



**JOB VACANCY MONITORING PROGRAMME:
16 TRADE OCCUPATION SHORTAGE ASSESSMENT REPORTS
AN OVERVIEW**

Summary

- 1 This report provides an overview of the 16 Trade Occupation Shortage Assessment reports of the Department of Labour. The 16 trades assessed are:
 - Automotive Electrician
 - Baker
 - Boat builder
 - Bricklayer
 - Butcher
 - Cabinet Maker
 - Carpenter
 - Diesel Mechanic
 - Electrician
 - Fitter and Turner
 - Fitter and Welder
 - Hairdresser
 - Motor Mechanic
 - Panel Beater
 - Plumber
 - Sheetmetal Worker
- 2 The objectives of the trade reports are to provide an assessment of whether there is a genuine skill shortage of the occupation under review, an understanding of the demand and supply forces contributing to the shortage and a short-term outlook.
- 3 The occupations were selected on the basis that there was some evidence that they are in shortage. This evidence was largely drawn from an earlier Job Vacancy Monitoring Programme survey of employers. The chosen occupations represent a

wide range of trades including construction, engineering, motor, food, boat building and furniture making.

- 4 The key findings of the survey of employers in the 16 selected trade occupations, and the associated additional analysis, are:
 - a Shortages exist in every trade occupation surveyed
 - b Shortages are acute in some trade occupations, with vacancy fill rates¹ below 30% in some areas
 - c The shortages are assessed to be genuine skill shortages, as opposed to recruitment difficulties, in all but one occupation surveyed
 - d On balance, the growth in supply through training and migration falls short of the loss of trades people through retirement and occupational wastage and the growth in demand through job creation
 - e The causes of trade shortages are varied and include a drop in young people entering the trades in the 1990s and low training rates² at the “fully trade qualified” qualification levels
 - f These shortages are expected to persist, certainly in the short term.

Wider Context

- 5 It is essential to view the situation of the trade occupations surveyed in the wider economic and labour context currently existing in New Zealand. With official unemployment at a 19 year low (the lowest unemployment rate in the OECD) and many industry sectors and employers reporting skill and labour shortages, the situation of the 16 trade occupations reported here is unlikely to be unique.

Approach and definitions

- 6 The 16 trade occupational shortage assessment reports draw on data from the Department of Labour’s Survey of Employers who have Recently Advertised (SERA) – Intensive; a small sample, largely qualitative survey of employers who have advertised vacancies in selected skilled occupations. The survey aims to gain an in-depth understanding of shortages in these 16 occupations by asking employers about their recruitment experiences. The survey was conducted in July 2004.
- 7 This survey data is analysed along with other data sources pertaining to demand and supply forces affecting these occupations. These data sources include census, Household Labour Force Survey, Tertiary Education Commission, Industry Training Organisations, New Zealand Qualifications Authority, External Migration and Tertiary Data Warehouse.
- 8 SERA surveyed employers seeking “fully skilled” tradespeople. “Fully skilled” has been benchmarked against the New Zealand Qualifications Framework as National Certificate Level 4 or equivalent, which equates with “fully qualified tradesperson” in

¹ See definition in paragraph 9c

² See definition in paragraph 9a

most trades. We have also recognised that there are numerous other courses available (usually at a lower level and of a shorter duration than the National Certificate) that are related to the 16 trade occupations. While not necessarily qualifying the trainee to become a fully qualified tradesperson they do contribute to the stock of skills associated with those trades, therefore we have also reported on enrolments in these courses.

- 9 The following terms are used in this report:
- a *Training rate*: Number of trainees completing relevant qualifications expressed as a percentage of employment in that occupation.
 - b *Enrolment rate*: Number of trainees enrolled for relevant qualifications expressed as a percentage of employment in that occupation.
 - c *Fill rate*: proportion of vacancies included in the SERA survey sample which were filled with an adequately qualified and experienced person within six to eight weeks of advertising³.
 - d *Skill shortage*: A genuine skill shortage exists when employers have considerable difficulty in 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.
 - e *Recruitment difficulty*: A recruitment difficulty exists when there is an adequate 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 in reasonably accessible locations. Unwillingness to take up employment in certain vacancies due to pay and conditions can also affect occupations experiencing skill shortages, thereby exacerbating genuine shortage situations. However, in these skill shortage assessment reports 'recruitment difficulty' is used to denote occupations with adequate supplies of skilled individuals but difficulties filling vacancies.
- 10 The survey of these trade occupations will be repeated annually, with a second series of reports expected to be completed in late 2005/early 2006. Also during this calendar year, the Department of Labour plans to undertake further analysis of the survey data to gain an in-depth understanding of some of the issues arising from these reports.

Major findings

- 11 Appendix A provides a summary table of the main skill shortage and supply indicators for each of the surveyed trade occupations.

Shortages are acute in some trade occupations ...

- 12 Only four out of ten trade vacancies included in our sample (453 vacancies) were filled within six weeks (an average fill rate across the surveyed trades of 41%).

³ In cases where an employer has taken on a new staff member in a skilled vacancy but does not regard that person as possessing the appropriate skill level, the vacancy is counted as unfilled. For example, an employer who advertised for a carpenter but was unable to find a fully skilled carpenter and took on a hammerhand is regarded as having an unfilled vacancy.

This indicates a depth of shortage within these trades, as any occupation with a fill rate of less than 80% is generally regarded as being in shortage. This average fill rate is also considerably lower than largely comparable fill rates measured in New South Wales, where most of these occupations are also considered to be in shortage.

- 13 However, it is important to note that the various trades surveyed differ markedly at a sectoral and individual occupational level. At a sectoral level, fill rates were lowest in the construction (35%) and metal trades (42%) and slightly higher in the motor (51%) and food trades (59%)⁴. At an individual trade occupation level, fill rates were lowest for automotive electricians (15%) and bricklaying (23%) and highest for motor mechanics (72%) and butchers (71%).

These are genuine skill shortages not recruitment difficulties ...

- 14 We classified 15 of the 16 trade occupations as experiencing *genuine skill shortages* while only one, hairdressing, was classified as being a *recruitment difficulty*.⁵ Hairdressers were regarded as a case of recruitment difficulty as average wages were substantially lower than the trade average and there was survey evidence from many employers of the existence of a pool of trained hairdressers who were unwilling to take up positions on offer at current wage rates and working conditions.
- 15 This is not to say that there may be examples of recruitment difficulties within occupations classified as being in genuine shortage, as some employers offer lower than occupational average wages for their jobs or poorer working conditions.

The causes of the shortages are varied ...

The number of young people entering the trades dropped sharply in the 1990s

- 16 The sharp drop in the number of young people entering the trades is clearly illustrated by the changing age profile of trade workers measured in the 1991, 1996 and 2001 population censuses. Employers told us that changes to the apprenticeship system in the 1990s impacted heavily on training. Other factors mentioned by employers included the winding down of many government-based apprentice training initiatives, economic recession, and the rising proportion of young people embarking on tertiary academic study in New Zealand.

Training rates at National Certificate Level 4 are low

- 17 While enrolment rates in training related to the trades occupations reviewed appear to be quite high (average of 30.5% across the surveyed trades), the number of people achieving the benchmark National Certificate Level 4 qualifications appears to be low as a percentage of the number of people employed in those occupations (1.8%). These training rates are lower than comparable rates in New South Wales, Australia, where widespread shortages in the trades are also reported.

⁴ These are aggregations. Construction includes carpenters, bricklayers, electricians and plumbers; metal trades includes sheet-metal workers, fitters and turners, fitters and welders; motor trades include motor mechanic, automotive electrician, diesel mechanic and panel beater; food trades include butchers and bakers.

⁵ In determining whether a skill shortage or recruitment difficulties exist, we examined average wage rates in each occupation, considered evidence from employers and others closely linked with the trades (e.g. ITO's) on the state of the occupation and sought evidence of a pool of trained people not willing to take up current positions.

- 18 In some occupations, training at Levels 2 and 3 appears to be assisting to meet recruitment needs, but overall the numbers achieving National Certificate Level 4 are unlikely to alleviate current shortages as well as meet new demands arising from job creation and replacement demand arising from trade workers moving into other occupations, retiring or emigrating.

Migratory outflows

- 19 There has been high net outward migration of trade workers over the seven year period from June 1997. This situation has improved recently and some trades registered positive net inflows in 2003 and 2004.

Construction boom

- 20 The booming construction industry (value of work put in place has grown by 36% in the three years to June 2004) has resulted in rapid growth in demand for construction trades. It has also impacted on other trade occupations as higher wages offered in construction has attracted trade workers with transferable skills (e.g. boat-builders and cabinet makers) from other industries.

Attractiveness of some occupations

- 21 Surveyed employers mentioned working conditions in some trades as discouraging people from choosing the occupation or causing people to leave. Examples include:
- a Bakers – the majority of employers interviewed made some reference to the long and unsociable hours bakers are required to work. One employer, commenting on working conditions, said "... getting up at 3am ... working 14-15 hour shifts on top of the early start. You have no social life when you have to be in bed by 8.30pm. Not exactly selling itself, is it?"
 - b Boatbuilding – Employers reported that some boat builders leave the occupation due to unpleasant working conditions. While young people are attracted by the glamour of yachting, particularly in post-America's Cup New Zealand, boat builders sometimes need to work with unpleasant chemicals under dusty and dirty conditions.
 - c Hairdressers – Hairdressers often work with unpleasant chemicals and have health problems associated with their backs, hands and arms. All these factors, along with low wage rates, may go some way to explaining the large occupational wastage experienced by the hairdressing occupation.

On balance, growth in demand outstrips growth in supply

- 22 The supply of people, to the trades under review, from training (i.e. the training rate) grew by 1.8% in 2003. This is only marginally faster than the rate (1.3%) at which supply was diminished through retirements. Supply would be further diminished through some trades people moving into other occupations ("occupational wastage") although net inward migration made a small positive contribution to supply (0.3%). Demand for the trades has increased over this

period. The Household Labour Force Survey employment growth figures shows that demand for all trades⁶ grew by at least 2.6% in 2003.

- 23 On balance, the growth in supply through training and migration falls short of the loss of trades people through retirement and occupational wastage and the growth in demand through job creation.

Shortages will persist ...

- 24 For most occupations there is little indication that supply through training and migration will rise to an extent that shortages will be alleviated in the next 12 months.

Consultation

- 25 The Tertiary Education Commission, relevant Industry Training Organisations, and other organisations such as registering authorities have been consulted extensively in the preparation of these reports. These organisations were asked to comment on the analysis, data and conclusions. Feedback has been incorporated into final reports. Responses have been generally positive. A full list of Industry Training Organisations that have been consulted is given in Appendix B.

Conclusion – Implications of the findings

- 26 These trade reports have provided some useful insights into the nature of skill shortages and training issues in particular trades occupations. The findings point to a need to improve recruitment and retention in the trade occupations and consider ways to increase the number of skilled workers in these trades. Government, industry, tertiary education providers and Industry Training Organisations (ITOs), employers and employees, will need to continue to work together to build a skilled workforce, and address the specific issues that may underlie skill shortages in some occupations

⁶ We do not have growth rates for each of the occupations under review, but rather an overall growth rate for all trades.

APPENDIX A: SUMMARY INDICATORS BY OCCUPATION

Occupation	Status	Fill rate ¹	Employed (000s) 2003 ²	Training: National certificate level 4 and equivalent (2003)					Training: All qualifications (2003)		Retirement rate ⁸ (2003)
				Achieved L.4 qual	Training rate ³	Training rate: New South Wales ⁴	Total enrolments	Enrolment rate ⁶	Total enrolments	Enrolment rate ⁷	
Automotive Electrician	Skill shortage	15%	1.4	28	2.0%	4.6%	230	16.6%	264	19.1%	0.7%
Baker	Skill shortage	47%	4.9	26	0.5%	2.2%	323	6.6%	945	19.2%	0.6%
Boat builder	Skill shortage	41%	2.1	85	4.0%	not available	501	23.7%	910	43.1%	0.8%
Bricklayer	Skill shortage	23%	3.2	27	0.8%	1.4%	148	4.6%	166	5.2%	1.2%
Butcher	Skill shortage	71%	4.3	60	1.4%	not available	574	13.2%	2367	54.6%	1.0%
Cabinet maker	Skill shortage	32%	4.7	37	0.8%	1.7%	485	10.4%	798	17.1%	1.4%
Carpenter	Skill shortage	38%	18.0	441	2.5%	4.3%	5317	29.5%	6588	36.6%	1.6%
Diesel Mechanic	Skill shortage	55%	9.4	101	1.1%	4.6%	994	10.5%	1081	11.4%	1.5%
Electrician	Skill shortage	54%	13.2	293	2.2%	3.8%	2224	16.8%	3890	29.4%	1.1%
Fitter and Turner	Skill shortage	54%	4.8	111	2.3%	2.2%	762	15.8%	2292	47.6%	1.5%
Fitter and Welder	Skill shortage	33%	6.2	146	2.4%	3.0%	1084	17.5%	4438	71.5%	0.9%
Hairdresser	Recruitment difficulty	42%	10.2	256	2.5%	6.0%	2276	22.2%	4426	43.3%	0.4%
Motor Mechanic	Skill shortage	72%	14.6	202	1.4%	4.6%	1434	9.8%	2783	19.0%	1.1%
Panel beater	Skill shortage	52%	3.4	51	1.5%	3.7%	307	8.9%	486	14.1%	0.8%
Plumber	Skill shortage	32%	6.2	61	1.0%	2.8%	919	14.7%	1407	22.5%	1.6%
Sheetmetal worker	Skill shortage	38%	3.8	44	1.2%	5.8%	557	14.8%	852	22.7%	1.2%
Total	Skill shortage	41%	110.6	1970	1.8%	2.8% ⁵	18135	16.4%	33694	30.5%	1.3%

Notes:

¹ Proportion of vacancies included in SERA filled within six to eight weeks of advertising

² Estimates from Department of Labour Occupational Employment Model

³ Number of trainees achieving relevant national certificates (L4) and equivalent qualifications expressed as a percentage of employment in that occupation.

⁴ Source: Australian Department of Employment and Workplace Relations

⁵ This rate refers to all trades

⁶ Number of trainees enrolled for relevant national certificates (L4) and equivalent qualifications expressed as a percentage of employment in that occupation

⁷ Number of trainees enrolled for all courses related to that occupation expressed as a percentage of employment in that occupation

⁸ Number of persons retiring each year expressed as a percentage of employment in that occupation.

APPENDIX B

ITOS AND OTHER RELEVANT ORGANISATIONS CONSULTED

OCCUPATION	ORGANISATIONS CONSULTED
Bricklayer	Signmaking Painting and Masonry Industry Training Organisation
Plumber	Plumbing Industry Training Organisation
Carpenter	Building and Construction Industry Training Organisation
Electrician	Electrotechnology Industry Training Organisation
Automotive Electrician	Motor Industry Training Organisation
Motor mechanic	Motor Industry Training Organisation
Panel Beater	Motor Industry Training Organisation
Diesel Mechanic	Motor Industry Training Organisation
Sheet Metal Worker	Competenz
Fitter Welder	Competenz
Fitter and Turner	Competenz
Cabinet Maker	Furniture Industry Training Organisation
Boat Builder	Boating Industry Training Organisation
Hair Stylist	Hairdressing Industry Training Organisation
Baker	Competenz
Butcher	Retail Meat Industry Training Organisation