



FINAL REPORT: 21 August 2014

Analysis of Retail Distribution Effects for the MAIL Rezoning

PREPARED FOR

Memorial Avenue Investments Limited

Authorship

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1 Executive Summary

Context and Approach

Memorial Avenue Investments Limited (MAIL) is seeking to rezone land on the corner of Russley Road and Memorial Avenue for a range of commercial purposes. To assist, this report considers retail distribution effects associated with potential retail development on the site. Following are the key steps in the analysis:

1. Identify and analyse existing centres that are likely to compete
2. Review current and future retail demand
3. Construct a model to estimate trade impacts
4. Estimate trade impacts for several scenarios
5. Consider potential adverse flow-on effects

Network of Centres

The analysis covers the city's full network of district centres, plus the CBD and four large format retail centres in BRP zones. Overall, there are 31 centres in the analysis. The retail size and composition of each centre was determined using detailed (meshblock) from data Statistics New Zealand. At the time of our analysis, the latest data available was for February 2012. Consequently, the centre retail definitions used in this report reflect their state at that particular point in time.

During the course of completing this report, we undertook detailed desktop studies of each centre and also made site visits. Our research found most centres in very good health, with few vacancies and high footfall. The key exception was New Brighton. This centre was in a declining state prior to the quakes, and is now functioning quite poorly indeed. Other than that, however, all centres appear healthy and vital.

Current and Future Demand

We assessed current and future retail demand to add context. We found that not only had the retail sector quickly recovered from the quakes, but that it had continued to grow strongly since. Further, under some fairly conservative assumptions, the city's retail turnover is expected to grow by more than \$2 billion (43%) over the next 20 years.

Retail Gravity Model

We constructed a sophisticated retail gravity model to estimate trade impacts. It simulates the flows of expenditure from customers to stores/centres based on principles that are similar to Newton's law of gravity. These state that, all other things being equal, shoppers are attracted to centres that are large or close to where they work or live.

While the relative attractiveness of centres – and hence their market share – may reflect a number of factors, centre size and location are by far the most important. Our model exploits this basic fact and calculates each centre's market share across eight different retail store types based on the following factors:

- proximity to homes and workplaces,
- the amount of employment in each retail category, and
- a general amenity score.



Once constructed, the model was calibrated to a highly-detailed set of electronic transaction data provided by BNZ. The data covered more than 14 million retail transactions in Christchurch City over a 12 month period with a combined value of more than \$800 million. The model fit the data very well. In fact, the correlation coefficient between estimated sales and actual sales on a centre-by-centre basis was 99%.

Retail Development Scenarios

In order to assess the potential effects of a considerable level of retail development on the site, we modelled four different scenarios. Each is based on the exact size and retail mix of an existing Christchurch centre. Specifically, we estimated the trade impacts associated with creating direct carbon copies of the following existing centres on the site:

- Northlands Mall,
- Northwood Supa Centre (plus the Belfast New World),
- Shirley the Palms, and
- Tower Junction (including the village).

While none of these centres are currently proposed for the site, they all represent a development that could be accommodated on the site, each with a differing tenancy type mix. Thus, collectively, they provide a comprehensive view of potential trade impacts associated with substantial retail development on the site.

Estimated Trade Impacts

The following table summarises the average trade impacts across centres for each store type/scenario combination.

Table 1: Average Trade Impacts by Scenario and Store Type

Store Types/Scenarios	Northlands	Northwood	The Palms	Tower Junction
Clothing & footwear	-7.1%	-2.2%	-4.5%	-1.7%
Department Stores	-3.0%	-9.2%	-4.6%	0.0%
Electrical	-1.1%	-6.1%	-2.5%	-0.9%
Food & Beverage	-2.0%	-1.4%	-1.2%	-0.1%
Furniture	-1.3%	0.0%	-2.1%	-2.5%
Hardware	0.0%	-0.6%	0.0%	-6.5%
Recreation	-3.0%	0.0%	-2.3%	-3.1%
Pharmacy & Other	-3.2%	0.0%	-1.9%	-1.2%
Food Retail	-5.2%	-3.1%	-1.9%	-0.6%
Total	-3.9%	-2.5%	-2.0%	-1.2%

While not fully shown in the table above, our analysis of trade impacts suggests that:

- Trade impacts tend to be greatest on the nearest centres, they also depend fundamentally on the specific mix of retail stores that occupy the site.
- When the assumed store mix is similar to nearby centres, those centres tend to experience the greatest trade impacts. However, when the assumed mix differs from nearby centres, the greatest effects tend to be felt further afield by centres whose retail mix is more similar.



- The overall trade impacts on Key Activity Centres and the CBD are minor.
- Similarly, impacts on district centres are also relatively small.

Analysis of Potential Flow On effects

Our analysis of flow-on effects notes that trade competition must be disregarded, and that only flow-on effects may be considered. Formally, we adopt the definition given in the landmark *Discount Brands* case. This stated that flow on effects may arise if trade impacts are so severe that they cause competing stores to close, and the closure of those stores causes the centres of which they formed part to decline *significantly* overall.

In our view, it is extremely unlikely that the trade impacts estimated above would cause any stores to close, from which it follows that flow-on effects will be minor and short-lived.

One of the key reasons why the trade impacts appear to be so low on the MAIL site is that it is located about the same driving distance from seven other centres. As a result, trade impacts are being widely dispersed, not shouldered by only one or two centres.

While our conclusion on flow-on effects applies to all centres, we further note that the proposed rezoning will have minimal impact on the CBD because:

- Estimated CBD trade impacts are low, ranging from less than 1% to only 8%.
- Retail has historically accounted for only a modest share of CBD employment (about 10%), and the CBD's share of retail activity has been steadily falling over time. To be frank, retail is not as critical to the CBD as some may believe.
- According to a recent UMR poll, only 11% of retailers want to be in the new CBD, with most seeking a location elsewhere in Christchurch.¹ Hence MAIL is unlikely to attract retailers that would have otherwise sought a CBD location.

Proposed Industrial Park Zoning

The plan change proposal includes provision for a total of 4,100m² general retail across the site, to be mostly comprised of tenancies larger than 450m².² This is considerably less than the scenarios modelled and will have considerably lower retail distribution effects. The trade impacts and flow on effects arising from this development will be negligible.

Conclusion

This analysis has carefully considered the potential flow-on effects of retail development on the MAIL site as a result of the proposed rezoning. It has found that any adverse effects associated with substantial retail development on the site would be minor and short-lived. In addition, it has concluded that such retail development on the site would

¹ UMR Research (2012) Christchurch Business Survey. Available from <http://umr.co.nz/sites/umr/files/umr-christchurch-business-report-20120810.pdf>

² Single retail tenancies of less than 450m² must not combine to more than 800m²

not adversely affect the CBD rebuild nor its long term health and vitality. In addition, there would be no significant impacts on Key Activity Centres or any other district centres.

The level of retail development proposed through the plan change is considerably less than that modelled. The trade impacts associated with that level of development will be negligible and our conclusions in relation to the greater level of development remain true. Accordingly, we believe that there are no retail distribution/economic grounds for declining a similar level of retail development.

2 Introduction

2.1 Context and Scope of this Report

Memorial Avenue Investments Limited (MAIL) is seeking to rezone land on the corner of Russley Road and Memorial Avenue. To assist, this report considers potential retail distribution effects associated with substantial retail development on the site. The overall objective is to consider the extent to which retail distribution effects might arise from rezoning of the site, in relation to:

- The Christchurch central city
- Key Activity Centres
- District Centres

2.2 Steps in the Analysis

Following are the key steps in the analysis.

Figure 1: Steps in the Analysis



2.3 Reference Point for the Analysis

This analysis has been closely informed by detailed employment data provided by Statistics New Zealand. At the time of our analysis, the latest data available was for February 2012. Consequently, the centre definitions and retail compositions underlying the analysis reflect their state at that particular point in time.³

2.4 Retail Development Scenarios

In order to assess the potential effects of retail development on the site, we have modelled four different scenarios. Each includes significantly more retail development than that proposed by the plan change, but with differing retail tenancy types. Collectively, these provide a comprehensive picture of potential effects.

2.5 Retail Store Types Included in the Modelling Analysis

The analysis includes all store types deemed “core retail” in the Retail Trade Survey. These span a range of large format and specialty retail types, as listed below. Appendix 2 provides further detail about the particular store types that comprise each group.

- Clothing, Footwear and Personal Accessories Retailing
- Department Stores
- Electrical and Electronic Goods Retailing
- Food and beverage services
- Food Retailing
- Furniture, Floor Coverings, Houseware and Textile Goods Retailing
- Hardware, Building and Garden Supplies Retailing
- Pharmaceutical and Other Store-Based Retailing
- Recreational goods retailing

2.6 Structure of this Report

The remainder of this report is structured as follows:

- **Section three** identifies the centres included in the analysis
- **Section four** describes the current and future city retail outlook
- **Section five** describes the gravity model used to estimate trade impacts
- **Section six** estimates trade impacts across various scenarios, and
- **Section seven** analyses potential flow on effects

³ After the analysis was complete, the February 2013 data became available. This revealed strong growth in a few centres – such as Moorhouse – but only small changes overall. While this new data would invariably alter the specific impacts estimated for certain stores/centres, it would not alter the overall conclusions of our analysis. Consequently, the analysis has not been redone at this stage.

3 Network of Existing Centres

This section identifies and analyses the network of existing centres.

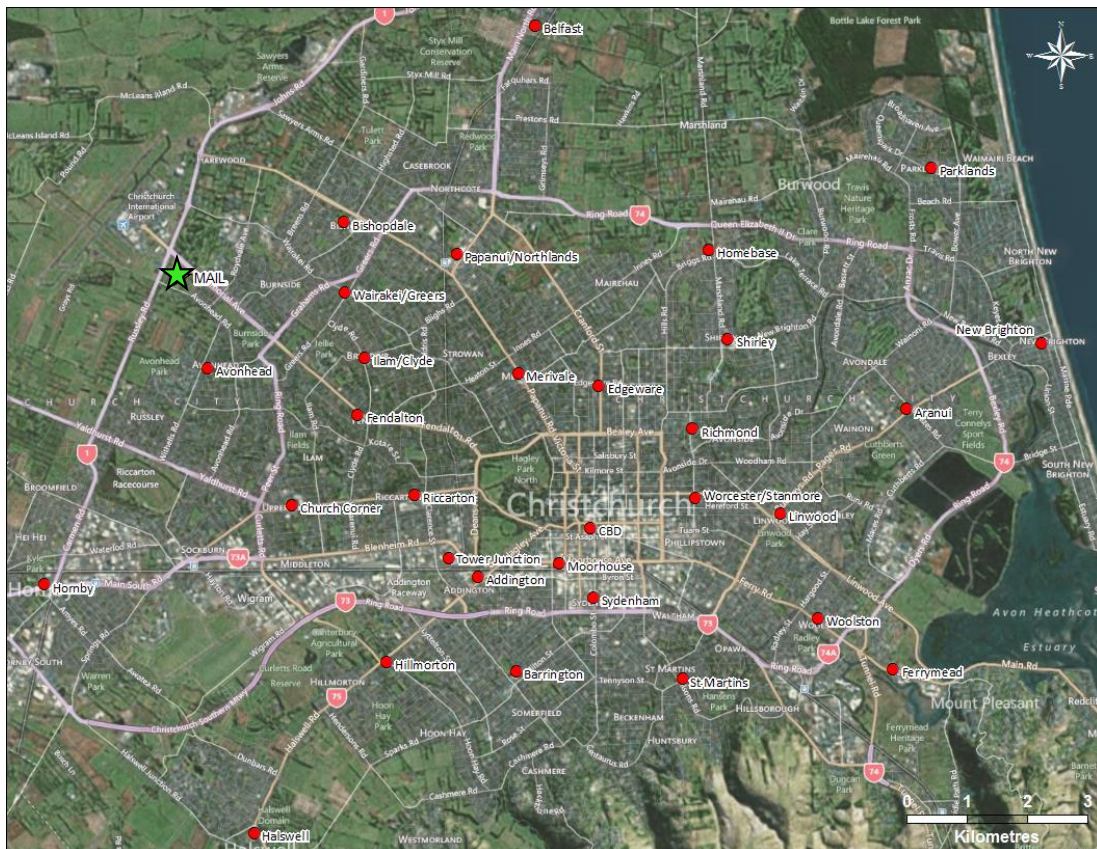
3.1 Relevant Geographic Scope

In order to analyse existing centres, we first had to set the geographic scope of the analysis. In this report, we set the geographic scope equal to the whole of Christchurch City so that potential effects on all centres could be assessed.

3.2 Types of Centres Analysed

The City Plan distinguishes two types of suburban centres: (i) small convenience centres located in B1 zones, and (ii) larger district centres in B2 zones. In this analysis, we consider only district centres⁴, as local centres serve very localised catchments and thus are unlikely to experience much effect. In addition, the analysis includes the CBD (as defined by the four avenues) and four large format retail (LFR) centres in BRP zones. Overall, 31 centres are modelled, as identified in the map below.

Figure 2: Centres Included in the Analysis



⁴ There are 28 district centres in the city, 26 of which are included in our analysis. The remaining two – Sumner and Redcliffs – are far away and sustained heavy damage in the quakes, so have been excluded.

3.3 Centre Size and Composition

The following table shows the number of retailers and retail employment for each centre as at February 2012, the most recent date for which information is available.

Table 2: Number of Retailers and Retail Employment by Centre (at Feb 2012)

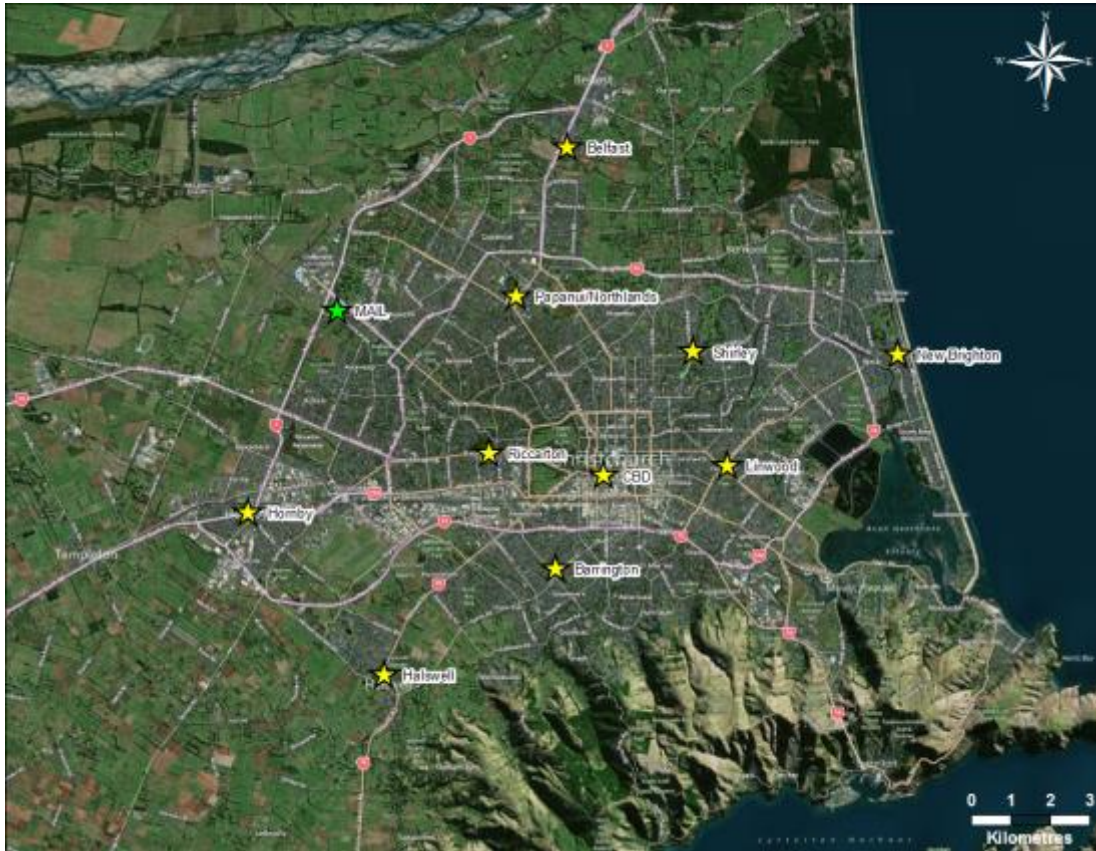
Centre	# of Retailers	Retail Employees
Key Activity Centres		
Barrington	31	422
Belfast	18	479
CBD	394	3,263
Halswell	5	304
Hornby	102	1,365
Linwood	38	618
New Brighton	43	288
Papanui/Northlands	150	1,744
Riccarton	203	2,318
Shirley	70	834
Large Suburban Centres		
Church Corner	53	829
Merivale	64	793
Destinational Centres		
Moorhouse	21	326
Tower Junction	22	415
Other Suburban Centres		
Addington	26	261
Aranui	4	19
Avonhead	13	189
Bishopdale	28	391
Edgware	9	76
Fendalton	7	281
Ferrymead	38	285
Hillmorton	8	39
Homebase	12	188
Ilam/Clyde	17	70
Parklands	6	125
Richmond	2	102
St Martins	2	11
Sydenham	49	334
Wairakei/Greers	16	62
Woolston	8	66
Worcester/Stammore	7	41
Out of Centre	1,936	8,380
Total	3,402	24,918

3.4 Key Activity Centres

Nine of the centres included in our analysis have been identified as Key Activity Centres (KACs) in the Land Use Recovery Plan. The purpose of these is to identify areas for focussing future commercial development, provision of community facilities, and higher density of residential provision.⁵ The following map shows the location of the MAIL site relative to the nine KACs within the city (and the CBD).

⁵ Land Use Recovery Plan Context Paper (December 2012)

Figure 3: KACs in Christchurch City (plus the CBD)



3.5 Centre Health and Vitality

During the course of completing this report, we visited each of the centres included in the analysis to assess their function and health. Overall, our site visits showed that virtually all centres were in very good health, with few vacancies and high footfall. The key exception was New Brighton. This was already in a rapid state of decline prior to the quakes, and is now functioning pretty poorly. Other than this, however, the centre network is generally very healthy and vital.

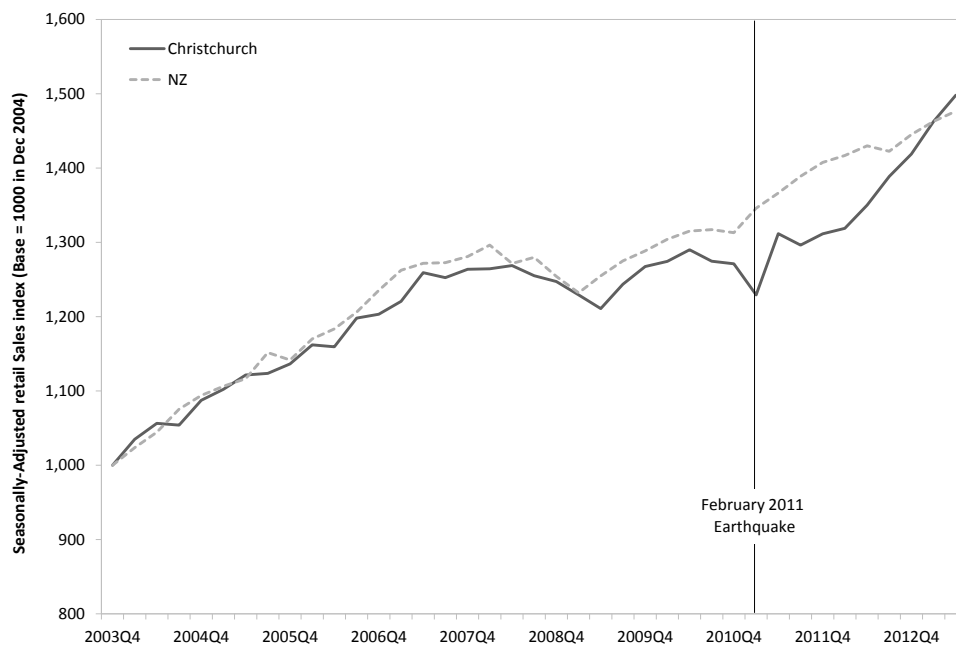
4 Current and Future Retail Outlook

This section briefly assesses current and future retail demand to add context.

4.1 Effects of the Quakes

The following chart plots Christchurch City's seasonally-adjusted retail trade index alongside the national average. While the quakes clearly had an effect, these were quickly overcome, and the city's retail sector has been on a strong growth path since.

Figure 4: Christchurch Seasonally-Adjusted Retail Trade vs National Average



4.2 Current Turnover by Store Type

The following table shows the city's estimated retail turnover by retail category. This was derived by applying retail category shares from the Canterbury Retail Trade Survey to total city turnover, as estimated by the Christchurch retail trade indicator.

Table 3: Estimated City Wide Turnover by Retail Category in 2013 (\$m)

Retail Category	Value \$m	Shares
Supermarket and grocery stores	\$1,433	31%
Food and beverage services	\$634	14%
Hardware, building, and garden supplies	\$552	12%
Pharmaceutical and other store-based retailing	\$429	9%
Department stores	\$420	9%
Clothing, footwear, and accessories	\$318	7%
Furniture, floor coverings, houseware, textiles	\$206	5%
Electrical and electronic goods	\$180	4%
Recreational goods	\$154	3%
Liquor	\$119	3%
Specialised food	\$115	3%
Total	\$4,559	100%

According to Table 3, retail expenditure is dominated by spending at supermarkets and grocery stores, followed by food and beverage services. All up, expenditure on food and drinks⁶ accounts for half of retail turnover.

4.3 Projected Future Turnover

To project future turnover, we extrapolated current turnover based on (i) growth in the number of households, and (ii) growth in average expenditure per household. This is, of course, a simplification as not all city turnover relates to city residents. Rather, a large amount of retail expenditure leaks in from other areas, notably Selwyn and Waimakariri. In fact, using the BNZ transaction data mentioned earlier, we calculated that about \$2 leaks in for every \$1 that leaks out. Accordingly, the projections shown below are conservative. Actual growth is likely to be much higher.

Using Council's 2012 household growth estimates along with an estimated 1% growth in inflation-adjusted expenditure per household produces the following estimates of future turnover to 2033. Total expenditure grows from about \$4.6 billion in 2013 to \$6.5 billion in 2033 – a 43% increase.

Table 4: Projected City Retail Turnover \$m

Christchurch Turnover (\$ million)	2013	2018	2023	2028	2033
Supermarket and grocery stores	\$1,433	\$1,549	\$1,703	\$1,879	\$2,055
Specialised food	\$115	\$124	\$136	\$151	\$165
Liquor	\$119	\$129	\$141	\$156	\$171
Department stores	\$420	\$454	\$499	\$551	\$603
Furniture, floor coverings, houseware, textiles	\$206	\$223	\$245	\$270	\$296
Hardware, building, and garden supplies	\$552	\$598	\$657	\$725	\$793
Recreational goods	\$154	\$166	\$183	\$202	\$221
Clothing, footwear, and accessories	\$318	\$344	\$378	\$417	\$456
Electrical and electronic goods	\$180	\$194	\$213	\$235	\$258
Pharmaceutical and other store-based retailing	\$429	\$464	\$510	\$563	\$615
Food and beverage services	\$634	\$686	\$754	\$831	\$909
Total	\$4,559	\$4,931	\$5,420	\$5,979	\$6,540

⁶ This includes supermarket and grocery, specialised food, liquor, and food and beverage services.

5 Retail Gravity Model

This section explains the gravity model constructed to assess trade impacts.

5.1 Rationale for Gravity Model

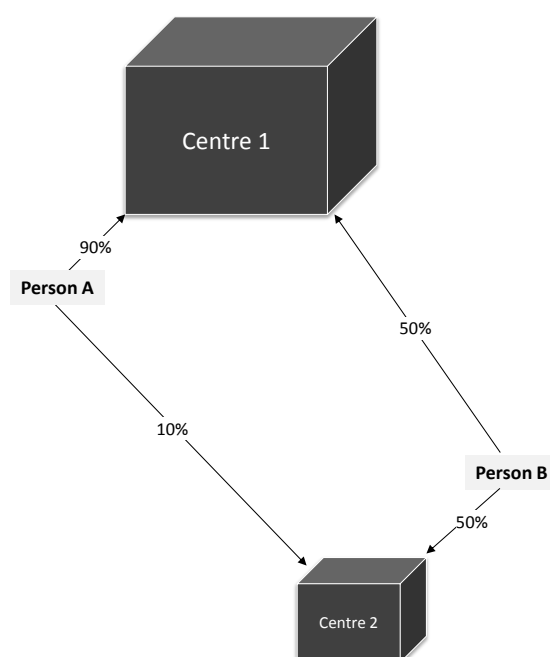
Retail distribution assessments are an important part of planning for new retail developments. They provide important insights into likely trade impacts, from which potential flow-on effects can be assessed. However, despite their importance, retail distribution assessments are often hampered by a lack of objective information. Specifically, it can be difficult to reliably assess trade impacts *ex ante*. One way to resolve this is by using a retail gravity model (RGM). This is a spatial-interaction model that estimates the flows of expenditure between customers and stores/centres.

5.2 Theoretical Basis of the Gravity Model

As their name suggest, RGMs are derived from principles that are analogous to Newton's law of gravity. These state that, all other things being equal, objects are attracted to other objects that are large or nearby. In the retail context, an RGM reflects the fact that shoppers are attracted to centres that are large or close to where they work or live.

Consider the following example. The diagram below shows a large centre (1) and a smaller centre (2). It also shows two consumers: A and B. In this example, person A lives closer to centre 1 and centre 1 is larger, so person A does 90% of their shopping there. Person A only visits centre 2 infrequently (perhaps for variety or to meet friends). The situation for person B is different. Although they live closer to centre 2, centre 1 is bigger. Thus, for person B, the two forces of attraction (size and distance) cancel out, and they visit both centres with similar frequency.

Figure 5: Illustration of the Gravity Model Concept



5.3 Estimating Trade Impacts

Once constructed, the model can be used to estimate trade impacts as follows:

- First, the model is run without the proposed new centre to estimate the pre-entry turnover of existing centres in the local network.
- Second, the new centre is added, with its size and location hard-coded.
- Third, the model is rerun with the new centre included. This has two effects. First the turnover of the new centre is estimated. Second, at the same time, the post-entry turnovers of existing centres are also estimated.
- Fourth, the pre-entry turnovers in step 1 are subtracted from the post-entry turnovers in step 4 to determine trade impacts.

5.4 Type of Gravity Model Used in this Report

The earliest retail gravity models date back to 1931, when they were first used to try and explain inter-city retail competition. Since then, they have been refined and expanded in several ways. Of all the subsequent work on retail gravity models, the work of Huff in 1953 has received the greatest attention. We adopt the Huff approach here.

Not only did Huff rework the model to focus on competition *within* centres, rather than between them, but he also made it probability-based. Thus, whereas the earlier models allocated each consumer's expenditure to only one store or centre, the Huff model calculates the shares of expenditure captured by each store or centre.

While centre attractiveness – and hence market share – may reflect a number of factors, centre size and distance are by far the most important. Consider, for example, the chart below. This shows the reasons that respondents to a 2010 survey for the Waimakariri District Council chose to shop at their most frequently visited centre.⁷

⁷http://www.waimakariri.govt.nz/Libraries/Kaiapoi_Town_Centre/Kaiapoi_Town_Centre_Economic_Assessment_May_2010.sflb.ashx

Figure 6: Reasons for Shopping at Most Frequently Visited Centre

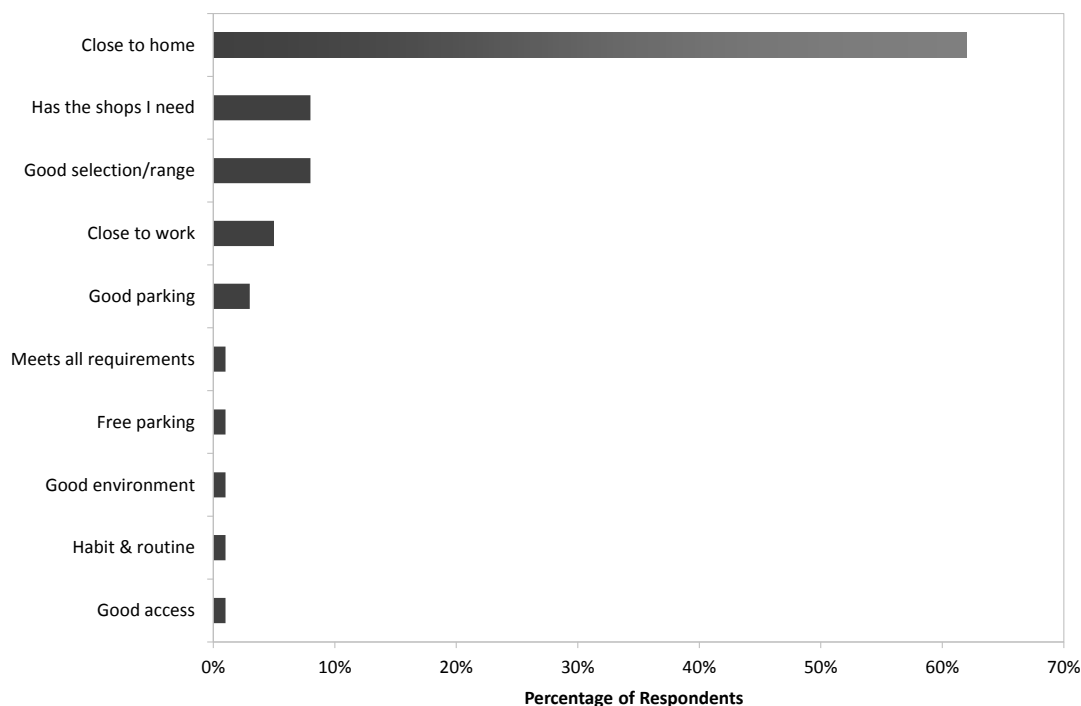


Figure 2 shows that shopping centre choice is dominated by proximity to the home, with proximity to work also important. Other key considerations are that centres (i) have a good range, (ii) contain specific stores, and (iii) have good parking.

While some of the latter factors may appear difficult to model – particularly the extent to which centres contain specific stores – centre size is actually a good proxy for all of them. Indeed, not only do larger centres generally have good parking, but they also tend to have a greater range of stores and are more likely to contain specific shops sought by customers. This means that the relative attractiveness of centres can be modelled accurately just with reference to their size and location.

Our model exploits this basic fact, and calculates the market share for each centre across several retail categories based on (i) relative proximity to homes and workplaces, and (ii) the amount of employment in each retail category. In addition, we have assigned each centre a general attractiveness score based on the results of recent site visits and extensive desktop research.

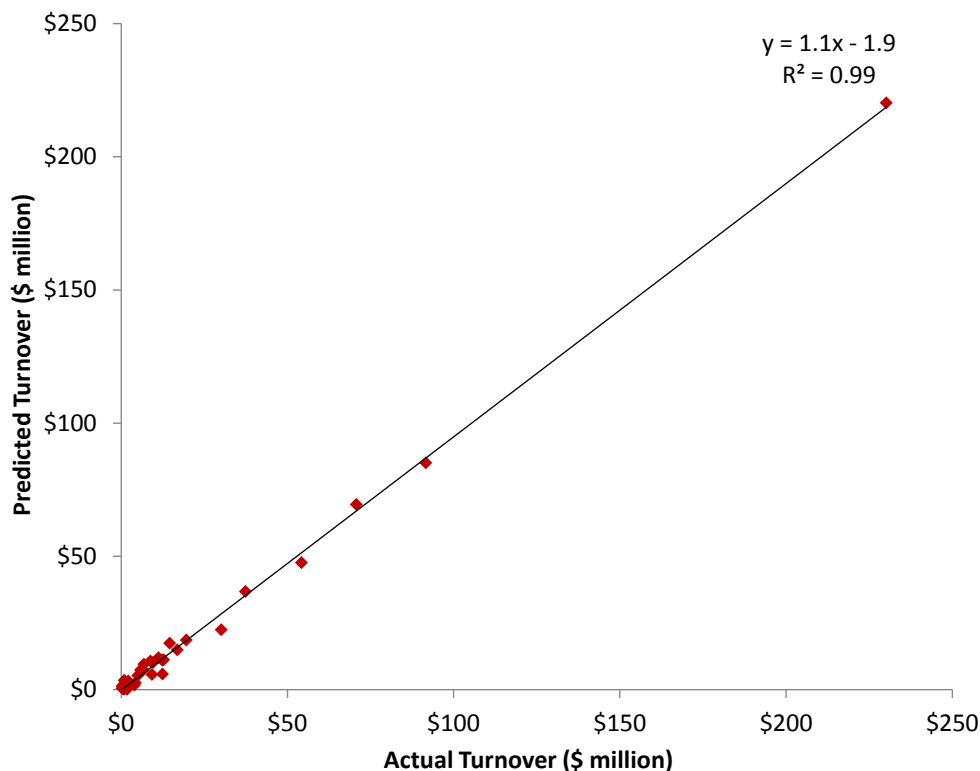
5.5 Checking the Accuracy of the Model

The model's parameter values were continuously refined by calibrating its results to a highly detailed set of electronic transaction data provided by BNZ. The data covered more than 14 million retail transactions in Christchurch City with a combined value of more than \$800 million. The chart below compares the model's predictions of electronic centre expenditure by BNZ customers with the actual amounts.⁸ Clearly, the model

⁸ Please note that this graph does not reflect the final centre turnover estimates produced by the model. Rather, it simply compares the actual and predicted values of electronic transactions by BNZ

predicts turnover well. In fact, the R^2 value of 0.99 attached to the trendline means that the model has successfully 'explained' 99% of the observed variation in centre turnover.

Figure 7: Calibration Results - Actual vs Predicted BNZ Electronic Transactions



We now use the model in the next section to estimate the trade impacts of various retail development scenarios.

customers at each centre to illustrate accuracy. Once the predicted BNZ electronic transactions for each centre were derived, they were scaled up twice to yield final centre turnover estimates. In the first round of scaling, the electronic BNZ transactions are grossed-up to cover electronic transactions by non-BNZ customers. In the second round, the results of the first round are grossed-up again to also include cash and hire purchase transactions.

6 Assessment of Trade Impacts

This section estimates trade impacts to inform the analysis of potential flow-on effects.

6.1 Approach to the Analysis

In the initial stages of assessment of the level of retail provision to be accommodated on the site, we were asked to assess the effects arising from the following level of retail development:

- One supermarket of up to 4,200m² GLFA
- A further 23,800m² of large format retail (tenancies > 450m²), and
- Up to 7,000m² of specialty retail (tenancies < 450m²).

In order to assess the potential effects of this level of retail development on the site, we modelled four different scenarios, each of which is based on the exact size and retail mix of an existing Christchurch centre. Specifically, we estimated the trade impacts of creating direct copies of the following centres on the MAIL site:

- Northlands Mall,
- Northwood Supa Centre (plus the Belfast New World),
- Shirley the Palms, and
- Tower Junction (including the village).

In comparison to the scenario we were asked to assess, the four scenarios modelled include a similar amount of retail, but with differing tenancy type mixes. Thus collectively, the four scenarios provided a comprehensive view of the potential trade impacts associated with the initial assessment scenario.

While the proposed plan change does not propose the level of retail development initially assessed, or represented by the four modelled scenarios, on the site, the scenarios represent a level of development which exists in the Christchurch context and could potentially be accommodated on the site. The scenarios provide perspective on the extent of trade impacts that would potentially arise from considerable retail development on the site, and the trade impacts of a lesser development can be drawn from the modelling results.

6.2 Running the Scenarios through the Model

As explained earlier, our gravity model measures the relative attractiveness – and hence market share – of each centre by store type based on its retail employment, not its retail GFA. To identify the retail employment by store type for each scenario, we used GIS to determine the meshblocks that comprise each centre, and then extracted the underlying retail employment from detailed data provided by Statistics New Zealand. The appendix shows the geographic extent of retail activity modelled for each scenario, while the corresponding trade impacts are shown in sections 6.5 to 6.8.

6.3 Store Types Modelled

As noted earlier, the gravity model calculates trade impacts for each centre across the following nine retail categories. In addition, it calculates an overall trade impact for each centre.

- Clothing, footwear and personal accessories retailing
- Department stores
- Electrical and electronic goods retailing
- Food and beverage services (cafes, restaurants, bars etc)
- Food retailing (supermarkets, specialised food and liquor retailing)
- Furniture, floor coverings, housewares and textile goods retailing
- Hardware, building and garden supplies retailing
- Pharmaceutical and other store-based retailing
- Recreational goods retailing

6.4 Presentation and Interpretation of the Results

The following tables show the estimated trade impacts for each scenario. Blank cells in the tables mean that there was no retail employment for that store type at that centre as at February 2012 (and hence there was no scope for trade impacts to occur). By contrast, reported impacts of 0.0% mean that trade impacts were detected, but they were so small that they were less than 0.05% (and hence automatically rounded to 0.0%).

6.5 Scenario 1 Results: Northlands

Table 6 shows the estimated trade impacts of replicating the Northlands mall on the MAIL site.

Table 5: Estimated Trade Impacts for the Papanui/Northlands Scenario

Centre	Clothing & footwear	Department Stores	Electrical	Food & Beverage	Furniture	Hardware	Recreation	Pharmacy & Other	Food Retail	Total
Addington	-6.1%			-1.8%	-1.3%		-2.6%	-2.7%	-5.0%	-3.8%
Aranui				-1.6%				-2.7%	-4.8%	-2.7%
Avonhead	-10.4%			-3.7%			-5.0%	-5.4%	-6.6%	-6.2%
Barrington	-6.0%	-2.6%		-1.6%			-2.5%	-2.7%	-4.9%	-3.9%
Belfast	-7.7%	-3.1%	-1.2%	-2.2%		0.0%			-5.5%	-4.0%
Bishopdale	-9.1%			-2.9%		0.0%	-4.4%	-4.5%	-6.2%	-4.9%
CBD	-5.0%	-2.5%	-0.9%	-1.6%	-1.1%	0.0%	-2.1%	-2.3%	-4.8%	-3.0%
Church Corner	-7.8%	-3.6%	-1.3%	-2.4%	-1.7%	0.0%		-3.8%	-5.6%	-4.7%
Edgeware	-5.6%			-1.4%		0.0%			-4.8%	-3.2%
Fendalton	-7.7%			-2.4%				-3.8%	-5.7%	-5.6%
Ferrymead	-6.1%		-1.0%	-1.6%	-1.2%	0.0%	-2.4%	-2.6%	-4.8%	-2.4%
Halswell				-2.0%				-3.3%	-5.2%	-5.0%
Hillmorton				-1.9%				-3.0%	-5.1%	-4.2%
Homebase			-1.1%	-1.8%	-1.3%	0.0%	-2.8%	-2.9%	-5.0%	-0.4%
Hornby	-8.1%	-3.8%	-1.4%	-2.5%		0.0%	-3.8%	-4.1%	-5.8%	-4.4%
Ilam/Clyde	-8.2%			-2.5%		0.0%		-4.1%	-5.8%	-5.1%
Linwood	-5.9%	-2.4%	-0.9%	-1.5%		0.0%	-2.4%	-2.5%	-4.7%	-3.3%
Merivale	-6.5%		-1.1%	-1.9%		0.0%	-2.8%	-3.0%	-5.2%	-3.9%
Moorhouse	-5.5%	-2.6%	-0.9%	-1.7%	-1.2%		-2.4%	-2.4%		-1.8%
New Brighton	-6.5%			-1.7%	-1.3%	0.0%	-2.5%	-2.8%	-4.9%	-3.9%
Papanui/Northlands	-7.5%	-3.4%	-1.3%	-2.2%	-1.7%	0.0%	-3.3%	-3.5%	-5.6%	-4.5%
Parklands				-1.7%					-4.9%	-4.6%
Riccarton	-6.8%	-3.2%	-1.1%	-2.0%	-1.5%	0.0%	-3.0%	-3.1%	-5.3%	-4.0%
Richmond								-2.6%	-4.8%	-4.8%
Shirley	-6.3%	-2.6%	-1.0%	-1.7%	-1.3%		-2.6%	-2.7%	-4.9%	-3.6%
St Martins				-1.5%					-4.7%	-4.5%
Sydenham	-5.7%		-0.9%	-1.6%	-1.1%	0.0%	-2.3%	-2.4%	-4.8%	-2.1%
Tower Junction	-6.3%		-1.0%	-1.8%	-1.3%	0.0%	-2.7%	-2.9%	-5.1%	-1.8%
Wairakei/Greers	-9.0%			-2.9%				-4.4%	-6.1%	-5.2%
Worcester/Stnmore			-0.8%	-1.3%					-4.6%	-3.3%
Woolston				-1.5%				-2.5%	-4.7%	-4.2%
Average	-7.1%	-3.0%	-1.1%	-2.0%	-1.3%	0.0%	-3.0%	-3.2%	-5.2%	-3.9%

Consistent with expectations, the results show that trade impacts are generally greatest on the closest centres. For instance, the highest modelled trade impact is felt by Avonhead, which is the closest district centre. Other district centres expected to experience some impacts include Wairakei/Greers, Ilam/Clyde and Fenadaltion, all of which are fairly close by.

In addition, the results show that trade impacts differ significantly by retail categories because the assumed development (i.e. a carbon copy of the Northlands mall) is much stronger in some retail categories than others. For example, the average trade impact for clothing and footwear retailing (a very strong category for Northland's) is 7.1%, while for electrical and electronic retailing it is only 1.1%.

The greatest effect on a Key Activity Centre is 5.0% (Halswell) and on the CBD, the overall effect is 3.0%

6.6 Scenario 2 Results: Northwood

Table 6 shows the estimated trade impacts of replicating the Northwood Supa Centre (plus the adjoining Belfast New World) on the MAIL site.

Table 6: Estimated Trade Impacts for the Northwood Scenario

Centre	Clothing & footwear	Depart Stores	Electrical	Food & Beverage	Furniture	Hardware	Recreation	Pharmacy & Other	Food Retail	Total
Addington	-1.9%			-1.3%	0.0%		0.0%	0.0%	-2.9%	-1.4%
Aranui				-1.2%				0.0%	-2.8%	-0.5%
Avonhead	-3.3%			-2.6%			0.0%	0.0%	-3.8%	-3.1%
Barrington	-1.9%	-8.2%		-1.2%			0.0%	0.0%	-2.9%	-3.1%
Belfast	-2.4%	-9.7%	-6.9%	-1.6%		-0.7%			-3.2%	-5.6%
Bishopdale	-2.9%			-2.0%		-0.9%	0.0%	0.0%	-3.6%	-2.6%
CBD	-1.6%	-8.0%	-4.8%	-1.1%	0.0%	-0.5%	0.0%	0.0%	-2.8%	-2.5%
Church Corner	-2.4%	-10.9%	-7.2%	-1.7%	0.0%	-0.8%		0.0%	-3.3%	-3.8%
Edgeware	-1.7%			-1.0%		-0.5%			-2.8%	-1.9%
Fendalton	-2.4%			-1.7%				0.0%	-3.3%	-3.1%
Ferrymead	-1.9%		-5.4%	-1.2%	0.0%	-0.5%	0.0%	0.0%	-2.8%	-1.2%
Halswell				-1.5%				0.0%	-3.1%	-2.9%
Hillmorton				-1.3%				0.0%	-3.0%	-2.2%
Homebase			-5.9%	-1.3%	0.0%	-0.6%	0.0%	0.0%	-3.0%	-0.8%
Hornby	-2.6%	-11.7%	-7.8%	-1.8%		-0.8%	0.0%	0.0%	-3.4%	-3.3%
Ilam/Clyde	-2.5%			-1.8%		-0.9%		0.0%	-3.4%	-2.7%
Linwood	-1.9%	-7.6%	-5.1%	-1.1%		-0.5%	0.0%	0.0%	-2.8%	-3.1%
Merivale	-2.0%		-6.0%	-1.4%		-0.6%	0.0%	0.0%	-3.0%	-2.0%
Moorhouse	-1.7%	-8.3%	-5.0%	-1.2%	0.0%		0.0%	0.0%		-4.9%
New Brighton	-2.1%			-1.2%	0.0%	-0.6%	0.0%	0.0%	-2.9%	-2.1%
Papanui/Northlands	-2.4%	-10.3%	-7.0%	-1.6%	0.0%	-0.7%	0.0%	0.0%	-3.3%	-3.5%
Parklands				-1.2%					-2.9%	-2.7%
Riccarton	-2.1%	-9.7%	-6.2%	-1.4%	0.0%	-0.7%	0.0%	0.0%	-3.1%	-3.3%
Richmond								0.0%	-2.8%	-2.8%
Shirley	-2.0%	-8.1%	-5.5%	-1.2%	0.0%		0.0%	0.0%	-2.9%	-3.2%
St Martins				-1.1%					-2.8%	-2.7%
Sydenham	-1.8%		-5.0%	-1.2%	0.0%	-0.5%	0.0%	0.0%	-2.8%	-0.8%
Tower Junction	-2.0%		-5.7%	-1.3%	0.0%	-0.6%	0.0%	0.0%	-3.0%	-1.1%
Wairakei/Greers	-2.8%			-2.0%				0.0%	-3.5%	-2.4%
Worcester/Stanmore			-4.5%	-0.9%					-2.7%	-2.2%
Woolston				-1.1%				0.0%	-2.8%	-2.4%
Average	-2.2%	-9.2%	-6.1%	-1.4%	0.0%	-0.6%	0.0%	0.0%	-3.1%	-2.5%

Unlike the previous scenario, where the greatest impacts were felt by the closest centres, the greatest impacts for this scenario are experienced by centres with the most similar retail mix. For instance, the greatest trade impacts of replicating the Belfast/Northwood centre would be borne by the Belfast/Northwood centre itself (a Key Activity Centre). The second highest trade impacts would be felt by Moorhouse (a Business Retail Park zone, but not a Key Activity Centre or a district centre), which also has a similar retail mix but is some distance away.

The reason for this observed outcome (where trade impacts are relatively muted on the nearest centres) is because the Belfast/Northwood centre contains quite a different retail mix to those centres, so the resulting trade impacts are quite low.

The greatest effect on a Key Activity Centre is Belfast (5.6%) and the effect on the CBD overall is 2.5%.

6.7 Scenario 3 Results: The Palms

Table 7 shows the estimated trade impacts for the Palms scenario.

Table 7: Estimated Trade Impacts for the Shirley the Palms Scenario

Centre	Clothing & footwear	Department Stores	Electrical	Food & Beverage	Furniture	Hardware	Recreation	Pharmacy & Other	Food Retail	Total
Addington	-3.8%			-1.1%	-2.0%		-1.9%	-1.6%	-1.8%	-2.2%
Aranui				-1.0%				-1.6%	-1.8%	-1.5%
Avonhead	-6.7%			-2.3%			-3.8%	-3.2%	-2.5%	-2.7%
Barrington	-3.8%	-4.0%		-1.0%			-1.9%	-1.6%	-1.8%	-2.2%
Belfast	-4.8%	-4.8%	-2.8%	-1.3%		0.0%			-2.0%	-3.2%
Bishopdale	-5.8%			-1.8%		0.0%	-3.4%	-2.7%	-2.3%	-2.0%
CBD	-3.1%	-4.0%	-2.0%	-1.0%	-1.8%	0.0%	-1.6%	-1.3%	-1.7%	-1.9%
Church Corner	-4.9%	-5.6%	-3.1%	-1.4%	-2.7%	0.0%		-2.3%	-2.1%	-2.6%
Edgeware	-3.5%			-0.8%		0.0%			-1.8%	-1.3%
Fendalton	-4.9%			-1.5%				-2.2%	-2.1%	-2.2%
Ferrymead	-3.8%		-2.2%	-1.0%	-1.9%	0.0%	-1.8%	-1.6%	-1.8%	-1.5%
Halswell				-1.2%				-2.0%	-1.9%	-1.9%
Hillmorton				-1.1%				-1.8%	-1.9%	-1.7%
Homebase			-2.4%	-1.1%	-2.1%	0.0%	-2.1%	-1.7%	-1.8%	-0.4%
Hornby	-5.1%	-5.9%	-3.3%	-1.5%		0.0%	-2.9%	-2.4%	-2.1%	-2.5%
Ilam/Clyde	-5.2%			-1.5%		0.0%		-2.4%	-2.2%	-2.2%
Linwood	-3.7%	-3.7%	-2.1%	-0.9%		0.0%	-1.8%	-1.5%	-1.7%	-2.1%
Merivale	-4.1%		-2.5%	-1.2%		0.0%	-2.1%	-1.8%	-1.9%	-2.0%
Moorhouse	-3.5%	-4.1%	-2.1%	-1.0%	-1.8%		-1.9%	-1.4%		-2.7%
New Brighton	-4.0%			-1.0%	-2.0%	0.0%	-1.9%	-1.6%	-1.8%	-1.7%
Papanui/Northlands	-4.7%	-5.3%	-3.0%	-1.4%	-2.7%	0.0%	-2.5%	-2.1%	-2.1%	-2.8%
Parklands				-1.0%					-1.8%	-1.7%
Riccarton	-4.3%	-4.9%	-2.6%	-1.2%	-2.3%	0.0%	-2.3%	-1.8%	-2.0%	-2.8%
Richmond								-1.5%	-1.8%	-1.8%
Shirley	-3.9%	-4.0%	-2.3%	-1.0%	-2.0%		-2.0%	-1.6%	-1.8%	-2.5%
St Martins				-0.9%					-1.7%	-1.7%
Sydenham	-3.5%		-2.0%	-1.0%	-1.8%	0.0%	-1.7%	-1.4%	-1.7%	-1.7%
Tower Junction	-4.0%		-2.4%	-1.1%	-2.1%	0.0%	-2.1%	-1.7%	-1.9%	-1.1%
Wairakei/Greers	-5.8%			-1.8%				-2.6%	-2.3%	-2.5%
Worcester/Stammore			-1.8%	-0.8%					-1.7%	-1.4%
Woolston				-0.9%				-1.4%	-1.7%	-1.6%
Average	-4.5%	-4.6%	-2.5%	-1.2%	-2.1%	0.0%	-2.3%	-1.9%	-1.9%	-2.0%

The centres expected to experience the greatest trade impacts for this scenario are Key Activity Centres – such as Riccarton, Northlands and Hornby – whose retail mix is broadly similar to that of the Palms, but the greatest impact is only 3.2%. Overall, the biggest impacts occur across department stores and clothing/footwear. Conversely, there is little impact across food and beverage, furniture or hardware. The overall effect on the CBD is 1.9%.

6.8 Scenario 4 Results: Tower Junction

Finally, the following table shows the estimated trade impacts for the Tower Junction scenario.

Table 8: Estimated Trade Impacts for the Tower Junction Scenario

Centre	Clothing & footwear	Depart Stores	Electrical	Food & Beverage	Furniture	Hardware	Recreation	Pharmacy & Other	Food Retail	Total
Addington	-1.5%			-0.1%	-2.4%		-2.6%	-1.0%	-0.6%	-1.1%
Aranui				-0.1%				-1.0%	-0.6%	-0.8%
Avonhead	-2.6%			-0.3%			-5.1%	-2.1%	-0.8%	-1.1%
Barrington	-1.4%	0.0%		-0.1%			-2.5%	-1.0%	-0.6%	-0.6%
Belfast	-1.8%	0.0%	-1.1%	-0.2%		-7.1%			-0.6%	-0.6%
Bishopdale	-2.2%			-0.2%		-9.5%	-4.5%	-1.7%	-0.7%	-2.1%
CBD	-1.2%	0.0%	-0.7%	-0.1%	-2.1%	-5.2%	-2.2%	-0.8%	-0.6%	-1.0%
Church Corner	-1.9%	0.0%	-1.1%	-0.2%	-3.2%	-7.9%		-1.4%	-0.7%	-0.8%
Edgware	-1.3%			-0.1%		-5.0%			-0.6%	-1.0%
Fendalton	-1.9%			-0.2%				-1.4%	-0.7%	-0.7%
Ferrymead	-1.4%		-0.8%	-0.1%	-2.3%	-5.3%	-2.5%	-1.0%	-0.6%	-1.5%
Halswell				-0.1%				-1.2%	-0.6%	-0.6%
Hillmorton				-0.1%				-1.1%	-0.6%	-0.6%
Homebase			-0.9%	-0.1%	-2.6%	-5.9%	-2.8%	-1.1%	-0.6%	-5.0%
Hornby	-2.0%	0.0%	-1.2%	-0.2%		-7.9%	-3.9%	-1.5%	-0.7%	-2.1%
Ilam/Clyde	-2.0%			-0.2%		-9.0%		-1.6%	-0.7%	-1.2%
Linwood	-1.4%	0.0%	-0.8%	-0.1%		-5.1%	-2.4%	-0.9%	-0.5%	-0.5%
Merivale	-1.6%		-0.9%	-0.1%		-6.3%	-2.9%	-1.1%	-0.6%	-1.0%
Moorhouse	-1.3%	0.0%	-0.8%	-0.1%	-2.2%		-2.5%	-0.9%		-0.7%
New Brighton	-1.5%			-0.1%	-2.4%	-5.6%	-2.6%	-1.0%	-0.6%	-1.0%
Papanui/Northlands	-1.8%	0.0%	-1.1%	-0.2%	-3.2%	-7.5%	-3.4%	-1.3%	-0.7%	-1.1%
Parklands				-0.1%					-0.6%	-0.5%
Riccarton	-1.6%	0.0%	-1.0%	-0.1%	-2.8%	-6.7%	-3.0%	-1.2%	-0.6%	-1.0%
Richmond								-1.0%	-0.6%	-0.6%
Shirley	-1.5%	0.0%	-0.8%	-0.1%	-2.4%		-2.6%	-1.0%	-0.6%	-0.7%
St Martins				-0.1%					-0.5%	-0.5%
Sydenham	-1.3%		-0.8%	-0.1%	-2.2%	-5.0%	-2.3%	-0.9%	-0.5%	-1.9%
Tower Junction	-1.5%		-0.9%	-0.1%	-2.5%	-6.0%	-2.8%	-1.1%	-0.6%	-3.7%
Wairakei/Greers	-2.2%			-0.2%				-1.7%	-0.7%	-0.9%
Worcester/Stammore			-0.7%	-0.1%					-0.5%	-0.4%
Woolston				-0.1%				-0.9%	-0.5%	-0.5%
Average	-1.7%	0.0%	-0.9%	-0.1%	-2.5%	-6.5%	-3.1%	-1.2%	-0.6%	-1.2%

Like the Northwood scenario, the greatest trade impacts of this scenario fall on centres with the most similar retail mix (namely Homebase and Tower Junction). The greatest effect on a Key Activity Centre is Belfast (3.2%) and the effect on the CBD overall is 1.9%. By retail category, the greatest impacts are in hardware, reflecting the predominance of Bunnings at Tower Junction.

6.9 Summary of Trade Impacts

The estimated trade impacts above suggest that:

- While trade impacts tend to be greatest on the nearest centres, they also depend fundamentally on the specific mix of retail store that occupy the site.
- When the assumed store mix is similar to nearby centres, those centres tend to experience the greatest trade impacts. However, when the assumed mix differs from nearby centres, the greatest effects tend to be felt further afield by centres whose retail mix is more similar.
- The overall trade impacts on Key Activity Centres and the CBD are minor.
- Similarly, impacts on district centres are also relatively small.

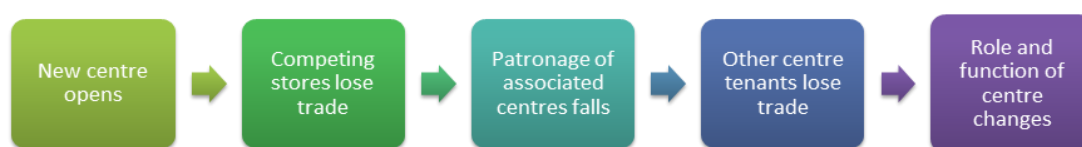
7 Potential Adverse Flow-on Effects

This section considers potential flow-on effects associated with the trade impacts estimated in the previous section.

7.1 Links between Trade Impacts and Flow-on Effects

Under the Resource Management Act 1991 (RMA), decision makers must not have regard for the effects of trade competition when evaluating development proposals. Instead, they must only have regard for flow-on effects. Figure 8 illustrates how a new retail development may give rise to flow-on effects.

Figure 8: Link between Trade Impacts and Flow-On Effects



As this stylised diagram shows, the size and extent of any flow on effects depends critically on the:

- significance of trade impacts on competing stores, and
- extent to which reduced patronage at competing stores affects the patronage of other centre tenants.

Thus, the smaller the trade impacts or the weaker the link between the patronage of directly affected stores and other centre tenants, the lower the probability of flow-on effects occurring. The most extreme trade impact scenario is that the proposed new centre causes a competing store (or stores) to close, in which case flow-on effects are more likely. However, even then, adverse flow-on effects may not arise if closed stores are replaced by other tenancies with similar attractiveness. For instance, the closure of an in-centre supermarket could pave the way for a more valuable anchor tenant to open, such as a new department store.

7.2 Threshold of Significance Established in Case Law

To begin, it is important to first clarify exactly what we mean by retail distribution effects. We adopt the definition given by Blanchard J in the landmark *Discount Brands* case. Having noted that direct trade impacts must be ignored, the decision states that:

“broader economic and social impacts might flow if a proposal were to result in the decline of an existing shopping centre to the extent that it would no longer be viable as a centre, with consequent adverse effects on the community as a whole or at least a substantial section of it.....although the Environment Court had made it clear that adverse social or economic effects must be significant before they could properly be regarded as going beyond the effects ordinarily associated with trade competition on trade competitors”

This definition suggests that retail distribution effects may arise if trade impacts are so severe that they cause competing stores to close, and that those closures then cause the centres of which the failed centres formed part to significantly decline overall. This is a very high threshold indeed, and must be kept in mind throughout the discussion below.

7.3 Overall Significance of Trade Impacts

According to the results in section 6, the retail provisions of the scenarios modelled would not cause significant trade impacts, from which it follows that any flow-on effects will also be minor and short-lived. Specifically, the single biggest trade impact across all stores, centres and scenarios was only 11.7%.⁹ In our experience, this is well below the levels at which significant trade impacts are likely to occur.

One of the main reasons that trade impacts appear to be so modest is because they are being spread fairly evenly across several centres, not shouldered by just one or two. This, in turn, reflects the fact that the MAIL site is a similar distance from several centres. In fact, according to the table below, the MAIL site is a short drive to seven other centres, ensuring effects are widely dispersed.

Table 9: Drive Time and Distance to Nearby Centres

Centre	Driving Distance (kilometres)	Drive Time (minutes)
Avonhead	2.8	5
Bishopdale	4.8	8
Church Corner	5.3	8
Fendalton	4.5	7
Hornby	6.5	8
Ilam/Clyde	4.6	8
Wairakei/Greers	4.1	6

Source: Google Maps

Not only would trade impacts arising from the modelled scenarios be quite small, but they should also be short-lived due to ongoing growth in city retail demand. Indeed, while the city's population is forecast to remain fairly flat over the short to medium term, there will still be growth in city retail demand due to increases in:

- Average household spending power
- Demand from neighbouring areas i.e. Selwyn and Waimakariri, and
- Demand from tourists

In fact, according to section 4.3, citywide retail turnover is expected to grow by about \$2 billion over the next twenty years, so any loss of trade caused by the modelled retail development on the site should be fairly short-lived. To quantify the length of time it is likely to take affected centres to recover lost turnover caused by such development, we compared the rate of citywide turnover growth with the percentage of trade lost by each centre to the development. This simple analysis suggested that most centres should

⁹ This was the estimated trade impact of the Northwood scenario on department stores at Hornby.

return to their pre-entry turnover levels within only a couple of years of the development opening, and hence trade impacts will certainly not be enduring.

To summarise: the trade impacts estimated in the previous section mean that it is highly unlikely that any competing stores would close. It then follows that if there are any flow-on effects at all, they will be minor and short-lived.

7.4 Specific Comments on the CBD

In addition to the general comments above, we would also like to make some further comments specific to potential effects on the CBD.

First, we would like to reiterate that the estimated trade impacts on the CBD are very low. For instance, they range from a minimum of less than 1% to a maximum of only 8%.¹⁰

Second, while retail is undoubtedly an important part of metropolitan CBDs, it is actually a much smaller component than many seem to believe. For instance, retail has historically accounted for only 10% of total employment within the four avenues.

Third, not only is retail only one part of Christchurch's CBD economic fabric, but the CBD's share of retail activity and employment has been steadily falling over time. This is noted at several places in the City Plan. For instance, section 3.11.2 of volume 1 of the City Plan notes the following with respect to role of the CBD as a retail destination:

"Although the central city appears to be remaining stable or slightly increasing in retail floorspace and workforce, the growth in suburban centres means that, as a proportion of the City's commercial activity, the central city is gradually declining. For example, the retail workforce in the central city declined between 1997 and 2001 before starting to grow back to a level slightly higher than the level of employment in 1997. However, as a proportion of Christchurch retail employment, the central city has declined from 20.3 to 18.6 percent between 1997 and 2003.

"Other activities such as financial, professional, community services, accommodation, restaurants and cafes have become more significant."

These observations are also borne out by employment data, which shows that the CBD's share of citywide retail employment has been falling over time (from 27% in 2000 to 21% in 2010). This is likely to reflect the factors outlined in the city plan extract above, and also a pervasive global trend of decentralisation, in which the economic centre of gravity is gradually shifting away from CBDs.

Indeed, the stark truth is that retail is not as big a part of CBD economic activity as some might believe and few retailers actively seek CBD locations anyway. This was confirmed by the results of the UMR poll mentioned earlier, which showed that only 11% of

¹⁰ The latter is the estimated trade impact of the Northwood scenario on department stores in the CBD. However, Northwood contains a significant amount of department store retail space (and hence employment), and this level of department store development is highly unlikely to also occur on the MAIL site. As a result, this upper bound overstates potential impacts on the CBD.

retailers wanted to be in the new CBD, with 71% seeking a location elsewhere in Christchurch and 18% undecided.

Thus, not only would the development scenarios modelled have very little trade impact on the CBD, but they would also be highly unlikely to attract retailers that would have otherwise sought a CBD location. Consequently, the modelled retail development would neither adversely affect the CBD rebuild nor its long term health and vitality.

8 Retail Recommendations

The plan change proposed 4,100m² of general retail across the zone, to be mostly comprised of single tenancies not less than 450m². This is considerably less retail than contained in the scenarios modelled and accordingly will have considerably less trade impacts and flow-on effects.

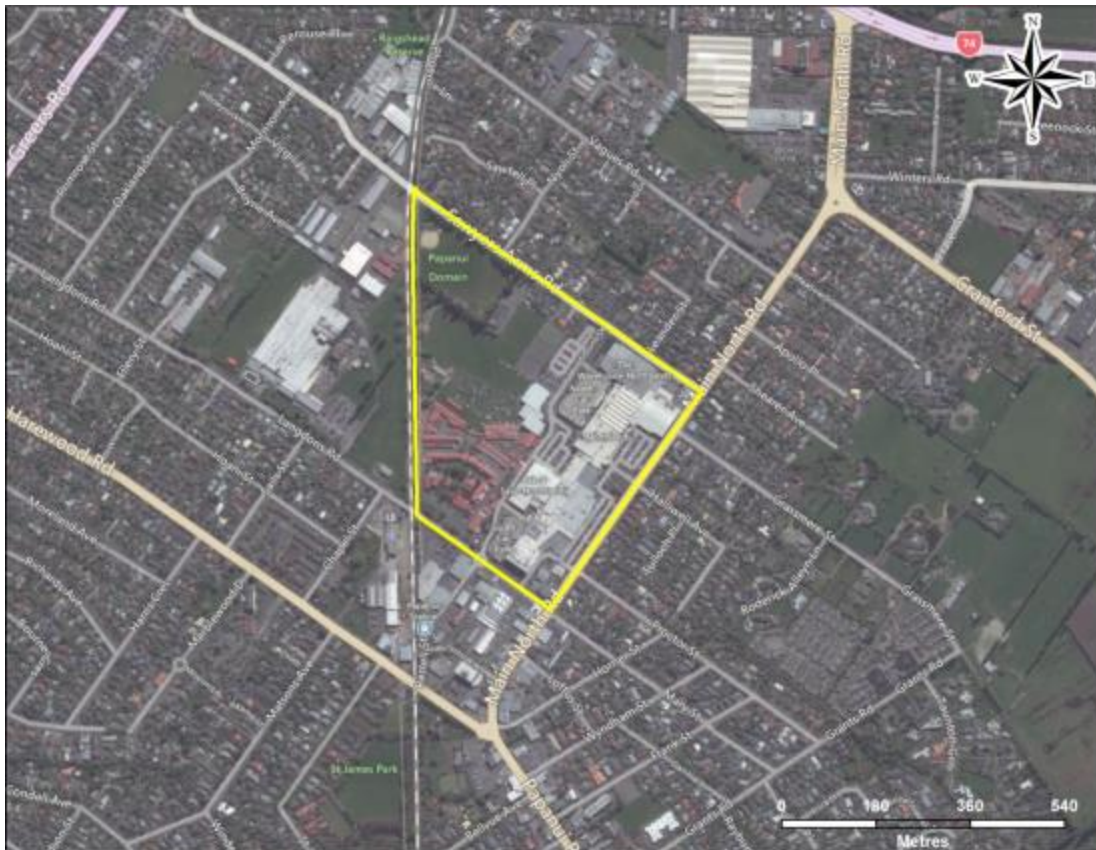
In light of the effects associated with the scenarios modelled and the significantly lower retail provision proposed by the plan change, we conclude that the trade impacts and flow-on effects arising from the proposed plan change will be negligible.

Appendix 1: Geographic Scope of Scenarios

Northlands

The following map identifies the geographic extent of the *retail* activity modelled. It was determined by overlaying Council's zone boundaries with Statistics New Zealand's 2011 meshblock boundaries, and selecting meshblocks that provided the best alignment with the zoning. The same approach was used for all other scenarios too.

Figure 9: Geographic Extent of the Centre used for the **Northlands** Scenario



For this scenario we have used only the meshblock containing the main Northlands shopping centre. The following table identifies the retail activity for this centre as at February 2012, which has been used in the analysis.

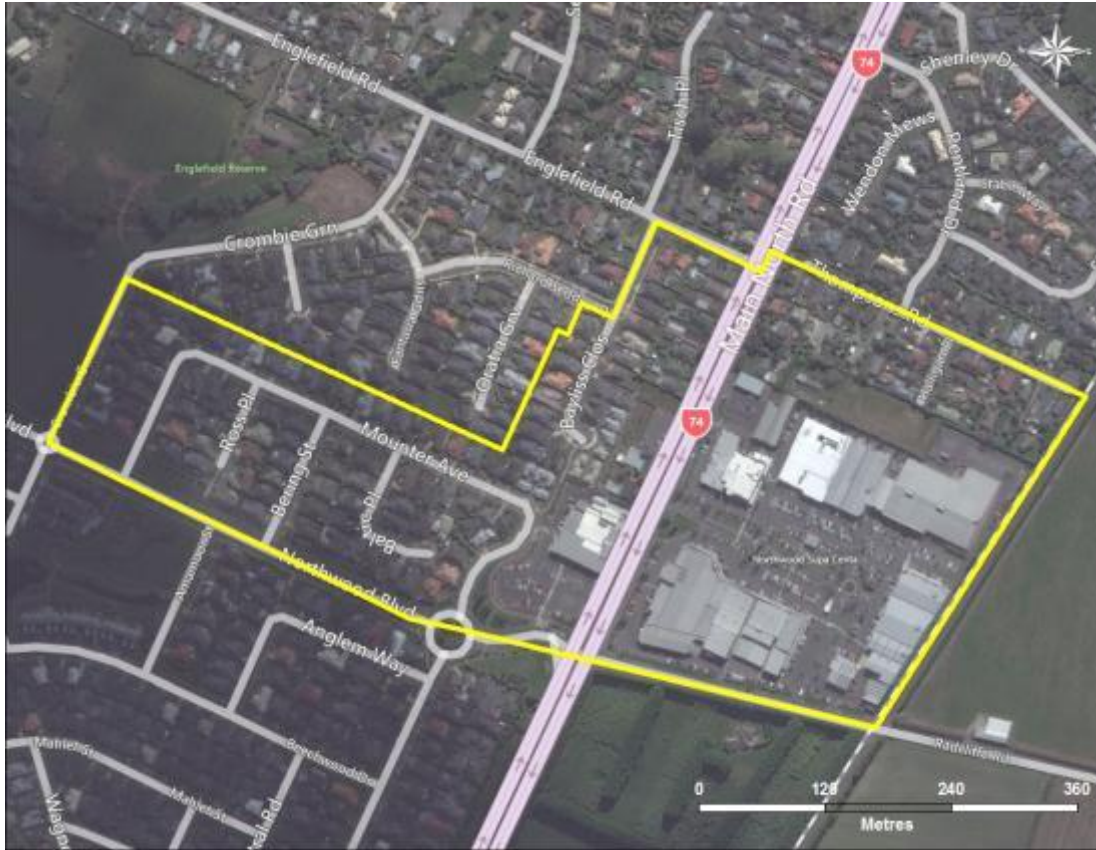
Table 10: Retail Composition of the **Papanui/Northlands** Scenario

Retail Categories	Businesses	Employees
Clothing, Dept Stores, Pharmacies & Other Retail	54	463
Recreation & Appliances	7	64
Furniture & Hardware	3	14
Food Retailing	5	447
Food & Beverage Services	21	232
Total	90	1,220

Northwood

The following map identifies the geographic extent of the centre used in this scenario.

Figure 10: Geographic Extent of the Centre used for the **Northwood** Scenario



The following table identifies the retail activity for this centre as at February 2012.

Table 11: Retail Composition of the **Northwood** Scenario

Retail Categories	Businesses	Employees
Clothing, Dept Stores, Pharmacies & Other Retail	5	206
Recreation & Appliances	5	43
Furniture & Hardware	1	4
Food Retailing	2	138
Food & Beverage Services	5	88
Total	18	479

Shirley the Palms

The following map identifies the geographic extent of the centre used in this scenario.

Figure 11: Geographic Extent of the Centre used for the **Shirley the Palms** Scenario



The following table identifies the retail activity for this centre as at February 2012.

Table 12: Retail Composition of the **Shirley the Palms** Scenario

Retail Categories	Businesses	Employees
Clothing, Dept Stores, Pharmacies & Other Retail	38	368
Recreation & Appliances	7	68
Furniture & Hardware	4	26
Food Retailing	3	158
Food & Beverage Services	14	138
Total	66	758

Tower Junction

The following map identifies the geographic extent of the centre used in this scenario.

Figure 12: Geographic Extent of the Centre used for the **Tower Junction** Scenario



The following table identifies the retail activity for this centre as at February 2012.

Table 13: Retail Composition of the **Tower Junction** Scenario

Retail Categories	Businesses	Employees
Clothing, Dept Stores, Pharmacies & Other Retail	8	103
Recreation & Appliances	5	66
Furniture & Hardware	5	184
Food Retailing	3	49
Food & Beverage Services	1	13
Total	22	415

Appendix 2: Full List of Retail Store Types

The following table shows the full list of retail types used in the analysis grouped by main store types.

Table 14: Full List of Retail Store Types included in the Analysis

Categories and Stores
Clothing, Footwear and Personal Accessories Retailing
Clothing Retailing
Footwear Retailing
Other Personal Accessories Retailing
Watch and Jewellery Retailing
Department Stores
Department Stores
Electrical and Electronic Goods Retailing
Computer and Computer Peripherals Retailing
Electrical, Electronic and Gas Appliance Retailing
Other Electrical and Electronic Goods Retailing
Food and beverage services
Cafes and Restaurants
Clubs (Hospitality)
Pubs, Taverns and Bars
Takeaway Food Services
Food Retailing
Fresh Meat, Fish and Poultry Retailing
Fruit and Vegetable Retailing
Liquor Retailing
Other Specialised Food Retailing
Supermarket and Grocery Stores
Furniture, Floor Coverings, Houseware and Textile Goods Retailing
Floor Coverings Retailing
Furniture Retailing
Houseware Retailing
Manchester and Other Textile Goods Retailing
Hardware, Building and Garden Supplies Retailing
Garden Supplies Retailing
Hardware and Building Supplies Retailing
Pharmaceutical and Other Store-Based Retailing
Antique and Used Goods Retailing
Flower Retailing
Other Store-Based Retailing n.e.c.
Pharmaceutical, Cosmetic and Toiletry Goods Retailing
Stationery Goods Retailing
Recreational Goods Retailing
Entertainment Media Retailing
Marine Equipment Retailing
Newspaper and Book Retailing
Sport and Camping Equipment Retailing
Toy and Game Retailing