



JUNE 2006

BOAT BUILDER: OCCUPATIONAL SKILL SHORTAGE ASSESSMENT

2004 Situation: Genuine skill shortage

Current Situation: Genuine skill shortage

Short-term Outlook: Genuine skill shortage

1 Executive Summary

1.1 Results from the 2005 Survey of Employers who have Recently Advertised suggest employers have had considerable difficulty in filling boat builder positions in New Zealand. Only 39% of positions were filled within ten weeks of advertising and there was an average of only 1.1 suitable applicants for every boat builder vacancy. This report considers these survey results in the context of trends in the demand for and supply of boat builders.

Table 1: Employer Survey Indicators, 2005

	Fill Rate	Average Number of Suitable Applicants
Boat Builders	39%	1.1
All Trades Surveyed	37%	1.0

Source: Survey of Employers who have Recently Advertised, Department of Labour.

1.2 Demand for boat builders grew rapidly from 2000 when New Zealand hosted the America's Cup and the industry was showcased to the world. This growth in demand for boat builders was largely driven by a surge in international orders which saw the value of exports of boats and ships more than triple between 1999 and 2003. Demand has, however, eased in 2004 and 2005 - possibly as the result of the impact of the high New Zealand dollar on exports. The predicted weakening of the New Zealand dollar over the next year or two may see demand for boat builders grow again as boats become less expensive to overseas buyers.

1.3 The supply of newly qualified boat builders remained stable at an average of 33 per annum between 2000 and 2001, before increasing to an average of 73 in 2002 and 2003. Supply through training has increased further in the last two years reaching 129 in 2005. About 15 boat builders are lost from the supply pool per annum through retirement. Occupational detachment appears to have some impact on supply due to factors such as dirty/unhealthy working conditions and higher pay available in related fields such as the construction sector.

- 1.4 Due to the on-going disparity between the levels of supply and demand, the Department of Labour has assessed the boat builder occupation as experiencing a **genuine skill shortage**.
- 1.5 Given that demand for boat builders may start to grow again as the economy eases, the number of newly qualified boat builders each year may not be sufficient to eliminate the current shortfall of boat builders. The Department of Labour, therefore, foresees shortages, at best, easing only slightly in the short-term.

2 Introduction

- 2.1 The purpose of this report is to investigate skill shortages for boat builders in New Zealand.
- 2.2 The following section presents key findings from the Department of Labour's (the Department's) *Survey of Employers who have Recently Advertised* (SERA). This survey provides an indication of employer's success in filling advertised vacancies for boat builders as well as other information on their recruiting experiences. The next two sections investigate trends in the demand for, and supply of, boat builders. The penultimate section presents some of the issues that arise from the matching of demand and supply in the labour market, such as wage rates. Finally, the 'Assessment' section considers all the information presented in the report and provides a view on whether the occupation is in shortage, and if so, the type of shortage being experienced. A short-term outlook for the shortage situation is also offered.



- 2.3 Further background to this occupational report, including a discussion of the methodology; a glossary of terms; and an overview of the Department's *Survey of Employers who have Recently Advertised*, including the survey questionnaire, can be found in the 'Background and technical note' at <http://www.dol.govt.nz/publications/jvm/trades/2005/background.asp>.

2.4 **Boat builders in New Zealand**

- 2.4.1 Boat builders (code 71123 in the New Zealand Standard Classification of Occupations) make and repair sailing, fishing, pleasure and motor boats.
- 2.4.2 The Department estimates that there were approximately 1,890 boat builders employed in New Zealand in 2005. Census 2001 figures indicate that almost the entire boat builder workforce is male (98%) and work full-time (96%).

2.5 **Note on Occupational Classification**

- 2.5.1 Household Labour Force Survey and External Migration data from Statistics New Zealand are only available at the 3-digit occupational level, with boat builders falling in the 3-digit category *building frame and related trades workers*. As boat builders comprise only a very small proportion of this broader group (4% in the 2001 Census), trends in employment and migration cannot be assessed through these sources.

3 **Survey of Employers who have Recently Advertised**

- 3.1 This section presents the key SERA findings of employers' experiences in recruiting boat builders.
- 3.2 The SERA allows the Department to gain insights into skill shortages by investigating how difficult it is for employers to fill vacancies. A 'fill rate' is calculated for each occupation – this being the proportion of vacancies included in the SERA sample which were filled with an adequately qualified and experienced person within ten weeks of advertising. Occupations with fill rates lower than 80% are typically regarded as being in shortage, while fill rates lower than 40% usually indicate that the occupation is in acute shortage.

Table 2: SERA Results for Boat Builders and All Trades Surveyed, August 2005

	Number of Employers	Number of Vacancies	Fill Rate¹	Average Number of Suitable Applicants per Vacancy¹
Boat Builders	12	31	39%	1.1
All Trades Surveyed	885	1480	37%	1.0

Source: Survey of Employers who have Recently Advertised, Department of Labour.

1 The 'All Trades Surveyed' fill rate and average number of suitable applicants per vacancy figures were both weighted to compensate for any under or over sampling of individual trade worker occupations in the 2005 survey.

- 3.3 Results from the 2005 SERA show that only 39% of boat builder vacancies included in the survey were filled within ten weeks of being advertised, down slightly from 41% in 2004. The fill rate for boat builders was slightly higher than the fill rate for all surveyed trade occupations (37%). There was an average of only 1.1 suitable applicants for each boat builder vacancy compared with an average of 1.0 for all trade occupations surveyed.

4 **Demand for Boat Builders**

- 4.1 This section investigates trends in the demand for boat builders and the factors underlying these trends. Demand is measured by the number of boat builders required by employers at current wage rates.

4.2 Historical Demand

4.2.1 According to the Census, between 1991 and 2001 the number of employed boat builders grew by an annual average of 2.9% (see Table 3). This is a greater level of growth than that seen for all trades (-0.2%) and all occupations (2.1%). There was very strong growth of 7.2% per annum over the period 1996 to 2001 as a consequence of growth in New Zealand's boat building industry. Business demography data collected annually by Statistics New Zealand show that the strong growth continued in 2002 and 2003 with an average increase of 10% per annum in the number of people employed in the Boatbuilding and Shipbuilding Industries. However, in 2004 and 2005 the number of people employed in these industries dropped by an average of 6% per annum.

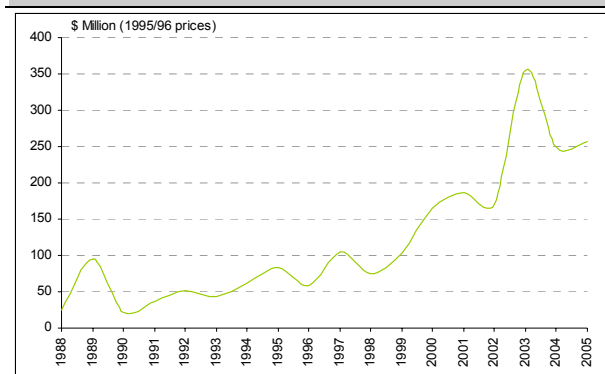
Table 3: Employment of Boat Builders, 1991-2001

	Annual Average Growth in Employment		
	1991-1996	1996-2001	1991-2001
All Boat Builders	-1.3%	7.2%	2.9%
All Trades	0.0%	-0.4%	-0.2%
All Occupations	3.1%	1.2%	2.1%

Source: Census of Population and Dwellings, Statistics New Zealand.

4.2.2 The America's Cup provided the impetus for growth in the boat building industry. The hosting of the Louis Vuitton Cup in late 1999 and the America's Cup in 2000 enabled New Zealand to showcase its boat building expertise to the world's yachting fraternity. A surge in international orders followed, with exports of boats and ships rising from NZ\$104 million in 1999 to \$354 million in 2003 (see Figure 1)¹. Exports dropped to around \$250M in both 2004 and 2005. This decrease may be due in part to the strengthening New Zealand dollar - making the price of boats more expensive for overseas buyers. In the year to March 2005, exports accounted for 42% of boat production, with the remaining 58% going to the domestic market in New Zealand.

Figure 1: Exports from New Zealand of Boats and Ships (1995/96 prices)



Source: Statistics New Zealand.

4.2.3 Despite the loss of the America's Cup in 2002, New Zealand continues to maintain its profile worldwide through the success of New Zealand made boats in international yachting events. The New Zealand boat building industry is well organised and organisations such as New Zealand Marine Export Group and New Zealand Trade and Enterprise actively promote the sector on international markets.

¹ These export figures do not include marine goods such as: sails, masts, anchors, and propulsion systems.

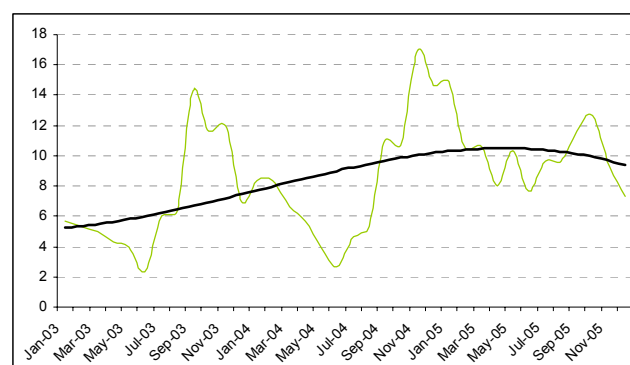
4.3 **Future Demand**

4.3.1 Despite a decrease in employment and exports in 2004 and 2005, the boat building industry is likely to continue its long-term growth into the future as it capitalises on its relatively low labour costs and reputation for innovation and quality. However, conditions in the industry are cyclical. It is a project-driven business and staffing requirements vary according to the order book. The industry is likely to be buoyed by the predicted weakening of the New Zealand dollar over the next year or two, making boats less expensive to overseas buyers. Domestic sales are likely to continue to remain high as the New Zealand population grows and personal income rises. Therefore, the Department foresees growth in demand for boat builders continuing over the short-term, although demand can fluctuate with the start up and completion of large projects.

4.4 **Changes in Market Conditions²**

4.4.1 Boat building is a cyclical industry and recruiting conditions vary over time. This is reflected in the Department's Job Vacancy Monitor which shows that the three-monthly moving average for job advertisements in this field has fluctuated over the last three years (see Figure 2). However, since late 2004 the number of advertised vacancies for boat builders has been consistently higher than in the period before it. This indicates that recruiting conditions for employers have been a little more difficult in the last five quarters than in earlier quarters.

Figure 2: Number of Advertised Vacancies for Boat Builders



Source: Job Vacancy Monitor, Department of Labour.

5 **Supply of Boat Builders**

5.1 This section investigates the various sources contributing to the supply of boat builders. Supply is measured by the number of people willing and able to work as boat builders at current wage rates.

5.2 **Training - National Certificate (Level 4) Qualifications and Equivalent**

5.2.1 This section investigates the growth in supply of *fully qualified* boat builders through training. This includes the award of the National Certificate in Boat Building (Level 4) by the Boating Industry Training Organisation (BITO). This is the nationally recognised qualification for boat builders which is designed by BITO to meet the needs of employers of boat builders. There are no other institutions that offer level 4 national certificate qualifications for this occupation.

² Analysis of the Job Vacancy Monitor suggests that it is an indicator of change in labour market tightness, or change in the degree of difficulty of recruiting staff. An increase in vacancies typically indicates increasing difficulty in recruiting staff and vice versa. While changes in demand usually dictate changes in labour market tightness, it can also be affected by changes in supply conditions, such as a rise in net migration.

5.2.2 New Zealand's participation in the America's Cup added a great deal of glamour to boat building and has encouraged young people into the trade. This, coupled with successful marketing of boat building training courses by BITO, led to strong growth in enrolments for the National Certificate in Boat Building (Level 4). Table 4 shows that new enrolments more than doubled from 113 in 2000 to 256 in 2001. New enrolments increased further in 2002 to 284, but have declined since then to be 200 in 2005. Due to the lag between enrolments and achievements, this upturn only begun to yield an increase in the number of National Certificate Level 4 qualifications achieved from 2002. There were an average of 75 completions between 2002 and 2004 compared to less than half this number between 2000 and 2001. In 2005, there were 129 completions – the highest figure in the period under examination.

Table 4: Number of Trainees Enrolled for and Achieving the Level 4 National Certificate in Boat Building (BITO)

	Total Enrolled	New Enrolments¹	Achievements
2000	223	113	33
2001	393	256	32
2002	486	284	79
2003	501	223	67
2004	499	222	78
2005	446	200	129

Source: Boating Industry Training Organisation; Tertiary Education Commission.

1 Caution should be taken with these numbers, as trainees who moved from one company to another were recounted as new enrolments in the database used to collect this information.

5.2.3 The training rate for boat builders is given in Table 5. This indicator provides an approximate measure of the rate at which the supply of fully qualified boat builders can potentially grow through training. The training rate is calculated by expressing the number of trainees achieving the relevant qualification as a percentage of total employment in that occupation. The training rate for boat builders was estimated to be 6.8% in 2005, which is a considerable increase from 2001 when the training rate was 2.0%. The training rate for boat builders in 2005 was more than double the average training rate of 3.3% for all trades analysed by the Department. By way of comparison, the average training rate for boat builders in New South Wales, Australia³ in the three years to June 2005 was 2.6% - lower than the training rate in New Zealand over the last three years.

³ Australian national level estimates of training rates are not available.

Table 5: Training Rate for Boat Builders, 2001-2005

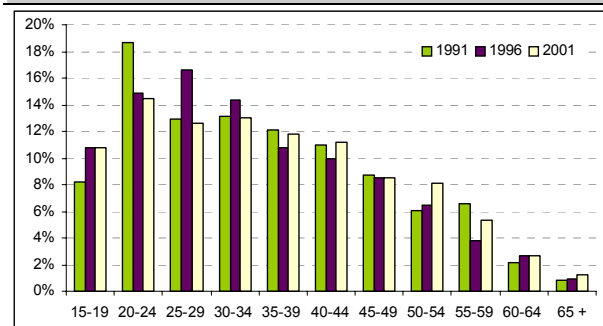
	Boat Builders	All Trades ⁴
2001	2.0%	2.0%
2002	5.1%	2.2%
2003	3.1%	2.2%
2004	3.8%	2.7%
2005	6.8%	3.3%

Source: Department of Labour.

5.3 Retirements

5.3.1 Based on 2001 Census data, it is estimated that approximately 0.8% of the boat builder workforce retires each year (assuming a retirement age of 65). This equates to a loss of about 15 boat builders per annum. This is lower than the average retirement rate for all trade occupations (1.3%). The relatively high number of young people entering the trade is reflected in the age profile of

Figure 3: Age Profile of Boat Builders, 1991-2001



Source: Census of Population and Dwellings, Statistics New Zealand.

boat builders which showed growth in the number of boat builders in the 15-19 and 20-24 year age groups between 1991 and 2001. This sets the boat building trade apart from most other trades. Most trades have seen a sharp decline in the number of young people entering the occupations in the 1990s. The average age of boat builders has remained steady at 35 years between 1991 and 2001.

5.4 Occupational Detachment⁵

5.4.1 Employers were asked if they thought boat builders left the occupation to go and do something different more or less than in other occupations. Of the eight employers who answered this question, four thought they left at a higher rate than in other occupations, three thought they left at the same rate, and one thought they left at a lower rate.

5.4.2 This suggests that occupational detachment is having some impact on supply for this occupation. While young people are attracted by the glamour of yachting, some employers say that the reality is that working conditions are dirty and unpleasant. Higher wages offered in the construction sector (which is also

⁴ The training rates for 'all trades' were calculated for the 14 trade occupations that were examined in-depth using data from the SERA Intensive 2005. As the composition of occupations being examined changes from year-to-year, so will the training rates.

⁵ 'Occupational detachment' refers to individuals who choose not to continue practising in their occupation but retain a connection to the occupation (e.g. move into a management or supervisory role, or retain professional registration), or who leave the occupation entirely (e.g. by changing occupation or withdrawing from the labour market).

experiencing skill shortages) may be luring some boat builders away from the boating industry.

6 Matching of Supply and Demand

6.1 This section considers some of the issues that arise from the labour market matching of the supply of boat builders with the demand for boat builders.

6.2 *Salaries*

6.2.1 Boat builder wages are relatively high compared with other trades. The Labour Cost Index (LCI) measured an average hourly wage of \$21.55 for boat builders in June 2005 compared with an average wage for all trade workers of \$19.81 (see Table 5). According to the LCI, wages of boat builders have increased by 9.2% in the twelve months to June 2005, compared with 4.8% in all trades.

Table 6: Average Hourly Wage Rates for Boat Builders⁶

	June 2004	June 2005
Boat Builder	\$19.74	\$21.55
All Trades	\$18.90	\$19.81

Source: Labour Cost Index, Statistics New Zealand.

7 Assessment

7.1 This section considers all the information presented in this report on employers' recruiting experiences, supply and demand trends, and matching issues, and offers a view on whether there is a shortage of boat builders and the type of shortage. A short-term outlook for the shortage situation is also offered.

7.2 Demand for boat builders grew rapidly from 2000 when New Zealand hosted the America's Cup and the industry was showcased to the world. Demand for boat builders was largely driven by a surge in international orders which saw the value of exports of boats and ships more than triple between 1999 and 2003. Demand has, however, eased in 2004 and 2005 - possibly as the result of the impact of the high New Zealand dollar on exports. In contrast to the sustained strong growth in demand in the early 2000s, the supply of newly qualified boat builders remained stable at an average of 33 per annum between 2000 and 2001, before increasing to an average of 73 in 2002 and 2003. While supply through training has increased further in the last two years (noting that about 15

Box 1: Skill Shortage Definitions

Genuine Skill Shortage

Occurs when employers have difficulties filling their job vacancies because there are not enough individuals with the required skills in the potential labour market to fill the positions on offer.

Recruitment and Retention Difficulty

Occurs when there is a considerable supply of individuals with the required skills in the potential labour market but they are unwilling to take up employment at current levels of remuneration and conditions of employment. Retention problems are often a major contributor to this condition.

⁶ The data shown from the LCI are unadjusted mean hourly rates. Caution should be taken with interpreting this information due to the relatively small sample sizes, particularly at the occupational level. Furthermore, the LCI is designed to measure changes in, rather than the actual level of, wage and salary rates.

boat builders retire per annum), occupational detachment appears to be impacting on supply. As there appears to be a considerable disparity between supply and demand, a shortage of boat builders has resulted. This is reflected in the low fill rate of 39% and there being only 1.1 suitable applicants per vacancy. This disparity that has developed as demand has outgrown supply indicates that the shortage of boat builders is a **genuine skill shortage** (see Box 1 for definition).

- 7.3 The boat building industry tends to be volatile and demand can fluctuate with the start up and completion of large projects. However, the predicted weakening of the New Zealand dollar over the next year or two may see demand for boat builders grow again as boats become less expensive to overseas buyers. The higher number of newly qualified boat builders in recent years is likely to be maintained in the short-term, however, this may not be sufficient to eliminate the current shortfall of boat builders. The Department therefore foresees shortages, at best, easing only slightly in the short-term.

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