

| | | | | |
|---|---|---|---|---|
| 14. | CHART | Neil Cox<br><br>Jeff Fulton | Y | n/a |
| 15. | Hospitality New Zealand<br><br>(Hospitality Christchurch INC) | Regional Managers | Y | n/a |
| 16. | EPIC | Wil McCellan | N | n/a |
| 17. | Canterbury Development Corporation | Gerard Quinn<br>Toni Brownie, General Manager Strategy and Planning | N | n/a |
| **Affected Community & Business Groups** | | | **Consultation Commenced (y/n)?** | **Submission Received (y/n)?** |
| 18. | Christchurch Writers' Festival | Marianne Hargreaves | N | n/a |
| 19. | Christchurch Arts Festival | Philip Tremewan, Director<br>Steph Walker, General Manager | N | n/a |
| 20. | World Buskers Festival | Jodi Wright<br>Jo Blair<br><br>Linda Penno (Chair) | N | 21757 |
| 21. | The Body Festival | Adam Hayward | Y | n/a |
| 22. | NZ International Jazz & Blues Festival | Jodi Wright | N | n/a |
| 23. | NZ Antarctic Festival | Jo Blair | Y | n/a |
| 24. | Christchurch International Film Festival | Nick Paris | N | n/a |