

Annexure 5

**Marsden Town Centre
Land Demand Analysis Guidelines**

Appendix

MARSDEN TOWN CENTRE LAND DEMAND ANALYSIS GUIDELINES

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INTRODUCTION

This appendix has been extracted directly from the Section 4 of the report *Demand Analysis: Marsden Town Centre* prepared in support of the Marsden Centre Plan Change Application.

That report built on the material on residential and business land demand assembled in support of the Structure Plan (*Population and Employment Growth Information Paper* prepared for Marsden Point-Ruakaka Structure Plan: 2008), combined with analysis and consultation over the design parameters for town centre development..

THE ROLE OF MARSDEN TOWN CENTRE

The preparation of the structure plan review considered the potential for industrial development to gather momentum on the back of an established industrial presence, the availability of land, transport and infrastructure capacity. The review allocated land to broad use categories and applied a series of generalised building: employment ratios to generate land supply-based estimates of employment capacity associated with the development.

Employment estimates were generally consistent with Marsden Point-Ruakaka continuing mainly as a location for low-density activity. This reflects the character of most existing employment in the area. Indeed, the extent of heavy industrial land, the level of existing activity, and the expectation that this will increase in the future dominates the projected employment pattern, as illustrated especially in the low scenario (Table 1).

Table 1 Employment Capacity at Full Development

	Area	EU/Gross Ha		Employment Capacity	
		Low	High	Low	High
Retail, Commercial	46	50	100	2,280	4,560
Light Industry	102	30	40	3,060	4,080
Medium Industry	98	20	20	1,960	1,960
Heavy Industry	629	10	10	6,290	6,290
Average/Total	874	16	19	13,590	16,890

Source: Phil McDermott Consultants (June 2008) "Population and Employment Growth: Information Paper Prepared for Marsden Point-Ruakaka Structure Plan 2008, Table 9

Under this scenario, the baseline density assumptions associated with retailing and light industry appear low. Significant commercial activity will be required to serve the development process itself, to meet the ongoing needs of local households, and to provide technical, trades, and supply services to local business, leading to higher densities. To illustrate this, a density of 100 persons per hectare was illustrated as a high scenario (Table 1).

This analysis can be further refined for the town centre, building on the MapInfo analysis of sustainable floor space and an additional analysis of likely employment growth in non-retail sectors which might be expected to locate within the town centre.

TOWN CENTRE RETAIL REQUIREMENTS

An approximate distribution of town centre retailing by general category and broad employment: floorspace ratios associated with each was derived in consultation with Pitney Bowes/MapInfo (Table 2). This is indicative only, although provides a basis for structure planning and for a plan change. Further adjustments among categories and to productivities are unlikely to modify the broad scope and scale or employment contribution of the retail component of the town centre at completion.

For the purpose of estimating employment impacts a series of assumptions relating to employment densities can be made. The estimated building footprint assumes that all retail is at grade – constructed at one level – and that parking occupies much of the balance of the site. Site coverage (the Floor Area Ratio) is relatively low in each case, reflecting the level of parking and amenity associated with this form of retail centre. A site yield of 60% is assumed to account for roads, utilities and parks provided at subdivision stage.

The result confirms that at full development, retailing (which includes cafes and restaurants but excludes pubs and accommodation) would require around 21ha.

Although the method of calculation varies slightly, this falls at the centre of the range derived in the Pitney Bowes MapInfo report.

Table 2 Town Centre Retail Land and Employment Requirements

Retail	Floorspace M ²	Foot- print	Site Area Ha	Gross Land Ha	M ² /EC	Employ- ment
Department Stores	10,000	0.50	2.0	3.3	40	250
Supermarkets	10,000	0.50	2.0	3.3	20	500
Bulk Retail	20,000	0.40	5.0	8.3	50	400
Specialty	20,000	0.60	3.3	5.6	20	1,000
TOTALS	60,000		10.3	20.6	28	2,150

The likely retail employment associated with this retail capacity can be estimated by applying representative employee: floorspace ratios, in this case based on guidelines provided by Pitney Bowes MapInfo and confirmed against the range contained in the 2006 review undertaken for SmartGrowth Bay of Plenty.¹ The result is an indicative estimate of around 2,150 people employed in the sector by at full development.

In summary, retailing based on local demand and supplemented by demand from a secondary, sub-regional catchment will sustain around 60,000 m² of floorspace or over 21 ha of the town centre zone, and employ around 2,150 people. This leaves the use of the balance of the land in the town centre available for non-retail uses..

NON RETAIL REQUIREMENTS

There is insufficient information or certainty when looking out 30 or more years to generate a detailed model of other activities that might occupy the town centre. To produce a general guideline, we have assessed the relationships between business services and local production activity (agriculture, mining, forestry, fishing and, especially manufacturing), measured as a ratio between employment in the service sector and in the productions sector for Northland Region in 2006. In each case (finance and insurance, business and property services), this ratio was applied to the estimate of future industrial employment at Ruakaka-Marsden Point.

¹ *Business Land Requirements Review Western Bay of Plenty* Phil McDermott Consultants for SmartGrowth Bay of Plenty

For each of the other “white collar” sectors, the ratio of regional employment to regional population was calculated in a similar manner (Table 3). These ratios were then applied to the industrial employment and population figures estimated for Marsden Point-Ruakaka to estimate the total employment potential employment at full development. Assumptions were made about the shares of each sector that might be expected to locate within the town centre, the balance either providing service from elsewhere in the area or the region.

Table 3 Employment Ratios, Northland Region

	2001	2006
Business Services:Production	0.238	0.251
Financial Services:Production	0.053	0.049
Hospitality: population	0.021	0.026
Government: Population	0.008	0.009
Education: Population	0.032	0.030
Health: Population	0.039	0.045
Recreation & Cultural:Population	0.006	0.008
Personal & Other:Population	0.010	0.014
Retail: Population	0.044	0.042

Source: Based on Business Directory and Census of Population, Statistics New Zealand

In practice, some of the employment growth will occur outside the area, as higher order services, in particular, are provided from Whangarei Urban Area. Hence, the overall employment estimated using this method, 17,860, is likely to be on the high side. However, once the results are scaled down to allow for the town centre share they appear reasonable. They indicate around 2,410 non-retail jobs located in the town centre as a result of associated the growth of Marsden Point-Ruakaka, in addition to the 2,150 retail positions, for a total of 4,500 (Table 4).

Indicative floor area requirements can be generated for non-retail activities using assumed employment densities (square metres per employee). The result is a requirement for over 89,000 m² broadly distributed as indicated in Table 4.

Table 4 Non-Retail Employment Potential, Marsden Town Centre

	Employment	Share Town Centre		Floorspace	
		Share	Total	m2/EC	m2
Financial Services	400	75%	300	30	9,000
Business & Property	2,070	50%	1,040	30	31,200
Accommodation	90	75%	70	80	5,600
Government	340	50%	170	30	5,100
Education	1,080	10%	110	60	6,600
Health	1,600	10%	160	40	6,400
Fire, Ambulance, etc			100	60	6,000
Recreation & Culture	290	50%	150	80	12,000
Personal & Other	500	50%	250	30	7,500
Subtotal	6,370	37%	2,350	38	89,400
Retail			2,150	28	60,000
TOTAL			4,500	33	149,400

Notes: The ratios for services were applied to total medium and heavy industry estimates from the structure plan. It is assumed that light industry is dominated by household oriented activity.
 # Pubs and Accommodation assumed to be 10% of the Hospitality sector, with cafes and restaurants included in retailing.

* Employment as percentage of health sector

LAND REQUIREMENTS AND STAGING

Estimating gross land demand requires assumptions to be made about the relationship between Net Lettable Floor Area (LFA), total built area or building footprint, (Gross Floor Area, or GFA) which includes common and public spaces, loading bays and the like, and Gross Land Area (GLA), which comprises the subdividable land available once road corridors (and other infrastructure needs) are provided for.

Separate parameters are provided for retail and non-retail uses. In retailing it is assumed that LFA in retailing is 60% of GFA; and GFA is 60% of GLA. In other words, the retail floorspace is 36% of the land requirement.

In non-retailing uses, more limited provision for public space and a greater capacity to go beyond a single story alters these parameters. For present purposes it is assumed that LFA is 70% of GFA and GFA is 70% of GLA; i.e. LFA is 49% of GLA (assume 50% in round figures).

Applying these ratios to estimates of Net Lettable Areas indicates a demand for around 32ha of Gross Land Area (Table 5). (Education is omitted from this analysis on the basis that it will be most likely to be located on land in close proximity to the town centre rather than within it). This is split more or less evenly between retail and non-retail uses.

The figures derived in this manner are a guide only. Land demand will vary according to the precise mix of activities, floor area ratios and the prospect of multi-storey buildings, and other design parameters. Detailed design will firm up needs. For example, it is noted that the ratio between LFA and GLA is assumed to be lower in the MapInfo report (29%, see Table 10, above). In addition, the 33ha gross land area estimate does not incorporate the transport centre or the town square.

Table 5 Estimated Land Allocation , Marsden Town Centre

Stage 1				Stage 2			
Stage 1	LFA , m2	GLA Ha	Employ- ment	Stage 2	LFA, m2	GLA Ha	Employ- ment
Government Centre	5,100	1.0	170	Hotel	5,600	1.1	70
Medical Centre	6,400	1.3	160	Recreation & Culture	12,000	2.4	150
Fire, Ambulance	6,000	1.2	100	Other	7,500	1.5	250
Offices	40,200	8.0	1,340				
Total Non-Retail	57,700	11.5	1,770	Total Non-Retail	25,100	5.0	470
Retail	25,000	6.9	900	Retail	35,000	9.7	1,250
Total for Stage	82,700	18.4	2670		60,100	14.7	1,720
Completed							
Non-Retail	82,800	16.6	2,240				
Retail	60,000	16.7	2,150				
Total	142,800	33.2	4,390				

Nevertheless, the analysis provides sound basis for planning space, estimating traffic generation, and considering staging. For present purposes, the retail core has been divided into around 40% in Stage 1 and 60% in Stage 2. Staging for non-retail uses has been associated with the likely sequencing of different activities, with early provision for office-based employment, government and community services, and accommodation and significant recreational and cultural facilities subsequently.