



AUGUST 2013

PLAN CHANGE 84 SPAZ BUSINESS LAND STUDY

CHRISTCHURCH CITY COUNCIL

Code Date Information / Comments Project Leader 50892.5 August 2013 Report Tim Heath / Phil Osborne

## DISCLAIMER

Property Economics has taken every care to ensure the correctness of all the information contained in this report. All information has been obtained by what are considered to be reliable sources, and Property Economics has no reason to doubt its accuracy. It is however the responsibility of all parties acting on information contained in this report to make their own enquiries to verify correctness. This document has been prepared for the use of Christchurch City Council only. Copyright © 2013 by Property Economics Ltd.





# TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	5
2.	PLAN CHANGE 84	12
3.	AIRPORTS AND CHANGING MARKETS	13
4.	SIGNIFICANCE AND RISKS TO CIA	16
5.	CHRISTCHURCH BUSINESS MARKET	18
6.	BUSINESS SIGNIFICANCE OF CIA ASSOCIATED ACTIVITIES	36
7.	POTENTIAL ACTIVITY SCENARIOS AND NET BENEFITS	38
8.	POTENTIAL IMPACTS ON KACS & CBD	43
9.	CONCLUSION	48
AP	PENDIX 1: 2008 SURVEY RESULTS	49
AP	PENDIX 2: PROPERTY ECONOMICS RETAIL EXPENDITURE MODEL .	50
AP	PENDIX 3: SPITFIRE SQUARE CONCEPT PLAN	56



# TABLE OF CONTENTS

# LIST OF TABLES

TABLE 1: TEMPORAL CHRISTCHURCH EMPLOYMENT CHANGES (2000 - 2012)	18
TABLE 2: TEMPORAL CHRISTCHURCH INDUSTRIAL EMPLOYMENT CHANGES (2000 - 2012)	19
TABLE 3: TEMPORAL NORTH-WEST QUADRANT EMPLOYMENT CHANGES (2000 - 2012)	23
TABLE 4: CHRISTCHURCH CITY INDUSTRIAL BUILDING CONSENTS (2000 - 2012) (GFA SQM)	24
TABLE 5: CHRISTCHURCH CITY VACANT INDUSTRIAL LAND BY ZONE (2012)	25
TABLE 6: CANTERBURY REGIONAL POPULATION PROJECTIONS	28
TABLE 7: TRENDED CHRISTCHURCH INDUSTRIAL EMPLOYMENT PROJECTIONS (2012 – 2031)	30
TABLE 8: SCENARIO 2 CHRISTCHURCH INDUSTRIAL EMPLOYMENT PROJECTIONS (2012 - 2031)	30
TABLE 9: CORE CATCHMENT RETAIL MARKET GROWTH 2013-2031	34
TABLE 10: OUTLINE OF HIGH LEVEL ECONOMIC COSTS OF SPAZ USE SCENARIOS	39
TABLE 11: OUTLINE OF HIGH LEVEL ECONOMIC BENEFITS OF SPAZILISE SCENARIOS	40

# LIST OF FIGURES

FIGURE 1: CHRISTCHURCH INDUSTRIAL EMPLOYMENT DISTRIBUTION 2012	. 20
FIGURE 2: CHRISTCHURCH INDUSTRIAL EMPLOYMENT CHANGES (2000 -2012)	. 21
FIGURE 3: CHRISTCHURCH VACANT INDUSTRIAL LAND UPTAKE DISTRIBUTION (2004 – 2012)	. 22
FIGURE 4: CHRISTCHURCH VACANT INDUSTRIAL LAND DISTRIBUTION (2012)	. 26
FIGURE 5: REZONINGS UNDER PC1 TO THE REGIONAL POLICY STATEMENT	. 27
FIGURE 6: CHRISTCHURCH AIRPORT CORE CATCHMENT	31



#### 1. EXECUTIVE SUMMARY

The principle objectives of this economic study include:

- Assessment of the economic value of the Christchurch International Airport to the Christchurch City and wider Canterbury Regional economy;
- Review of the changing airport market and the issues facing Christchurch International Airport's ("CIA") competitiveness;
- The level of potential risk to Christchurch Airport's current and future 'core' operations;
- Determination of the market for General Industrial land and retail in Christchurch to 2031:
- The potential economic costs and benefits to the City of retaining the existing Special Purpose Airport Zone ("SPAZ") restrictions;
- The potential economic costs and benefits to the City of altering SPAZ restrictions both City wide and to specific Key Activity Centres ("KAC");
- Identify potential alterations to SPAZ to mitigate potential impacts.

### Salient High Level Findings

Christchurch City finds itself in a unique economic situation. The devastation of the 2010/11 earthquakes has provided the City with opportunities to identify and remedy previous shortcomings in its business environment that will be crucial to both its economic recovery and future prosperity.

The provision of business locations that are competitive, both nationally and internationally, are fundamental to the recovery and the city's future growth. Central, in terms of vital locations, is accessibility and certainty. A regionally significant, and in fact nationally significant, location for Canterbury and the City is Christchurch Airport.

Airports have always represented significant economic assets in any economy from large cities to smaller tourist dependent locations. In more recent times however they have widened their scope driving the fundamental competitiveness of localities for essential business activity. A study in 2005<sup>1</sup> by the Air Transport Action Group ("ATAG") found that 25% of all companies' sales are dependent on air transport, while 70% of businesses reported that serving a bigger market is a key benefit of using air services.

<sup>&</sup>lt;sup>1</sup> Aviation Benefits Beyond Borders, Air Transport Action Group (ATAG), March 2012



With \$3 trillion dollars of economic activity (GDP) generated by this industry globally the competition is fierce.

On top of the significant direct, indirect and induced economic impacts airports have on the accommodating area there are two key benefits that are gaining increased prominence: Connectivity and Productivity. A recent international survey has shown that 18% of businesses reported a lack of good air links had affected their location decisions with 59% choosing alternative locations and 23% choosing not to make an investment. While a study undertaken by Oxford Economics<sup>2</sup> indicated a clear relationship between connectivity and productivity. It was estimated that a 10% increase in connectivity would lead to a 0.07% increase in annual GDP.

Christchurch International Airport is no exception in terms of its significance to Christchurch City and in turn the Region.

In 2012 Christchurch Airport saw over 5,550,000<sup>3</sup> passengers to the year ended March 2013, along with approximately 30,000 tonnes of imported and exported goods (freight). The impact of this activity on the Regional economy is vast including:

- Over \$1b in goods exported from the Airport
- \$842m in tourism spend generated through the Airport, supporting over 8,300 ECs<sup>4</sup>
- Over 50% of visitors to Canterbury arriving via the Airport
- 6,400 ECs in the wider Airport area exhibiting growth of over 1,000 ECs (18.5%) in the last 2 years
- \$163m per annum generated directly from CIAL's 528 ECs (2010)
- Regional benefits to Canterbury economy in excess of \$2.13b in 2012, approximately 9% of the region's GDP, or 25,425 ECs (9.9%)
- Given the growth expectations to 2031 of passenger numbers (36.7%) and the potential freight demand outlined in the PWC report of 2011<sup>5</sup>, the direct, indirect and induced economic impact of Christchurch Airport could be in excess of \$3.488b by 2031.
- More importantly for the regional economy it is fundamental to business that it
  has confidence in the Airport's ability to fulfil its role efficiently and effectively,

<sup>&</sup>lt;sup>5</sup> PWC – 'Opening up the South, A report to the Canterbury Development Corporation' September 2011



<sup>&</sup>lt;sup>2</sup> Oxford Economics, Economic Benefits from Air Transport, 2011

<sup>&</sup>lt;sup>3</sup> Christchurch International Airport Limited

<sup>&</sup>lt;sup>4</sup> EC (Employment Count) – Statistic NZ measure of employment in a defined geographic area

not just now but in the future. The reliability and ability for the Airport to meet future growth demands is key to the locating of many national and international businesses that would not otherwise situate themselves in Canterbury. It is crucial to the regional economy that the Christchurch Airport remains a competitive option providing solid air links for the regional economy.

With \$3 trillion<sup>6</sup> in economic activity to pursue the market and competitiveness of airports is in a period of rapid change. In 2009 the Air Transport Research Society found that 48% of major airports revenues came from non-aeronautically based activities. The competition for aeronautical activity has led to both aggressive price and environmental activities. Malaysian airports for example have held landing and parking charges constant for the last 19 years with new and additional routes free for 3 years. Dallas Fort Worth Airport has recently implemented a revenue sharing scheme with airlines.

Along with this level of price competition is the development of business clusters around primary airports. The M4 Corridor at London's Heathrow, Dresden's (Germany) Electronics Park as well as the recent Council driven Business Park, Hamilton's (NZ) Titanium Park a mixed use business park, Auckland's Airport Oaks and North Carolina's ILM Park.

Auckland Airport currently contributes approximately 22% to regional GDP<sup>7</sup>. Airport Oaks, known as the airports growth corridor, is seen as integral to the prosperity of Auckland generating over \$3b towards GDP currently and expected to grow to between \$5-\$6b by 2031. This location has been a key attraction for business seeking to locate in an area suitable to service both New Zealand and overseas markets.

These are examples of a market that is recognising two factors, first, the notable locational advantages for businesses locating near these well located transport hubs, and second Airports recognition of the need for a competitive, flexible business environment that reduces uncertainty and increases efficiency and competitiveness.

The potential risk to the Canterbury economy lies in the ability of Christchurch Airport to remain and improve its competitiveness, without this the value generated by this economic conduit is likely to diminish over time. As the level of relative competitiveness in the Airport market grows the economic well-being of the Canterbury, and in fact South Island, community rely on the viable options available to the Airport to continue to attract business.

<sup>&</sup>lt;sup>7</sup> Market Economics, Auckland Airport website 2012



<sup>&</sup>lt;sup>6</sup> Aviation Benefits Beyond Borders, Air Transport Action Group, March 2012 (Represented in \$NZ)

## **Christchurch City Industrial Market**

With the proposed greenfield industrial land identified under Plan Change 1 ("PC1") to the Regional Policy Statement, Christchurch faces key locational and timing decisions around its provision based on the net economic value to the community and the City's business competitiveness.

It is expected that by 2031 Christchurch City will be home to nearly 400,000 residents, a growth rate of approximately 10%. Based on this and a variety of factors, outlined in Section 6 of the report, Christchurch City is expected to accommodate over 216,000 ECs (17% growth) based on Property Economics employment projection modelling. This compares to the Council Employment Futures Model ("EFM") which projects EC growth to 211,000 (15%). Of this growth it is expected industrial ECs will constitute approximately 8,500 ECs. If however the environment is such that the air freight potential in the PWC report is achieved this growth is likely to be in the range of 10,300 ECs by 2031.

Given the industrial sectors expected to grow and the ratios of employment to land by sector, it is estimated that Christchurch City will require approximately 288ha of industrial land to 2031 (16ha per annum). Under the 'PWC Scenario' this number increases to 350ha (20ha per annum). Interestingly, since 1994 the uptake of industrial land in Christchurch has average just over 20ha per annum, including some inefficiently utilised areas.

Christchurch City vacancy levels are currently estimated at 350ha (excluding the SPAZ). Historical uptake rates show an increasing demand for industrial land in west Christchurch over the past 12 years. There is a distinct movement of industrial activity from the central Christchurch areas out to the western fringe. Demand in this location is typically a mix of industrial uses with an increasing propensity towards Transport, Storage and a proportionately smaller, but increasing, demand for high amenity smaller/lighter industrial uses.

The preceding information has been utilised to assess four potential scenarios regarding the activities controlled under the SPAZ rules, including, but not restricted to Dakota Park. The four development scenarios included are:

- 1. Restriction to the current City Plan SPAZ rules with only airport related industrial activity permitted by the rules.
- 2. Industrial restrictions on Dakota Park are lifted with the remaining SPAZ area remains under the current restrictions
- 3. Dakota Park allowed for wider industrial uses, expanded Terminal precinct for limited office and retail.



4. General industrial within the whole SPAZ area, not just Dakota Park with the potential for other business activities including travellers accommodation.

It was clear from the high level economic assessment that the current situation (Scenario 1) does not offer the best economic outcome for the City. This situation will continue to create uncertainty both for businesses in this area and for the patrons of the Airport. While this scenario would appear to be conservative in terms of its potential impacts on other industrial areas it is likely that this restriction will result (and is currently) in less business activity in the Region as a whole, and therefore a smaller market for existing industrial locations.

While difficult to quantify the potential costs to the Regional economy it is safe to assume that the impact on the Airport's national and international competitiveness alone will result in the potential loss of growth in the Airport's commercial operations of \$450m (2% of Regional GDP) per annum by 2031. This excludes the catalytic benefits of businesses that would not otherwise locate in the Region at all.

Scenario 2 goes some way to reducing the economic impacts of the restrictions on the Region as is ultimately likely to improve the long-term competitiveness of the Airport in terms of business efficiency. However it is clear that the net economic benefits to the City and Region are unlikely to be maximised essentially curtailing the Region's potential economic growth.

Scenario 4 offers a better economic outcome than the first two scenarios however the concern is for the impacts on existing centres (and specific centres recognised as KACs in the City Plan) for the provision of inappropriate retail and office activity. Although this location would be competitive for such activity, as recent international and national examples would attest to, the potential impacts would be exponential in nature.

The finding of this report is that a representation of **Scenario 3** be adopted for the SPAZ area. This would include:

- The provision of general industrial over the entire 143ha area identified in the MUL. Given the potential addition of 62ha of demand to 2031, there is sufficient demand for appropriate activities to be accommodated in this location.
- That this industrial activity is restricted to 'light industrial' activity, including trade supply activity
- That no timing restrictions are applied
- That 'Speciality' retail is restricted to convenience oriented retail activities
- That non-convenience Large Format Retail ("LFR") be restricted in its status at this point (e.g. Non-Complying)



- Supermarkets within the SPAZ be capped at one (1)
- The provision for commercial / office space be for activity directly associated with the Airport operations and associated functions
- Travellers accommodation be enabled in and around the terminal precinct of the SPAZ

Although the international trend in airport activity is to produce a 'mini-city' that is self-sufficient, this approach is seen as inappropriate for Christchurch given the potential level of impacts on the existing KACs and the CBD.

The following includes the primary costs and benefits associated with this approach:

#### **Potential Costs:**

- Fall in industrial land uptake in other locations in the short to medium term
- Short term fall in industrial land price
- Potential short to medium term 'over-supply' of industrial land potentially attracting some level of 'transitory' business locations
- Potential short term increase in risk to industrial developers in other locations
- Potential infrastructure issues (capacity, roading etc.)

#### **Potential Benefits:**

- Medium to long term relative increase in economic activity. The potential increase in industrial land demand of 62ha (under the PWC growth scenario).
- Increase in Airport national and international competitiveness. Resulting in a potential increase in Airport activity contributing a further \$450m to annual GDP, supporting an additional 5,600 ECs by 2031.
- Increased provision of nationally competitive industrial land (located by major transport corridors) supply attracting 'additional' businesses to the Region
- Efficient utilisation of existing infrastructure and the viable potential to provide greater levels of infrastructure increasing overall competitiveness through economies of scale.
- Provide certainty and flexibility for future Airport operations
- Ability to provide a master-planned development providing greater clustering benefits as well as discouraging 'disjointed' development



The potential impacts of the above recommendation on the Christchurch CBD and identified KACs have been separated into the 3 sectors of industrial, retail and commercial activities.

The convenience retail associated with this site will by its nature not lead to any adverse effects on the CBD or any KACs. The provision of LFR needs to be more carefully managed. There is no economic evidence to advance the proposition that LFR activity is most appropriately located within the SPAZ or is critical or unique to the on-going function and operation of the airport. However the SPAZ should form part of a suite of further assessed potential options available to accommodate non-convenience LFR activity to satisfy future demand in the North-West market, determines the most appropriate location to site such LFR activity, and promotes the efficient operation of the market and enhanced community wellbeing.

Given the current requirement that office activity needs to be associated with the Airport's functions and operations, a restriction should be placed on general office activity within the SPAZ that falls outside of this category to reduce the likelihood any relocations or in fact activities present here that would otherwise locate (in a long-term competitive manner) in either the CBD or KACs.

In terms of industrial activity it is the finding of this report that the provision of the more flexible zoning on the SPAZ land will in fact create additional business activity in the Region essentially improving the economic environment in which both the CBD and KACs operate. The potential uptake of industrial activity at the Airport will not directly impact negatively upon the sustainability or the activity of any identified KAC.

#### Further Recommendations on Industrial land

• Further consideration should be given to the potential land supply with the inclusion of PC1 identified sites in the Land Use Recovery Plan ("LURP") as priority areas for development. Given the significant level of potential over supply to 2031 in the total industrial land, some consideration may be required to appropriately 'time' the release of land to the City market.



#### 2. PLAN CHANGE 84

This report addresses the potential economic impacts of retaining or altering the planning provisions under the current SPAZ. The impacts themselves have been restricted to the potential levels of economic activity created through industrial activity throughout Christchurch City and the potential spatial impacts that may occur given this distribution of this activity and the corresponding demand and supply balance.

Four options have been considered with regard to the SPAZ:

- 1. The activities permitted within the SPAZ remain limited to those deemed to be directly associated with airport activities. While clarity would be provided in the plan as to what constitutes 'Airport related' activity.
- 2. Greater flexibility for industrial activity within the existing Dakota Park area providing for 'general' industrial activities. The remaining SPAZ is restricted to industrial activity that would fall under scenario one.
- 3. Greater flexibility for industrial activity within the existing Dakota Park area providing for 'general' industrial activities. Additionally the Terminal precinct is expanded to include a limited extent of general office, retail activity, plus travellers accommodation.
- 4. A wider range of more general industrial activities across the total SPAZ zone. Also the consideration or retail, office and visitor accommodation.



#### 3. AIRPORTS AND CHANGING MARKETS

With over 50% of international travel and nearly 40% (by value) of freight airports represent vital economic conduits to a city's economic prosperity<sup>8</sup>. In terms of transport they are critical to a modern city's success for both economic activity and the community's standard of living. The total economic activity generated by Airports internationally exceeds \$3trillion per annum and is expected to grow to over \$4.2 trillion by 2031. The size of this market is huge and the ability for a local economy to compete for this activity is paramount in its ability to be economically successfully.

A recent report undertaken for Sydney Airport by Deloitte Access Economics highlights the fundamental economic position an airport plays in a national economy. With 2% of Australia's GDP generated by the Sydney Airport alone and growth projected to be in the order of 50% over the next 20 years the report found that the Airport:

- influences decisions by companies to locate their head offices in Sydney and improves their competitiveness
- attracts new investment to the NSW and Sydney economy
- retains existing companies and secures their expansion projects
- promotes exports through air freight and enhances the competitiveness of our economy through the provision of efficient passenger and freight services
- attracts new businesses, leisure activities and tourism-based incomes and creates new jobs

It was found that one additional A380 flight from China daily, would contribute over \$388m per annum and support 4,000 jobs in NSW alone.

In fact a study undertaken by ATAG in 2005<sup>9</sup> found that 25% of all companies' sales are dependent on air transport.

Apart from the direct economic activity generated by air transport the indirect, induced and catalytic benefits are massive. The indirect and induced benefits are those attributable to the industry's suppliers and the income introduced into the economy by the industry's employees. Although these three components constitute the \$3 billion annually, the real value is in the catalytic benefits. Without the air transport industry international and

<sup>&</sup>lt;sup>9</sup> Aviation Benefits Beyond Borders, Air Transport Action Group (ATAG), 2005



<sup>&</sup>lt;sup>8</sup> IATA, IATA Economics Briefing Paper No. 10, June 2013

national tourism would be halved (in value), world trade would lose 40% of its value and there would be a considerable fall in connectivity.

This connectivity is a key component in the ability for an economy to compete in terms of business location and overall productivity. A recent international survey has shown that 18% of businesses reported a lack of good air links had affected their location decisions with 59% choosing alternative locations and 23% choosing not to make an investment. While a study undertaken by Oxford Economics indicated a clear relationship between connectivity and productivity<sup>10</sup>. It was estimated that a 10% increase in connectivity would lead to a 0.07% increase in annual GDP.

The economic and wider social value created by an efficient, effective and competitive airport within an economy is vast given the fact that cities are realising the increasing importance of this locations for business both national and international cities are taking targeted steps to capitalise on the locational advantages produced by these transport hubs. In 2009 48% of major airports revenues came from non-aeronautically based activities<sup>11</sup> or Passenger Independent Revenue Streams ("PIRS"). CEO of Dubai Airports stated that 'overall non-aeronautical revenue, it is actually over \$2bn a year. Aeronautical revenue is about \$600m so you can see the skew in favour of commercial revenue and imagine it gets a lot of our attention'<sup>12</sup>

Two clear lines of competitiveness are developing between airports; price competition, and environmental competition.

Price competition is clear in its intent and approach. Airports are increasingly becoming aware of the 'additional' economic value associated with air transport movements both of goods and people. Two approaches are currently finding favour with airports internationally. Firstly the simple policy of reducing of holding constant airport fees for planes utilising the airport. In the past 19 years Malaysian airports have held landing and parking charges fixed with any new routes attracting no charges at all. Many airports have special rates (signatory) for airlines that enter into long term commitments with airports. The British Civil Aviation Authority (CAA) is currently in debate with both Heathrow and Gatwick over the landing charges at both airports as, although due to demand Heathrow has returned a £1.3b profit in 2012, the impact on flights and wider economic activity is suffering.

Additionally airports are entering into *'revenue sharing'* agreements with airlines to increase their patronage. Such schemes are in place at Dallas Fort Worth Airport, Port Colombo International Ohio and Dubai Airports. In this recent downturn of economic activity these

<sup>12 2012</sup> Trinity Forum



<sup>&</sup>lt;sup>10</sup> Oxford Economics, Economic Benefits from Air Transport, 2011

<sup>&</sup>lt;sup>11</sup> Air Transport Research Society 2009

methods have been increasing in popularity to achieve, at the very least, stable economic activity.

The second approach to improving the competitiveness of an airport is the environment created in and around the airport for both passengers / airlines and businesses. There are two aspects to this, the airport infrastructure and the ability of the airport and surrounding area to provide efficient, flexible and certain business locations. The physical locations of most major airports general lend themselves to providing good business locations. These strategic assets are often located amongst major transport hubs and the infrastructure generally required to operate a successful airport also provides for a competitive (both nationally and internationally) business location. Increasingly over recent years it is not surprising therefore that either the market or airports themselves have sought to provide nationally and internationally competitive business parks / locations immediately adjacent to major airports. These parks themselves operate as independent and unique business generators for local areas, attracting businesses driven specifically by the airport location.

International examples of these business parks abound with Heathrow's M4 development, Dresden's Electronics Park, North Carolina's ILM Park, along with New Zealand's Airport Oaks (Auckland) and Titanium Park (Hamilton). Business development on Denver's International Airport has been an issue of much debate with Adam's County seeking to reduce the activity here (due in part to their inability to tax the location) while the City is pressing to provide for dramatically increased development due to the 'tangible' and 'significant' economic benefits associated with the activity.

Auckland's Airport Oaks is a good example of an airport location operating to attract businesses that would not have otherwise located in the Region. Auckland Airport currently contributes approximately 22% to regional GDP. Airport Oaks, known as the airport's growth corridor, is seen as integral to the prosperity of Auckland generating over \$3b towards GDP currently and expected to grow to \$5 - \$6b by 2031. This location has been a key attraction for business seeking to locate in an area suitable to service both New Zealand and overseas markets.

The potential risk to the Canterbury economy lies in the ability of Christchurch Airport to remain and improve its competitiveness, without this the value generated by this economic conduit is likely to diminish over time. As the level of relative competitiveness in the Airport market grows the economic well-being of the Canterbury, and in fact South Island, community rely on the viable options available to the Airport to continue to attract business.



#### 4. SIGNIFICANCE AND RISKS TO CIA

Christchurch International Airport ("CIA") fulfils an extremely important and unique role for the Canterbury regional community. It serves not only as a significant employer for the region but also as a conduit for visitors and commerce into the region. It plays a fundamental role in the shipping of goods from a much wider area and therefore is critical to the economic and social well-being of all residents within the South Island. The presence and efficient operation of this airport enables Christchurch to maintain a competitive environment for economic development as well as enhancing residents' quality of life through access to these services.

In assessing the significance of CIA it is important to distinguish between the types of impacts the Airport's presence and operations has on the Regional economy. There are essentially four categories of impacts and benefits attributable to this facility

- 1. Direct Benefits: economic impacts (benefits) derived from the actual spending/expenses incurred through the operations of CIA
- 2. Indirect Benefits: increased activity brought about by those firms and their employees, who supply CIA and its operations
- 3. Induced Benefits: are measured in terms of the additional income that will be spent in the area due to increased business activity through those directly or indirectly employed through CIA operations
- 4. Catalytic Benefits: activity that is facilitated by CIA operations such as tourism, trade (businesses operating through imports or exports). This is the likely overall impact on the regional economy of not having CIA present.

While the first three have been assessed in the following section benefit 4 is extremely evasive due to its marginal impacts and 'spin-off' impacts upon potentially ever sector in the regional economy. Given the expansion of high values goods in a modern economy the influence of an efficient, competitive international airport is as crucial as a modern sea port or an efficient roading network. Due to the importance of airports and their economic significance, the ownership of national airports have until recent times (primarily post-1980) often been held in the public's hands. It has not been until the increasing need for the efficiencies have resulted in continued privatisation of the industry.

In 2012 CIA contributed \$2.13b to the regional economy, approximately 9% of Canterbury's GDP. This created 25,425 jobs (EC's) nearly 10% of regional employment.

Of particular interest, with regard to the airport operations, is the potential underperformance of the freight sector. A report undertaken by PWC for the CDC<sup>13</sup> in

<sup>&</sup>lt;sup>13</sup> Canterbury Development Corporation



September 2011 identified the potential for increased freight services from CIA. Currently, given the production and consumption rates of the South Island, it was estimated that freight volumes through CIA are approximately 50% of the current potential. By 2031 the report estimated demand to be 3 times the current rate. A key consideration in the utilisation of freight through CIA is the concept of 'just in time' logistics. Many business models are moving away from the storage of large inventories and are servicing demand on much shorter timeframes to reduce costs. This shift has created demands for airport business parks that service the production chain to a greater degree. Such sectors as high value goods assembly are key activities that seek immediate access to air transportation hubs for import or export from the region or country. This has moved airport locations away from purely traditional storage facilities and increased their overall competitiveness.

Considering the current average value of goods moved through CIA growth to 55,500 tonnes of exports and 32,300 tonnes of imports annual (by 2031) would have a dramatic impact on CIA's contribution to regional GDP as well increasing the overall total demand for industrial land in Christchurch City.

CIA currently caters for 5,550,000 passengers per annum and is expected to increase this by over 36% to 7,590,000 passengers per annum by 2031. With both the proportional increase in freight and the increased passenger numbers the contribution to GDP made by CIA has the potential to exceed \$3.48b by 2031.

The current impact on the regional economy includes:

- Over \$1b in goods exported from the Airport
- \$842m in tourism spend generated through the Airport, supporting over
   8.300 ECs
- Over 50% of visitors to Canterbury arriving via the Airport
- 6,400 ECs in the wider Airport area exhibiting growth of over 1,000 ECs (18.5%) in the last 2 years
- \$163m per annum generated directly from the Airports 528 ECs (2010)
- The contribution to the regional economy of foreign fee-paying students has fallen in the past 2 years due to the uncertainty of the earthquakes. While nearly 12,000 students were enrolled in Canterbury institutions in 2010 this number had fallen to 8,600 by December 2012. The contribution of this sector to the Canterbury economy has therefore fallen to \$109m per annum.

CIA currently encompasses 719.36ha (a total SPAZ area of 720.6ha) with 143.7ha identified in the Council's Vacant Industrial Land Registry in 2012.



#### 5. CHRISTCHURCH BUSINESS MARKET

This section assesses the current and future business environment within Christchurch City. The purpose of this section is to gain a greater understanding of the potential demands for business land in the area around and including CIA. This assessment identifies changes in the City's business activities and the potential for CIA to play an important role in business growth and competitiveness in the City.

Table 1 below outlines the changes in employment activity experienced by Christchurch City over the past 12 years. This activity is measured in the employment unit utilised by Statistics NZ (ECs).

TABLE 1: TEMPORAL CHRISTCHURCH EMPLOYMENT CHANGES (2000 - 2012)

CHRISTCHURCH CITY	2000	2002	2004	2006	2008	2010	2012
A Agriculture, Forestry and Fishing	1,706	1,621	1,605	1,636	1,638	1,660	1,594
B Mining	167	251	180	332	436	325	489
C Manufacturing	28,268	28,833	29,613	29,037	27,990	24,461	23,631
D Electricity, Gas, Water and Waste Services	646	690	586	683	955	1,017	1,234
E Construction	6,963	7,721	9,613	11,778	12,481	10,817	14,715
F Wholesale Trade	9,306	10,084	10,643	11,005	11,705	11,258	11,034
G Retail Trade	17,406	18,158	19,868	21,098	21,349	20,088	19,575
H Accommodation and Food Services	11,408	12,239	13,763	13,845	14,177	13,375	11,213
I Transport, Postal and Warehousing	10,737	9,439	9,635	10,233	10,674	9,263	8,971
J Information Media and Telecommunications	3,779	3,786	4,203	4,328	4,448	3,856	3,018
K Financial and Insurance Services	3,539	3,649	4,383	4,941	5,033	4,496	4,329
L Rental, Hiring and Real Estate Services	2,616	2,603	2,983	3,663	3,529	3,176	2,927
M Professional, Scientific and Technical Services	7,554	8,623	9,938	12,163	12,864	13,178	13,618
N Administrative and Support Services	6,827	7,471	9,234	9,810	10,909	9,386	11,887
O Public Administration and Safety	5,756	5,980	6,870	7,110	7,619	7,897	7,466
P Education and Training	12,314	13,029	14,253	14,221	14,164	15,213	14,934
Q Health Care and Social Assistance	18,941	20,707	21,787	22,259	23,246	24,220	23,774
R Arts and Recreation Services	2,909	3,085	3,439	3,754	3,717	4,142	3,266
S Other Services	5,467	5,616	6,620	6,980	7,006	7,103	6,541
Total All Industries	156,309	163,585	179,216	188,876	193,940	184,931	184,216

Source: Property Economics, Statistics NZ

Sectors that have experienced significant levels of change include:

- Construction (over 100% growth with 27% of total employment growth)
- Professional Services (80% growth with 21% of total employment growth)
- Manufacturing (16% drop in employment)
- Health Care (now the City's largest employer)



Within this 12-year timeframe total employment within the City has increased by 28,000 ECs a rise of 18%.

## **Industrial Activity**

Over the same period industrial activities (as indicated by Table 2) have increased just over 3,000 ECs a rise of 6%. The proportional change has meant that as a proportion of total business activity within Christchurch City industrial sectors have fallen from 36% to 32% in this period. The fall in Manufacturing, Transport and Storage has led the way for this proportional shift.

There are two factors that have influenced this dramatic change. First, the 2010/11 earthquakes have served to disrupt industrial movements throughout the region and has forced the relocation (albeit potentially temporary) of industrial businesses. The slight rise more recently in industrial activity (30% in 2010 to 32% in 2012) is an indication that some businesses are returning and that the current situation is potential an inaccurate indicator of the economic baseline. Second, any maturing economy is likely to increase its economic base of service activities as high valued sectors replace proportionally lower valued ones. Many factors influence this change from simple growth to increasing land prices.

TABLE 2: TEMPORAL CHRISTCHURCH INDUSTRIAL EMPLOYMENT CHANGES (2000 - 2012)

CHRISTCHURCH CITY	2000	2002	2004	2006	2008	2010	2012
A Agriculture, Forestry and Fishing	171	162	161	164	164	166	159
B Mining	17	25	18	33	44	33	49
C Manufacturing	28,268	28,833	29,613	29,037	27,990	24,461	23,631
D Electricity, Gas, Water and Waste Services	194	207	176	205	287	305	370
E Construction	6,963	7,721	9,613	11,778	12,481	10,817	14,715
F Wholesale Trade	9,306	10,084	10,643	11,005	11,705	11,258	11,034
I Transport, Postal and Warehousing	10,737	9,439	9,635	10,233	10,674	9,263	8,971
Total All Industrial	55,655	56,471	59,858	62,455	63,344	56,303	58,930

Source: Property Economics, Statistics NZ

Figure 1 below illustrates the spatial distribution of industrial employment through the City. It shows strong influence throughout the western edges of Christchurch currently. However this distribution of activity has not always been the case in Christchurch, in fact the past 12 years has seen a significant shift from central areas westward.



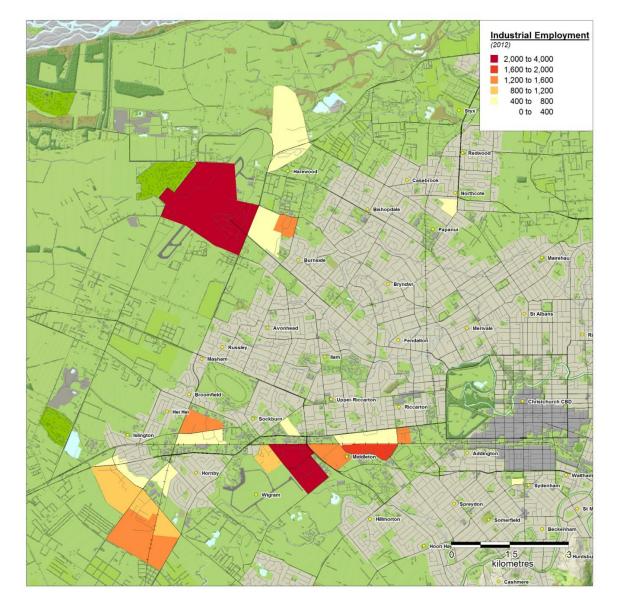


FIGURE 1: CHRISTCHURCH INDUSTRIAL EMPLOYMENT DISTRIBUTION 2012

Source: Property Economics, Statistics NZ

Figure 2 demonstrates the marked movement of industrial activity over the past 12 years. Although over this period there has been growth of only 3,000 ECs the movement indicates that the net shift of industrial ECs within Christchurch City is significantly more. Over the 2000-2012 period there was a total movement of over 24,000 industrial ECs of these the net movement was over 18,000 ECs or 31%. This is a massive internalised shift of activity within the City that has occurred throughout the period and has been simply facilitated by the earthquakes.

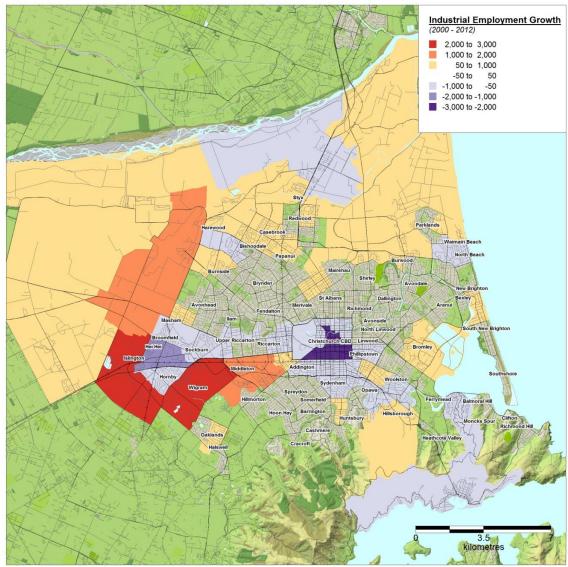


FIGURE 2: CHRISTCHURCH INDUSTRIAL EMPLOYMENT CHANGES (2000 -2012)

Source: Property Economics, Statistics NZ

This position is reinforced by the vacant industrial land uptake rates over the past 12 years. Figure 3 illustrates these and shows uptake of industrial land intensifying towards the western side of the City. This of course is driven nominally by the availability of vacant industrial land. However when considering the uptake rate in comparison to the total quantum of available vacant industrial land the North West and South West of Christchurch City are clearly in higher demand than any other area.



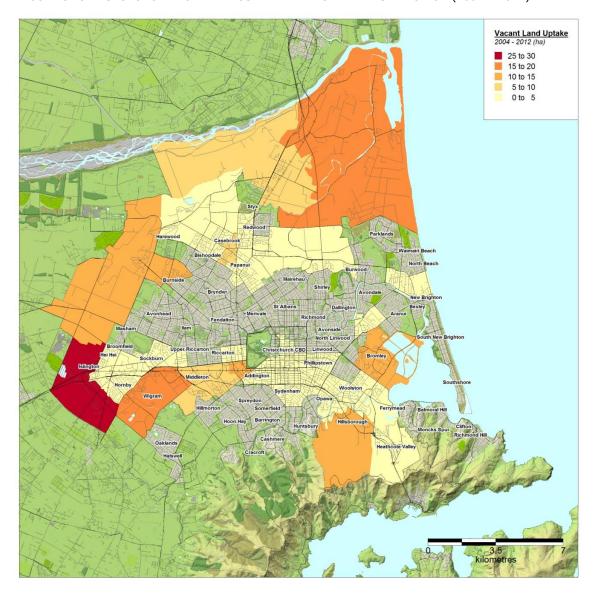


FIGURE 3: CHRISTCHURCH VACANT INDUSTRIAL LAND UPTAKE DISTRIBUTION (2004 - 2012)

Source: Property Economics, CCC

It is of interest to note that although the Construction sector has driven net industrial growth in the City and the west is undoubtedly the recipient of much of this development, industrial growth in this area has experienced balanced industrial growth. The North-West quadrant of Christchurch has seen a rise in over 3,000 net industrial employees with half of these in Transport and Storage and a further 600 in Wholesale Trade (Table 3 below).

TABLE 3: TEMPORAL NORTH-WEST QUADRANT EMPLOYMENT CHANGES (2000 - 2012)

	2000	2002	2004	2006	2008	2010	2012
A Agriculture, Forestry and Fishing	416	424	508	342	188	260	177
B Mining	79	54	75	93	100	60	150
C Manufacturing	4,355	4,459	4,807	4,698	4,538	4,240	4,037
D Electricity, Gas, Water and Waste Services	42	79	24	57	68	62	60
E Construction	1,022	1,038	1,252	1,553	1,777	1,682	2,267
F Wholesale Trade	1,154	1,197	1,468	1,562	1,761	1,721	1,611
G Retail Trade	3,656	3,804	3,985	4,344	4,044	3,840	4,119
H Accommodation and Food Services	3,421	3,554	4,211	3,895	3,843	3,487	3,470
I Transport, Postal and Warehousing	2,268	2,031	2,384	2,999	3,981	3,531	3,774
J Information Media and Telecommunications	834	835	575	546	522	586	468
K Financial and Insurance Services	520	596	541	556	611	468	602
L Rental, Hiring and Real Estate Services	792	865	1,058	1,215	1,220	1,086	1,190
M Professional, Scientific and Technical Services	1,694	1,579	1,891	2,381	2,493	2,465	4,034
N Administrative and Support Services	1,022	904	1,273	1,492	1,837	1,456	1,707
O Public Administration and Safety	1,175	1,504	1,373	1,540	1,653	1,708	1,173
P Education and Training	5,549	5,737	6,293	6,101	5,975	6,151	5,994
Q Health Care and Social Assistance	2,788	3,017	3,127	3,123	3,178	3,114	2,910
R Arts and Recreation Services	1,036	1,119	1,054	1,250	1,084	711	840
S Other Services	700	765	886	1,028	1,032	1,168	1,447
Total All Industries	32,523	33,561	36,785	38,775	39,905	37,796	40,030
Christchurch City Total ECs	•	•	•	188,876	•	•	•
NW Proportions	20.8%	20.5%	20.5%	20.5%	20.6%	20.4%	21.7%

Source: Property Economics, Statistics NZ

There is clearly increasing demand for industrial space in the western side of Christchurch. It is highly accessible, well located, and crucial to the recovery of the City's economic base.

Table 4 identifies the biennial industrial building consents across the sectors over the 2000-2012 period. This is important to determine recent absorption and uptake rates of industrial land in the city.

TABLE 4: CHRISTCHURCH CITY INDUSTRIAL BUILDING CONSENTS (2000 - 2012) (GFA SQM)

Building Type	2000	2002	2004	2006	2008	2010	2012	Total
Cool Store	594	4,571	2,347	-	2,500	371	-	25,381
Factory	17,693	11,973	22,718	8,357	9,614	1,983	27,168	176,344
Freezing Works and Abattoir and Other Structures e.g. Covered Yards	-	383	-	-	-	270		788
Industrial	8,342	5,684	5,854	20,135	5,726	2,089	13,162	100,687
Other Factory and Industrial Building	3,443	1,500	4,007	3,637	5,317	149	1,776	27,962
Other Storage Building	6,975	28,182	10,997	8,841	7,262	4,474	37,724	188,041
Parking Building	-	3,695	-	10,664	2,233		6,020	37,210
Sawmill	543	1,935						3,141
Warehouse	56,418	52,782	77,341	55,219	42,124	16,328	25,485	599,696
Workshop e.g. Electrical or Vehicle Repairs	3,162	10,986	16,365	4,981	5,144	695	2,080	66,030
Total	97,170	121,691	139,629	111,834	79,920	26,359	113,415	1,225,280

Source: Property Economics, Statistics NZ

In terms of total average uptake rates for Christchurch City per annum, approximately 100,000sqm of industrial floorspace has been consented each year since 2000. Given the natural replacement of some buildings, conversions of existing space to commercial activity and the smaller percentage of unimplemented consents this is in line with the uptake rates of both growth (to the height of activity in 2008, 63,000 ECs) and vacant land uptake rates (21ha per annum).

It is important to note that generally the market will supply space for the highest level of industrial ECs over a given period i.e. the market will have to have accommodated 63,000 industrial ECs at one point. However the 2010/2011 earthquake has altered this capacity somewhat. It is expected that given the rapid increase in industrial consents through 2012 the expected level of latent supply of industrial floorspace does not exist at normally anticipated levels.

There exist some difficulties in assessing the current level of industrial land supply. Inappropriate locations have emerged given geotechnical difficulties as well as quantum shifts in activity towards the west of the city. Table 5 lists the levels of currently vacant industrial land in Christchurch. This table is geospatially represented by Figure 4 which shows the majority of vacant industrially zoned land lies in the South West.

It is important to note that the area located in the SPAZ has restricted uses currently attributable to it. Without this land Christchurch currently has approximately 353ha of vacant industrial land. Additionally over 23% of this vacant land exists in land holdings less than 1ha, leaving 272ha in sites greater than 1 hectare.



TABLE 5: CHRISTCHURCH CITY VACANT INDUSTRIAL LAND BY ZONE (2012)

B3	Zone	Vacant Area (ha)
Addington / Cc South 1.33 Phillipstown 1.68 Sydenham 1.64 B3 Total 4.65  B3B  Addington / Cc South 0.96 Avon Loop 0.40 Phillipstown 1.35 Sydenham 0.85 B3B Total 3.56  B4 Belfast(Ind) 3.81 Bromley 0.37 Chisnall 1.80 Ferrymead 0.36 Hornby North 1.35 Islington 2.95 Islington South 3.31 Mandeville / Addington 2.09 Northcote 1.75 Opawa / Woolston 40.70 Papanui / Casebrook 0.33 Rawhiti 0.04 Russley / Harewood 3.53 Styx Mill 1.24 Wigram / Hillmtn / Mditn 28.96 B4 Total 103.37  B4P Islington South 6.56 B4T Russley / Harewood 0.76 B4T Total 0.76  B5 Belfast(Ind) 9.96 B7 Belfast(Ind) 3.00 Islington 3.2.95 B6 Chaneys 1.84 Hornby North 24.19 Hornby South (Ind) 1.30 Islington 3.95 Opawa / Woolston 4.76 B5 Belfast(Ind) 9.96 B7 Willington 3.95 D9 Woolston 3.9	Zone	vacant Arca (na)
Phillipstown         1.68           Sydenham         1.64           B3 Total         4.65           B3B         4.65           Addington / Cc South         0.96           Avon Loop         0.40           Phillipstown         1.35           Sydenham         0.85           B3B Total         3.56           B4         Belfast(Ind)         3.81           Bromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4T Total         0.76           B4T Total         0.76           B4T Total         0.76           B5 <t< td=""><td>B3</td><td></td></t<>	B3	
Phillipstown         1.68           Sydenham         1.64           B3 Total         4.65           B3B         4.65           Addington / Cc South         0.96           Avon Loop         0.40           Phillipstown         1.35           Sydenham         0.85           B3B Total         3.56           B4         Belfast(Ind)         3.81           Bromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4T Total         0.76           B4T Total         0.76           B4T Total         0.76           B5 <t< td=""><td>Addington / Cc South</td><td>1.33</td></t<>	Addington / Cc South	1.33
B3B           Addington / Cc South         0.96           Avon Loop         0.40           Phillipstown         1.35           Sydenham         0.85           B3B Total         3.56           B4         Belfast(Ind)         3.81           Bromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Uigram / Hillmtn / Mdltn         28.96           B4P Total         6.56           B4P Total         6.56           B4T Total         0.76           B5         8elfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19		1.68
B3B	Sydenham	1.64
Addington / Cc South         0.96           Avon Loop         0.40           Phillipstown         1.35           Sydenham         0.85           B3B Total         3.56           B4         Belfast(Ind)           Beromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         1.01           B4P Total         6.56           B4P Total         6.56           B4P Total         0.76           B5         Belfast(Ind)         9.96           B6 Total         1.34.85           B6	B3 Total	4.65
Addington / Cc South         0.96           Avon Loop         0.40           Phillipstown         1.35           Sydenham         0.85           B3B Total         3.56           B4         Belfast(Ind)           Beromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         1.01           B4P Total         6.56           B4P Total         6.56           B4P Total         0.76           B5         Belfast(Ind)         9.96           B6 Total         1.34.85           B6		
Avon Loop         0.40           Phillipstown         1.35           Sydenham         0.85           B3B Total         3.56           B4         Belfast(Ind)           Beromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         1.84           Hornby South         6.56           B4P Total         6.56           B4P Total         0.76           B4T Total         0.76           B4T Total         0.76           B5         Belfast(Ind)         9.96           Browley <td< td=""><td>·</td><td></td></td<>	·	
Phillipstown   0.85	Addington / Cc South	
Sydenham         0.85           B3B Total         3.56           B4         3.81           Beromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         6.56           B4P         6.56           B4P Total         6.56           B4T Total         0.76           B5         6.56           B4T Total         0.76           B5         8.52           Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00		
B4         Belfast(Ind)         3.81           Bromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4T Total         0.76           B4T Total         0.76           B4T Total         0.76           B5         8elfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston		
Belfast(Ind)   3.81		
Belfast(Ind)         3.81           Bromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4P Total         6.56           B4T Total         0.76           B5         8elfast(Ind)         9.96           B4T Total         0.76           B5         8elfast(Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total	B3B lotal	3.50
Belfast(Ind)         3.81           Bromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4P Total         6.56           B4T Total         0.76           B5         8elfast(Ind)         9.96           B4T Total         0.76           B5         8elfast(Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total	R4	
Bromley         0.37           Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4T Total         0.76           B5         Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys<		3.81
Chisnall         1.80           Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4T Total         0.76           B5         Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns R	***************************************	
Ferrymead         0.36           Hornby North         1.35           Hornby South (Ind)         10.80           Islington         2.95           Islington South         3.31           Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4P Total         6.56           B4T Total         0.76           B5         8elfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns		
Hornby North   1.35     Hornby South (Ind)   10.80     Islington   2.95     Islington   3.31     Mandeville / Addington   2.09     Northcote   1.75     Opawa / Woolston   40.70     Papanui / Casebrook   0.33     Rawhiti   0.04     Russley / Harewood   3.53     Styx Mill   1.24     Wigram / Hillmtn / Mdltn   28.96     B4 Total   103.37     B4P	***************************************	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Hornby South (Ind)   10.80   Islington   2.95   Islington   2.95   Islington   3.31   Mandeville / Addington   2.09   Northcote   1.75   Opawa / Woolston   40.70   Papanui / Casebrook   0.33   Rawhiti   0.04   Russley / Harewood   3.53   Styx Mill   1.24   Wigram / Hillmtn / Mdltn   28.96   B4 Total   103.37   B4P   Islington South   6.56   B4P Total   6.56   B4T Total   6.56   B4T Total   0.76   B5   B6   B7 Total   1.84   Hornby North   24.19   Hornby South (Ind)   30.00   Islington   32.95   Opawa / Woolston   8.52   Wigram / Hillmtn / Mdltn   17.39   B5 Total   134.85   B6   Chaneys   46.53   Johns Road   8.09   B6 Total   54.62   SP(ARPT)   Airport   143.73   SP(ARPT) Total   3.75   S		
Islington South       3.31         Mandeville / Addington       2.09         Northcote       1.75         Opawa / Woolston       40.70         Papanui / Casebrook       0.33         Rawhiti       0.04         Russley / Harewood       3.53         Styx Mill       1.24         Wigram / Hillmtn / Mdltn       28.96         B4 Total       103.37         B4P       1slington South       6.56         B4P Total       6.56         B4T Total       0.76         B5       86         Belfast(Ind)       9.96         Bromley       11.84         Hornby North       24.19         Hornby North (Ind)       30.00         Islington       32.95         Opawa / Woolston       8.52         Wigram / Hillmtn / Mdltn       17.39         B5 Total       134.85         B6       Chaneys       46.53         Johns Road       8.09         B6 Total       54.62         B7       Wilmers Road       44.86         B7 Total       44.86         B7 (ARPT)       143.73         SP(ARPT) Total       143.73		10.80
Mandeville / Addington         2.09           Northcote         1.75           Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4T Total         0.76           B5         86           Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           B7 (ARPT)         Airport         143.73           SP	Islington	2.95
Northcote	Islington South	3.31
Opawa / Woolston         40.70           Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4T Total         0.76           B5         Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           B7 (ARPT)         143.73           SP(ARPT) Total         143.73           Grand Total         496.95		2.09
Papanui / Casebrook         0.33           Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South         6.56           B4P Total         6.56           B4T Total         0.76           B5         Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           B7 Total         44.86           B7 (ARPT)         143.73           SP(ARPT) Total         143.73           Grand Total         496.95		1.75
Rawhiti         0.04           Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South           B4P Total         6.56           B4T Total         0.76           B4T Total         0.76           B5         5           Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95		
Russley / Harewood         3.53           Styx Mill         1.24           Wigram / Hillmtn / Mdltn         28.96           B4 Total         103.37           B4P         Islington South           B4P Total         6.56           B4T Total         0.76           B4T Total         0.76           B5         Selfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95		
Styx Mill		
Wigram / Hillmtn / Mdltn       28.96         B4 Total       103.37         B4P       Islington South       6.56         B4P Total       6.56         B4T Total       0.76         B5       Selfast(Ind)       9.96         Bromley       11.84         Hornby North       24.19         Hornby South (Ind)       30.00         Islington       32.95         Opawa / Woolston       8.52         Wigram / Hillmtn / Mdltn       17.39         B5 Total       134.85         B6       Chaneys         Chaneys       46.53         Johns Road       8.09         B6 Total       54.62         B7       Wilmers Road       44.86         B7 Total       44.86         SP(ARPT)       Airport       143.73         SP(ARPT) Total       143.73         Grand Total       496.95		
B4P           Islington South         6.56           B4P Total         6.56           B4T Total         0.76           B5         0.76           Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95		
B4P           Islington South         6.56           B4P Total         6.56           B4T         0.76           B4T Total         0.76           B5         0.76           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95		
Islington South         6.56           B4P Total         6.56           B4T Tutal         0.76           B4T Total         0.76           B5         Selfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	B4 lotal	103.37
Islington South         6.56           B4P Total         6.56           B4T Tutal         0.76           B4T Total         0.76           B5         Selfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	D.4D	
B4P Total         6.56           B4T         Russley / Harewood         0.76           B4T Total         0.76           B5         Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	1B4P	
Russley / Harewood         0.76           B4T Total         0.76           B5         0.76           Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95		6.56
Russley / Harewood         0.76           B4T Total         0.76           B5         0.76           Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South	
B5         Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys         46.53           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73         SP(ARPT) Total         496.95	Islington South <b>B4P Total</b>	
B5 Belfast(Ind) 9.96 Bromley 11.84 Hornby North 24.19 Hornby South (Ind) 30.00 Islington 32.95 Opawa / Woolston 8.52 Wigram / Hillmtn / Mdltn 17.39 B5 Total 134.85  B6 Chaneys 46.53 Johns Road 8.09 B6 Total 54.62  B7 Wilmers Road 44.86 B7 Total 44.86 SP(ARPT) Airport 143.73 SP(ARPT) Total 143.73 Grand Total 496.95	Islington South <b>B4P Total</b>	
Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South  B4P Total  B4T  Russley / Harewood	<b>6.56</b> 0.76
Belfast(Ind)         9.96           Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South  B4P Total  B4T  Russley / Harewood	<b>6.56</b> 0.76
Bromley         11.84           Hornby North         24.19           Hornby South (Ind)         30.00           Islington         32.95           Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6         Chaneys           Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South  B4P Total  B4T  Russley / Harewood  B4T Total	<b>6.56</b> 0.76
Hornby North   24.19     Hornby South (Ind)   30.00     Islington   32.95     Opawa / Woolston   8.52     Wigram / Hillmtn / Mdltn   17.39     B5 Total   134.85     B6	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5	0.76 0.76
Hornby South (Ind)   30.00   Islington   32.95   Opawa / Woolston   8.52   Wigram / Hillmtn / Mdltn   17.39   B5 Total   134.85   B6   Chaneys   46.53   Johns Road   8.09   B6 Total   54.62   B7   Wilmers Road   44.86   B7 Total   44.86   SP(ARPT)   Airport   143.73   SP(ARPT) Total   143.73   Grand Total   496.95   SP(STAND	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind)	0.76 0.76 9.96
Islington     32.95       Opawa / Woolston     8.52       Wigram / Hillmtn / Mdltn     17.39       B5 Total     134.85       B6	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley	0.76 0.76 9.96 11.84
Opawa / Woolston         8.52           Wigram / Hillmtn / Mdltn         17.39           B5 Total         134.85           B6	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North	9.96 11.84 24.19
Wigram / Hillmtn / Mdltn       17.39         B5 Total       134.85         B6	Islington South  B4P Total  B4T Total  B5  Belfast(Ind)  Bromley  Hornby North  Hornby South (Ind)	9.96 11.84 24.19 30.00
B5 Total     134.85       B6     Chaneys     46.53       Johns Road     8.09       B6 Total     54.62       B7     Wilmers Road     44.86       B7 Total     44.86       SP(ARPT)     Airport     143.73       SP(ARPT) Total     143.73       Grand Total     496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington	9.96 11.84 24.19 30.00 32.95
Chaneys       46.53         Johns Road       8.09         B6 Total       54.62         B7         Wilmers Road       44.86         B7 Total       44.86         SP(ARPT)         Airport       143.73         SP(ARPT) Total       143.73         Grand Total       496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston	9.96 11.84 24.19 30.00 32.95 8.52
Chaneys       46.53         Johns Road       8.09         B6 Total       54.62         B7         Wilmers Road       44.86         B7 Total       44.86         SP(ARPT)         Airport       143.73         SP(ARPT) Total       143.73         Grand Total       496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn	9.96 11.84 24.19 30.00 32.95 8.52 17.39
Johns Road         8.09           B6 Total         54.62           B7         Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)         Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total	9.96 11.84 24.19 30.00 32.95 8.52 17.39
B6 Total     54.62       B7     Wilmers Road     44.86       B7 Total     44.86       SP(ARPT)       Airport     143.73       SP(ARPT) Total     143.73       Grand Total     496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85
B7         Wilmers Road       44.86         B7 Total       44.86         SP(ARPT)         Airport       143.73         SP(ARPT) Total       143.73         Grand Total       496.95	Islington South  B4P Total  B4T  Russley / Harewood  B4T Total  B5  Belfast(Ind)  Bromley  Hornby North  Hornby South (Ind)  Islington  Opawa / Woolston  Wigram / Hillmtn / Mdltn  B5 Total  B6  Chaneys	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85
Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)           Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South  B4P Total  B4T Russley / Harewood  B4T Total  B5  Belfast(Ind)  Bromley  Hornby North  Hornby South (Ind)  Islington  Opawa / Woolston  Wigram / Hillmtn / Mdltn  B5 Total  B6  Chaneys Johns Road	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85
Wilmers Road         44.86           B7 Total         44.86           SP(ARPT)           Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South  B4P Total  B4T Russley / Harewood  B4T Total  B5  Belfast(Ind)  Bromley  Hornby North  Hornby South (Ind)  Islington  Opawa / Woolston  Wigram / Hillmtn / Mdltn  B5 Total  B6  Chaneys Johns Road	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85
B7 Total         44.86           SP(ARPT)	Islington South  B4P Total  B4T Russley / Harewood  B4T Total  B5  Belfast(Ind)  Bromley  Hornby North  Hornby South (Ind)  Islington  Opawa / Woolston  Wigram / Hillmtn / Mdltn  B5 Total  B6  Chaneys Johns Road  B6 Total	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85
SP(ARPT)           Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85
Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total  B7 Wilmers Road	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85  46.53 8.09 54.62
Airport         143.73           SP(ARPT) Total         143.73           Grand Total         496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total  B7 Wilmers Road	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85  46.53 8.09 54.62
SP(ARPT) Total         143.73           Grand Total         496.95	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total  B7 Wilmers Road B7 Total	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85  46.53 8.09 54.62
	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total  B7 Wilmers Road B7 Total  SP(ARPT)	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85  46.53 8.09 54.62  44.86
	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total  B7 Wilmers Road B7 Total  SP(ARPT) Airport	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85  46.53 8.09 54.62  44.86 44.86
Source: CCC	Islington South B4P Total  B4T Russley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total  B7 Wilmers Road B7 Total  SP(ARPT) Airport	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85  46.53 8.09 54.62  44.86 44.86
	Islington South B4P Total  B4T Tussley / Harewood B4T Total  B5 Belfast(Ind) Bromley Hornby North Hornby South (Ind) Islington Opawa / Woolston Wigram / Hillmtn / Mdltn B5 Total  B6 Chaneys Johns Road B6 Total  B7 Wilmers Road B7 Total  SP(ARPT) Airport SP(ARPT) Total  Grand Total	9.96 11.84 24.19 30.00 32.95 8.52 17.39 134.85  46.53 8.09 54.62  44.86 44.86



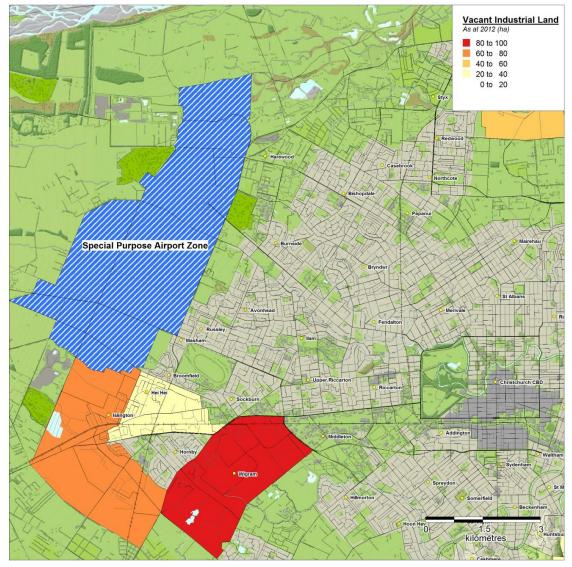


FIGURE 4: CHRISTCHURCH VACANT INDUSTRIAL LAND DISTRIBUTION (2012)

Source: Property Economics, CCC

Note the identified Special Purpose Area Zone in Figure 4 may not duplicate the actual zone in the District Plan as it is based on Statistics NZ meshblock boundaries, and as such should be treated as indicative only.

Additional to the currently vacant industrial land in Christchurch City, PC1 to the Regional Policy Statement seeks to rezone a further 487.9ha of land currently with a variety of zonings to industrial zonings out to 2041. These areas are outlined in Figure 5. There is also extra 125ha of land identified in the Draft LURP primarily in the North-West Review Area.

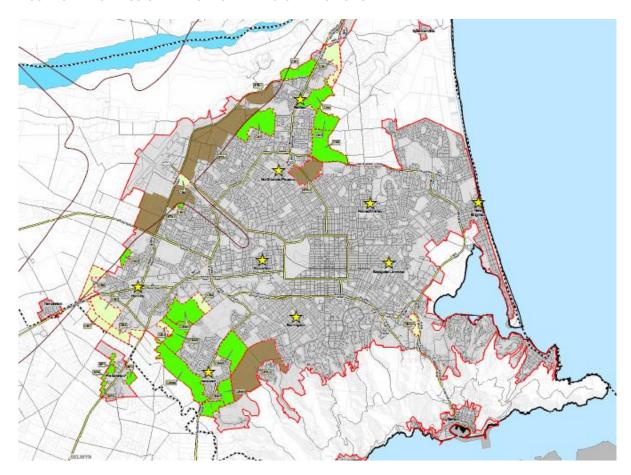


FIGURE 5: REZONINGS UNDER PC1 TO THE REGIONAL POLICY STATEMENT

Source: CCC

#### **Industrial Demand**

As with the supply of industrial land in Christchurch the assessment of future demand also presents some difficulties. There is no doubt that the current economic environment in the Region is in flux, with growth in some industrial sectors still curtailed and uncertainty while growth in others is artificially enlarged due to the recovery process. These factors must be taken into consideration when projecting potential employment growth by sector for the City.

Using the population forecasts in Table 6, historical business demographic trends and the changing demographic profile of Christchurch City, Property Economics have projected industrial employment for Christchurch out to 2031 (Tables 7 & 8) factoring in changing labour force participation rates over the period.



TABLE 6: CANTERBURY REGIONAL POPULATION PROJECTIONS

Year	Christchurch City	Selwyn District	Waimakariri District	Total
2006	358,300	22,000	34,100	414,400
2011	361,918	24,427	40,016	426,361
2013	362,087	26,986	42,941	432,014
2016	362,075	30,995	47,479	440,549
2021	370,813	35,148	49,605	455,566
2026	385,828	39,386	51,783	476,997
2031	398,434	41,888	52,834	493,156
2036	410,740	44,439	53,909	509,088
2041	423,101	46,992	55,009	525,102

Source: CCC

The sector projected employment for the following sectors is based on a variety of factors including:

- National and Regional GDP and employment projections
- Population projections these are key both to labour force projections and population based employment.
- Labour Force projections (skilled / unskilled)
- Regional ability to accommodate growth, especially the potential relocation of business (industrial) activity from the wider Canterbury Region.
- Christchurch sub-region's relative business land supply and prices
- Trended growth from at least the past 11 years at an Census Area Unit level
- Economic development directions
- Locational criteria by sector
- National / Regional and local supply of inputted goods and location of market



- Business sector analysis
- Increasing working age
- Potential inflation of recent sector growth

Estimates of the quantity of future industrial land demand based on the employment projections on a sector by sector basis and have been compiled based on projected employment and sustainable land efficiencies. As a result, the projections presented, represent the industrial land demand of efficiently used land.

The requirements for these calculations include:

- The ratio of net land to employee by industrial sector (These estimates are based on specific sectors and have been compiled based on empirical data such as regional rating databases).
- A locational assessment of efficient land utilisation (i.e. whether the local price is such that industrial land will be efficiently used, assessed based on current EC levels compared to national land use assessment)
- Price
- Historical trends by sector towards increased land or labour efficiencies
- Changes in technology (capital)

It is also important to note that these projections do not factor in changes in industrial land prices resulting from changes in the level of potential over or under supply in Christchurch and price changes in surrounding areas. These factors can influence where businesses decide to locate, however given the unpredictability of land values, for the purpose of this report it has been assumed that relative prices between Christchurch and surrounding areas remain constant over the forecast period. Based on these factors it is expected that Christchurch City will accommodate approximately 216,000 ECs by 2031<sup>14</sup>.

Table 7 below illustrates the forecast industrial employment growth for Christchurch City under a trended projection.

 $<sup>^{14}</sup>$  It is of interest to note that the EFM model operated by Council estimates 2031 ECs at approx. 211,000 ECs



TABLE 7: TRENDED CHRISTCHURCH INDUSTRIAL EMPLOYMENT PROJECTIONS (2012 - 2031)

CHRISTCHURCH CITY	2000	2008	2011	2012	2021	2026	2031
A Agriculture, Forestry and Fishing	171	164	152	159	161	176	143
B Mining	17	44	34	49	52	49	47
C Manufacturing	28,268	27,990	24,032	23,631	25,091	26,944	28,253
D Electricity, Gas, Water and Waste Services	194	287	337	370	371	370	389
E Construction	6,963	12,481	11,309	14,715	17,013	17,596	16,822
F Wholesale Trade	9,306	11,705	11,245	11,034	11,604	12,374	12,647
I Transport, Postal and Warehousing	10,737	10,674	8,922	8,971	9,116	9,371	9,176
Total All Industries	55,655	63,344	56,031	58,930	63,407	66,881	67,476

Source: Property Economics

This shows growth in the order of 8,500 industrial ECs over the 18-year period assessed. Although the growth in construction is expected in the short to medium term to be driven by the recovery process the medium to longer term prospects will eventually need to be supported by normal growth and population base. It is expected that although Manufacturing has experienced a significant decline over the past 12 years that, given Christchurch in the production hub for the South Island, that this capacity will rebound slightly.

A position raised in Section 6 of this report was the potential for CIA to induce greater levels of growth in the City through improving the competitiveness of the Airport environment. The basis for potential growth levels were outlined in the PWC freight report of 2011. Based on these potential an alternative industrial growth projection has been development. The foundation for this potential increase in employment growth would be a resulting increase in population.

TABLE 8: SCENARIO 2 CHRISTCHURCH INDUSTRIAL EMPLOYMENT PROJECTIONS (2012 - 2031)

CHRISTCHURCH CITY	2000	2008	2011	2012	2021	2026	2031
A Agriculture, Forestry and Fishing	171	164	152	159	161	176	143
B Mining	17	44	34	49	52	49	47
C Manufacturing	28,268	27,990	24,032	23,631	25,133	28,034	28,421
D Electricity, Gas, Water and Waste Services	194	287	337	370	371	370	389
E Construction	6,963	12,481	11,309	14,715	16,523	17,666	16,892
F Wholesale Trade	9,306	11,705	11,245	11,034	11,684	12,514	12,893
I Transport, Postal and Warehousing	10,737	10,674	8,922	8,971	9,232	9,918	10,302
Total All Industries	55,655	63,344	56,031	58,930	63,155	68,727	69,087

Source: Property Economics



This projection is a result in part of an Airport business environment that is competitive at both a national and international level.

Based on the two projections above the level of expected demand for industrial land required to meet the changes and accommodate the activity are 288ha and 350ha respectively.

This equates to an uptake rate of between 16 to 20ha of industrial land per annum.

It is important to note that the additional activity and hence demand generated by Airport facilitated activities are dependent on the Airport's ability to improve its competitiveness for this activity. Not only does this require certainty and capacity provided in the Airport's operations but it also requires certainty for those businesses seeking to location these operations in Christchurch. This certainty is based also around highly competitive locations for their businesses.



#### SPAZ RETAIL OVERVIEW

This section provides a 'higher level' assessment of the retail market within the North-West area as a determination for the propensity and appropriateness of the SPAZ to accommodate retail activities in the future.

This overview excludes consideration on retailing in the passenger terminals either 'landside' or 'airside'. This activity is considered to predominantly service travelling passengers and is very limited (and focused) in its scope and scale.

Figure 6 identifies the core trade catchment for retail activity if established within the SPAZ. This is slightly more extensive geo-spatially than the majority of centres in Christchurch (excl. the City Centre and sub-regional centres), but is a reflection of the unique nature and level of visitation to the airport irrespective of the form, scale and type of retail activity developed within the SPAZ, i.e. the airport has unique characteristics and usage that will continue to occur (and grow) as a result of other avionic services and facilities embodied within the SPAZ which are not (and cannot) be duplicated in other centres or parts of the City and wider region.

It's important to note Figure 6 does not represent the entire trade catchment for any retail activity at the airport, particularly if the activity is accessed off Memorial Ave within the SPAZ, as residents within this identified catchment will also shop in centres outside of the identified area, and vice versa, as a result of catchment layering, i.e. a household can be in the primary catchment of numerous centres depending on their position, role and function in the commercial centre hierarchy of the city.



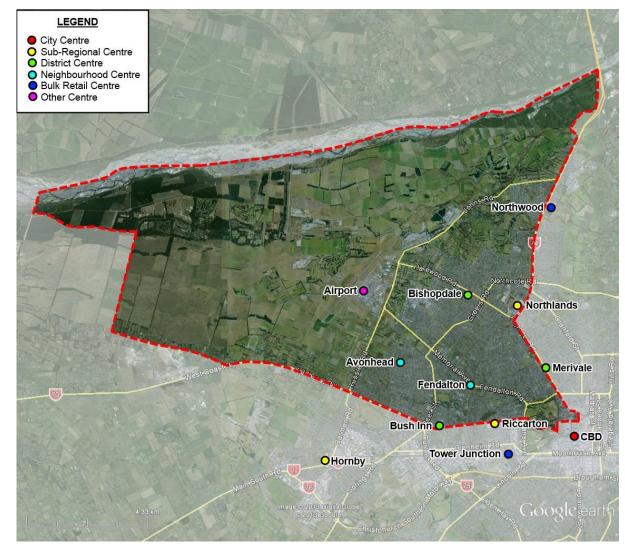


FIGURE 6: CHRISTCHURCH AIRPORT CORE CATCHMENT

Source: Property Economics, Google Earth

This widespread 'pull' of the airport is graphically represented by the yellow dots on the map in Appendix 1 The yellow dots represent the residential address of visitors to the airport which was based on random vehicle registration survey of airport visitors during December 2008. While this survey is now fairly dated, it is still considered a viable representation of the spread of people visiting the airport. Note this was also completed prior to the redevelopment of the airport terminals, Dakota Park being established and the development of the new McDonalds store on Memorial Ave.

Interestingly, the survey shows only 14% of airport visitors resided within the identified core trade catchment, underlining the unique position the airport has in the market. This puts the current level of 'visitation' to the airport into context, it is equivalent to attracting the

entire population of Timaru on a daily basis (approx. 44,300 people<sup>15</sup>), which if annualised equates to around 16 million visitors.

The extent of the identified core trade catchment would be reduced if the airport was restricted to convenience retail activity only (as per the proposed, and recently consented, Spitfire Square development), however this assessment needs to consider the suitability of all retail activity types and their appropriateness for siting such within the SPAZ.

Note Spitfire Square, once developed, as a result of its localised convenience oriented composition, is likely to increase the proportion of North-West area market penetration above the 14% identified in the 2008 survey. Spitfire Square represents a new offering that is not currently available within the SPAZ, so when developed by default will attract more localised custom to the airport than currently exhibited.

#### Retail Market Size

In terms of quantifying 'the market' of the identified core catchment, and therefore the potential of the area to sustain retail activity in the future, Table 9 below highlights some of the key economic data.

TABLE 9: CORE CATCHMENT RETAIL MARKET GROWTH 2013-2031

NORTH WEST	2006	2013	2031	Growth 2006 - 2031
Population	87,034	90,290	92,215	5,181
Households	32,759	34,857	38,440	5,681
Specialty Retail Expenditure (\$m)	\$478	\$521	\$722	\$245
LFR Retail Expenditure (\$m)	\$495	\$540	\$749	\$254
Total Retail Expenditure (\$m)	\$973	\$1,061	\$1,471	\$498
Specialty Retail GFA (sqm)	84,500	92,100	127,700	43,300
LFR Retail GFA (sqm)	133,700	145,800	202,200	68,500
Total Retail GFA (sqm)	218,100	237,800	329,900	111,800

Source: Property Economics

<sup>&</sup>lt;sup>15</sup> CIAL, 2012



Table 9 is derived from utilisation of the Property Economics Retail Expenditure Model. A more detailed outline of the model, and its key inputs and methodology is provided in Appendix 2.

The notable implications of the retail economic data in Table 9 include:

- The population within the identified core catchment is projected to grow meaningfully over the 2006-2031 period by nearly 5,700 households to total around 38,500. Since 2006 the major influence to this growth has been the 2010/11 Canterbury earthquakes which has fuelled a general east-to-west shift of people. This recent 'shift' is considered important to 'factor-in' and this is why the assessment considers growth since 2006 and does not start from the current 2013 base year, as such analysis would miss this recent transfer of retail demand (and associated sustainable supply implications) and not portray the complete picture of growth across the identified trade catchment.
- This population and household growth is echoed in the annual level of retail expenditure generated in the identified catchment over the assessed period, which is estimated to increase from \$973m to \$1.47b in 2013 NZ\$, representing growth of nearly \$500m or around 50% over the assessed period.
- Splitting this retail demand into sustainable retail supply provides a finer grain view on the type and scale of retail activity that the identified catchment can support. Not all of this supply needs to be provided within the identified catchment itself, as a proportion of this spend will be required to be 'available' for the Central City recovery and other KACs servicing this market already. However, the crucial point is that there is a material increase in retail demand within the general North-West area that will sustain additional retail supply (both Specialty and LFR) a proportion of which will more efficiently be provided within the north-west area itself to meet the future requirements of the market.



## 6. BUSINESS SIGNIFICANCE OF CIA ASSOCIATED ACTIVITIES

Christchurch International Airport is well located within the wider Christchurch business market. The Airport itself represents a nationally strategic transport corridor and incorporates other major transport corridors. It also represents a considerable level of community infrastructure investment.

Additionally the clustering of business activities at CIA represents a benefit to the economy in terms of agglomeration benefits. The efficiencies that this transportation hub signifies to businesses creates an increased competitiveness both for the Airport (in terms of competing airports) and for the Region as a whole.

The operations of CIA by their nature often conflict with other sensitive activities within the community, with exposure to these potentially jeopardising the current and potential level of activities within the Airport (and the overall economic well-being of the community).

CIA currently has 143ha of vacant industrial land within the SPAZ area (identified in Table 5). Currently operating within the bounds of the SPAZ area is Dakota Park which has experienced some level of demand from 'general industrial' activities. This demand has been significantly reduced due to the fact that the SPAZ, including Dakota Park, allows only for industrial activities that are deemed directly related to Airport presenting considerable uncertainty and risk to the wider industrial market in seeking to locate here.

The benefits to business of proximity to the Airport include:

- Increased transport efficiencies
- Improved nationally and internationally competitive location
- Agglomeration benefits
- Overall infrastructure efficiencies
- Increased supply in a high demand area

The benefits associated with the SPAZ area specifically include:

- Certainty for Airport operations
- Flexibility for the Airport to accommodate activities that give range to their operations (i.e. allowing activities that are not sensitive to their future operations)
- Increased competiveness for the core Airport operations
- Efficiencies of a Masterplanned development (the lack of which is a key concern with industrial land oversupply)



- Increased certainty for growth potential for national and international businesses seeking to locate near the Airport
- Utilisation of existing Airport infrastructure
- Ability to provide a clear and self-sustained buffer for noise sensitivity activities

Not only are there benefits of locating business activity in this general area but there are significant benefits in providing for increased demand potential within the SPAZ area itself.

The Airport itself has developed a Masterplan for future activities within the area (circa 2006), albeit this is likely to be required to be updated given recent developments and consents within the SPAZ.



# 7. POTENTIAL ACTIVITY SCENARIOS AND NET BENEFITS

There is no doubt that the SPAZ land offers the City and Regional community net economic benefits, the assessment within this section outlines the high level economic costs and benefits associated with four scenarios allowing differing degrees of flexibility for activities within the 143ha identified.

#### The scenarios include:

- 1. The current / status quo situation remains: The SPAZ area is restricted to 'airport related' industries.
- 2. Industrial restrictions on Dakota Park are lifted with the remaining SPAZ area remains under the current restrictions.
- 3. Dakota Park allowed for wider industrial uses, expanded Terminal precinct for limited office and retail.
- 4. General industrial within the SPAZ area with the potential for other business activities.

Tables 10 and 11 outline some high level economic costs and benefits associated with the four identified scenarios.



TABLE 10: OUTLINE OF HIGH LEVEL ECONOMIC COSTS OF SPAZ USE SCENARIOS

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Industrial Land Supply	This would not change the current market for Industrial land		Increase of General Industrial by approx 143ha	
Industrial Land Prices	No Change	No Change	Potential decrease in prices in the short to medium term	Potential decrease in price over a longer period
Industrial Activity	Limitation on competitive locations will reduce medium to long term potential	Reduced Cost of Scenario 1	Potential shorterm oversupply may led to some transitory industrial activity elsewhere	Potential to effect the industrial market in the longerterm leading to a sustained oversupply
Industrial Market	Limited growth potential	Limitation on growth potential and the ability to cluster activity appropriately	Potential increase in risk to developers and investors of industrial land elsewhere which may lead to a temporary acceleration of activity towards the west	Potential to undermine the longterm sustainability of the industrial market in Christchurch through percieved/real monopolisation
Infrastructure	Level of effciency/inefficiency maintained	Level of efficiency/inefficiency proportionately improved given apprpriate capacity	Potential lack of capacity	Increased risk of Scenario 3
Economic Activity	Static / Fall	Non proportional increase. Businesses are likely to require greater levels of certainty in land areas to achieve real economic growth	Unlikely to result in a net economic activity cost	Due to the reaction of the market above has the potential to 'backfire' and decrease activity
General Risks	Decrease in Airport operations, due to relative fall in competitiveness over time, leading to a regional fall in activity	Potentially proportional fall in Airport operations, due to relative fall in competitiveness over time, leading to a regional fall in activity	Utilisation of SPAZ for inappropriate longterm activities such as Heavy Industrial	Undermining of the Airport opertaions due to pressure from other uses
Other			Increase of Commercial Activity at the Terminal Precinct	

Note the 143ha within the SPAZ may not be all sited in one location, but spread across a few large areas.

Given the dynamic nature of Airports as identified in Section 4, it would always be difficult, under Scenario 1, to define 'airport related' activities. It is partly for this reason that the market faces such uncertainty with this location and therefore uncertainty around the suitability of CIA.



TABLE 11: OUTLINE OF HIGH LEVEL ECONOMIC BENEFITS OF SPAZ USE SCENARIOS

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Industrial Land Supply	Potentially maintains demand for Industrial activities in other areas	Increased level of competitive industrial land	Increased level of competitive industrial land	Increased choice
Industrial Land Prices	Reduces risk of price / wealth fall	Decrease in less competitive areas may lead to new industrial opportunities	Decrease in less competitive areas may lead to new industrial opportunities	Increased growth due to low prices (also a cost)
Industrial Activity	Retained	Increase in overall activity	Increase in overall activity	Potential to 'crowd out' any positive impacts result in no net change
Industrial Market	Increase potential for redevelopment in existing areas	Improved growth potential and increased certainty for developers on the SPAZ site	Improved growth potential and increased certainty for developers on the SPAZ site as well as certainty regard growth of business opportunities	Improved growth potential and increased certainty for developers on the SPAZ site as well as certainty regard growth of business opportunities
Infrastructure	Limited capacity pressure on existing infrastucture	Increased efficiencies	Increased efficiencies	Limited due to inevitable capacity issues
Economic Activity	None	Net increase through improvement in overall competitive nature of the industrial land in Christchurch	Net increase through improvement in overall competitive nature of the industrial land in Christchurch	Potential shortterm increase
General Advantages	Little to no impact on existing Industrial supply or market	Improved competiveness of CIA to attract unique (i.e. business that would not otherwise locate here) activity	Improved competiveness of CIA to attract unique (i.e. business that would not otherwise locate here) activity	
Other			Increase competiveness for Airport general operations	

It is clear from the high level assessment that the provision of general industrial activity (given the ability and current capacity of infrastructure or associated infrastructure costs) within the SPAZ is likely to have net economic benefits if only in the medium to long term.

The clear advantage of allowing greater flexibility on the associated 143ha of the SPAZ is the potential increase in CIA national and international competitiveness and the resulting increase in Regional GDP. It is of interest to note that the competitiveness of the Airport in terms of freight and passenger numbers are partially interdependent.



Increased demand for either activity improves the Airport's flight frequency providing enhanced competitiveness for other activities. In effect improving the Airport's associated business environment is likely to have an impact on the number of passengers entering through CIA.

As previously outlined the potential Regional GDP (or GRP) generated by CIA is estimated at \$3.488b by 2031. The potential for CIA to grow as a pivotal industry in the Canterbury economy is partially based around its ability to remain competitive in attracting business and passengers. While passengers do not visit Canterbury for the Airport its efficient operations and its ability to attract a greater number of flights facilitate greater numbers of visitors. More importantly the provision of a competitive business environment at the Airport has the ability to attract an additional \$450m in economic activity per annum by 2031.

This activity along with associated demands is likely to require a further 62ha of industrial land by 2031. Of the potential 350ha of demand resulting from projection 2's growth parameters it is expected that nearly 180ha would be activity suitable for the SPAZ area with the remaining 170ha of land demand required for heavy industrial activity, locally servicing industrial activity and other locationally specific demand.

Given these net economic benefits it is considered that a variant of Scenario 3 is the most appropriate approach for the Council to adopt with regard to activity allowed on the 143ha of vacant SPAZ land. It is difficult to say whether the entire 143ha will be absorbed by the market by 2031 however the associated economic costs of additional vacant land within a Masterplanned development are minimal, if any.

#### **Potential Costs:**

- Fall in industrial land uptake in other locations in the short to medium term
- Short term fall in industrial land price
- Potential short to medium term 'over-supply' of industrial land potentially attracting some level of 'transitory' business locations
- Potential short term increase in risk to industrial developers in other locations
- Potential infrastructure issues (capacity, roading etc.)

## **Potential Benefits:**

- Medium to long term relative increase in economic activity. The potential increase in industrial land demand of 62ha (under the PWC growth scenario).
- Increase in Airport national and international competitiveness. Resulting in a potential increase in Airport activity contributing a further \$450m to annual GDP, supporting an additional 5,600 ECs by 2031.



- Increased provision of nationally competitive industrial land (located by major transport corridors) supply attracting 'additional' businesses to the Region
- Efficient utilisation of existing infrastructure and the viable potential to provide greater levels of infrastructure increasing overall competitiveness through economies of scale.
- Provide certainty and flexibility for future Airport operations
- Ability to provide a master-planned development providing greater clustering benefits as well as discouraging 'disjointed' development.



# 8. POTENTIAL IMPACTS ON KACS & CBD

Key considerations with regard to the potential impacts of allowing greater flexibility of activity on the SPAZ are the identified KACs within Christchurch and of primacy the Christchurch CBD. The potential for redirected activity or growth from these locations brings with it potential economic costs associated with underutilised community infrastructure, duplication of resources and a loss of community value through dispersed activity. There is an increasing awareness of the value of existing centres and the community investment as well as tangible economic value that vibrant mixed use centres bring to the economy. It is therefore important that PC84 is assessed in terms of its potential impacts upon existing KACs and the CBD rebuild process.

The value of existing infrastructure investments in key activity centres are recognised where these are efficiently located with regard to transport systems and housing, and meet wider community social and economic needs. Some recent growth trends have resulted in urban developments which have not utilised the opportunities available to integrate effectively with existing urban centres.

The following are the identified KAC centres within Christchurch and the wider area:

- Central City
- Papanui/Northlands
- Shirley
- Linwood
- New Brighton
- Belfast
- Riccarton
- Halswell
- Barrington
- Hornby
- Kaiapoi
- Rangiora
- Woodend / Pegasus
- Lincoln
- Rolleston



When considering the potential impacts of PC84, three general sectors have been assessed; Industrial (primarily light), Commercial (office) and Retail.

#### Industrial

Given the general structure of the KACs above and the types of industrial activities likely to locate in the SPAZ there could be no reason to suggest that any KACs (including the CBD) would be adversely affected due to a rezoning of the SPAZ to general industrial activity. The KACs themselves are based around centres that would not adequately facilitate the large sites and floorplates required to accommodate the expected activity on the SPAZ.

For clarification trade based activity is included in this category. The level of 'threat' trade supply stores will have on the KACs and Central City recovery is negligible in Property Economics view as they are not prevalent store types in these centres, and nor does their role, function, amenity, vitality, performance and viability of the centres rely of such store types. These store types do not typically locate in centres for land economic and site requirement reasons, with light industrial zones being the typical zone / location of choice. These activities trade like, look like, perform like, are categorised like and function like light industrial activities, and as such are not considered retail stores, making the light industrial zone an appropriate 'fit' for such activity types.

# Retail in SPAZ (excl. the Passenger Terminal)

In terms of a determination of what retail activity is appropriate to enable in the SPAZ, first there is a need to consider the current baseline. As mentioned earlier, the Airport has recently received consent to establish a supermarket based convenience retail and commercial service centre. The concept plan for this centre is shown in Appendix 3. This centre is designed to predominantly service the localised market (smaller than the identified catchment in Figure 6) and people already visiting the airport, i.e. the centre is unlikely to attract significant custom from shoppers falling outside either of the aforementioned categories by way of unique shopping trips.

This can apply to convenience retail in general, that is it typically does not generate unique non-local shopping trips, and in this regard represents an opportunistic capture of spend rather than specific pre-determined expenditure. Convenience retailing can be generally defined as stores used for quick stop and frequently required shopping, used primarily due to their close proximity to the customer and 'drive by' draw. It is for these reasons allowing convenience retail activity within the SPAZ is considered unlikely to adversely affect any KAC, jeopardise their role and function in the market or the communities they serve.



LFR plays a different role in the market with larger store footprints (typically 450sqm+ GFA) attracting shoppers from further afield, i.e. beyond its localised catchment. These store types can change the role and function of centres due to their larger 'pulling power' and more extensive trade catchments such stores service. This store model has emerged to increase efficiency in the way a retail brands delivers their goods and services to the market by enabling a single store to service a wider market, rather than numerous smaller stores servicing the same market as previously. Retail sectors where this has been pronounced include hardware and building supply, appliance and electrical retailing, and department stores.

Important to this process is the need to consider what LFR activities comprise an important component of KACs in and around the identified catchment, as the KAC concept and identified KAC centres are given special weight in the City Plan. These include centres pertinent to this assessment such as Riccarton, Hornby, Papanui/Northlands and Belfast (albeit it is my understanding the location of the KAC in Belfast is not specifically determined). All these centres have two common LFR sectors that represent important store types to their composition, role and function – Supermarket and Department Stores.

Supermarkets are a convenience based activity and due to their high number around the city and similarity of offer, primarily serve a more localised market. This is one of the paramount reasons why Property Economics consider a supermarket within the Spitfire Square development as appropriate (particularly in conjunction with the provisions that form part of the consent). In this regard, the airport already has the ability to make such an offering in this sector without jeopardising any existing centre (or KAC) and is unlikely to require a second such store (albeit an expansion of the consented store in due course as the market grows is considered appropriate). However, to provide future certainty to the market and airport, in Property Economics view the SPAZ should be limited to one supermarket only.

Department stores fall into the category of a non-convenience LFR store, and as such they service a market wider than the localised catchment. Such stores include Farmers, Ballantynes, KMart and The Warehouse. Department stores are an important component of KACs in and around the identified catchment, and therefore development of such a store type within the SPAZ is likely to have an 'effect' on a KAC. Effects may not be significant (depending on the brand and scale developed), but it would represent a movement of spend away from KACs, which in my understanding is what the Council is trying to avoid at present. On this basis the development of a Department Store within the SPAZ would in my view go against the thrust of the City Plan which is to maintain and enhance the KAC concept and identified KAC centres, albeit acknowledging KACs are not defined geospatially making such an assessment difficult to apply.

The balance of other non-convenience LFR activity is generally in the retail sectors of:

Furniture, Floor Covering, Houseware and Textile Goods Retailing



- Electrical and Electronic Goods Retailing
- Hardware, Building and Garden Supplies Retailing, albeit this activity type is considered a trade based activity and should be treated as such for strategic planning purposes.

While some of these store types that fall within these categories maybe in existing KACs, they are not considered an integral or fundamental component nor critical to the role and function KACs play in the market. Therefore there is the potential for the SPAZ to accommodate such activity, but as one of a number of other options available to locate such activity with the North-West area in general. This analysis should form part of a wider commercial strategy of the North-West area, but it cannot be shown that these activities are 'most appropriate' to locate within the SPAZ at this stage.

These activities are not considered unique or critical to the function, role and operations of the airport, nor fundamental to such that merits these activities given special status and opportunity to develop within the SPAZ at this point. However in Property Economics view the SPAZ area should be considered as one of a range of options available to meet the future non-convenience LFR demand identified earlier in this section. On this basis the enablement of these LFR sectors / store types to be developed in the SPAZ should be restricted at this point until a wider assessment of the merits of all opportunities in the market are considered to make sure such activity is encouraged and enabled in the most appropriate location for the community and market to operate efficiently, and ensure the community's economic and social wellbeing is enhanced.

In terms of 'Specialty Retailing', i.e. typically defined as non-convenience retail stores below 450sqm GFA, these are fundamental to KACs and the rebuild of the Central City. Development of these store types within the SPAZ would have the potential to attract significant retail expenditure and activity away from the KACs and slow down the rebuild of the City Centre given the extent of the airport's trade catchment, and as such in Property Economics view should be prevented from establishing within the SPAZ at this point in time.

# **Commercial Office Activity**

In regard to commercial office activity there is a clear strategic direction in the current planning framework of the city that this activity is to be focused in the KACs and the Central City rebuild. The Airport is not identified as a KAC, albeit it would appear to have many of the attributes of the identified KACs on commercial grounds and it is just residential activity that it fails to encompass for obvious reasons.

However flexibility and recognition should be given to the Airport as an appropriate location to site some commercial activity, e.g. Customs and Airline offices, but in Property



Economics view planning provisions need to be carefully crafted to not 'open up' the SPAZ to general office activity that could generate impacts on the KACs and the rebuild of the Central City. Given the extent of developable land within the SPAZ, such a scenario could lead to significant effects.

In this regard, commercial office space within the SPAZ is considered appropriately restricted if being directly associated with the Airport's operations and function. This should remove the potential for, by way of example, the Financial and Professional Services sector (critical to the rebuild of the CBD) establishing head offices within the SPAZ.

# **Traveller Accommodation**

Traveller accommodation and facilities in considered appropriate to enable within the SPAZ given it is directly related to the Airport's activity. Accommodation premises and facilities within airports, in general, service a different market to standard accommodation premises in non-airport locations. Airport accommodation typically services short-term occupation (note for airport's this can be measured in hours not necessarily nights) with a particular focus on transit accommodation (i.e. passengers waiting on connecting flights, delayed due to inclement weather conditions, or a very early morning flight generating a demand for travellers to go and stay at the airport 'the night before'). In this regard, accommodation at the airport can potentially generate increased demand for accommodation facilities in Christchurch.

Whereas hotels, motels, backpackers, lodges, bed'n breakfasts, etc. elsewhere in the city generally accommodates people staying for a longer period of time. This is due to airports have limited amenity and an environment not conducive to long term stays.

On this basis, accommodation facilities within the SPAZ are unlikely to cause material impacts on neither this sector in Christchurch nor the rebuild of the Central City.



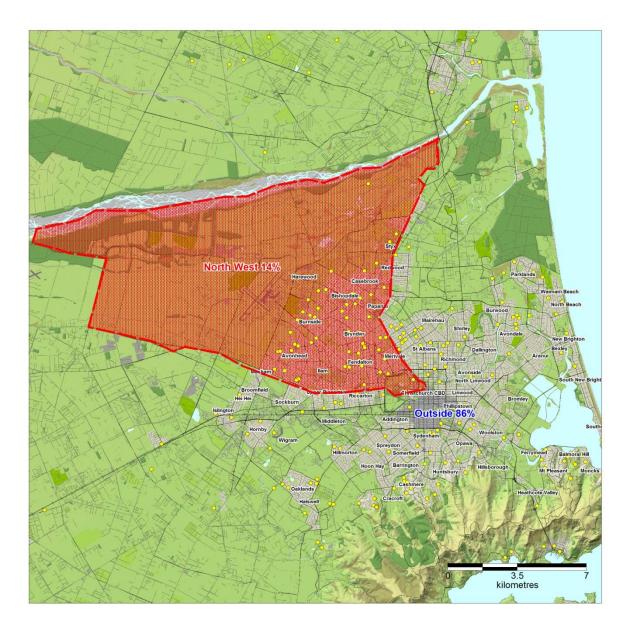
# 9. CONCLUSION

From the assessment above the following planning considerations are recommended for the SPAZ.

- The provision of general industrial over the entire 143ha area. Given the potential addition of 62ha of demand to 2031, there is sufficient demand for appropriate activities to be accommodated in this location.
- That this industrial activity is restricted to 'light industrial' activity, including trade based activity
- That no timing restrictions are applied
- That Speciality retail is restricted to convenience oriented retail activities
- That non-convenience LFR activity be restricted in its status at this point (e.g. Non-Complying)
- Supermarkets within the SPAZ be capped at one (1)
- The provision for commercial / office space be for activity directly associated with the Airport operations and associated functions
- Travellers accommodation be enabled in and around the terminal precinct of the SPAZ.



# APPENDIX 1: 2008 SURVEY RESULTS



## APPENDIX 2: PROPERTY ECONOMICS RETAIL EXPENDITURE MODEL

This overview outlines the methodology that has been used to estimate retail spend generated at Census Area Unit (CAU) level for the identified catchments out to 2031.

## CAU 2006 Boundaries

All analysis has been based on Census Area Unit 2006 boundaries, the most recent available.

# Permanent Private Households (PPH) 2006

These are the total Occupied Households as determined by the Census 2006. PPHs are the primary basis of retail spend generation and account for approximately 71% of all retail sales. PPHs have regard for (exclude) the proportion of dwellings that are vacant at any one time in a locality, which can vary significantly, and in this respect account for the movement of some domestic tourists.

#### Permanent Private Household Forecasts 2006-2031

These are based on Statistics NZ Census Area Unit (CAU) Medium Series Population Growth Projections and have been adjusted to account for residential building consent activity occurring between 2006 and 2011, with this extrapolated to the year of concern. This accounts for recent building activity, particularly important for the 5-10 year forecasts, and effectively updates Statistics NZ projections to reflect recent trends. Geo-spatial differences in growth between 2001 and 2006 CAUs have been accounted for with a pro rata distribution.

# International Tourist Spend

The total international tourism retail spend has been derived from the Ministry of Economic Development Tourism Strategy Group (MEDTSG) estimates nationally. This has been distributed regionally on a 'spend per employee' basis, using regional spend estimates prepared by the MEDTSG. Domestic and business based tourism spend is incorporated in the employee and PPH estimates. Employees are the preferred basis for distributing regional spend geo-spatially as tourists tend to gravitate toward areas of commercial activity, however they are very mobile.

# **Total Tourist Spend Forecast**

Growth is conservatively forecast in the model at 2% per annum for the 2011-2031 period.



# 2006-2031 PPH Average Household Retail Spend

This has been determined by analysing the national relationship between PPH average household income (by income bracket) as determined by the 2006 Census, and the average PPH expenditure of retail goods (by income bracket) as determined by the Household Economic Survey (HES) prepared by Statistics NZ. In particular a regression analysis has shown the following relationship exists:

PPH Retail Spend = 27.3% of Average PPH Income plus \$4,999 constant.

This relationship between income and retail spend is statistically significant, with a R<sup>2</sup> (the measure of the relationship between the two variables) considered extremely strong. While there are variables other than household income that will affect retail spending levels, such as wealth, access to retail, population age, household types and cultural preferences, the effects of these are not able to be assessed given data limitations, and have been excluded from these estimates.

# Real Retail Spend Growth (excl. trade based retailing

Real retail spend growth has been factored in at 1% per annum. This accounts for the increasing wealth of the population and the subsequent increase in retail spend. The following explanation has been provided.

Retail Spend is an important factor in determining the level of retail activity and hence the 'sustainable amount 'of retail floorspace for a given catchment. For the purposes of this outline 'retail' is defined by the following categories:

- Food Retailing
- Footwear
- Clothing and Softgoods
- Furniture and Floor coverings
- Appliance Retailing
- Hardware
- Chemist
- Department Stores
- Recreational Goods
- Cafes, Restaurants and Takeaways
- Personal and Household Services
- Other Stores.

These are the retail categories as currently defined by the ANZSIC codes (Australia New Zealand Standard Industry Classification).

Assessing the level and growth of retail spend is fundamental in planning for retail networking and land use within a regional network.



# Internet Retail Spend Growth

Internet retailing within New Zealand has seen significant growth over the last few decades. This growth has led to an increasing variety of business structures and retailing methods including; internet auctions, just-in-time retailing, online ordering, virtual stores, and etc. As some of internet spend is being made to on-the-ground stores, a proportion of internet expenditure is being represented in the Statistics NZ Retail Trade Survey (RTS) while a large majority remain unrecorded. At the same time this expenditure is being recorded under the Household Economic Survey (HES) as part of household retail spend, making the two datasets incompatible. For this reason Property Economics has assumed a flat 5% adjustment percentage on HES retail expenditure, representing internet retailing that was never recorded within the RTS.

Additionally, growth of internet retailing for virtual stores, auctions and overseas stores is leading to a decrease in on-the-ground spend and floorspace demand. In order to account for this, a non-linear percentage decrease of 2.5% in 2016 growing to 9% by 2031 has been applied to retail expenditure encompassing all retail categories in our retail model. These losses represent the retail diversion from on-the-ground stores to internet based retailing that will no longer contribute to retail floorspace demand.

## **Retail Spend Determinants**

Retail Spend for a given area is determined by: the number of households, size and composition of households, income levels, available retail offer and real retail growth. Changes in any of these factors can have a significant impact on the available amount of retail spend generated by the area. The coefficient that determines the level of 'retail spend' that eventuates from these factors is the MPC (Marginal Propensity to Consume). This is how much people will spend of their income on retail items. The MPC is influenced by the amount of disposable and discretionary income people are able to access.

# Retail Spend Economic Variables

Income levels and household MPC are directly influenced by several macroeconomic variables that will alter the amount of spend. Real retail growth does not rely on the base determinants changing but a change in the financial and economic environment under which these determinants operate. These variables include:



**Interest Rates:** Changing interest rates has a direct impact upon households' discretionary income as a greater proportion of income is needed to finance debt and typically lowers general domestic business activity. Higher interest rates typically lower real retail growth.

Government Policy (Spending): Both Monetary and Fiscal Policy play a part in domestic retail spending. Fiscal policy, regarding government spending, has played a big part recently with government policy being blamed for inflationary spending. Higher government spending (targeting on consumer goods, direct and indirectly) typically increases the amount of nominal retail spend. Much of this spend does not, however, translate into floorspace since it is inflationary and only serves to drive up prices.

Wealth/Equity/Debt: This in the early-mid 2000s had a dramatic impact on the level of retail spending nationally. The increase in property prices has increased home owners unrealised equity in their properties. This has led to a significant increase in debt funded spending, with residents borrowing against this equity to fund consumable spending. This debt spending is a growth facet of New Zealand retail. In 1960 households saved 14.6% of their income, while households currently spend 14% more than their household income.

**Inflation:** As discussed above, this factor may increase the amount spent by consumers but typically does not dramatically influence the level of sustainable retail floorspace. This is the reason that productivity levels are not adjusted but similarly inflation is factored out of retail spend assessments.

Exchange Rate: Apart from having a general influence over the national balance of payments accounts, the exchange rate directly influences retail spending. A change in the \$NZ influences the price of imports and therefore their quantity and the level of spend.

**General consumer confidence:** This indicator is important as consumers consider the future and the level of security/finances they will require over the coming year.

**Economic/Income growth:** Income growth has a similar impact to confidence. Although a large proportion of this growth may not impact upon households MPC (rather just increasing the income determinant) it does impact upon households discretionary spending and therefore likely retail spend.

**Mandatory Expenses:** The cost of goods and services that are necessary has an impact on the level of discretionary income that is available from a households disposal income.



Important factors include housing costs and oil prices. As these increase the level of household discretionary income drops reducing the likely real retail growth rate.

#### **Current and Future Conditions**

Retail spend has experienced a significant real increase in the early-mid 2000s. This was due in large part to the increasing housing market. Although retail growth is tempered or crowded out in some part by the increased cost of housing it showed massive gains as home owners, prematurely, access their potential equity gains. This resulted in strong growth in debt/equity spending as residents borrow against capital gains to fund retail spending on consumption goods. A seemingly strong economy also influenced these recent spending trends, with decreased employment and greater job security producing an environment where households were more willing to accept debt.

Over the last 4 years this has now reversed with the worldwide GFC recession taking grip. As such, the economic environment has undergone rapid change. The national market is currently experiencing low interest rates (although expected to increase this coming quarter), a highly inflated \$NZ (increasing importing however disproportionately), a stalled property market, and a stagnation in general business confidence. These factors will continue to dampen retail spending throughout the next 5 or so years. Given the previous years (pre 2008) substantial growth and high levels of debt repayment likely to be experienced by New Zealand households it is expected that real retail growth rates will continue to be stifled for the short term.

# Impacts of Changing Retail Spend

At this point in time a 1% real retail growth rate is being applied by Property Economics over the longer term 20 year period. This rate is highly volatile however and is likely to be in the order of 0.5% to 1% over the next 5-10 years rising to 1% - 2% over the more medium term as the economy stabilises and experiences cyclical growth. This would mean that it would be prudent in the shorter term to be conservative with regard to the level of sustainable retail floorspace within given centres.

# Business Spend 2006

This is the total retail spend generated by businesses. This has been determined by subtracting PPH retail spend and Tourist retail spend from the Total Retail Sales as determined by the Retail Trade Survey (RTS) which is prepared by Statistics NZ. All categories are included with the exception of accommodation and automotive related spend. In total, Business Spend accounts for 26% of all retail sales in NZ. Business spend is distributed based on the location of employees in each Census Area Unit and the national average retail spend per employee (\$6,640pa).



# Business Spend Forecast 2006-2031

Business spend has been forecasted at the same rate of growth estimated to be achieved by PPH retail sales in the absence reliable information on business retail spend trends. It is noted that while working age population may be decreasing as a proportion of total population, employees are likely to become more productive over time and therefore offset the relative decrease in the size of the total workforce.



# APPENDIX 3: SPITFIRE SQUARE CONCEPT PLAN

