

February 2005

**SKILL SHORTAGE ASSESSMENT
OCCUPATION: BRICKLAYER**

Current situation: Skill shortage
Short term outlook: Skill shortage

Executive summary

1. Results from the Survey of Employers who have Recently Advertised (SERA) indicate that there is currently a severe shortage of bricklayers, with a very limited pool of suitable labour now available to meet demand. Only 23% of vacancies included in the survey were filled and, on average, there were only three suitable applicants for every ten vacancies.

Table 1: employer survey indicators, 2004

	Fill rate	Average number of suitable applicants
Bricklayers	23%	0.3
All trades surveyed	41%	0.7

Source: Department of Labour, SERA

This indicates that tighter recruitment conditions exist for bricklayers than in any other building trade included in the SERA. This report considers these survey results in the context of trends in the demand for and supply of bricklayers.

2. The demand for bricklayers has grown rapidly in the past few years due to the construction boom, and the increasing use of brick masonry in buildings. Construction industry activity is expected remain at its current high level in 2005, but demand for bricklayers will continue to grow due to shifting consumer preferences towards bricks.
3. The formal training system appears to have contributed little to the stock of bricklaying skills in New Zealand. Fewer than 30 trainees have achieved the national certificate qualification each year since 2000, which is barely enough to replace retiring bricklayers, let alone cope with new demand which has probably been growing by a few hundred bricklayers each year. It appears that employers have largely expanded their bricklayer workforce by recruiting untrained staff and providing informal on-job training.
4. Continued growth in demand for bricklayers coupled with extremely low training levels indicates that the current shortage of bricklayers will persist in the short term.

Introduction

The purpose of this report is to investigate the shortage of bricklayers in New Zealand. The report aims to give an assessment of whether there is a shortage of bricklayers and to provide an insight into demand and supply factors contributing to this situation. It also offers an outlook for shortages in this trade.

Bricklayers (coded 71111 under the New Zealand Standard Classification of Occupations) lay bricks, tiles and building blocks outside and within a variety of residential and commercial building structures. They need to have a wide knowledge of building materials currently in use because of the changing range and composition of bricks and concrete blocks available. The physical demands of the job are very high due to the long hours and the labour intensive nature of the work, although more mechanisation on building sites such as hoists and cranes mean slightly less manual lifting is required. Most bricklayers (around 60%) are self-employed. There are regional differences in employment arrangements, with a higher incidence of sub-contractors working on large developments in the Greater Auckland area, who may be paid according to number of bricks laid rather than an hourly wage. The Department of Labour (DoL) estimates that approximately 3,200 bricklayers were employed in New Zealand in 2003.

A background and technical note to this report is available from DoL. The note provides an overview of the broader Job Vacancy Monitoring Programme, of which this report is an output. It also provides a brief description of the employer survey conducted for this report and explanations of indicators and definitions used in the report.

Demand for bricklayers

Historical demand

There has been strong growth in the employment of bricklayers between 1991 and 2001, according to data from Census. Employment grew by 3.3% per annum during this period, which is considerably higher than average employment growth across all construction trades. This indicates that there has been increasing use of brick, and hence bricklayers, in construction in New Zealand. The increasing popularity of brick-based construction is due in part to the leaky building issue, as well as the increasing cost competitiveness of bricks. Growth in demand for bricklayers is therefore being driven by two factors: growth in the construction industry and a shift towards the use of brick masonry.

Table 2: employment growth of bricklayers, 1991-2001

Occupation	1991-2001 annual growth
Bricklayer	3.3%
Construction trades	0.5%
All trades	-0.2%
All occupations	2.2%

Source: Statistics New Zealand, Census of Population and Dwellings 1991, 1996 and 2001

Demand for bricklayers is likely to have grown considerably since 2001. The building boom of the past three years has led to a 36% rise in the volume of construction work completed (between mid 2001 and mid 2004). Employment in the construction industry has grown by 31% over this period. Demand for bricklayers is likely to have grown at an

even higher rate than this, given that brick masonry is increasingly being used in construction. DoL estimates that a few hundred bricklayer positions have been created each year between 2001 and 2004.

Future demand

An overview of future demand in the construction industry is given in Appendix 1. Demand for bricklayers is likely to continue growing in 2005. While the volume of construction work completed is expected to level off during 2005, the increasing trend towards the use of brick will ensure that demand for bricklayers continues to rise.

Summary

The demand for bricklayers has grown rapidly in the past few years due to the construction boom, and due to the increasing use of brick masonry in buildings. Construction industry activity is expected remain at its current high level in 2005, but demand for bricklayers will continue to grow due to a shift towards brick masonry in construction.

Supply of bricklayers

Training – National certificate (Level 3) qualifications and equivalent

This section investigates the growth in supply of *fully qualified* bricklayers through training. It considers three sources of supply:

1. The award of the National Certificate in Masonry (Brick and Block laying) Level 3 by the Signmaking, Painting and Masonry Industry Training Organisation. This is the nationally recognised qualification for bricklayers. It takes an average of three years to attain this qualification.
2. The award of the National Certificate in Masonry (Brick and Block laying) Level 3 by other providers such as polytechnics.
3. The award of qualifications apart from national certificates which are deemed to be equivalent to the national certificate in terms of level and number of credits.

The number of bricklayers achieving the National Certificate rose slightly between 2001 and 2003 from 21 to 27 (see table 3). Total enrolments and new enrolments have increased between 2001 and 2003 (table 4) which suggests that the number of trainees achieving qualification should increase in the future.

There were no non-national certificate qualifications at the equivalent level of the national certificate awarded over this time period.

Table 3: number of trainees achieving the National Certificate in Masonry (brick and block laying) Level 3 and other equivalent qualifications

	National Certificate in Masonry (Brick and Block laying) Level 3 (ITO)	National Certificate in Masonry (Brick and Block laying) Level 3 (Other providers)	Other equivalent qualifications	Total
2001	21	None	None	21
2002	16	None	None	16
2003	27	None	None	27

Source: Source: Signmaking Painting and Masonry Industry Training Organisation, Weltec and Tertiary Education Commission (TEC)

Table 4: number of trainees enrolled for the National Certificate in Masonry (Brick and Block laying Level 3 and other equivalent qualifications)

		National Certificate in Masonry (Brick and Block laying Level 3 (ITO))	National Certificate in Masonry (Brick and Block laying) Level 3 (Other providers)	Other equivalent qualifications	Total
2001	Total enrolled	116	None	None	113
	New enrolments	22	None	None	22
2002	Total enrolled	113	None	None	113
	New enrolments	38	None	None	38
2003	Total enrolled	148	None	None	148
	New enrolments	58	None	None	58

Source: Source: Signmaking, Painting and Masonry Industry Training Organisation, Weltec and Tertiary Education Commission (TEC)

Training rate indicators are given in table 5. A comparison of achievements of the national certificate in bricklaying (level 3) and equivalent qualifications with the number of bricklayers employed yields a training rate of only 0.8%. This indicator provides a crude measure of the rate at which the supply of fully qualified bricklayers can potentially grow through training¹. This training rate is extremely low considering that a booming construction industry has led to demand for construction trades probably growing by 10% or more per annum over the past three years. The training rate for bricklayers is considerably lower than the average training rate of 1.8% for all trades surveyed as part of the SERA. It is also lower than the bricklayer training rate of 1.4% in New South Wales (NSW), Australia.

An alternative measure of training levels is the training enrolment rate (NC level 3) which compares the number of trainees enrolled for the national certificate with the number of bricklayers employed. The enrolment rate for bricklayers was 4.6% in 2003. This too is well below the average for all trades surveyed in SERA.

Training – Other related qualifications and courses

While the level 3 national certificate and equivalent non-national certificates may be regarded as the qualification required to be a *fully qualified* bricklayer, there are other lower level qualifications available in bricklaying (such as the certificate in pre-trade masonry). These qualifications are at a lower level and are of shorter duration than the level 3 national certificate. But they may be regarded as adequate to some employers of bricklayers, especially during times of acute skill shortages. They are also of significance as these qualifications may staircase trainees towards the national certificate level 3 qualifications. Credits obtained in these qualifications may be recognised towards a national certificate level 3, should the trainee later wish to become a fully qualified tradesperson. A list of these qualifications and the proportion of trainees enrolled in courses leading to these qualifications is provided in Appendix 2.

¹ This assumes that there is full employment of bricklayers. This is a reasonable assumption in the current environment of low unemployment and skill shortages.

Training in these courses is reflected in the training enrolment rate (all related training) which compares the number of trainees enrolled in all bricklayer-related training with the number of employed bricklayers. The training enrolment rate (all related training) is measured at 5.2% for 2003 (table 5).

Table 5: training rates for Bricklayers

Indicator	Explanation	Bricklayer (NZ)	All SERA trades surveyed (NZ)	Bricklayer (NSW, Australia)	All trades (NSW, Australia)
Training rate (national certificate L4 and equivalent)	Number of trainees achieving relevant national certificates (level 3) and equivalent non-national certificate qualifications expressed as a percentage of employment in that occupation.	0.8%	1.8%	1.4%	2.8%
Training enrolment rate (national certificate L4 and equivalent)	Number of trainees enrolled for relevant national certificates (level 3) and equivalent non-national certificate qualifications expressed as a percentage of employment in that occupation.	4.6%	16.3%		
Training enrolment rate (all related training)	Number of trainees enrolled in all relevant courses expressed as a percentage of employment in that occupation.	5.2%	30.5%		

Source: Department of Labour (New Zealand), Department of Employment and Workplace Relations (Australia)

These training indicators show that formal training programmes have been contributing very little to the growth in the supply of bricklayers. Moreover, many employers say they value experience above qualifications and that they are willing to take on unskilled workers who have the right attitude and train them up informally. This practise appears to be the norm. Information from the 2001 census shows that only 14% of bricklayers held a relevant vocational qualification in that year. Employers noted that that the sole provider of the bricklaying national certificate was based in Wellington while most bricklaying work occurred north of Hamilton.

Retirement

Assuming a standard retirement age of 65 years, around 30 bricklayers are likely to retire each year. This exceeds the annual number of trainees achieving the national certificate.

Summary

The formal training system appears to have contributed little to the stock of bricklaying skills in New Zealand. Fewer than 30 trainees have been achieving the national certificate qualification each year since 2000, which is unlikely to be enough to replace retiring bricklayers, let alone cope with new demand which has probably been growing by a few hundred bricklayers each year. It appears that employers have largely expanded their bricklayer workforce by recruiting untrained staff and providing informal on-job training.

Employer recruiting experiences

Is there a shortage of bricklayers?

SERA results indicate that there is a severe shortage of bricklayers in New Zealand. Table 5 shows that only 23% of bricklayer vacancies in the survey were filled within six weeks of being advertised. This fill rate was significantly lower than the average fill rate

for all trades surveyed (41%), and was lower than any other individual building trade surveyed. The very difficult recruiting environment for bricklayers is further emphasised by the fact that there was an average of only 3 suitable applicants per 10 bricklayer vacancies, compared with an average of 7 out of 10 for all surveyed trades. One skill requirement that employers found especially hard to find was the ability to lay aerated concrete blocks, a relatively new product on the market.

Table 5: SERA results for Bricklayers and all trades

	Number of employers	Number of positions	Positions filled	Fill rate	Suitable applicants	Average number of suitable applicants
Bricklayers	10	48	11	23%	13	0.3
All trades surveyed	240	453	186	41%	337	0.7

Source: Department of Labour, SERA

What are employers paying?

Information from the Labour Cost Index (LCI) indicates that bricklayers’ wages are higher than the average wage for all trades (table 6)². This result challenges the reported perceptions that bricklaying is low-paid work. Some bricklayers are paid on a piece-rate basis (i.e. per brick laid), which means the most efficient workers can command a considerable pay premium in this trade. One employer reported that an experienced, skilled bricklayer could earn a six-figure annual income.

Table 6: bricklayer average hourly wage rates

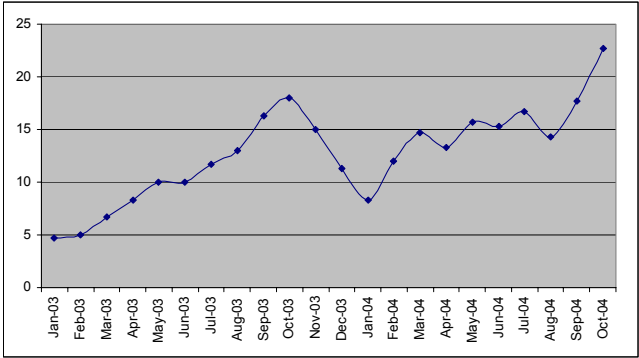
	Mean
Bricklayer	\$19.69
All trades	\$19.54

Source: Statistics New Zealand, LCI

Changes in market conditions

The DoL’s Job Vacancy Monitor shows an upward trend in the number of advertised vacancies for bricklayers (figure 1). This suggests that market conditions have been getting tighter. The decline between October 2003 and January 2004 (observable on figure 1) may have been a seasonal effect.

Figure 1: bricklayer job advertisements, Jan 2003 – Sep 2004



Source: Department of Labour, Job Vacancy Monitor

Outlook

Continuing growth in demand for bricklayers coupled with extremely low training levels indicates that the current shortage of bricklayers will persist in the short term.

² The LCI is not designed to produce statistically accurate estimates of wage levels. The LCI estimates of wage levels are merely indicative.

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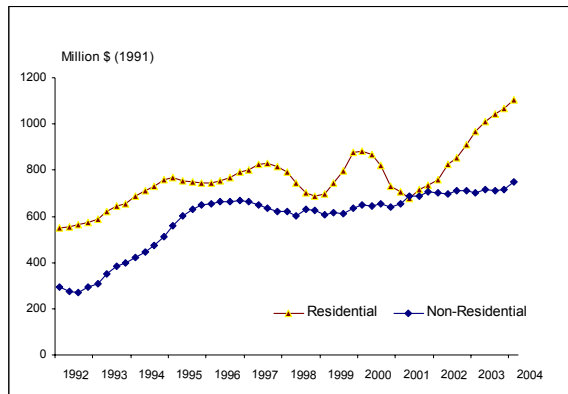
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Appendix 1: Construction Industry Overview

New Zealand has experienced three years of strong growth in construction activity. Figure 1 shows the rapid (36%) growth in building work put in place between mid-2001 and mid-2004. The boom has resulted in construction sector employment growth of 31%

Figure 1: building work put in place, residential and non-residential



Source: Statistics New Zealand

over the same period. The strong construction industry growth has been driven mainly by activity in the residential sector. The non-residential sector has been flat. Growth in the residential sector has been driven by a range of factors. These include low real interest rates from early 2001 to early 2004, high population growth caused by record net immigration, strong wage and job growth, offshore investment, a previous lull in building activity, and falling household sizes.

Table 1: construction activity and employment, years to June 2001 and June 2004

Construction indicator	Year to June 2001	Year to June 2004	June 2001-June 2004 % change
Work put in place (1991\$m)	5,452	7,408	36%
Residential building consents (number)	19,345	32,851	70%
Non-residential building consents (number)	16,169	15,983	-1%
Construction employment (number of people)	114,300	149,100	31%

Source: Statistics New Zealand

Outlook for the residential sector

The residential sector is likely to slow considerably from the high growth experienced in the past few years. This is because all the key drivers of that growth have turned. Interest rates have risen,³ lower net inward migration⁴ has slowed population growth, the downturn in international education may hurt apartment building, and the high exchange rate may discourage offshore investors. September 2004 Consensus Forecasts from New Zealand Institute of Economic Research (NZIER) predict that residential investment will grow by 4.8% in the year to March 2005 and then fall by 9.3% in the following year.

Outlook for the non-residential sector

Non-residential building activity is expected to grow strongly in 2005. This is reflected in an upward trend in building consents since late 2003 (figure 2). Growth will be driven by increased government expenditure on corrections, education and health facilities, upgrading and construction of new primary processing facilities, ongoing construction of

³ The Central Reserve Bank increased its Official Cash Rate to 6.5 per cent in October 2004, a rise of 1.5 percentage points since the beginning of 2004.

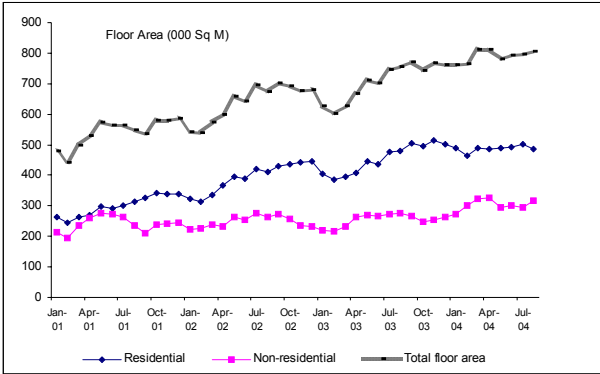
⁴ Net inward migration (permanent and long-term arrivals less departures) fell to 22,000 in the year to June 2004 from 42,500 a year earlier and the Department of Labour expects it to continue falling to 15,000 in the year to March 2005 and 10,000 in the year after.

retail premises and growing demand for office space arising from strong employment growth.

Overall outlook

Current high levels of construction activity are expected to be maintained in 2005 as growth in the non-residential sector compensates for the expected slowdown in the residential sector. This will result in current levels of employment being sustained. However, the shift in emphasis from residential activity to non-residential will require a transfer of workers from one sector to the other and a change in the mix of skills applied in the construction sector as a whole.

Figure 2: building consents issued, residential and non-residential



Source: Statistics New Zealand

APPENDIX 2. TRAINING ENROLMENTS FOR BRICKLAYING TRADE: 2003

Enrolments in National Certificate Level 3 and equivalent qualifications: 2003

Qualification Title	Qualification Code	Provider Name	Level	Credits	Share of Enrolments (%)
NC in Masonry - Brick & Blocklaying	na	Painting ITO	3	86	100.0%
Total					100.0%

Enrolments in other qualifications

Qualification Title	Qualification Code	Provider Name	Level	Credits	Share of Enrolments (%)
Certificate in Pre-Trade Masonry (Bricklaying)	HV4108	Wellington Institute of Technology	2	44	82.4%
Introduction to Block Laying	HV4048	Wellington Institute of Technology	na	na	17.6%
Total					100.0%