



*Te Kaunihera o*  
**MANUKAU**  
*City Council*

# **MANUKAU FUTURE SKILLS DEMAND PROJECTION**



**A report by the Economic Development  
Unit of Manukau City Council 2004**

## INTRODUCTION

As Mayor of Manukau, the 2<sup>nd</sup> largest city in New Zealand, I lead a Council which champions economic expansion and the creation of jobs which are the foundation of security for our residents. In the year to March, Manukau's economic growth rate was 7.3% and 7,500 jobs were created in the city. However Manukau businesses are having difficulties finding skilled workers at a time when there are over 14,000 Manukau residents seeking employment. The problem is that most of these job seekers do not have the necessary skills or educational requirements to meet the needs of businesses.

Skills shortage and skills mismatch cost Manukau more than \$200 million a year; deprive business of growth opportunities; prevent the city from developing its economic and social well-being to potential; and deprive many people of a quality lifestyle.

It is in everyone's best interest to be able to predict the future skills demand to avoid the huge social and economic costs of this unfortunate dilemma.

Manukau City Council's Economic Development Unit has researched and developed a future skills demand projection tool for Manukau, which is the main feature of this report. It can be used by local authorities to support education and training institutions and by key agencies to plan for and position youth, Maori, Pacific Island people and other residents to gain skills directly aligned to current and future industry needs.

The resulting projection does not predict what will happen in the future. It does however indicate the scale of future opportunities open to Manukau residents in different industries and occupations.

This study is released in the hope that the projection will benefit educational and training institutions in Manukau and help our residents to make informed decisions regarding their education and career choices.

The study also has the potential to assist businesses in avoiding skills shortage in the future through informed collaboration with educational and training organisations.

This is a first attempt to close the information gap in the battle against future skills shortage. We plan to refine the projection over the years with new data on any changes in the employment structure of the economy.



**SIR BARRY CURTIS**  
Mayor of Manukau

---

*Cover photo by Karen Raynes*

# MANUKAU FUTURE SKILLS DEMAND

## Table of Contents

<b>Executive Summary .....</b>	<b>2</b>
<b>1. Background .....</b>	<b>4</b>
<b>2. Purpose.....</b>	<b>5</b>
<b>3. Methodology.....</b>	<b>5</b>
3.1 Population Based Approach	6
3.2 Assumptions	6
<b>4. Limitations .....</b>	<b>8</b>
<b>5. Estimation of Future Employment Opportunities .....</b>	<b>8</b>
5.1 Construction	8
5.2 Education Services	9
5.3 Community and Health Services	10
5.4 Retail Services	12
5.5 Wholesale	13
5.6 Transport and Storage	13
5.7 Hospitality Industry	15
5.8 Property and Business Services	16
5.9 Cultural and Recreational Services	18
5.10 Personal Services	19
5.11 Finance and Insurance Services	20
5.12 Communication Services	21
5.13 Manufacturing	21
5.14 Electricity, Gas and Water Services	23
5.15 Government Services	23
5.16 Total Economy	23
5.16.1 Top Industries	23
5.16.2 Qualifications required	24
5.16.3 Likely occupations	24
<b>6. Implications .....</b>	<b>25</b>
6.1 Urgent need to uplift academic achievements	25
6.2 Pressing Demand for wider Tertiary Education provision	25
6.3 Financial Support for Maori and Pacific Students	26
6.4 Information Technology in Training and Education	26
<b>7. Conclusion .....</b>	<b>26</b>
Appendix A : Background statistical data	27-32
Appendix B : Estimated number of employment opportunities for Manukau residents by occupation between 2004 to 2011	33-41

# MANUKAU FUTURE SKILLS DEMAND PROJECTION

## EXECUTIVE SUMMARY

The Manukau future skills demand analysis is designed to give a general indication of potential future employment opportunities that may be available for Manukau residents and also provides a guide to the skill requirements and future training needs.

This analysis provides a projection of new employment opportunities and the skills needed during the next 8 years (2004-2011). The opportunities will be generated by economic growth and the retirement of workers. The projections are based on population growth, existing economic structure, trends and potential changes in Manukau and in the Auckland region.

On the above basis it is estimated that in the next 8 years, there will be close to 170,000 new employment opportunities in the Auckland region. Manukau's proportional share will be 40,000 jobs<sup>1</sup>. *In other words, the region will need close to 40,000 skilled workers from Manukau in the next 8 years.* This is significant, because Manukau's population is projected to increase by 50,000 during the same period. The projected positions represent a portion of the new and replacement jobs in the Auckland region - including Manukau - that may be available for Manukau residents. The analysis clearly demonstrates that a skill shortage exists and will be exacerbated over time.

The industries that offer the most employment opportunities are:



The major growth sector will be in Business Services, especially research, design, project management, marketing and IT services. The Highbrook Business Park and Airport Business Park will contribute significantly to Business Service employment opportunities for Manukau residents.

These opportunities are for people with the following qualifications:



---

<sup>1</sup> As of 2001, there were 533,856 jobs held by residents of the Auckland region. Manukau residents held 117,057 positions while there were 94,619 FTE jobs within Manukau City boundaries

And for those with skills to work in these occupations:

- |   |               |
|---|---------------|
| • Professionals, technicians and associate professionals: | 14,191 or 36% |
| • Management staff:                                       | 5,830 or 15%  |
| • Clerks  | 5,970 or 15%  |
| • Sales and service workers                               | 5,030 or 13%  |
| • Trade workers   | 2,910 or 7%   |

Of the opportunities for trade workers, the following numbers can be projected for each specific trade:

- 486 for builders including building contractors
- 276 for carpenters and joiners
- 285 for electricians
- 275 for painters and decorators
- 236 for metal trade people (eg fitters, welders, sheet metals workers, tool makers)
- 174 for motor mechanics
- 130 for plumbers
- 100 for plasterers
- 120 for machinery mechanics
- 86 for bricklayers and stonemasons

These opportunities are not necessarily nor exclusively for young people joining the workforce for the first time. They may be taken up by migrants (approximately 10%) and existing workers whose existing positions will become new employment opportunities for others. This is a more likely scenario for management and professional positions.

Education, health services and business services are areas where the demand for professionals with degrees and advanced vocational qualifications are the largest. These services are essential for the social and economic wellbeing of Manukau in the future. The strongest demand will be for people with skills and knowledge. Therefore, it is critical to plan and provide adequate training for Manukau's future labour force.

The results of this projection imply that:

- The demand for wider provision of tertiary education and for better staircasing from secondary to tertiary education in Manukau is pressing.
- There may be a need for incentives to encourage Maori & Pacific youth to pursue higher education and vocation training as this group accounts for over 50% of school rolls in Manukau.
- There may be a need to broaden the use of Information and Communication Technology to enhance training and education activities.

## 1. BACKGROUND

Manukau's businesses are having increasing difficulty finding workers while there are over 14,000 Manukau residents seeking employment. The problem is that most of these job seekers do not have the skills needed by businesses.

The main measures to fill the skills gap are to recruit skilled workers/professionals from overseas and to organise appropriate training courses.

Both measures have very limited success.

The cost of recruiting skilled and English literate workers from developed countries is too high for most small and medium businesses. At the same time, it is not easy to find enough skilled workers from developing countries fluent in English and familiar with New Zealand standards.

On the other hand, training requires time, at least two to four years, and incentives.

While business, government and education/training institutions have to take all available stopgap measures to address the current skills shortage, it is every one's desire to be able to foresee future skills demand and prepare adequate supply to minimise shortages in the future.

That's why central and local government - Manukau City Council included - want to ensure that the workforce in their jurisdiction is able to provide the skills that are needed in the future so that the economy can grow to its full potential and their people enjoy a high income and high standard of living.

For training providers and for young people preparing to enter the workforce, it is important for them to know which skills and which areas of training will provide people with a good chance of satisfactory employment.

To do this, there has been work to project skills requirements, to identify the gap and initiatives implemented to reduce and eliminate the gap.

However, it is recognised that the labour market is complex, the task is difficult and there is no hard and fast methodology to avoid skills shortage and unemployment happening at the same time.

The Government, through the Department of Labour, has started some programmes and initiatives to inform the public, training providers and education institutions about the demand for skills in the market.

Among these are:

- Improving Information in Skills Action Plan
- Helping jobseekers make better choices
- Works Trends Report in Future Work Initiative
- Other research reports on labour force supply

## 2. PURPOSE

The purpose of this analysis is to provide a projection of new and replacement employment opportunities open to Manukau residents in the next 8 years. This projection will serve as a useful basis for training providers to plan education and training programmes/initiatives. It also helps young people to prepare themselves with skills and qualifications in areas/industries that have opportunities for them.

As a result, it is hoped that the skills demand of the economy will be met and unnecessary unemployment /waste of human resources will be reduced in the future.

## 3. METHODOLOGY

Attempts to forecast future demand for skills have been made all over the world for many years with the purpose to plan supplies to avoid excess or shortage of skills.

According to the research report by Richard Blandy and Brett Freeland of NCVER, Australia "*Is the stock of VET skills adequate? - Assessment methodologies*", four main approaches have been used:

- manpower requirements
- international, national and industry comparisons
- labour market analysis
- indicators.

The first three approaches aim to provide bases for training and education planning. The usefulness of these approaches is said to be limited and questioned.

The manpower requirements approach is the most common general approach used by all employment forecasting organisations mentioned in a research paper called "*Occupational and Skill Forecasting: A Survey of Overseas Approaches with Applications for New Zealand*" by Kerry L. Kapps and published by the Labour Market Policy Group of the Department of Labour in 2001. It relies on forecasts of future GDP and future structures in the economy, which are normally more suitable at national level for short /medium term projections.

The international, national and industry comparisons approach assumes that a nation's economic competitiveness is reflected by its qualification profile rank and to increase competitiveness is to imitate countries of higher ranking. By disregarding comparative advantage factors and differences in policy settings, this approach has limited practical value, especially at sub national levels.

The labour market analysis employs models of markets for skills labour to forecast future supplies and demands. The use of models for social forecasting is hazardous: a model that fits one period and seems valid may - because of omitted factors or changes in the social system - turn out to be inapplicable in another<sup>2</sup>.

The indicators approach is more widely used as a guide for career planning in response to recent changes in the market on an annual basis. It does not provide forecasts of future demand for long term planning.

---

<sup>2</sup> Page 23, NCVER- Methodologies to assess the adequacy of VET skills

### **3.1 Population Based Employment Approach**

The approach taken for this analysis is based on the population based employment concept. This approach is supported by the fact that the local and regional population constitutes the main consumption market for most local products and services.

This is practically true for education, health, community services, housing services and personal services. In the long run the ratios of employment to population can change significantly due to changes in technology, standard of living and age structure. But for a short term to medium term of up to 10 years any changes in the employment/population ratios are likely to be gradual and predictable.

For other sectors where the consumption market is outside the area or is influenced by factors outside the area, the ratios of employment/population change but can also be predictable. For instance, the employment/population ratio for the education sector may be influenced by the number of international students, the manufacturing sector by the export markets, and the hospitality sector and transport sector by the number of tourists and tourism projects.

Manukau is part of the greater Auckland region. New employment opportunities opened for Manukau residents include new job opportunities in other cities in the region. Conversely, job opportunities in Manukau are also for residents of other cities.

In some industries the employment/population ratios in Manukau follow similar trends with those of the Auckland region - for instance in education, health, construction, hospitality and retail sectors.

In other industries, the trend in Manukau is different due to its uniqueness in the region. This is especially true for the Transport and Storage sector and Finance Services sector. Development strategy and policy will affect the employment/population ratios in some priority areas.

Therefore, the methodology and the assumptions have to take into account all these factors.

### **3.2 Assumptions**

Taking into account all of the above, the estimation of employment opportunities for Manukau residents in the next eight years is based on the following assumptions:

- Manukau's population is to increase from 317,500 in 2003 to 366,000 in 2011.
- All workers who were 55 and over by 2001 Census date will have been retired by 2011.
- The profile of Manukau workers in 2011 in terms of qualification and occupation will be similar to the 2001 Auckland region profile by 2011. The occupation profile in each industry in the region in 2011 is assumed to be the same as in 2001.
- This is a projection but also incorporates a practical target for Manukau.
- Employment/population ratios for Manukau residents in each industry sector will follow more or less the trends recorded between 1996 and 2001.

Table 1 - Employment/Population Ratios - Past and Assumed for 2011

Industry	Residents employment/population ratio				2011 Assumed ratios
	Auckland Region		Manukau		
	1996	2001	1996	2001	
Manufacturing	7.4%	6.3%	8.8%	7.6%	6%
Electricity, Gas & Water supply	0.2%	0.1%	0.16%	0.12%	0.1%
Construction	2.8%	2.9%	2.3%	2.5%	2.9%
Wholesale	3.9%	3.8%	3.7%	3.7%	3.7%
Retail	5.6%	5.3%	5.2%	4.9%	4.6%
Hospitality	1.7%	1.8%	1.3%	1.5%	1.8%
Transport & Storage	2.0%	2.0%	2.1%	2.4%	3%
Communication	0.8%	0.8%	0.7%	0.6%	0.6%
Finance & Insurance	1.8%	1.8%	1.3%	1.3%	1.3%
Property Services	1.2%	1.2%	0.9%	0.9%	0.9%
Business services	4.6%	5.5%	3.0%	3.6%	5.1%
Property & Business services	5.7%	6.6%	3.9%	4.5%	6%
Government	1.1%	0.9%	0.9%	0.73%	0.6%
Education	2.6%	3.0%	2.3%	2.6%	3.2%
Health	1.9%	2.2%	1.5%	1.7%	2.2%
Community services	0.8%	1.0%	0.7%	0.9%	1.3%
Health & Community Services	2.7%	3.2%	2.2%	2.6%	3.2%
Cultural & Recreational services	1.1%	1.3%	0.6%	0.7%	1.1%
Personal service	0.8%	0.8%	0.65%	0.64%	0.63%
Total employed residents	45.7%	45.5%	40.3%	40.2%	42.9%
Population	1,068,645	1,173,021		291,000	366,000

Industries where employment/population ratios (EPR) are assumed to increase significantly are:

- Business Services with EPR from 3.6% to 5.1%: This is supported by the development trend in the region and the development of Airport Business Parks and Highbrook Business Park targeting high tech research and business service businesses. It is also practical at 5.1% as it is still below the regional average in 2001.
- Health and Community Services with EPR from 2.6% to 3.2%. This assumption follows the trend between 1996 and 2001 and is supported by Government's funding on population basis as well as the development of more high income areas in Manukau and increased demand by the aging population in the region. It is within reach at 3.2% as it is not higher than the regional average in 2001.
- Education services with EPR from 2.6% to 3.2%. This assumption follows the trend between 1996 and 2001 and is supported by the fact that Manukau has a younger population than other cities in the region.
- Transport and Storage with EPR from 3.6% to 5.1%. The change in EPR is assumed to follow the trend between 1996 and 2001 and is supported by the fact that Auckland International Airport is in Manukau and Manukau has the land to continue developing the distribution hub of the region.
- Hospitality with EPR from 1.5% to 1.8%. This assumption follows the trend between 1996 and 2001 and is strengthened by the investment in tourism industry in the region and in Manukau - for instance, TelstraClear Pacific Event Centre, Mangere Gateway Heritage.
- Cultural and Recreational Services with EPR from 0.7% to 1.1%. This assumption is ahead of the trend between 1996 and 2001 but is supported by many tourism and arts development initiatives already planned including TelstraClear Pacific Event Centre, Villa Maria tourism village.

## **4. LIMITATIONS**

This analysis is not to replace any of the work being carried out by the Department of Labour in improving information on the demand for skills in the market.

The longer term picture of employment opportunities for Manukau residents in the next 8 years provided by this analysis is not suitable for use as forecasts of future employment in Manukau in 2011.

The assumptions are partly based on historical changes between 1996 and 2001, planned development strategies and initiatives, and on some desire that Manukau qualification and occupation profiles will improve toward the 2001 regional average. In that sense, the projections are more biased toward targeting - even though with no unrealistic targets - than objective forecasting. Without taking appropriate actions and providing adequate resources, the targets will not be achieved.

The use of 2001 occupation profile and employment population ratios as benchmarks for the analysis could underestimate the future demand for skills, if skill shortages were a problem in 2001.

As the analysis assumes that between 2001 and 2003 all the skills have been met, the projections for the next eight years may be further understated because firms in Manukau and in New Zealand reported that they found it harder to find skilled and unskilled people<sup>3</sup>.

There have often been mismatches between acquired qualifications and required qualifications. As a result, the qualification profile of employed people in an industry recorded in 2001 may not reflect the qualifications required by that industry. Therefore using the 2001 qualification profile is not likely to produce a projection of true requirements in the future.

By 2008, when the results of the 2006 Population Census are available, estimates of employment opportunities for Manukau residents and skills required need revising to reflect up-to-date changes in the economy and technology.

## **5. RESULTS: ESTIMATES OF FUTURE EMPLOYMENT OPPORTUNITIES**

### **5.1 Construction**

It is estimated that there will be about 2,251 new jobs and 834 replacements - a total of about 3,085 employment opportunities in the next eight years to 2011, in the construction industry for Manukau residents.

About 980 or just under 1/3 of the employment opportunities are for people with vocational qualifications (Table 2).

18% (554) of the opportunities are suitable for people with no qualifications (Table 2). However only 195 elementary or manual job opportunities are available (Table 3). This means that people without qualifications still need to have basic skills to operate some tools and machinery.

---

<sup>3</sup> NZIER, QSBO December 2003 report for Manukau

*Table 2 - Estimated number of employment opportunities for Manukau residents in the construction industry from 2003 to 2011 - by qualification*

	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	257	297	554
School Qualifications	948	201	1,149
Skilled Vocational Qualification	750	228	978
Bachelor Degree	207	12	219
Not Elsewhere Included	83	93	176
<b>Total</b>	<b>2,251</b>	<b>834</b>	<b>3,085</b>

Of the 3,085 construction employment opportunities, about 300 will be for professionals, technicians & associate professionals. These will be for architects, road/building engineers, accountants, planners, surveyors, building inspectors, certifiers and environmental planners.

In addition, over 430 new administrators/managers with construction industry knowledge will be required in the next eight years.

However, the highest demand is for trade skills. Nearly 1,600 job opportunities in construction (or 52%) demand the skills of trade workers such as builders (450), carpenters/joiners (220), painters/decorators (220), electricians (220), bricklayers/stonemasons/plasterers (185) and plumbers (130).

*Table 3 - Estimated number of employment opportunities for Manukau residents in the construction industry from 2003 to 2011 - by occupation.*

	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	329	102	431
Professionals	79	36	115
Associate Professionals & Technicians	128	57	185
Clerks	127	66	193
Service & Sales workers	25	12	37
Fishery & Agriculture workers	57	9	66
Trade workers	1,225	369	1,594
Plant & machine operators	156	108	264
Elementary occupations	126	78	195
<b>Total</b>	<b>2,251</b>	<b>834</b>	<b>3,085</b>

## **5.2 Education Services**

It is estimated that there will be over 4,390 new employment opportunities in the education sector for Manukau residents in the next eight years (from 2003 to 2011).

The majority, 3,600 or 82%, of these jobs have to be filled by people with skilled and advanced vocational qualifications or university degrees. At least 1,160 new positions will require workers with higher degrees (Table 4).

*Table 4 - Estimated number of employment opportunities for Manukau residents in the education sector from 2003 to 2011- by qualification*

<i>Qualification (Education)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-98	171	73
School Qualifications	389	237	626
Vocational Qualifications	664	486	1,150
Bachelor Degrees	1,012	156	1,168
Higher Degrees	1,162	150	1,312
Not Elsewhere Included	-32	93	61
<b>Total</b>	<b>3,095</b>	<b>1,287</b>	<b>4,390</b>

About 3,390 workers (or 77% of the total) will be required to fill new positions of professionals, associate professionals and technicians - mainly teachers, lecturers, tutors, lab technicians (Table 5).

Over 365 workers will be required to have the skills and qualifications for new positions of managers and administrators at schools and education/training institutions (Table 5).

*Table 5 - Estimated number of employment opportunities for Manukau residents in the education sector from 2003 to 2011- by occupation*

<i>Occupation (Education)</i>	<i>Increase in demand</i>	<i>Vacancies due to retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	248	117	365
Professionals	2278	696	2,974
Associate Professionals & Technicians	270	147	417
Clerks	268	105	373
Service & Sales workers	44	36	80
Fishery & Agriculture workers	19	15	34
Trade workers	6	15	21
Plant & machine operators	-9	6	-3
Elementary occupations	-44	117	73
Not elsewhere included	15	33	48
<b>Total</b>	<b>3,095</b>	<b>1,287</b>	<b>4,382</b>

### **5.3 Community & Health Services:**

It is estimated there will be about 5,205 new employment opportunities for Manukau residents in the health and community service sector in the next eight years (2003-2011).

Over 3,332 or nearly two thirds of these employment opportunities require people with degrees (1,830) and vocational qualifications (1,502) (Table 6).

*Table 6 - Projected increase in demand for Manukau workers in the Health and Community service sector from 2003 to 2011- by qualification*

	<i>New demand Health services</i>	<i>New Demand Community Services</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	18	208	246	472
School Qualifications	330	535	303	1,168
Basic Vocational Qualifications	54	57		110
Skilled Vocational Qualifications	41	15		57
Intermediate Vocational Qualifications	21	12		34
Advanced Vocational Qualifications	668	273	360	1,301
Bachelor Degrees	787	159	61	1,057
Higher Degrees	672	101	50	773
Not Elsewhere Included	1	106	126	233
<b>Total</b>	<b>2,592</b>	<b>1,466</b>	<b>1,146</b>	<b>5,205</b>

For both the health and community service sectors, about 390 job opportunities are for people with management skills. About 2,500 new professionals (doctors, radiologists, optometrists, counsellors, psychologists etc) and about 825 new associate professionals and technicians (nurses, physiotherapists, lab technicians, advisors, etc) will be required from Manukau.

In addition, about 1,240 additional people with skills for customer service and administrative work (clerks, sales & service workers, security guards) will also be required. Only a small number (about 100) of new workers is required for simple manual work like cleaning (Table 7).

*Table 7 - Estimated number of employment opportunities for Manukau residents in the Health and Community service sector from 2003 to 2011- by occupation*

<i>Occupation (H&amp;C)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	318	69	387
Professionals	2,158	318	2,476
Associate Professionals & Technicians	675	150	825
Clerks	324	234	558
Service & Sales workers	401	279	680
Fishery & Agriculture workers	25	12	37
Trade workers	14	12	26
Plant & machine operators	11	9	20
Elementary occupations	133	63	196
<b>Total</b>	<b>4,057</b>	<b>1,146</b>	<b>5,205</b>

## 5.4 Retail Services

There will be about 2,790 new employment opportunities for Manukau residents in the retail sector in the next eight years (Table 8).

Over 55% of the opportunities will be for people with school qualifications to work as clerks, sales and service workers.

The demand for new workers with vocational qualifications and degrees is substantial:

- 530 positions require people with vocational qualifications
- 490 positions require people with degrees.

*Table 8 - Estimated number of employment opportunities for Manukau residents in Retail activities between 2003 and 2011 - by qualification*

<i>Qualification (Retail)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-118	456	338
School Qualifications	880	456	1336
Vocational Qualifications	355	177	532
Degrees	417	72	489
Not Elsewhere Included	-66	160	94
<b>Total</b>	<b>1,468</b>	<b>1,321</b>	<b>2,789</b>

The areas of study /skills required to suit the following occupations (Table9):

- Managers, administrators - over 1,000 positions
- Professionals (including pharmacists, marketers, advertisers, IT, legal advisers, financial specialists, accountants) - about 170 positions
- Associate professionals (including technical representatives, sales representatives) - about 170 positions
- Trade workers - approximately 103 new opportunities including motor mechanics (35), panel beaters/painters (21), butchers (7) bakers (9).

*Table 9 - Estimated number of employment opportunities for Manukau residents in Retail activities between 2003 and 2011 - by occupation*

<i>Occupation (Retail)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	695	312	1,007
Professionals	119	60	179
Associate Professionals & Technicians	121	48	169
Clerks	-54	171	117
Service & Sales workers	832	411	1,243
Fishery & Agriculture workers	44	6	50
Trade workers	-56	159	103
Plant & machine operators	-32	36	4
Elementary occupations	-138	66	-72
Not elsewhere included	-61	39	-22
<b>Total</b>	<b>1,469</b>	<b>1,320</b>	<b>2,789</b>

## 5.5 Wholesale

There will be about 1,860 new jobs and 1,300 replacement jobs (or nearly 3,160 in total) for Manukau residents in the wholesale sector in the next eight years. Nearly 53% of the demand will be for people with vocational - mostly high level - qualifications or degrees. Another 44% need to have school qualifications (Table 10).

Over 81% (or over 2,500) of the job opportunities are for managers, administrators, professionals, technicians and associate professionals (Table 11).

*Table 10 - Estimated number of employment opportunities for Manukau residents in Wholesale activities between 2003 and 2011- by qualification*

<i>Qualification</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-195	411	216
School Qualifications	757	516	1,273
Vocational Qualifications	470	207	677
Degrees	822	42	864
Not Elsewhere Included	10	117	127
<b>Total</b>	<b>1,864</b>	<b>1,293</b>	<b>3,157</b>

*Table 11 - Estimated employment opportunities for Manukau residents in Wholesale activities between 2003 and 2011- by occupation*

<i>Occupation (wholesale)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	1,134	372	1,506
Professionals	269	48	317
Associate Professionals & Technicians	578	132	710
Clerks	-13	294	281
Service & Sales workers	238	108	346
Fishery & Agriculture workers	21	12	33
Trade workers	-30	69	39
Plant & machine operators	-264	90	-174
Elementary occupations	-98	135	37
Not elsewhere included	29	33	62
<b>Total</b>	<b>1,864</b>	<b>1,293</b>	<b>3,157</b>

## 5.6 Transport and Storage:

The number of new employment opportunities for Manukau residents in this sector will reach 3,057 in the next eight years.

Most of the new opportunities will be for people with qualifications and skills. 29% or 890 people need to have vocational - mostly high level - qualifications. 16% or 500 people need to have degree qualifications.

Only 244 are for those with no qualifications (Table 12). But they have to have skills, because there will be no demand for new workers with elementary occupations (simple labour) (Table 13).

*Table 12 - Estimated number of employment opportunities for Manukau residents in Transport and Storage activities between 2003 and 2011 - by qualification*

<i>Qualification ( Transport &amp; Storage)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-77	321	244
School Qualifications	1,073	255	1,328
Vocational Qualifications	751	111	862
Degrees	458	24	482
Not elsewhere included	45	96	141
<b>Total</b>	<b>2,250</b>	<b>807</b>	<b>3,057</b>

This sector needs skilled and knowledgeable workers. A large proportion of people with skills at professional and technician levels (38%) are needed. All those who want to work in the Transport and Storage sector should have at least secondary qualifications and working skills.

*Table 13 - Estimated number of employment opportunities for Manukau residents in Transport & Storage activities between 2003 and 2011- by occupation*

<i>Occupation (Transport &amp; Storage)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	511	87	598
Professionals	174	54	228
Associate Professionals & Technicians	793	90	883
Clerks	79	123	202
Service & Sales workers	366	27	393
Fishery & Agriculture workers	5	3	8
Trade workers	28	24	52
Plant & machine operators	425	291	716
Elementary occupations	-143	108	-35
<b>Total</b>	<b>2,247</b>	<b>810</b>	<b>3,057</b>

The new job opportunities are estimated to distribute among different services as follows:

*Table 14 - Estimated distribution of new & replacement job opportunities for Manukau residents in Transport & Storage services between 2003 and 2011.*

<i>Industry</i>	<i>Average share (2001)</i>	<i>No. of new &amp; replacement jobs</i>
Road Transport	37.2%	1,136
Rail Transport	1.7%	51
Water Transport	1.3%	40
Air and Space Transport	16.4%	501
Other Transport	2.0%	61
Services to Transport	31.6%	966
Storage	9.9%	301
<b>Total</b>	<b>100.0%</b>	<b>3,057</b>

## 5.7 Hospitality Industry

There will be close to 1,950 new employment opportunities for Manukau workers in the next eight years.

Over half the number of opportunities will be suitable for people with only school qualifications (Table 15). But they do need to be trained with adequate skills to work as service and sales workers (Table 16).

There will be new/replacement demand for about 600 people having vocational and degrees qualifications in business management, food preparation, accounting, maintenance trade workers to work in the hospitality industry.

There will be opportunities for over 550 people with adequate skills to work as managers and supervisors, 100 as professionals and associate professionals and 210 as trade workers (Table 16).

The main trade skills required in this sector include bakers (85) carpenters/joiners/cabinet makers (47), machinery mechanics (21) and other building related trade people.

*Table 15 - Estimated number of employment opportunities for Manukau residents in Hospitality activities between 2003 and 2011- by qualification*

<i>Qualification (Hospitality)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	15	120	135
School Qualifications	991	102	1,093
Vocational Qualifications	329	27	356
Degrees	305	12	229
Not Elsewhere Included	1	45	46
<b>Total</b>	<b>1,642</b>	<b>306</b>	<b>1,948</b>

*Table 16 - Estimated number of employment opportunities for Manukau residents in Hospitality activities between 2003 and 2011- by occupation*

<i>Occupation (Hospitality)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	456	93	549
Professionals	37	9	46
Associate Professionals & Technicians	36	9	45
Clerks	64	21	85
Service & Sales workers	892	111	1,003
Fishery & Agriculture workers	10	6	16
Trade workers	203	6	209
Plant & machine operators	-18	6	-12
Elementary occupations	-23	36	13
Not elsewhere included	-15	9	-6
<b>Total</b>	<b>1,643</b>	<b>306</b>	<b>1,949</b>

## 5.8 Property and Business Service

This is the main growth industry in both Manukau and the Auckland region, not only to serve the New Zealand market but also overseas markets.

The Highbrook Business Park and Auckland Airport Business Park will contribute significantly to the future growth of this sector.

It is estimated that more than 8,450 new employment opportunities will be available in property and business service activities for Manukau residents in the next eight years.

62% of the new job opportunities (over 5,230) require workers with high level vocational qualifications and degrees. Only 1% of the new employment opportunities are for people with no qualifications (Table 17).

A lot of people without vocational or degree qualifications on the other hand need to have management skills or specialists skills because the required number of managers, professionals, technicians and associate professionals (6,486) exceeds the number of people with vocational and degree qualifications (5,564).

In the same way, a large number of people with no qualifications wanting to work in this sector must have some skills to work as clerks and sales and service workers. There will be no new opportunities for elementary occupation (Tables 17 and 18).

*Table 17 - Estimated number of employment opportunities for Manukau residents in Property and Business Service activities between 2003 and 2011- by qualification*

<i>Qualification (Property &amp; Business Service)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-163	405	242
School Qualifications	2,090	552	2,642
Basic Vocational Qualification	177		177
Skilled Vocational Qualification	212	360	572
Intermediate Vocational Qualification	26		26
Advanced Vocational Qualification	809		809
Bachelor Degree	2,584	140	2,724
Higher Degree	1,082	94	1,176
Not Elsewhere Included	-75	159	84
<b>Total</b>	<b>6,744</b>	<b>1,713</b>	<b>8,457</b>

Skills in highest demand will be those of

- accountants (457 - 5.4%)
- lawyers (296 - 3.5%)
- real estate/ property consultants (296 - 3.5%)
- technical and sales representatives (260 - 3.1%)
- systems analyst & managers (220 - 2.6%)
- computer application engineers (210 - 2.5%)
- engineers (135 - 1.6%)
- graphic designers (110 - 1.3%)
- security officers (110 - 1.3%)
- draughting technicians (100 - 1.2%)
- computer programmers (93 - 1.1%) and
- architects (93 - 1.1%).

*Table 18 - Estimated number of employment opportunities available for Manukau residents in Property and Business Service activities between 2003 and 2011- by occupation*

<i>Occupation (Property &amp; Business Service)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	1,520	282	1,802
Professionals	2,813	315	3,128
Associate Professionals & Technicians	1,565	309	1,874
Clerks	880	309	1,189
Service & Sales workers	49	108	157
Fishery & Agriculture workers	42	9	51
Trade workers	87	69	156
Plant & machine operators	-96	54	-42
Elementary occupations	-194	195	1
Not elsewhere included	84	66	150
<b>Total</b>	<b>6,744</b>	<b>1,713</b>	<b>8,457</b>

Based on the 2001 data, more than 80% of the new opportunities in property and business services will be in business service activities. And the new job opportunities are estimated to distribute among different services as follows:

*Table 19 - Estimated distribution of new job opportunities for Manukau residents in property and business services between 2003 and 2011.*

<b>Industry</b>	<b>Average share (2001)</b>	<b>No. of new and replacement jobs</b>
Residential Property Operators	0.6%	54
Commercial Property Operators and Developers	5.0%	425
Real Estate Agents	5.7%	485
Holder Investor Farm Animals	0.1%	5
Non-Financial Asset Investors nec	0.3%	22
Motor Vehicle Hiring	1.3%	110
Other Transport Equipment Leasing	0.3%	28
Plant Hiring or Leasing	1.9%	163
Scientific Research	1.0%	86
Architectural Services	2.3%	195
Surveying Services	0.6%	54
Consultant Engineering Services	6.2%	524
Technical Services nec	1.3%	113
Data Processing Services	0.4%	35
Information Storage and Retrieval Services	0.8%	69
Computer Maintenance Services	0.5%	42
Computer Consultancy Services	9.8%	831
Legal Services	6.4%	542
Accounting Services	6.5%	546
Advertising Services	3.1%	264
Commercial Art and Display Services	2.2%	189
Market Research Services	2.4%	206
Business Administrative Services	3.7%	314
Business Management Services	10.3%	869
Employment Placement Services	5.0%	427
Contract Staff Services	2.1%	174

Secretarial Services	0.8%	72
Security and Investigative Services (except Police)	3.1%	262
Pest Control Services	0.2%	17
Cleaning Services	7.0%	590
Contract Packing Services nec	0.5%	41
Business Services nec	8.3%	700
<b>Total</b>	<b>100%</b>	<b>8,457</b>

## 5.9 Cultural and Recreational Services

It is estimated that there will be over 2,560 new employment opportunities for Manukau residents in the next eight years in cultural and recreational activities. About 1,220 (47%) people with vocational qualifications and degrees will be required for these new/replacement jobs (Table 20).

However, about 68% of the total (1,750) will be for professionals and associate professionals. It means that quite a large number may not have vocational and degree qualifications but have skills in management, music, sound/film equipment operation, acting and sports at professional or associate professional levels (Table 21).

There will be hardly any new elementary jobs (manual labour) in cultural and recreational services (Table 21). Correspondingly, the demand for new workers without qualifications or skills is negligible.

*Table 20 - Estimated employment opportunities for Manukau residents in Cultural & Recreational Service activities between 2003 and 2011- by qualification*

<i>Qualification</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	167	63	230
School Qualifications	998	78	1,076
Vocational Qualifications	512	39	551
Degrees	630	21	651
Not Elsewhere Included	50	21	71
<b>Total</b>	<b>2,351</b>	<b>219</b>	<b>2,570</b>

*Table 21 - Estimated number of employment opportunities for Manukau residents in Cultural & Recreational Service activities between 2003 and 2011- by occupation*

<i>Occupation</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	428	48	476
Professionals	185	27	212
Associate Professionals & Technicians	1,025	36	1,061
Clerks	331	48	379
Service & Sales workers	120	24	144
Fishery & Agriculture workers	109	9	118
Trade workers	51	3	54
Plant & machine operators	30	3	33
Elementary occupations	43	15	58
Not elsewhere included	34	6	23
<b>Total</b>	<b>2,351</b>	<b>219</b>	<b>2,570</b>

## 5.10 Personal Services

It is estimated that there will be about 850 new and replacement jobs for Manukau residents in the personal service sector in the next eight years.

Most (710 or 84%) of the people working in this sector will have at least secondary qualifications to give quality personal services (Table 22).

Over 50% of job opportunities will be in hairdressing and gardening services (Table 24). The majority will work as service workers (Table 23). Nearly a third need to have some business management and professional skills to work as managers, administrators & professionals.

*Table 22 - Estimated employment opportunities) for Manukau residents in Personal Service activities between 2003 and 2011- by qualification*

<i>Qualification</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-41	165	124
School Qualifications	155	177	332
Vocational Qualifications	113	108	221
Degrees	55	57	112
Not Elsewhere Included	-1	60	59
<b>Total</b>	<b>280</b>	<b>567</b>	<b>847</b>

*Table 23 - Estimated number of employment opportunities for Manukau residents in Personal Service activities between 2003 and 2011- by occupation*

<i>Occupation</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	37	72	109
Professionals	33	93	126
Associate Professionals & Technicians	33	54	87
Clerks	21	78	99
Service & Sales workers	147	69	216
Fishery & Agriculture workers	19	81	100
Trade workers	6	12	18
Plant & machine operators	-4	42	38
Elementary occupations	-15	54	39
<b>Total</b>	<b>280</b>	<b>567</b>	<b>847</b>

*Table 24 - Estimated distribution of new/replacement employment opportunities for Manukau residents in different types of personal services between 2003 and 2011*

<i>Services</i>	<i>Average share (2001)</i>	<i>No. of new job opportunities</i>
Video Hire Outlets	9.8%	83
Other Personal and Household Goods Hiring	3.4%	29
Laundries and Dry-Cleaners	13.6%	115
Photographic Film Processing	5.8%	49
Photographic Studios	7.5%	64

Funeral Directors Crematoria and Cemeteries	2.7%	23
Gardening Services	19.1%	162
Hairdressing and Beauty Salons	32.0%	271
Other Personal Services	6.1%	51
<b>Total</b>	<b>100.0%</b>	<b>847</b>

### 5.11 Finance and Insurance:

There will be over 910 new and replacement employment opportunities for Manukau residents in the next eight years in Finance & Insurance Service activities. Two thirds (70%) of these jobs require people with vocational - mainly advanced level - qualifications (116) and degrees (532) (Table 25).

*Table 25 - Estimated number of employment opportunities in Finance and Insurance Service activities for Manukau residents between 2003 and 2011- by qualification*

<i>Qualification (Finance &amp; Insurance)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-48	72	24
School Qualifications	139	126	265
Skilled Vocational Qualification	46	60	106
Bachelor Degree	489	21	510
Others	-4	13	9
<b>Total</b>	<b>613</b>	<b>300</b>	<b>914</b>

Most of these job opportunities (95% or 871) will require people with skills to be managers, administrators, professionals and associate professionals. It means that many people with no qualifications or with only secondary qualifications also need adequate skills to work as managers, professionals and associate professionals (Table 26).

*Table 26 - Estimated number of new/replacement employment opportunities in Finance and Insurance Service activities for Manukau residents between 2003 and 2011- by occupation*

<i>Occupation</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	275	45	320
Professionals	237	39	276
Associate Professionals & Technicians	228	75	303
Clerks	-37	96	59
Service & Sales workers	-6	12	6
Fishery & Agriculture workers	-5	3	-2
Trade workers	-11	9	-2
Plant & machine operators	-35	9	-26
Elementary occupations	-32	9	-23
Not elsewhere included	6	0	6
<b>Total</b>	<b>614</b>	<b>300</b>	<b>914</b>

## 5.12 Communication Services

There will be 440 new and replacement job opportunities for Manukau workers in the next eight years in Communication Service businesses.

About half (or 352) of these new jobs require people with vocational qualifications (117) and degrees (235). The rest require mainly people with school qualifications (Table 26).

About 65% (465) of the new jobs will require people with skills to be managers, administrators, professionals and associate professionals. People with no qualifications or with only school qualifications therefore need some appropriate skills to work in this sector (Table 27 and 28).

*Table 27 - Estimated number of job opportunities in Communication Service activities for Manukau residents between 2003 and 2011- by qualification*

<i>Qualification (Communication services)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
No Qualification	-94	45	-49
School Qualifications	111	48	159
Skilled Vocational Qualification	98	12	110
Bachelor Degree	227	0	227
Not Elsewhere Included	-28	24	-4
<b>Total</b>	<b>314</b>	<b>129</b>	<b>443</b>

*Table 28 - Estimated number of job opportunities in Communication Service activities for Manukau new workers between 2003 and 2011- by occupation*

<i>Occupation (Communication services)</i>	<i>Increase in demand</i>	<i>Retirement</i>	<i>Total</i>
Legislators, Administrators and Managers	149	3	152
Professionals	157	3	160
Associate Professionals & Technicians	121	9	130
Clerks	-50	48	-2
Service & Sales workers	17	12	29
Fishery & Agriculture workers	0	0	0
Trade workers	0	0	0
Plant & machine operators	-24	6	-18
Elementary occupations	-63	45	-18
Not elsewhere included	7		2
<b>Total</b>	<b>314</b>	<b>129</b>	<b>443</b>

## 5.13 Manufacturing

The number of people employed in the manufacturing sector as a percentage of the total population dropped from 8.8% to 7.6 % in Manukau between 1996 and 2001. The same measure fell from 7.4% to 6.3% in the Auckland region in the same period.

It is unlikely that the number of manufacturing jobs will increase in the next eight years in Manukau nor in the greater region. As a proportion of the population, it will reduce to 6% if the employment number stays the same.

However, it does not mean that there won't be job opportunities for new people wanting to work in manufacturing. There will be people leaving the sector for other opportunities. There will be manufacturing workers being laid off because of their lack of the new skills required by new technologies. There will be about 2,650 of Manukau manufacturing workers retiring in the next eight years. 72% of the positions left by retirees need filling by people with at least school qualifications (Table 29).

The opportunities for people with management skills for professionals (engineers), technicians and associate professionals and trade workers are significant - 1,127 or 43% (Table 30).

People with skills to work as clerks, and plant and machine operators will be required to replace another 40% of retirees in the next eight years (Table 30).

One thing certain is that new entrants into the manufacturing sector need to be more qualified and skilled than in the past.

*Table 29 - Estimated number of employment opportunities opened for Manukau residents in manufacturing activities between 2003 and 2011- by qualification*

<i>Qualification</i>	<i>Number of employment opportunities</i>
No Qualification	942
School Qualifications	801
Basic Vocational Qualification	
Skilled Vocational Qualification	474
Intermediate Vocational Qualification	
Advanced Vocational Qualification	
Bachelor Degree	96
Higher Degree	
Not Elsewhere Included	339
<b>Total</b>	<b>2,652</b>

*Table 30 - Estimated number of employment opportunities opened for Manukau residents in manufacturing activities between 2003 and 2011- by occupation*

<i>Occupation</i>	<i>Number of employment opportunities</i>
Legislators, Administrators and Managers	507
Professionals	132
Associate Professionals & Technicians	168
Clerks	363
Service & Sales workers	66
Fishery & Agriculture workers	15
Trade workers	480
Plant & machine operators	585
Elementary occupations	201
Not elsewhere included	135
<b>Total</b>	<b>2,652</b>

## 5.14 Electricity, Gas and Water Services

In a similar trend, the number of people employed in the Electricity, Gas and Water Services sector as a percentage of total population dropped from 0.2% to 0.1% in Manukau and the Auckland region between 1996 and 2001.

It is unlikely that the number of jobs in this sector will increase in the next eight years in Manukau nor in the greater region. Assuming that there is no reduction in employment in this sector, there will be demand for 57 people to replace retirees in the next eight years. These numbers are insignificant to consider in detail.

## 5.15 Government Services

The number of people employed in the government sector as a percentage of total population dropped from 0.9% to 0.7% in Manukau and from 1.1% to 0.9% in the Auckland region between 1996 and 2001.

The demand for workers in the government sector is unlikely to increase. However, assuming that it does not reduce further as a result of the hands-on policy of the Labour Government, there will be over 280 people in Manukau working in the government service who will retire in the next eight years.

56% of replacement opportunities will be for managers, professionals and associate professionals. 45% of them require vocational and degree qualifications. Only 10% do not require qualifications.

## 5.16 Total Economy

In total, there will be close to 40,000 new employment opportunities for Manukau residents in the next eight years.

As the average natural increase of population in Manukau was 4,125 per year in the last six years, it is estimated that there will be a net number of 17,000 internal and external migrants coming to reside in Manukau in the next eight years. As 22% of the migrants to Manukau between 1996 and 2001 got employment<sup>4</sup> it is estimated that 3,740 or close to 10% of the 39, 800 job opportunities will be taken up by migrants.

5.16.1 The industries that offer the most employment opportunities are (See Table 31)

- Property and Business Services: 8,450
- Health and Community Services: 5,200
- Education Services: 4,380
- Wholesale Services 3,160
- Construction: 3,080
- Transport and Storage 3,060
- Retail Services: 2,790
- Manufacturing: 2,650
- Cultural and Recreational Services: 2,570
- Hospitality 1,950
- Finance and Insurance Services 910

<sup>4</sup> Census of Population and Dwellings 2001- Statistics NZ

*Table 31 - Estimated number of employment opportunities for Manukau residents in the next 8 years - by industry*

<i>Industry</i>	<i>Retirement</i>	<i>New demand</i>	<i>Total</i>
Manufacturing	2,652	0	2,652
Electricity, Gas & Water supply	57	0	57
Construction	834	2,248	3,082
Wholesale	1,299	1,858	3,157
Retail	1,323	1,466	2,789
Hospitality	306	1,643	1,949
Transport & Storage	810	2,247	3,057
Communication	129	314	443
Finance & Insurance	300	614	914
Property & Business services	1,713	6,738	8,451
Government	282	0	282
Education	1,287	3,095	4,382
Health & Community Services	1,146	4,058	5,204
Cultural & Recreational services	216	2,354	2,570
Personal service	567	280	847
<b>Total</b>	<b>12,921</b>	<b>26,915</b>	<b>39,836</b>

#### 5.16.2 Qualifications Required

The majority of those who fill these future employment opportunities will have academic and vocational qualifications (See Table 32):

- 25% need to have vocational qualifications.
- 32% need to have degree qualifications.
- And 36% need to have school qualifications.

*Table 32 - Estimated number of employment opportunities for Manukau residents in the next 8 years - by qualification*

<i>Highest Qualification</i>	<i>Number</i>	<i>% of total</i>
No Qualification	3,612	9.1%
School Qualifications	13,369	33.6%
Basic Vocational Qualifications	915	2.3%
Skilled Vocational Qualifications	3,646	9.2%
Intermediate Vocational Qualifications	310	0.8%
Advanced Vocational Qualifications	4,330	10.9%
Bachelor Degrees	8,329	20.9%
Higher Degrees	3,889	9.8%
Other Post school qualifications	1,437	3.6%
<b>Total</b>	<b>39,837</b>	<b>100.0%</b>

#### 5.16.3 Likely Occupations

The new employment opportunities for Manukau residents are opened mainly for people with high skill levels in specific areas to work as:

- 8,111 professionals (20.4%)
- 6,921 technicians and associate professionals (15.3%)

- 5,828 managers and administrators (14.6%)
- 2,912 trade workers (7.3%).

*Table 33 - Estimated number of employment opportunities for Manukau residents in the next 8 years - by occupation*

<i>Occupation</i>	<i>Number</i>	<i>% of total</i>
Legislators, Administrators and Managers	5,828	14.6%
Professionals	8,111	20.4%
Associate Professionals & Technicians	6,080	15.3%
Clerks	5,967	15.0%
Service & Sales workers	5,035	12.6%
Fishery & Agriculture workers	417	1.0%
Trade workers	2,912	7.3%
Plant & machine operators	2,331	5.9%
Elementary occupations	2,033	5.1%
Not elsewhere included	801	2.0%
<b>Total</b>	<b>39,833</b>	<b>100.0%</b>

## **6. IMPLICATIONS**

### **6.1 Urgent need to lift academic achievement**

The new employment opportunities include only 6.5% of the jobs for people with no qualifications. And the fact that no more than 2% of the occupations will be of elementary type means that even people with no qualifications still need to have some practical skills to be either entrepreneurs, sales persons or machinery operators.

Currently about 20% of Manukau students left school without qualifications. For Maori students the percentage is 39% and for Pacific students the percentage is 33%. Maori and Pacific students account for just over 50% of school students in Manukau.

It is critical and urgent to find more ways to lift the academic achievements of students, especially Maori and Pacific students.

A lot of good initiatives and programmes are in place. However, it seems that there is room for more effective programmes.

### **6.2 Pressing demand for wider provision of tertiary education and for better staircasing from secondary to tertiary education.**

In the next eight years, the training and education system needs to produce roughly 1,370 new degree graduates and over 1,000 new vocational graduates per year on average among Manukau residents.

Between 1996 and 2001, the number of people with degree/higher degree as their highest qualification increased by 800 per year. The corresponding figure was 600 per year for vocational qualifications.

As the demand in the next eight years is about 1.7 times the increase between 1996 and 2001 in the number of people with their first degree/higher degree qualifications and the number of people with their first vocational qualifications, the demand for wider tertiary provision is pressing. At the same time, it is important to provide better

staircasing between secondary and tertiary education so that more school leavers can take up tertiary education.

### **6.3 Financial Support for Maori & Pacific Students**

In the most recent study by the NZ Students Association, only 58% of students in Decile 1 schools said that they would consider tertiary education/training. The percentage of Maori and Pacific people considering tertiary education is much lower. The main reason is the cost of tuition.

To be able to produce 1,400 new degree graduates and 1,000 vocational graduates a year, Manukau needs to have more than two thirds (68%) of school leavers going to tertiary education every year.

On average, each year 340 Maori and 660 Pacific school leavers in Manukau need to go to a university, polytechnic or other tertiary institutions to earn an appropriate degree, diploma or certificate.

Without special incentives, it is very unlikely that more than 30% of the above target will be achieved. The feasibility of establishing some scholarship fund starting from \$3 million a year rising to \$12 million per year to encourage about 1,000 Maori & Pacific youth to gain tertiary qualifications and skills deserves serious investigation.

### **6.4 Information Technology in Training and Education**

On one hand, employment opportunities increase in the future thanks to the advance of technology in general and of Information and Communication Technology (ICT) in particular. On the other hand ICT has opened many ways to speed up the learning process by making information and knowledge more readily accessible.

An investigation into how to use ICT to its full potential to promote education, for exchange of knowledge and information especially for the young in Manukau deserves serious attention.

## **7. CONCLUSION**

This is a bold attempt to estimate future skills demand at a city level. The method used is new, simple and based on common sense. Many people may be sceptical of the projections because of the simplicity of using past Census data and in many cases, some straight extrapolation into the future.

It is true that no projections are accurate. But this method of projection seems to be the most practical, closest to reality, and very useful for education/training planning, advice and career development in the medium term. It can be used simply and easily at City and regional levels.

Further research may be needed to see if some annual occupation surveys and job advertisement series can be used to improve and update the projections annually to reflect changes in technology, developments in the economy and in the labour markets.

## BACKGROUND DATA

**Table A1: Employment of Manukau residents by industry**

Industry	Manukau			
	Employed No		% of population	
	1996	2001	1996	2001
Manufacturing	22,971	22,206	8.8%	7.6%
Electricity, Gas & Water supply	432	360	0.2%	0.1%
Construction	6,096	7,239	2.3%	2.5%
Wholesale	9,708	10,800	3.7%	3.7%
Retail	13,497	14,187	5.2%	4.9%
Hospitality	3,441	4,458	1.3%	1.5%
Transport & Storage	5,616	6,876	2.1%	2.4%
Communication	1,770	1,848	0.7%	0.6%
Finance & Insurance	3,315	3,642	1.3%	1.3%
Property Services	2,382	2,580	0.9%	0.9%
Business services	7,818	10,485	3.0%	3.6%
Property & Business services	10,200	13,065	3.9%	4.5%
Government	2,394	2,064	0.9%	0.7%
Education	5,841	7,368	2.2%	2.5%
Health	3,741	4,716	1.4%	1.6%
Community services	1,926	2,742	0.7%	0.9%
Health & Community Services	5,667	7,458	2.2%	2.6%
Cultural & Recreational services	1,686	2,073	0.6%	0.7%
Personal service	1,698	1,860	0.6%	0.6%
Total employed residents	105,498	117,084	40.3%	40.2%
Population	262,000	291,000		

Source: Statistics New Zealand

**Table A2: Employment of Auckland region's residents by industry**

Industry	Auckland Region			
	Employed No		% of population	
	1996	2001	1996	2001
Manufacturing	79,224	73,881	7.4%	6.3%
Electricity, Gas & Water supply	1,968	1,443	0.2%	0.1%
Construction	29,436	33,834	2.8%	2.9%
Wholesale	41,145	44,550	3.9%	3.8%
Retail	59,412	62,694	5.6%	5.3%
Hospitality	18,306	21,510	1.7%	1.8%
Transport & Storage	21,864	24,036	2.0%	2.0%
Communication	8,703	9,207	0.8%	0.8%
Finance & Insurance	19,023	21,333	1.8%	1.8%
Property Services	12,486	13,638	1.2%	1.2%
Business services	48,843	64,314	4.6%	5.5%
Property & Business services	61,329	77,952	5.7%	6.6%
Government	12,288	10,497	1.1%	0.9%
Education	28,305	35,577	2.6%	3.0%
Health	20,523	26,055	1.9%	2.2%

Community services	8,766	11,571	0.8%	1.0%
Health & Community Services	29,289	37,626	2.7%	3.2%
Cultural & Recreational services	11,622	14,772	1.1%	1.3%
Personal service	9,012	9,654	0.8%	0.8%
Total employed residents	488,337	533,856	45.7%	45.5%
Population	1,068,645	1,173,021		

Source: Statistics New Zealand

**Table A3: Qualification profile by industry in Manukau**

Manukau 2001	Qualification								
	None	School Quals	Basic Vocational	Skilled Vocational	Intermediate Vocational	Advanced Vocational	Bachelor Degree	Higher Degree	Other
<b>Industry (i)</b>									
Manufacturing	27.6%	40.3%	3.7%	6.4%	2.8%	4.4%	4.4%	1.4%	9.2%
Electricity, Gas & Water	17.5%	26.7%	5.8%	10.0%	4.2%	12.5%	10.8%	5.8%	9.2%
Construction	25.6%	34.4%	4.1%	16.0%	4.3%	4.9%	2.3%	0.7%	7.7%
Wholesale	20.9%	46.4%	4.2%	5.5%	2.6%	6.2%	6.9%	1.9%	5.5%
Retail	21.7%	50.1%	4.5%	5.6%	2.2%	3.7%	4.5%	1.1%	6.5%
Hospitality	20.3%	51.3%	6.3%	2.4%	1.7%	4.3%	3.8%	1.1%	8.7%
Transport & Storage	27.9%	42.2%	3.5%	5.3%	2.1%	6.4%	4.4%	0.9%	7.3%
Communication	22.7%	48.9%	4.5%	2.8%	2.8%	5.2%	5.2%	1.3%	6.5%
Finance & Insurance	9.4%	53.9%	5.0%	3.3%	2.9%	8.2%	10.9%	3.5%	2.8%
Property & Business Services	14.7%	40.2%	4.9%	4.3%	2.8%	9.0%	14.0%	4.8%	5.3%
Government Services	10.5%	43.5%	5.8%	2.8%	2.6%	12.2%	13.1%	6.4%	3.5%
Education	9.7%	21.4%	4.4%	2.5%	1.8%	24.8%	20.4%	11.2%	3.9%
Health & Community Services	14.0%	29.8%	6.0%	4.1%	1.7%	21.5%	11.0%	5.0%	6.8%
Cultural and Recreational Services	14.2%	47.5%	5.8%	4.1%	2.0%	9.7%	9.1%	2.6%	4.8%
Personal Services	23.2%	41.1%	6.0%	7.9%	4.4%	5.8%	2.9%	0.8%	7.7%

Source: Statistics New Zealand - 2001 Population and Dwelling Census

**Table A4: Qualification Profile by Industry in Auckland Region**

Auckland Region - 2001	Qualification								
	None	School Quals	Basic Vocational	Skilled Vocational	Inter. Vocational	Advanced Vocational	Bachelor Degree	Higher Degree	Other
<b>Industry (i)</b>									
Manufacturing	23.7%	39.4%	4.0%	7.5%	2.8%	5.7%	7.0%	2.3%	7.5%
Electricity, Gas & Water	12.3%	27.9%	5.8%	7.1%	3.7%	10.8%	20.0%	8.5%	4.2%
Construction	22.6%	36.0%	4.2%	16.7%	3.8%	5.4%	3.4%	0.9%	6.9%
Wholesale	16.6%	45.7%	4.0%	5.2%	2.5%	7.8%	10.7%	3.0%	4.5%
Retail	19.1%	50.9%	4.1%	5.7%	2.2%	4.6%	6.1%	1.5%	5.6%
Hospitality	15.5%	53.6%	6.7%	2.7%	1.6%	5.1%	6.2%	2.1%	6.5%
Transport & Storage	21.0%	43.4%	4.5%	5.3%	2.5%	8.5%	6.8%	1.8%	5.9%
Communication	15.6%	47.1%	4.2%	3.0%	3.3%	6.9%	11.8%	3.6%	4.4%
Finance & Insurance	7.1%	49.7%	4.2%	3.0%	2.0%	8.5%	17.3%	5.8%	2.3%
Property & Business Services	9.5%	37.4%	4.2%	4.0%	2.0%	9.9%	21.5%	8.3%	3.3%
Government Services	7.9%	37.6%	4.1%	2.9%	2.2%	11.6%	19.4%	11.4%	2.8%

Education	6.3%	19.1%	3.5%	2.2%	1.4%	23.2%	23.6%	18.1%	2.6%
Health & Community Services	10.8%	25.5%	5.0%	3.5%	1.4%	22.8%	15.9%	10.3%	4.9%
Cultural and Recreational Services	10.6%	44.9%	5.2%	4.1%	1.8%	10.5%	14.6%	4.8%	3.4%
Personal Services	18.6%	42.9%	5.8%	8.6%	3.9%	7.7%	4.5%	1.1%	6.7%

Source: Statistics New Zealand - 2001 Population and Dwelling Census

**Table A5. Occupation Profile by Industry in Manukau**

Manukau 2001	Occupation									
	Legislators, Administrators and Managers	Professionals	Associate Professionals & Technicians	Clerks	Service & Sales workers	Fishery & Agriculture workers	Trade workers	Plant & machine operators	Elementary occupations	
<b>Industry (i)</b>										
Manufacturing	13.0%	4.9%	6.7%	12.5%	2.3%	0.4%	17.9%	26.9%	10.2%	
Electricity, Gas & Water	12.4%	17.4%	15.7%	16.5%	1.7%	0.0%	7.4%	19.0%	4.1%	
Construction	9.0%	3.9%	6.5%	8.0%	1.5%	1.6%	45.6%	15.7%	5.8%	
Wholesale	24.0%	5.8%	12.5%	23.3%	8.9%	0.5%	5.6%	8.4%	8.7%	
Retail	17.4%	2.2%	4.6%	15.9%	34.5%	0.4%	13.6%	3.9%	5.0%	
Hospitality	18.2%	1.8%	2.7%	6.4%	55.2%	0.3%	2.7%	1.7%	7.8%	
Transport & Storage	10.5%	4.8%	13.7%	22.6%	4.8%	0.4%	2.2%	27.2%	11.8%	
Communication	10.4%	6.5%	12.8%	38.5%	3.6%	0.2%	0.5%	4.1%	21.4%	
Finance & Insurance	16.4%	11.5%	17.7%	45.0%	2.6%	0.2%	1.3%	1.9%	1.8%	
Property & Business Services	14.4%	19.0%	16.7%	22.0%	7.2%	0.9%	3.6%	3.3%	10.4%	
Government Services	8.1%	16.7%	31.3%	30.7%	5.1%	0.1%	0.4%	0.4%	1.4%	
Education	6.4%	56.5%	15.1%	9.2%	3.0%	0.7%	0.7%	0.7%	5.2%	
Health & Community Services	4.6%	32.0%	16.9%	14.4%	26.1%	0.6%	0.5%	0.7%	2.3%	
Cultural and Recreational Services	14.8%	7.7%	29.1%	21.1%	14.9%	4.2%	1.9%	1.2%	3.3%	
Personal Services	9.3%	10.4%	9.9%	10.8%	32.8%	9.3%	2.0%	7.6%	5.4%	

Source: Statistics New Zealand - 2001 Population and Dwelling Census

**Table A6: Occupation profile by Industry in Auckland Region**

**Auckland Region  
- 2001**

Industry (i)	Occupation								
	Legislators, Administrators and Managers	Professionals	Associate Professionals & Technicians	Clerks	Service & Sales workers	Fishery & Agriculture workers	Trade workers	Plant & machine operators	Elementary occupations
Manufacturing	16.0%	5.6%	9.2%	11.3%	2.8%	0.6%	19.6%	22.4%	8.5%
Electricity, Gas & Water	16.5%	21.8%	13.6%	19.6%	1.6%	0.6%	5.3%	14.9%	3.1%
Construction	10.2%	3.8%	6.3%	7.5%	1.4%	1.8%	47.5%	13.9%	5.6%
Wholesale	29.1%	7.0%	15.1%	20.1%	9.5%	0.6%	4.6%	5.4%	6.8%
Retail	20.0%	2.7%	4.9%	14.2%	36.4%	0.6%	12.1%	3.3%	3.7%
Hospitality	20.6%	1.9%	2.6%	5.8%	54.9%	0.4%	5.1%	1.0%	5.5%
Transport & Storage	13.2%	5.4%	18.4%	18.4%	7.3%	0.4%	2.0%	25.4%	7.8%
Communication	15.4%	12.4%	16.3%	31.2%	3.8%	0.2%	0.4%	2.5%	15.9%
Finance & Insurance	20.2%	15.2%	20.3%	38.1%	2.2%	0.1%	0.9%	0.9%	0.9%
Property & Business Services	16.9%	26.0%	18.7%	19.3%	5.2%	0.8%	2.9%	1.8%	6.3%
Government Services	8.7%	18.0%	26.3%	25.5%	14.0%	0.5%	1.6%	0.6%	1.2%
Education	6.8%	61.0%	13.4%	9.1%	2.6%	0.7%	0.6%	0.4%	3.4%
Health & Community Services	5.7%	38.8%	16.9%	12.5%	21.1%	0.6%	0.4%	0.6%	1.9%
Cultural and Recreational Services	16.5%	7.8%	36.5%	17.5%	9.9%	4.4%	2.0%	1.2%	2.6%
Personal Services	9.8%	10.5%	10.1%	10.4%	35.2%	9.0%	2.0%	6.5%	4.3%

Source: Statistics New Zealand - 2001 Population and Dwelling Census

**Table A7: Number of Manukau employed residents aged 55 and over - by occupation in selected industries**

Occupation	Manufacturing	Construction	Wholesale	Retail Trade
Legislators, Administrators and Managers	507	102	372	312
Professionals Technicians and Associate Professionals	132	36	48	60
Clerks	168	57	132	48
Service and Sales Workers	363	66	294	171
Agriculture and Fishery Workers	66	12	108	411
Trades Workers	15	9	12	6
Plant and Machine Operators and Assemblers	480	369	69	159
Labourers and Related Elementary Service Workers	585	108	90	36
Not Elsewhere Included (1)	201	39	135	66
Total	135	36	33	39
	2,652	831	1,302	1,320

Source: Statistics New Zealand - 2001 Population and Dwelling Census

**Table A8: Composition of trade workers in selected industries - Auckland Region 2001**

<b>Occupation</b>	<b>Manufact.</b>	<b>Construction</b>	<b>Wholesaling</b>	<b>Retail</b>	<b>Hospitality</b>	<b>Transport &amp; Storage</b>	<b>Business &amp; Property Services</b>
71111 Bricklayer and/or Blocklayer	0.2%	4.7%	0.4%	0.2%	0.0%	0.0%	0.4%
71112 Stonemason	0.5%	0.6%	0.1%	0.1%	1.1%	0.0%	0.1%
71121 Carpenter and/or Joiner	3.8%	13.7%	2.8%	0.7%	14.6%	3.9%	9.8%
71122 Builder (Including Contractor)	1.4%	28.5%	3.0%	0.8%	5.6%	3.3%	16.2%
71123 Boatbuilder	5.3%	0.0%	0.4%	0.2%	1.1%	0.7%	0.1%
71211 Plasterer	0.3%	6.3%	0.9%	0.2%	1.1%	0.0%	1.1%
71221 Glazier	0.6%	1.2%	2.2%	0.9%	0.0%	0.0%	0.1%
71231 Plumber	0.2%	8.0%	0.6%	0.3%	2.2%	2.0%	2.1%
71241 Painter, Decorator and/or Paperhanger	1.0%	13.0%	0.7%	0.5%	5.6%	1.3%	5.4%
71242 Spray Painter	2.1%	0.8%	1.2%	7.4%	0.0%	1.3%	1.1%
71243 Sign Writer	1.0%	0.1%	0.1%	0.2%	0.0%	0.0%	13.8%
71311 Electrician	3.0%	13.4%	4.2%	0.9%	4.5%	7.2%	4.0%
71312 Transport Electrician	0.1%	0.1%	1.2%	3.0%	0.0%	2.6%	0.3%
71313 Appliance Electrician	0.5%	0.3%	1.9%	1.5%	0.0%	2.0%	1.0%
72111 Metal Mould Maker	0.2%	0.0%	0.4%	0.0%	0.0%	0.7%	0.0%
72121 Coach Builder	1.0%	0.1%	0.3%	0.4%	0.0%	1.3%	0.3%
72122 Sheet-Metal Worker	6.0%	0.4%	2.2%	0.2%	1.1%	0.7%	1.2%
72123 Boiler Maker	1.1%	0.1%	1.0%	0.0%	0.0%	0.0%	0.3%
72124 Fitter and Welder	7.7%	0.5%	3.0%	0.2%	0.0%	4.6%	1.9%
72125 Panel Beater	0.1%	0.1%	0.4%	13.0%	0.0%	2.0%	1.0%
72211 Blacksmith	0.2%	0.0%	0.3%	0.0%	0.0%	5.9%	0.0%
72221 Pattern Maker	0.7%	0.0%	1.0%	0.1%	0.0%	0.0%	0.7%
72222 Tool and/or Die Maker	3.6%	0.0%	1.0%	0.2%	0.0%	0.0%	0.1%
72231 Fitter and Turner	5.0%	0.3%	3.7%	0.1%	1.1%	2.0%	1.4%
72241 Saw Doctor	0.4%	0.0%	0.7%	0.1%	0.0%	0.0%	0.3%
72311 Machinery Mechanic	6.1%	0.8%	15.4%	3.0%	10.1%	22.4%	7.7%
72312 Motor Mechanic	1.4%	0.4%	14.9%	33.8%	0.0%	17.1%	4.1%
72313 Aircraft Engine Mechanic	0.2%	0.0%	0.1%	0.0%	0.0%	12.5%	0.3%
72314 Heating, Ventilation and Refrigeration Mechanic	0.4%	0.9%	1.0%	0.1%	0.0%	0.0%	0.1%
72315 Small Engine Mechanic	0.2%	0.0%	1.0%	1.9%	0.0%	0.7%	0.4%
72316 Mechanical Products Inspector and Tester	0.1%	0.0%	0.4%	2.0%	0.0%	0.0%	1.1%
72411 Electrical Fitter	0.9%	0.7%	1.0%	0.2%	0.0%	0.0%	1.5%
72412 Fire Alarm	0.1%	0.5%	0.3%	0.0%	0.0%	0.0%	0.3%

Technician							
72421 Electronics Serviceperson	0.5%	0.8%	6.3%	0.8%	0.0%	0.7%	2.6%
72422 Avionics Mechanic	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.1%
72431 Radio and Television Repairer	0.1%	0.1%	0.4%	1.3%	0.0%	0.0%	0.1%
73111 Industrial Precision Instrument Maker and Repairer	0.2%	0.0%	1.5%	0.0%	0.0%	0.7%	0.3%
73112 Locksmith	0.0%	0.1%	0.1%	1.3%	0.0%	0.0%	0.3%
73113 Optical Instrument Maker, Repairer and Mechanic	0.2%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%
73115 Watchmaker and Repairer	0.1%	0.0%	0.4%	0.4%	0.0%	0.0%	0.0%
73121 Musical Instrument Maker, Repairer and Tuner	0.1%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%
73131 Jeweller and Jewellery Repairer	2.1%	0.0%	1.5%	1.1%	0.0%	0.0%	0.4%
73132 Gem Cutter and Polisher	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
73211 Glass Cutter and Beveller	0.1%	0.1%	1.6%	0.0%	0.0%	0.0%	0.0%
73311 Graphic Pre-Press Tradesperson	1.2%	0.0%	0.1%	0.1%	0.0%	0.0%	1.7%
73316 Screen Printer	1.6%	0.0%	0.7%	0.0%	0.0%	0.0%	0.4%
73317 Printing Machinist	12.4%	0.1%	3.1%	0.1%	1.1%	2.0%	6.1%
73318 Desktop Publisher	0.4%	0.0%	1.0%	0.0%	0.0%	0.7%	3.0%
73321 Bookbinder	3.0%	0.1%	0.7%	0.1%	0.0%	0.7%	0.7%
73331 Photolithographer, Photo Engraver	1.1%	0.0%	0.1%	0.1%	0.0%	0.0%	1.4%
74111 Butcher	0.5%	0.0%	3.7%	7.1%	2.2%	0.0%	0.4%
74112 Meat Grader	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%
74121 Baker	2.4%	0.0%	1.2%	9.1%	40.4%	0.0%	0.3%
74211 Cabinet Maker	9.6%	0.7%	3.0%	2.2%	7.9%	0.0%	1.8%
74212 Furniture Finisher	1.1%	0.0%	0.1%	0.2%	0.0%	0.7%	0.1%
74311 Tailor/Dressmaker	1.0%	0.0%	0.4%	0.2%	0.0%	0.0%	0.6%
74312 Textile Products Pattern Maker	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
74313 Textile Products Marker and Cutter	2.1%	0.0%	2.8%	0.4%	0.0%	0.0%	0.4%
74321 Furniture Upholsterer	2.6%	0.0%	0.4%	0.4%	0.0%	0.0%	0.1%
74322 Vehicle Upholsterer and Trimmer	0.6%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
74323 Canvas Worker	0.9%	0.0%	0.1%	0.1%	0.0%	0.0%	0.4%
74331 Carpet and Other Floor Covering Layer	0.2%	2.4%	0.6%	2.0%	0.0%	0.0%	0.4%
74411 Saddler and Harness Maker	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
74412 Shoe Repairer	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.1%

Source: Statistics NZ, Population and Dwellings Census 2001.

## Appendix B

# ESTIMATED NUMBER OF EMPLOYMENT OPPORTUNITIES BY OCCUPATION FOR MANUKAU RESIDENTS FROM 2004 TO 2011

<i>Occupation</i>	<i>Number</i>
<b>1. Administrators, Managers and Legislators - Total</b>	<b>5,828</b>
11311 Chief Executive and/or Managing Director	317
11411 Special-Interest Organisation Administrator	40
12111 General Manager	1,224
12211 Senior Education Manager	137
12212 Broadcasting and Theatrical Production Manager	105
12213 Production Manager (Manufacturing)	207
12214 Transport Manager	83
12218 Construction Manager	56
12219 Engineering Technical Manager	21
12221 Health Services Manager	56
12222 Administration Manager	633
12223 Property Manager	138
12224 Finance Manager	319
12231 Human Resources Manager	77
12241 Sales and/or Marketing Manager	599
12251 Advertising and Public Relations Manager	129
12261 Supply and Distribution Manager	139
12262 Wholesale and Warehouse Manager	83
12263 Retail Manager	456
12264 Hotel or Motel Manager	67
12265 Restaurant or Tavern Manager	121
12266 Other Lodging Services Manager	65
12267 Other Catering Services Manager	221
12271 Information Technology Manager	118
12281 Research and Development Manager	22
12282 Quality Assurance Manager	26
12291 Office Manager	370
<b>2. Professionals - Total</b>	<b>8,111</b>
21111 Physicist	6
21121 Meteorologist	2
21131 Chemist (Other than Pharmacist)	14
21141 Geologist	8
21142 Geophysicist	3
21211 Mathematician and/or Statistician	10
21311 Systems Analyst	219
21312 Computer Applications Engineer	317
21313 Systems Manager	168
21411 Architect	101
21412 Resource Management Planner	18
21413 Landscape Architect	18
21421 Roading Engineer	14

21422 Water Resources Engineer	8
21423 Public Health Engineer	6
21425 Structural Engineer	45
21426 Other Civil Engineer	89
21431 Electrical Engineer	32
21441 Electronic and Telecommunications Engineer	46
21451 Heating, Ventilation and Refrigeration Engineer	30
21452 Naval Architect and/or Ships' Surveyor	5
21453 Aeronautical Engineer and/or Aircraft Surveyor	81
21455 Other Mechanical Engineer	47
21461 Chemical Engineer	22
21481 Surveyor	47
22117 Environmental Scientist	9
22121 Biochemist	9
22122 Microbiologist	20
22123 Medical Pathologist	7
22211 General Practitioner	160
22212 Resident Medical Officer	129
22213 Surgeon	24
22214 Physician	58
22215 Gynaecologist and Obstetrician	6
22216 Radiologist, Radiation Oncologist	15
22217 Anaesthetist	15
22221 Dentist and Dental Surgeon	65
22231 Veterinarian	32
22241 Hospital Pharmacist	11
22242 Retail Pharmacist	30
22251 Dietitian and Public Health Nutritionist	17
22261 Optometrist	23
22311 Principal Nurse	15
22312 Registered Nurse	966
22313 Psychiatric Nurse	44
22314 Plunket Nurse	20
22315 Public Health and District Nurse	38
22316 Occupational Health Nurse	4
22317 Midwife	88
23111 University and Higher Education Lecturer and/or Tutor	491
23211 Secondary School Teacher	615
23311 Primary School Teacher	965
23321 Early Childhood Teacher	365
23322 Kōhanga Reo Teacher	14
23411 Special Education Teacher	67
23412 Speech-Language Therapist	20
23413 Teacher of English to Speakers of Other Languages	81
23511 Education Adviser	32
23521 Education Reviewer	7
24111 Accountant	702
24113 Auditor	38
24121 Human Resources Officer	182
24122 Training and Development Officer	77
24131 Market Research Analyst	79
24132 Public Relations Officer	69
24133 Financial Adviser	201
24135 Management Consultant	151
24211 Barrister and Solicitor	305

24231 Other Legal Professional	23
24311 Archivist	8
24312 Art Gallery and/or Museum Curator	16
24321 Librarian	127
24322 Information Services Administrator	8
24411 Economist	4
24421 Social Scientist	29
24422 Policy Analyst	39
24431 Philologist, Translator or Interpreter	28
24441 Psychologist	50
24442 Psychotherapist	22
24451 Counsellor	74
24511 Minister of Religion	60

**3. Associate Professionals and Technicians- Total** **6,080**

31111 Physical Science Technician	57
31121 Quantity Surveyor	61
31122 Surveyor's Technician	4
31124 Other Civil Engineering Technician	8
31131 Electrical Engineering Technician	23
31141 Telecommunications Technician	70
31142 Computer Systems Technician	73
31143 Other Electronics Engineering Technician	49
31144 Avionics Technician	8
31151 Mechanical Engineering Technician	24
31161 Chemical Engineering Technician	7
31181 Draughting Technician	128
31191 Other Engineering Technician	9
31211 Computer Programmer	135
31212 Computer Operator	77
31213 Computer Support Technician	93
31311 Photographer	31
31312 Camera Operator	37
31313 Sound Recording Equipment Controller	23
31321 Broadcasting Transmitting and Studio Equipment Operator	74
31322 Radio Operator	28
31323 Cinema Projectionist	9
31331 Medical Radiation Technologist	47
31332 Other Medical Equipment Controller	30
31333 Sonographer	9
31411 Ships' Engineer	13
31421 Ships' Officer (Deck) Including Master	11
31423 Other Ships' Deck Officer and Pilot	7
31431 Aircraft Pilot and Flight Crew	73
31433 Flying Instructor	9
31434 Helicopter Pilot	3
31441 Air Traffic Controller	13
31511 Safety Inspector	27
31514 Health Inspector	7
31515 Agricultural Inspector	2
31516 Quality Inspector	21
32111 Life Science Technician	12
32112 Medical Laboratory Technician	130
32121 Agricultural Technician	6
32211 Dispensing Optician	12

32221 Dental Therapist	30
32231 Physiotherapist	84
32232 Occupational Therapist	70
32233 Osteopath	10
32234 Orthotist and/or Prosthetist	2
32235 Podiatrist	7
32236 Chiropractor	10
32241 Veterinary Assistant	44
32252 Retail Dispensary Assistant	16
32261 Other Health Associate Professional	68
32262 Dental Technician	8
32311 Enrolled Nurse	56
32312 Karitane Nurse	5
33111 Financial Dealer and Broker	59
33121 Insurance Representative	74
33131 Real Estate Agent/Property Consultant	277
33132 Property Developer	35
33141 Travel Consultant	325
33151 Business Services Representative	74
33152 Technical Representative	524
33153 Sales Representative	431
33161 Wholesale and/or Retail Buyer	34
33163 Purchasing Agent	36
33171 Valuer	33
33181 Auctioneer	5
33211 Administration Officer	146
33212 Conference/Function Organiser	68
33221 Legal Executive	42
33222 Legal Clerk	41
33231 Bookkeeper	46
33241 Organisation and Methods Analyst	62
33242 Building Control/Consents Officer	2
33311 Customs Officer	9
33312 Quarantine and Agriculture Ports Officer	2
33411 Social Worker	283
33412 Probation Worker	6
33413 Case Worker	11
33421 Employment Programme Teaching Associate Professional	7
33422 Teacher Aide	302
33511 Careers, Transition, Employment Adviser	21
33611 Author and Critic	54
33612 Reporter	68
33613 Editor	43
33614 Sub-Editor	6
33615 Copywriter	13
33621 Sculptor, Painter and Related Artist	75
33631 Graphic Designer	180
33632 Fashion Designer	20
33633 Display and Window Dresser	5
33634 Industrial Designer	27
33636 Interior Designer	38
33641 Composer, Arranger and/or Conductor	9
33642 Instrumentalist	41
33643 Singer	7
33644 Singing and Music Teacher	69

33651 Dancer	6
33652 Dancing Teacher and/or Choreographer	21
33661 Actor	54
33662 Artistic Director	97
33671 Radio and Television Presenter	49
33681 Clown, Magician, Acrobat and Related Worker	30
33691 Professional Sportsperson	61
33692 Sports Coach or Trainer	243
33693 Sports Official	11
33711 Non-Ordained Religious Assistant	17
33812 National Park Ranger	11
<b>4. Clerks - Total</b>	<b>5,967</b>
41111 Typist and Word Processor Operator	162
41121 Data Entry Operator	203
41141 Secretary	837
41211 Accounts Clerk	545
41212 Audit & Statistical Clerks	5
41213 Costing Clerk	22
41221 Finance Clerk	69
41223 Survey Interviewer	117
41311 Stock Clerk	323
41312 Dispatch and Receiving Clerk	221
41321 Material and Production Planning Clerk	41
41331 Transport Clerk	50
41411 Library Assistant	103
41412 Record and Filing Clerk	45
41421 Mail Sorting Clerk	37
41422 Mail Clerk	34
41423 Postal Deliverer	26
41424 Mail Delivery Contractor	5
41443 General Clerk	1,374
41444 Office Machine Operator	15
41445 Human Resources Clerk	62
42111 Cashier	92
42112 Checkout Operator	165
42113 Ticket-Seller	103
42121 Bank Officer	217
42131 Gaming Dealer	83
42151 Bill and Debt Collector	21
42211 Hotel and/or Motel Receptionist	26
42212 Patient Receptionist	104
42213 Information Clerk and Other Receptionist	749
42221 Telephone Switchboard Operator	113
<b>5. Service and sales workers</b>	<b>5,035</b>
51111 Travel Attendant	143
51121 Tour and Travel Guide	65
51122 Outdoor Recreation Guide	9
51211 Housekeeper (Private Service)	16
51212 Housekeeper (Not Private)	67
51221 Chef	265
51222 Cook	136
51231 Bartender	140
51233 Waiter	328

51234 Catering Counter Assistant	348
51235 Kitchenhand	208
51236 Usher and Cloakroom Attendant	53
51311 Hospital Orderly	36
51312 Health Assistant	127
51313 Ambulance Officer	32
51314 Nurse Aide	262
51316 Care Giver	495
51411 Hairdresser	109
51412 Beauty Therapist	53
51413 Massage Therapist	27
51414 Weight Loss Consultant	4
51421 Child Care Worker	206
51431 Funeral Director	5
51511 Fire Fighter	25
51521 Detective	3
51522 Police Officer	78
51531 Prison Officer	22
51541 Private Investigator	7
51542 Security Officer	181
52111 Sales Assistant	1,409
52112 Demonstrator	82
52113 Forecourt Attendant	63
52211 Street Vendor and Related Worker	24
52311 Fashion and Other Model	7
<b>5. Fishery &amp; Agricultural Workers - Total</b>	<b>417</b>
61112 Market Gardener and Related Worker	11
61121 Fruit Grower, Worker	9
61122 Grape Grower and/or Wine Maker, Worker	11
61131 Nursery Grower, Nursery Worker	36
61132 Landscape Gardener	58
61133 Grounds or Green Keeper	101
61134 Gardener	98
61211 Dairy Farmer, Dairy Farm Worker	5
61251 Crop and Livestock Farmer, Worker	15
61265 Horse Trainer, Groom or Stable Hand	37
61311 Logger	5
61312 Forest Hand & Contractor	5
61411 Fishing Skipper, Fisherman	6
61441 Animal Welfare Worker	20
<b>7. Trade workers - Total</b>	<b>2,912</b>
71111 Bricklayer and/or Blocklayer	74
71112 Stonemason	12
71121 Carpenter and/or Joiner	276
71122 Builder (Including Contractor)	486
71123 Boatbuilder	33
71211 Plasterer	99
71221 Glazier	28
71231 Plumber	129
71241 Painter, Decorator and/or Paperhanger	222
71242 Spray Painter	54
71243 Sign Writer	40
71311 Electrician	249

71312 Transport Electrician	16
71313 Appliance Electrician	20
72121 Coach Builder	9
72122 Sheet-Metal Worker inc metal mould maker	46
72123 Boiler Maker	10
72124 Fitter and Welder	62
72125 Panel Beater	50
72211 Blacksmith	6
72221 Pattern Maker	8
72222 Tool and/or Die Maker	22
72231 Fitter and Turner	42
72241 Saw Doctor	4
72311 Machinery Mechanic	123
72312 Motor Mechanic	174
72313 Aircraft Engine Mechanic	9
72314 Heating, Ventilation and Refrigeration Mechanic	18
72315 Small Engine Mechanic	11
72316 Mechanical Products Inspector and Tester	12
72411 Electrical Fitter	22
72412 Fire Alarm Technician	9
72421 Electronics Serviceperson	35
72431 Radio and Television Repairer	11
73111 Industrial Precision Instrument Maker and Repairer	5
73112 Locksmith	7
73113 Optical Instrument Maker, Repairer and Mechanic	7
73115 Watchmaker and Repairer	3
73121 Musical Instrument Maker, Repairer and Tuner	2
73131 Jeweller and Jewellery Repairer	18
73211 Glass Cutter and Beveller	4
73311 Graphic Pre-Press Tradesperson	13
73316 Screen Printer	10
73317 Printing Machinist	90
73318 Desktop Publisher	14
73321 Bookbinder	20
73331 Photolithographer, Photo Engraver	10
74111 Butcher & meat grader	36
74121 Baker	57
74211 Cabinet Maker	78
74212 Furniture Finisher	9
74311 Tailor/Dressmaker	18
74313 Textile Products pattern maker, Marker and Cutter	19
74321 Furniture Upholsterer	16
74322 Vehicle Upholsterer and Trimmer	4
74323 Canvas Worker	7
74331 Carpet and Other Floor Covering Layer	46
<b>8. Plant &amp; Machine Operators - Total</b>	<b>2,331</b>
81111 Quarry and Mine Worker	5
81133 Driller	7
81211 Metallic Furnace Operator	3
81221 Metal Caster	28
81231 Welder and Flame-Cutter	28
81241 Metal Drawer and/or Extruder	2
81312 Clay Product Plant Operator	10
81321 Glass Pressing and Drawing Machine Operator	15

81411 Timber Processing Machine Operator	7
81431 Paper Production Worker	4
81522 Water Treatment Plant Operator	4
81531 Still and Reactor Operator	2
81541 Other Chemical Processing Plant Operator	15
81611 Power Generating Plant Operator	4
81613 Pumping-Station Operator	7
81614 Other Stationary Engine Operator	3
82111 Machine Tool Operator	41
82112 Automated Machine Operator	141
82113 Spring Maker and Wire Worker	8
82115 Power Shear Operator	6
82121 Concrete Worker	60
82211 Pharmaceutical and Toiletry Products Machine Operator	7
82221 Electroplater	4
82223 Metal Polisher	5
82231 Photographic Darkroom Operator	17
82313 Tyre Retreader	14
82321 Rubber Machine Operator	2
82322 Plastics Machine Operator	22
82323 Plastics Laminator	3
82411 Woodworking Machinist	12
82412 Wood Panel Production Worker	2
82413 Joiner's Benchhand	6
82511 Paper Products Machine Operator	3
82512 Cardboard Forme Maker and Finisher	6
82513 Guillotine Operator	6
82623 Carpet Weaver	5
82624 Knitter, Knitting Machinist	6
82631 Sewing Machinist	143
82641 Launderer	42
82643 Dry-Cleaner	6
82644 Presser	9
82645 Textile Finisher	8
82646 Carpet Cleaner	10
82712 Slaughterer	33
82717 Meat & fish Processing Worker	7
82721 Milk and Other Dairy Products Maker	13
82742 Baker's Assistant	27
82751 Fruit, Vegetable and Nut Processing Machine Operator	6
82773 Other Food Products Processing Machine Operator	30
82911 Machinery Assembler	13
82922 Electric and Electronic Equipment Assembler	31
82923 Linesperson	32
82924 Electric Cable Jointer	4
82931 Metal Goods Assembler	5
82932 Plastic and Rubber Goods Assembler	19
82941 Wood and Related Materials Products Assembler	12
82944 Fencer	12
82953 Leather Goods Assembler	3
82954 Footwear Production Machine Operator	11
83111 Railway Locomotive Driver	10
83211 Taxi Driver	216
83212 Light Truck or Van Driver	49
83213 Driving Instructor	12

83221 Passenger Coach Driver	164
83231 Heavy Truck or Tanker Driver	484
83311 Farm Machinery Operator, Including Contractor	7
83312 Ground Spraying and/or Dusting Contractor	3
83321 Excavating Machine Operator	37
83323 Pile Driver, Driller Operator	4
83324 Earthmoving Machine Operator	35
83325 Roothing and/or Paving Machine Operator	22
83331 Crane Operator	19
83341 Fork-Lift Operator & Tow truck operator	61
83411 Deck Rating	14
83412 Other Ship or Boat Hand	12
84110 Building Exterior Cleaner	11
84111 Drainlayer	51
84112 Pipe Fitter	18
84113 Steel Fixer	5
84114 Scaffolder	13
84115 Rigger and Cable Splicer	10
84116 Steel Erector, Construction	5
84117 Roofer	45
84118 Aluminium Joiner	15
84119 Insulator	8
84121 Underwater Worker	6
<b>9. Elementary Occupations - Manual workers - Total</b>	<b>2,033</b>
91111 Cleaner	715
91112 Building Caretaker	88
91113 Pest Control Worker	9
91211 Courier and Deliverer	206
91212 Hotel Porter	27
91311 Refuse Collector	13
91312 Street or Park Cleaner	6
91411 Packer	222
91412 Loader and/or Checker	286
91413 Railway Shunter	5
91512 Builder's Labourer	98
91513 Sawmill Labourer	21
91514 General Labourer	340
Others	801
<b>Total</b>	<b>39,674</b>