>>> National Bricklaying Apprenticeship Status Report

Industry Pathfinders Project

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altegis GROUP

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Jude Walker and Tim Powers

22 William Street
Newtown Victoria 3220
Telephone: 03 5263 2514
Fax: 03 5263 3731
www.altegis.com.au

Disclaimer

Steering Committee

Geoff Noble (Chair)	Australian Brick & Blocklaying Training Foundation Ltd.
Ross Petersen	Sutherland College, TAFE NSW
Paul Klepczynski	TAFE SA
Don McKenzie	Nat. Federation of Bricklayers & Masonry Employers Assn
Alan Waldron	Hutchinson Builders (Qld)
Paul Croudace	CSR Bricks & Roofing (NSW)
Jon Godby	Adbri Masonry (Qld)
John Glover	Group Training Association of Victoria
Dean Pearson	Australian Brick & Blocklaying Training Foundation Ltd (WA)
Joan Whelan	Construction Property Services Industry Skills Council
Tracey Murphy	Department of Education, Employment and Workplace Relations

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Executive Summary

This report forms the first stage of a project, funded by the Department of Education, Employment and Workplace Relations (DEEWR), and managed by the Construction and Property Services Industry Skills Council (CPSISC) through the consulting firm Altegis Group. The project is being oversighted by a Steering Committee with wide industry representation and has been actively supported by the Australian Brick and Blocklaying Training Foundation (ABBTF).

This first stage report reviews the current status of bricklaying apprenticeships and the present industry and training environment within which they operate. The second stage of the project will gain important stakeholder input through direct surveys and further round-table consultation, to provide a customer-focused approach to solutions and improvements in the up-take of Australian Apprenticeships. The methodology for this report involved desktop research, forums conducted in two States and interviews conducted with bricklaying employers and trainers.

Industry overview

The brick and blocklaying industry is made up mainly of small independent contractors, with the four largest employers accounting for less than 10% of annual industry revenue. Most businesses comprise sole proprietors with no employees. Most of the small businesses which do employ staff maintain a small gang or simply involve a qualified tradesperson with a bricky's labourer. For some employers taking on an apprentice is a more cost effective strategy than having to employ a qualified bricklayer.

Competition within the bricklaying industry is primarily on quality of workmanship and reputation with building contractors. Although there appears to be an initial focus on the narrow band of pricing within regional marketplace for similar work, it appears that price is seldom the sole purpose for competition. Bricklaying contractors tend to build strong relationships with clients with a focus on prime building contractors and property developers. Commercial, or non-residential, activity tends to attract a stronger price point in the marketplace, but is also accompanied by more stringent industrial instruments.

The bricklaying industry is particularly susceptible to the business cycle due to the ease with which members enter and exit. Apart from basic tools, there is little capital investment required by most workers. The work is physically demanding and labour intensive. The key success factors in the industry include understanding the market, having strong relationships with key clients, having a reputation for quality and timeliness, the capability to manage a business effectively and the ability to manage other contractors.

The bricklaying trade has been relatively stable over the last few years with historically high levels of activity. The current industry generates $1,550 million in revenue with an added value of $1,085 million, representing 0.1% of Australia's GDP. A trend towards

lower brick usage in residential construction has seen a slight decline in recent times, but this has been offset by an increase in commercial work.

At the time of this report, the current economy is experiencing a substantial downturn due to the worldwide financial crisis. This downturn is having a flow on effect on the construction, and therefore the bricklaying, industry. It is estimated that housing starts will decline by 3% during 2009. This falls on the heels of a 5% decline in 2008. However, forecasts suggest a strong recovery during 2010, which will put additional pressure on bricklaying services. A 12% increase in workforce represents approximately 3,100 bricklayers. In order to make up this shortfall, apprentice numbers would need to double their current in-training numbers.

The Australian Census figures from 2006 showed that there were 25,979 individuals who identified themselves as bricklayers or stonemasons. Bricklayers are spread throughout the country, with a high density in Western Australia, primarily due to the propensity of double brick construction.

Most job opportunities come from skilled labour leaving the industry, with one research report identifying that, in 2001, only 10% of job opportunities were created through growth in industry demand. The high turnover is also reflected in the number of bricklaying businesses which exit the industry each year. This is compounded by the fact that the industry is mainly made up of an aging workforce. In 2006, roughly 47% of bricklayers were over the age of 40 and 24% were over the age of 50.

This issue of an aging workforce highlights the importance of the bricklaying apprenticeship system. ABS and NCVER data shows that there is a national average of 10.7 bricklaying apprentices per 100 bricklayers, with DEEWR and ABS suggesting that only 45% of bricklayers in Australia have trade qualifications.

In order to gain a clearer picture of current and future labour needs, the ABBTF brick levy has been used to estimate the labour requirements for each State. This information can then be used by Governments and the industry to identify demand and supply issues, and to develop appropriate strategies.

Background on bricklaying training

Bricklaying forms one of the oldest crafts in existence. England, the United States, Canada and New Zealand all report a need for more qualified bricklayers and are trying to improve the take up of trade apprenticeships.

In Australia, there are a number of issues impacting on the trade. Firstly, whilst there is a great deal of information available about the trade, there are some problems in accessing accurate, timely statistical data. This is due to the complex nature of the data and the multiple sources.

As with the industry in general, bricklaying trade teachers represent an aging group and are leaving the workforce more rapidly than new teachers are entering. With the requirements imposed by the introduction of a competency based training model and the

use of the BCG03 Training Package, the training process has become more complex and teachers are having to find more creative ways to engage students and employers.

Bricklaying training structure

ABBTF information identifies over forty public and private RTOs delivering bricklaying training throughout Australia. Whilst a number of public RTOs have maintained their existing program structure of and delivery formats, others have been impacted by the increased competition from private RTOs, reduced student numbers or changed Government policies. This has necessitated a more flexible approach to apprentice training. Strategies include replacing the traditional apprentice 'year' with stages through which students can move at their own pace, effectively shortening the time required off the job for some apprentices. Other RTOs are delivering some training and conducting assessments on the job, thereby allowing for the capacity to more effectively engage with employers.

Whilst commencement data shows a general increase in student numbers, a number of RTOs have reported declining student numbers, resulting in reduced numbers of classes. This is exacerbated by a high level of attrition. With respect to those apprentices who receive financial support from the ABBTF, data shows that, in 2007, 21.4% of supported directly employed apprentices left during their first year, as did 41.4% of apprentices employed through Group Training Companies (GTCs). Overall completion rates for the whole of Australia average less than 50%. Should these trends not be reversed, then the future looks bleak for the ongoing skill levels of bricklayers.

Introduction

This report has been produced as the first stage of a project funded under the Australian Government's Industry Training Strategies Programme, administered by the Department of Education, Employment and Workplace Relations.

The project is delivered through the Construction and Property Services Industry Skills Council (CPSISC), which works with the construction industry to improve training for industry members. The project aims to identify barriers that are presently hindering the take-up of New Apprenticeships in Bricklaying & Blocklaying (i.e. General Construction - Bricklaying/Blocklaying).

This first stage report reviews the current status of bricklaying apprenticeships and the present industry within which they operate. The second stage of the project will gain important stakeholder input through direct surveys and further round-table consultation, to provide a customer-focused approach to solutions and improvements in the up-take of Australian Apprenticeships.

BCG03 Training Package has now been in use by all states, except Victoria, for 3-4 years - having replaced the original BCG98 General Construction Training Package. Most RTOs have now had cohorts of apprentices graduate from this Training Package and it is therefore appropriate at this time to review industry training learnings to identify improvements to the training process. This learning is contexted by an understanding of the current industry environment within which bricklaying employers and their apprentices operate.

Project Methodology

This report has been developed through a consultative process of engagement on a number of different fronts. Forums were conducted in Victoria and Queensland with participation from brick and blocklaying teachers, employers, industry representative groups, and unions as well as separate forums with bricklaying apprentices.

In addition to these forums, interviews were conducted with a number of employers and training representatives in order for the consultants to gain a deeper understanding of the current state of both the brick and blocklaying industry in general and the brick and blocklaying training environment in particular. This information was supplemented through desktop research of the current literature and statistics with regard to the industry, both in Australia and overseas.

Stage two of the project will continue the interview and forum process to inform the development of a national survey.

Industry Overview

Bricklayers & blocklayers

Bricklayers are also sometimes referred to as blocklayers depending upon their specialty and/or area of work. In some regions, these terms are not considered interchangeable and there is great pride taken in being referred to as a blocklayer.

Most of the information and data available bring these specialties together into a single trade group and, as there is also sufficient overlap in training and practice, we will use the term 'bricklayer' as a reference to both specialists. Further, it should be noted that apprenticeship training within this industry covers both of these specialties and considers the wide range of skills as part of the 'trade'.

Source: ABS 2006 Census

Chart 1 – Bricklayers Within All Construction Workers

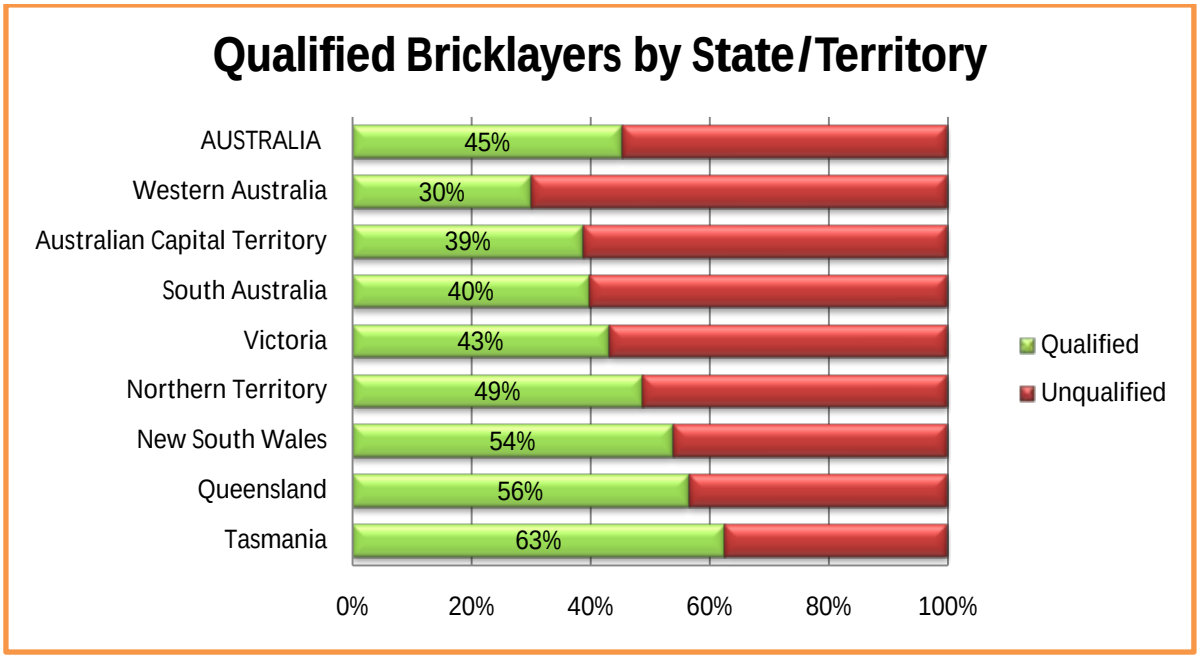
Within this framework, bricklayers lay bricks, pre-cut stones and other types of building blocks in mortar, construct and repair walls, partitions, arches and other structures, and cut and shape masonry slabs for the construction and renovation of monumental masonry[1].

The typical tasks involved in this trade include some or all of the following:

- Studying plans and specifications to determine materials required, dimensions and installation procedures
- Erecting and dismantling restricted height scaffolding
- Sealing foundations with damp-resistant materials and spreading layers of mortar to serve as a base and binder for blocks using trowels
- Laying bricks in rows, designs and shapes, and spreading mortar between joints
- Embedding blocks in mortar and removing excess mortar
- Checking vertical and horizontal alignment
- Cutting, shaping bricks using machines and hand tools, and shaping bricks to fit irregular spaces
- Repairing and maintaining bricks, cement blocks and related structures
- Constructing walls using stone slabs and large masonry slab blocks

[1] ABS 2006, *Australian and New Zealand Standard Classification of Occupations*, Cat. No. 1220.0, Canberra

The construction industry continues to use the apprenticeship scheme as the preferred means of training and skills development. For bricklayers, the apprenticeship provides a Certificate III, which includes at least two years of on-the-job training. Despite this long standing apprenticeship structure in bricklaying, many practise the trade outside of any formal qualification structure. The Department of Employment, Workplace Relations and Small Business estimated in 2001 that only 45% of bricklayers have formal qualifications, approximately 40% have no qualifications and around 15% are qualified in trades other than bricklaying[2]. This continues to be the trend as identified by the ABS 2006 census information presented in the following chart.



Source: ABS 2006 Census

Chart 2 – Qualified Bricklayers by State/Territory

Some States have licensing for the trade, but this is more to do with the control of contracting and conducting a business than regulating specific trade skills.

Figure 1: Licensing requirements by State

[2] Duggan D, & Coad P 2001, *Forecasting the Skill Requirements of the Bricklaying Industry in Victoria for 2001-2004*, Submission No. 53.

Market Segments

The bricklaying industry is primarily involved in the construction of exterior and interior walls for buildings using either clay or concrete bricks, blocks and stone.

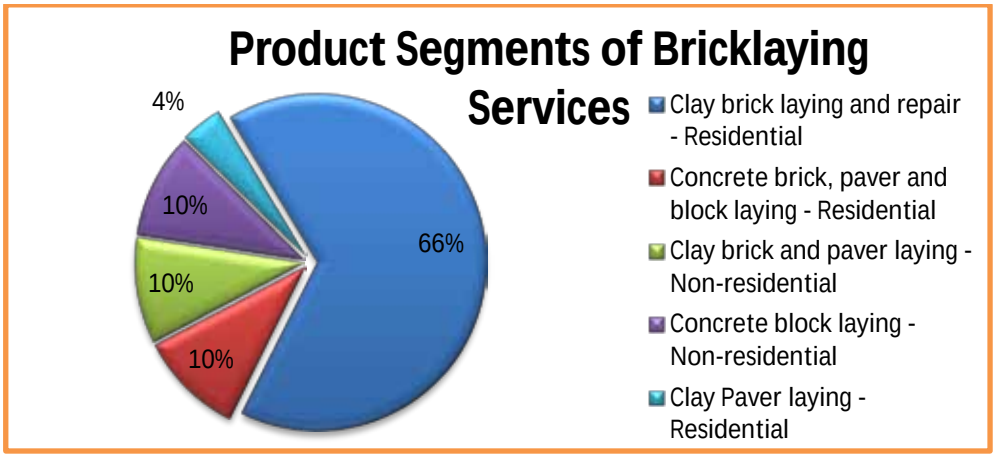


Chart 3 – Product Segments of Bricklaying Services[3]

Bricklayers may be involved in a wide variety of work including bricklaying, brick cutting, brick pointing and tuck pointing, kiln and furnace work and parging. Bricklaying contractors also lay blocks of concrete, terracotta, masonry, plaster, stone setting, paving bricks, block and tiles. They are also involved in constructing and repairing walls, partitions, fences, arches, sewers and other structures such as fireplaces and chimneys. As can be seen from the foregoing, the brick and blocklaying industry is far more complex than is understood by many people.

Roughly two-thirds of annual industry revenue comes from laying and repairing clay bricks for outer walls, steps, patios, and fences[4]. Over the last ten years there has been a growing trend toward rendering, which has decreased the demand for first quality face bricks and increased the demand for seconds or standards. Rendering has also caused a shift towards concrete bricks or blocks because of the lower production costs of concrete products.

It is estimated that roughly 10% of revenue is derived from concrete bricks, pavers and blocks on residential worksites[5]. Concrete blocks are more often used in residential buildings other than houses (e.g. flats and apartments) due to the reduced labour component.

In the non-residential market, roughly half of the activity involves the laying of clay bricks and pavers. This most typically occurs in small commercial endeavours such as small to medium scale shops, schools and health centres. The other half of non-

[3] IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 6.
[4] Ibid – IBIS World 2008
[5] Ibid – IBIS World 2008

residential work involves the laying of concrete blocks and pavers on a wide range of commercial buildings including office complexes, warehouses and factories[6].

While most bricklayers are involved in the construction industry, the scope of their work may involve them in other industries. The ABS 2006 census reveals that a surprising number of bricklayers identified with industry categories other than construction.

Construction	22,382
Manufacturing	2,307
Administrative and Support Services	127
Wholesale Trade	95
Public Administration and Safety	80
Retail Trade	75
Professional, Scientific and Technical Services	46

Table 1 – Industries within which Bricklayers Work[7]

Although only a small percentage work outside of the construction industry, many categories raise questions as to their role and whether these individuals still participate in the trade.

Whilst the general construction industry breaks down the major segments of the market into residential and non-residential, the bricklaying industry typically uses terminology that distinguishes between residential and commercial.

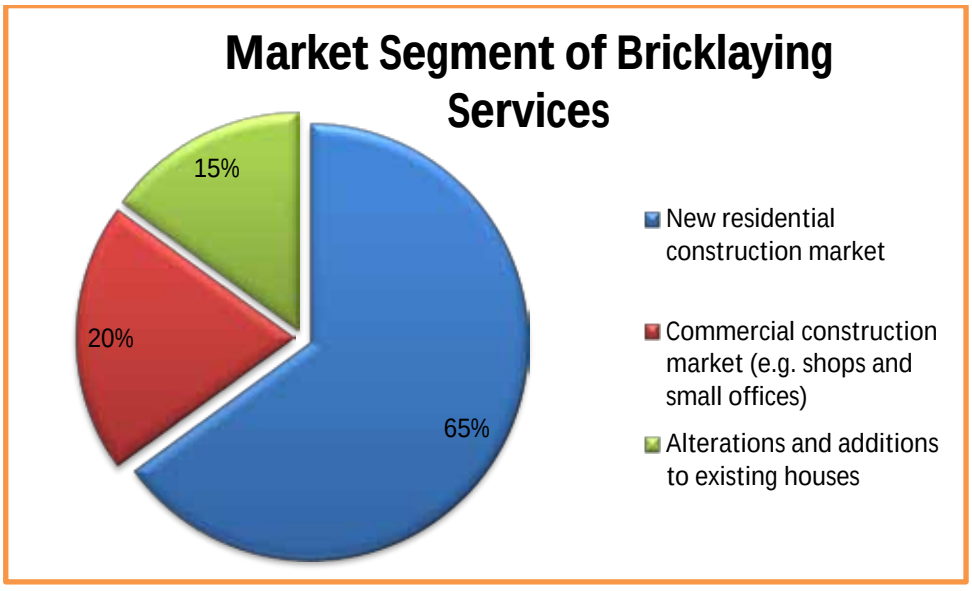


Chart 4 – Market Segments of Bricklaying Services[8]

[6] Ibid – IBIS World 2008
[7] Australian Bureau of Statistics 2006, CDATA Database(Feb 2009).

The industry overwhelmingly derives most of its revenue from the residential building market, which includes new residential construction and alterations and additions to existing homes. The new residential construction, which is dominated by single unit 'detached' housing, is estimated to have accounted for 65% of the industry revenue in 2008. Around 85% of all single unit houses constructed use clay bricks for their exterior walls.

Alterations and additions to existing houses account for 15% of the current industry revenue. This particular segment is less cyclical than the new residential construction market but is also more exposed to substitution from alternative materials such as fibre cement sheeting and other cladding on second storey extensions[9].

> *'Renovations have never been huge ... but you now see hebel coming in where they may put an addition on where they may use hebel and render the whole house, or the other thing is they are building these enclosed patios'.*
>
> *'It's what they are able to do. Some contractors are doing more renovation than new houses at the moment.'*

The commercial, or non-residential component of the market makes up roughly 20% of the industry revenue for bricklaying services.

Most bricklayers work primarily in one segment and tend to associate with a small handful of builders or construction companies. This poses challenges for the training of bricklayers. Since many apprentices will stay with the same employer throughout their apprenticeship training, often these apprentices only receive a narrow experience of their trade.

> *'More builders are rendering houses so there is less face-work being done ... I'm trying to encourage them to pick up as much face-work brickwork training in the training environment at the TAFE to counteract that, because it's not occurring onsite. Builders over here are saying 'let's dumb down the trade', so bricklayers do just what's required on site and do away with decorative brickwork because that's not needed. We need to go the other way ... consumers are missing out in my opinion'.*
>
> *'Up here in North Queensland because they get so much blockwork and hardly any brickwork they don't get the opportunity to do much brick on site. So they really need to pick that up in TAFE. A person who is going to lay bricks and brick only, will learn to lay block quickly. A person who only every laid block and never laid brick, will struggle to lay brick'.*

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[8] IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 7.
[9] IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 7.

'Unfortunately it's the design. You've got project homes that are primarily brick veneer. Very few full-brick homes are being built, and in the domestic industry you hardly touch blocks at all. When I was at TAFE years ago, we did do a lot of full-brick homes'.

'The training in residential involves a variety of bricklaying that you don't get in commercial – window sills, more detailed work, whereas commercial is often block laying on straight up walls'.

There are also some linkages between the market segments and the product segments. In general, blocklaying is more prevalent in the commercial segment and bricklaying (clay and cement) is more common in residential. However, it should be noted that some regional differences do have an impact on this delineation. For instance, there is a stronger use of blocks in construction of residential homes in the northern regions of Queensland and Western Australia. This is as much a reflection of climatic needs as well as tradition, availability of clay bricks and transportation costs.

Industry Concentration

The bricklaying services industry has a low level of industry concentration. That is to say, there are few big employers and the industry is dominated by many independent contractors and subcontractors. The four largest participants account for much less than 10% of the annual industry revenue[10].

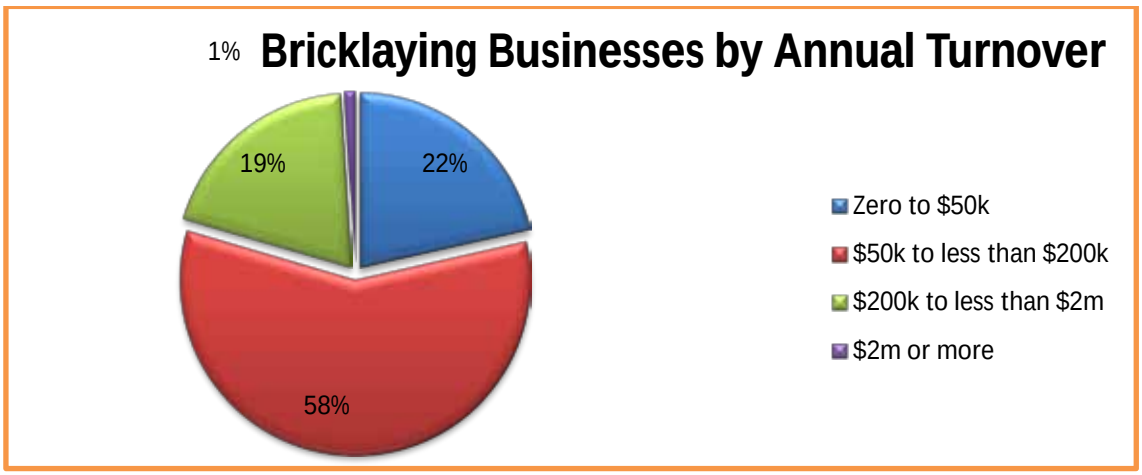


Chart 5 – Bricklaying Business by Annual Turnover[11]

Of the 13,711 registered bricklaying businesses operating at the beginning of 2008, 72% of them are sole proprietors with no employees. 27% have less than 20 employees and only 1% of the businesses operating have 20 or more employees[12]. This reflects the number of small businesses operating within the industry and the amount of sub-contracting that is prevalent generally within the construction industry.

[10] IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 7.
[11] Australian Bureau of Statistics 2007, Businesses by Industry Class by Main State by Employment Size Range – 2006-7, Cat. No. 8165.
[12] Ibid, ABS Cat. No. 8165.

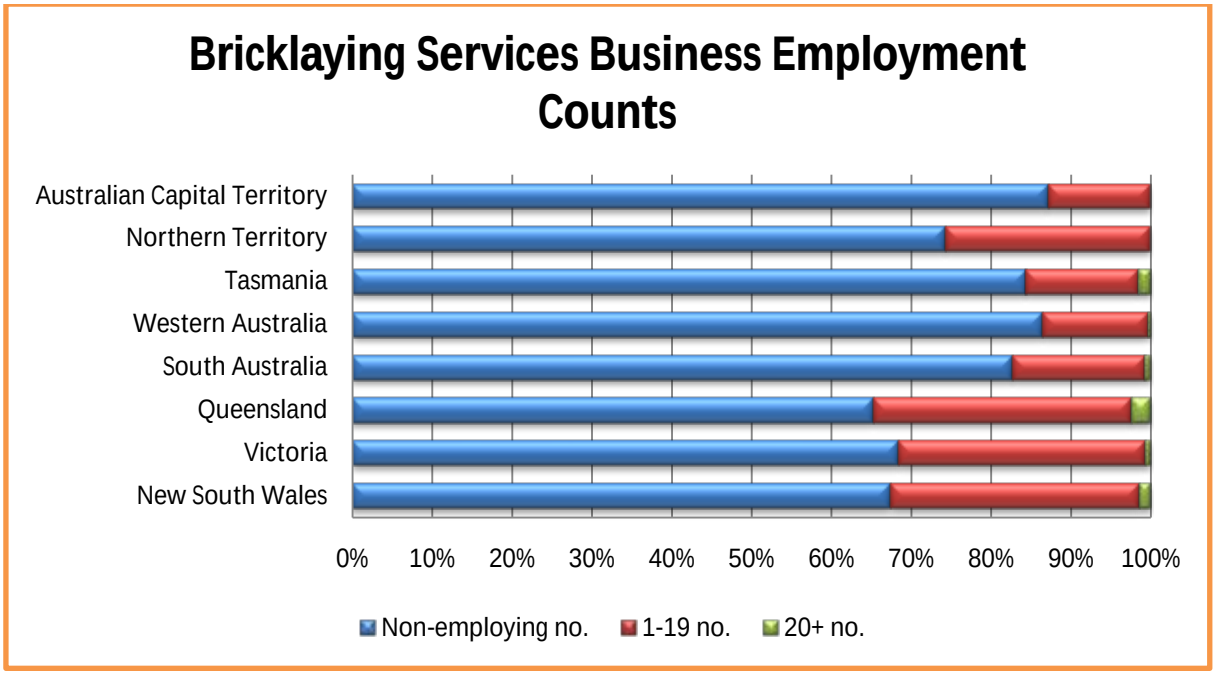


Chart 6 – Bricklaying Services Business Employment Count[13]

It appears that Queensland, New South Wales and Victoria tend to have larger percentage of businesses with employees – this is roughly double ACT, Western Australia, Tasmania and South Australia figures.

Although the majority of bricklayers are subcontractors with no employees, there are some trends that are beginning to emerge by State:

- The following States/Territories are shifting more towards contractors with employees, with consistent declines in sole operators – NSW, VIC, QLD, SA and ACT
- Only WA has shown an increase in sole operators (no employees)

Despite these trends, bricklaying contractors are often disinclined to directly employ qualified tradespersons due to the on-costs of employment such as worker's compensation, superannuation and leave loading. Most bricklaying contractors maintain a small gang or simply involve a qualified tradesperson with a 'brickies' labourer'. It is more common for bricklayers to become sub-contractors themselves than to continue under the employment of a growing bricklayer subcontractor.

[13] Australian Bureau of Statistics 2006, CDATA Database(Feb 2009).

Why sub-contract?

'[They are typically looking for] a bit more money, but also need the confidence that they can do it on their own'.

'Probably post-apprenticeship ... around the four year mark. Most apprentices that have a bit of 'go' about them will pick up some weekend work, and it grows from there'.

'I think opportunities come up for a lot of guys to jump in. They might meet another guy and start a little partnership. Or it might be a father-son team'.

For many bricklaying contractors, an apprentice becomes a viable alternative to employing a qualified tradesperson. Some of the benefits to a contractor are the lower apprenticeship wages, a 3-4 year contract and a mentoring relationship that often encourages a stronger commitment than might otherwise be found in normal employment relationships.

Basis of Competition

Competition within the bricklaying industry is primarily on quality of workmanship and reputation with building contractors. Although there appears to be an initial focus on the narrow band of pricing within regional marketplace for similar work, it appears that price is seldom the sole purpose for competition. Bricklaying contractors tend to build strong relationships with clients with a focus on prime building contractors and property developers.

'I have about four builders that I do work for; two big ones and a couple of small ones. I also try to diversify with retaining walls, fences, and things like that'.

'It's typical to be tied to a builder. I've chased up the larger builders. One of our volume builders, I've been with them for 12 years now'.

However, different market segments tend to have different pricing levels – which directly impacts income levels for bricklayers. Commercial or non-residential activity tends to

attract a stronger price point in the marketplace, but often is accompanied by more stringent industrial instruments. Further, commercial projects often require a larger operation than is afforded by most sole employers in the residential side of the industry.

'You make more money in commercial ... most commercial bricklayers raid the residential market for tradesmen'.

'Cottage industry usually just uses teams of a few mates - rarely teams of 6 or more. Commercial have 80, 90, 100 bricklayers and have agreements with the union for a ratio of apprentices'.

'Quality of commercial construction is equal to anything in the world because they pay to get trades. Quality of housing construction in Australia is abysmal. Poor work because much of it is built by people who haven't done an apprenticeship'.

'Commercial pays more per hour, plus site allowance … block money … plus day travel [allowance]. Most commercial bricklayers are unionised'.

A significant number of bricklayers will form joint enterprises between two or more qualified tradespeople in order to cover a wider region, maintain a flow of contracts, and provide for taking on apprentices.

The ease of entry and exit within this industry means that the bricklaying industry is particularly susceptible to the business cycle. When times are good, there are few barriers to bringing someone into the industry and even circumventing any trade qualification. Equally, when the building cycle is down, many leave the industry.

Apart from some basic tools, there is little capital required to take part in the industry or to restrain exits during a slow period. Trade tools consist mainly of trowels, shovels, mortar mixers, barrows and motor vehicles. Ownership or hire of a portable brick and mortar elevator is necessary for jobs above ground level and is often desirable for most jobs.

The principal activity of the bricklaying industry is the supply of skilled labour on construction projects. The work is physically demanding with little capital investment and therefore is considered labour intensive. The total labour costs (i.e. wages and subcontract payments) account for two-thirds of industry revenue[14].

[14] IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 16.

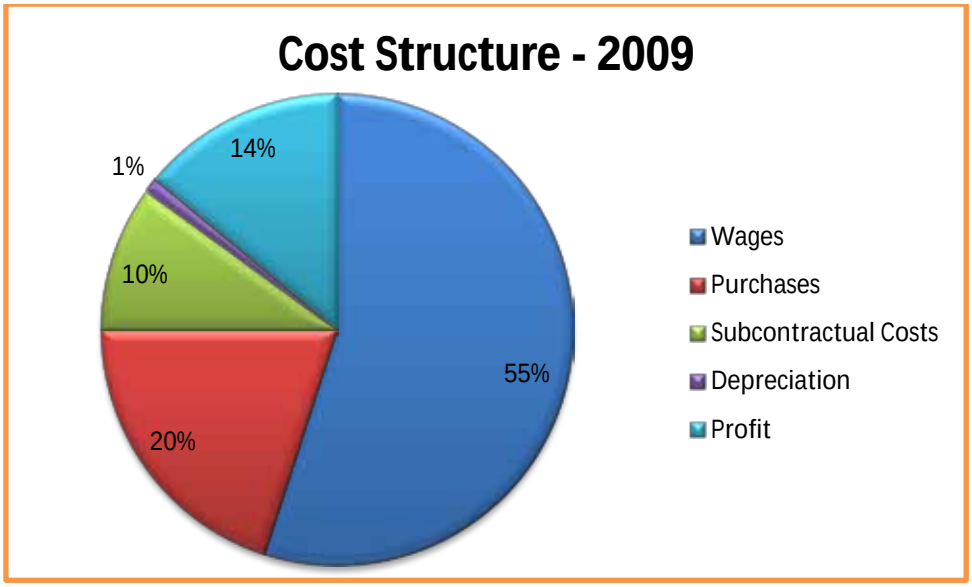


Chart 7 – Cost structure[15]

The greatest challenge to new entrants is competing with existing players with an established reputation for quality and timeliness. In addition, some states require a formal qualification when tendering, obtaining licenses and insurance.

Key Success Factors

The key success factors most prevalent within the bricklaying industry include the following[16]:

Market Understanding – A sound understanding of the housing construction cycle that allows bricklaying contractors to manage contracts and cash flow

Clients in Key Market Segments – This usually involves having strong working relationships with key clients in markets with ongoing and continuous work

Reputation for quality and timeliness – This is the prime differentiation within the marketplace

Sound Business Knowledge – the ability to manage the business for productive outcomes.

Ability to manage other contractors – Successful contractors tend to expand their capacity during boom times by subcontracting work to other bricklayer contractors rather than taking on other permanent employees.

[15] Australian Bureau of Statistics 2007, Businesses by Industry Class by Main State by Employment Size Range – 2006-7, Cat. No. 8165.
[16] IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 19.

Performance and Trends

The bricklaying services performance over the last few years has been relatively stable at historically high levels of activity. The following performance measures have been recently reported in November 2008 and include estimates for the current year.

Key Statistics

	2004-5	2005-6	2006-7	2007-8	2008-9	
Industry Revenue	1575.0	1525.0	1555.0	1560.0	1550.0	$Mill
Industry Gross Products	1120.0	1050.0	1090.0	1100.0	1085.0	$Mill
Total Wages	860.0	840.0	865.0	865.0	853.0	$Mill

Source – IBIS World estimates

Table 2 – Key statistics

The following table presents the information above in today's current pricing, providing a stronger link to volumes without impact of pricing changes and inflation.

Current Prices

	2004-5	2005-6	2006-7	2007-8	2008-9	
Industry Revenue	1342.3	1360.6	1449.1	1505.5	1550.0	$Mill
Industry Gross Products	954.5	936.8	1015.8	1061.6	1085.0	$Mill
Total Wages	732.9	749.4	806.1	834.8	853.0	$Mill

Source – IBIS World estimates

Table 3 – Current prices

Real Growth

	2004-5	2005-6	2006-7	2007-8	2008-9	
Industry Revenue	-1.6	-3.2	2.0	0.3	-0.6	$Mill
Industry Gross Products	-2.0	-6.3	3.8	0.9	-1.4	$Mill
Total Wages	-1.7	-2.3	3.0	0.0	-1.4	$Mill

Source – IBIS World estimates

Table 4 – Real growth

The current bricklaying services industry generates $1,550 million in revenue with an added value of $1,085 million. This represents approximately 0.1% of Australia's GDP for 2008-09. The industry has experienced a slight decline over the last five years of 0.6%[17]. This reflects the slight softening of the housing starts over this period as well as the trend towards lower brick usage in construction. This downward trend has been cushioned by the upturn in commercial activity in Australia during this same period – estimated at 7.8% per annum over the same five year period[18]. Although commercial activity only represents 20% of the industry, there have been noticeable increases in this segment.

Despite the flat performance over the last five years, the industry has averaged $1.55 billion in annual revenue over that period. This represents a historical high point for the industry and is 9% higher than the average for the previous 5 year period ($1.42 billion for the period of 1999-2004).

Housing starts have reduced by 1.3% per annum over the last five years. However, the industry has also been negatively impacted by the trend towards construction of multi-unit dwellings and medium density houses which tend to use few bricks per dwelling[19]. Also, many inner city apartments are using tilt-slab construction while, at the same time, standard dwelling homes are using less bricks due to other cladding material and smaller wall size of medium density housing[20].

Year to June	Percentage New Housing	Percentage New Other Residential	Percentage Total Housing	Percentage Non-residential Bldg
1999	8.8	6.1	8.4	4.9
2000	17.3	13.2	16.8	-2.4
2001	-27.2	-23.5	-26.7	-16.8
2002	23.2	19.0	22.5	5.2
2003	17.8	11.5	16.8	11.5
2004	6.1	12.6	7.1	6.2
2005	-0.5	0.2	-0.4	4.9
2006	-5.8	-4.2	-5.5	11.1
2007	0.1	3.7	0.7	9.1

Table 5 – Growth in constant prices for construction[21]

[17] IBIS World 2008, *Bricklaying Services in Australia*, Ref. E4222, p 22
[18] Ibid – IBIS World 2008
[19] Ibid – IBIS World 2008
[20] Ibid – IBIS World 2008
[21] Australian Bureau of Statistics 2007, Cat. No. 8752

The commercial end of the industry has strengthened and grown over the last five years. Some of the sectors within this segment include:

- 12.1% per annum increase in office construction
- 9.5% per annum in other business premises
- 10.1% per annum in healthcare building construction

Looking Forward

At the time of this report, the current economy is experiencing a substantial downturn due to the worldwide financial crisis. The construction industry and bricklaying services are certainly not immune to this widely based downturn.

Current indicators such as consumer confidence and business investment all point to a reduction of large ticket purchases and capital expenditure. Despite this current sentiment, there are a number of reports that suggest a housing shortage in many parts of the country. The commercial (i.e. non-residential) building construction is unlikely to provide the cushion to the industry as in the past five years. Estimates from only a few months ago suggest a moderate 1.9% increase in 2008-09, but even these seem bullish in the current environment.

A more recent study by the HIA suggests that housing starts will decline by 3% during 2009. This falls on the heels of a 5% decline from 2008.

Housing Starts (in '000s)

	NSW	VIC	QLD	SA	WA	Tas	NT	ACT	Aust
2002	49.59	48.93	40.00	10.38	19.18	2.03	0.96	2.77	173.85
2003	44.46	44.91	41.19	10.23	21.73	2.42	0.98	2.79	168.70
2004	45.14	42.60	41.36	10.51	22.76	2.99	1.25	2.28	168.89
2005	34.25	40.19	39.07	10.73	24.13	2.63	1.32	2.43	154.72
2006	31.76	39.35	38.74	11.22	26.45	2.76	1.19	2.42	153.96
2007	29.88	40.02	43.19	11.30	22.85	2.89	1.46	2.28	153.85
2008	27.09	39.97	38.71	12.37	20.30	2.79	0.88	2.21	145.60
2009	29.06	40.67	35.18	11.35	19.27	2.86	1.07	2.12	141.57
2010	34.14	43.41	41.94	11.67	20.72	3.02	1.34	2.41	158.66

Source – HIA

Table 6 – Housing starts

Housing Starts (% change)

	NSW	VIC	QLD	SA	WA	Tas	NT	ACT	Aust
2003	-10	-8	3	-1	13	19	2	0	-3.0
2004	2	-5	0	3	5	23	28	-18	0.1
2005	-24	-6	-6	2	6	-12	5	6	-8.4
2006	-7	-2	-1	5	10	5	-9	0	-0.5
2007	-6	2	12	1	-14	5	23	-6	-0.1
2008	-9	0	-10	9	-11	-3	-40	-3	-5.0
2009	7	2	-9	-8	-5	2	22	-4	-3.0
2010	17	7	19	3	8	6	26	14	12.0

Source - HIA

Table 7 – Housing starts (% change)

However, HIA is forecasting a strong recovery during 2010 as the pent up demand for housing unfolds. This will put strong pressure on bricklaying services to ramp up capacity during this time period. A 12% increase in workforce within the bricklaying services trade represents approximately 3,100 bricklayers. In order to make up this shortfall, apprentice numbers would need to double their current in-training numbers.

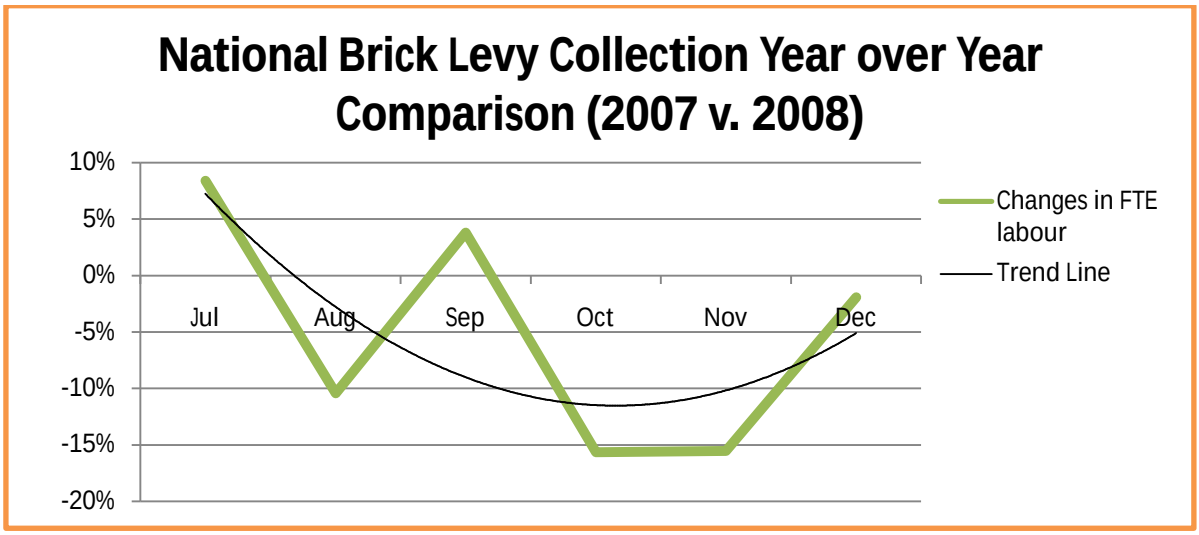
This current downturn has impacted revenue within the bricklaying services industry. One of the strongest measures of this decline is the brick levy managed by the Australian Brick and Blocklaying Training Foundation.

The Australian Brick & Blocklaying Training Foundation Ltd (ABBTF) represents clay brick and concrete masonry manufacturers and was created to address the critical shortage of skilled bricklayers.

The purpose of the ABBTF is to ensure there is an adequate and competent bricklaying and blocklaying workforce to support the demand for bricks and blocks as a construction material and improve the standing of bricklayers and blocklayers within the building industry.

The ABBTF is jointly funded by an industry contribution of $2 per thousand clay bricks or 10 cents per square metre in the wall for concrete masonry and a matching contribution from brick and block manufacturers. The scheme applies across the following States and Territories: Victoria, New South Wales, Australian Capital Territory, Queensland, Western Australia, South Australia and Tasmania. The scheme has been approved by the Australian Competition and Consumer Commission.

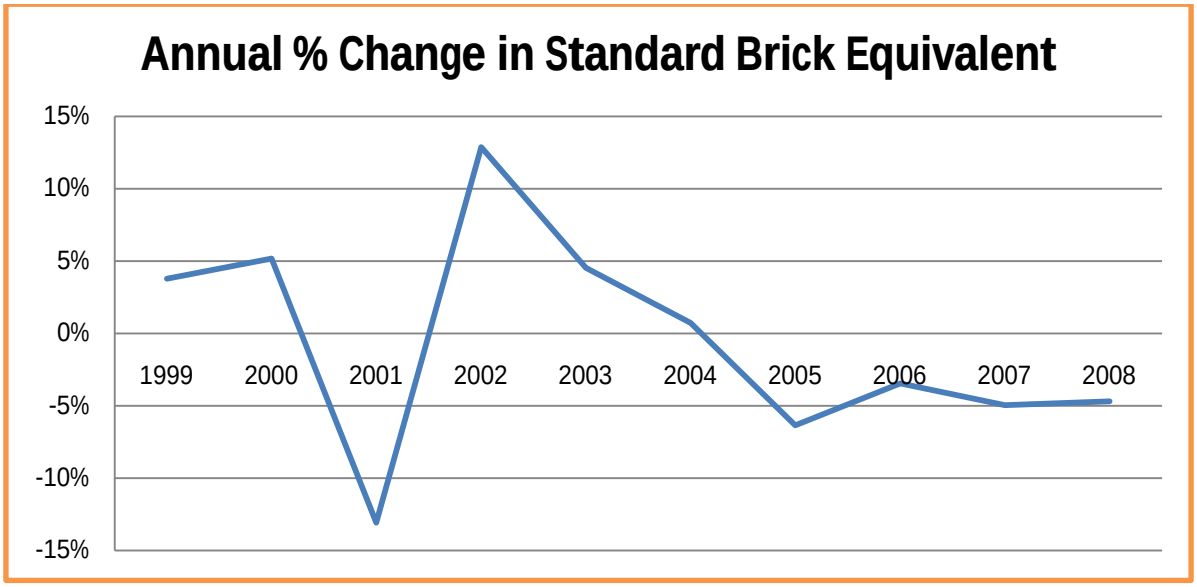
The national brick levy is calculated monthly on all bricks and blocks that 'clear the gate' at the manufacturer to be delivered to construction sites. Due to the fact that these deliveries are quickly converted into the building site (i.e. there is little stockpiling or inventorying of bricks at the job site), this measure represents a very strong indicator of bricklaying services revenue by month.



Source: Australian Brick and Blocklaying Training Foundation

Chart 8 – National brick levy

Whilst the brick levy is a strong hallmark of an industry led response to labour shortages within the construction industry, it has only recently included collections from all States (i.e. April 2007). A more long term view of the industry trends is derived from the Australian Bureau of Statistics in their manufacturing production report that provides historical data on brick production over the past years.



ABS – Cat No 8301.0.55.001 - Manufacturing Production, Australia, Dec 2008

Chart 9 – Annual % change in standard brick equivalent

Impact on Bricklaying Apprenticeships

The current market trends will have a dramatic impact on bricklaying apprenticeships and the future skills within the market.

> *'I honestly think within the next 2-3 months, a significant number of people will walk away from the industry'.*
>
> *'It's hugely significant. Last year we had 70-90 vacancies for first years that we couldn't find enough kids to fill them. This year we only placed 17 kids with employers. We are struggling to place the pre-apps with employers'.*

As the current economic downturn reduces demand, there will be growing pressure on pricing as bricklayers compete for a share of the dwindling housing and construction starts. Quality will still be a distinguishing competitive advantage for many bricklaying

contractors, but there is no denying that builders will have more contractors to choose from in the coming period, than has been the case during skill shortages of the past.

This does, and will, have an impact on current apprentices. A number of 1st year apprentices or those considering a bricklaying apprenticeship are already having difficulty maintaining or finding an employer. Employers are concerned with making a 3-4 year commitment to an apprentice in the current environment.

'In the housing sector, I'm seeing a lot of contractors who are hesitant at taking on apprentices due to the downturn'.

'I'm seeing a reduction in commencements by about 30-40% ... Currently, out of all bricklayer apprentices 11-15% are suspended'.

'My worry is it could affect our retention rate - handing apprentices back because they don't have any work'.

'Bricklayers read the papers and see all the doom and gloom. However, if an apprentice 'has his lights on' he'll always get a job'.

'It was pretty easy to find an employer [a couple of years ago]. You just had to look in the paper or you knew someone who needed [an apprentice]; but now it's hard for the new guys going into first year'. (3rd Year Apprentice)

However, the risk within the current economic downturn lies in the ability of the industry to rebound for what appears to be a likely surge in housing starts that may occur as early as 2010, by some estimates. This resurgence will stretch the capacity of the current labour force – even if they all return to the trade. Further, the training system will need the capacity to expand quickly if the bricklaying service is to even maintain a level skill capacity.

Labour Market Profile

According to the last ABS census (2006), the following is the number of bricklayers within Australia:

	Bricklayers and Stonemasons (ANZSCO 4222)
New South Wales	7,341
Victoria	6,355
Queensland	4,058
South Australia	1,692
Western Australia	5,686
Tasmania	369
Northern Territory	124
Australian Capital Territory	354
AUSTRALIA	**25,979**

Table 8 – Number of bricklayers in Australia as at 2006[22]

The bricklaying industry essentially provides bricklaying services to the construction industry with little infrastructure or capital investment. Therefore, the industry's ability to meet demand is largely determined by its ability to provide a skilled and available workforce. The supply of labour is driven by:

- Apprentice commencements and completions
- Commencements outside of the apprenticeship program
- Skilled migration
- Tradespeople leaving the industry

There are Masonry Contractor Associations in three States and one territory, representing bricklayer contractors (See Appendix 1 for further details).

State	Organisation	Inception	Membership
TAS	Masonry Contractors Association of Tasmania	1970	11
NSW	Masonry Contractors Association (Central West, NSW)	2001	50
NSW	Masonry Contractors Association of NSW & ACT	1993	60
VIC	Masonry Contractors Association of Victoria	1999	50-60

Table 9 – Masonry Contractor Associations by State

[22] NOTE: Whilst these numbers were taken from the 2006 ABS Census, the numbers of Bricklayers and Stonemasons were adjusted up slightly to take into account the appropriate share of nfd (i.e. not further defined) in the 3-digit ANZSCO occupation level that feeds into this level. On a national level, the adjustment was small, representing 362 additional bricklayers.

Mr. John White from the Masonry Contractors' Association of NSW & ACT recently stated, 'Bricklaying is unique; it is an aesthetic trade as it is highly visible. But, unfortunately, it has a reputation as a wet trades industry and a messy trades industry'. He believes that the trade needs to do something about this to 'ensure that someday a child reading a book doesn't say to his grandfather *what's a bricklayer?*' There is some perception that because of this poor image, few builders have any bricklaying experience. Mr. Michael Bryne from the Victorian Association expressed his concern about having 'two generations of builders who have no experience with bricks'. He believes that the Associations must work to improve the perceptions of the trade.

Turnover

The majority of job opportunities have come from turnover within the bricklaying industry since the level of industry growth has been relatively flat.

Previous studies have highlighted that most job opportunities come from skilled labour leaving the industry as opposed to growth within the bricklaying services industry. Specifically, a study in 2001 by the Victorian Bricklaying Industry at the Holmesglen Institute of TAFE and the Tasmanian Building and Construction Industry Training Board found that only 10% of job opportunities were created through growth in industry demand.

> 'It should be noted that job turnover provides most job opportunities and does not primarily depend on the level of demand for the occupation. People move in or out of the occupation for a variety of reasons and the occupation may be one which is an entry point to a different but related occupation, or a stepping stone in a career'[23].

The report went on to highlight that 90% of the employment opportunities resulted from turnover within the industry.

This turnover is also reflected in the number of businesses that enter and exit the bricklaying industry every year. There are over 13,000 registered businesses in the bricklaying services industry and each year roughly 16-18% exit the industry.

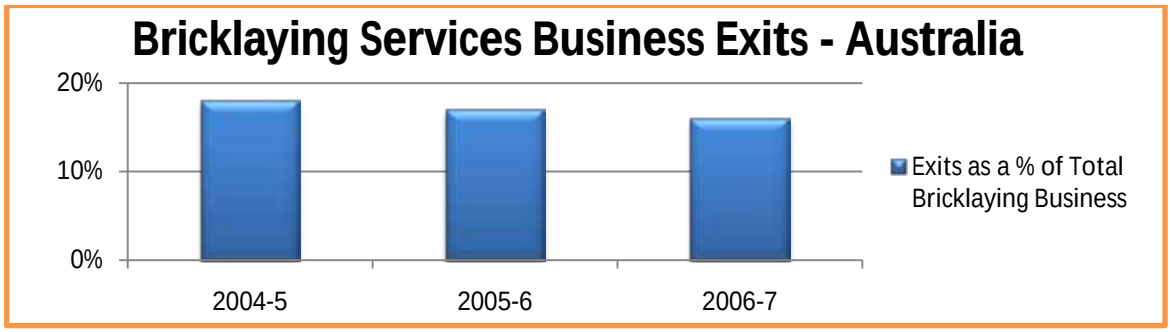


Chart 10 – Bricklaying Services Business Exits 2005-07[24]

[23] Duggan D, & Coad P 2001, *Forecasting the Skill Requirements of the Bricklaying Industry in Victoria for 2001-2004*, Submission No. 53.
[24] Australian Bureau of Statistics 2007, Counts of Australian Businesses including Entries and Exits Jun 2003 to Jun 2007, Cat. No. 8165.

This high turnover represents a very large challenge for the industry and impacts the apprenticeship scheme. At the current rate of business exits, roughly half of the registered bricklaying businesses cease during the three year apprenticeship time frame. Acknowledging that not all business exits result in tradespeople leaving the industry, it does however reflect the inherent risk in small business, the cyclical nature of the trade and a high level of uncertainty for bricklaying apprentices.

Aging Workforce

The aging workforce issue has been highlighted in a large number of industries and reflects the general aging population of Australia. The industries most immediately impacted by this trend will be those that are physically demanding and therefore less attractive to those in their latter years of working. There is no denying that bricklaying is an arduous job that relies primarily on the quantity of bricks and/or blocks laid each day.

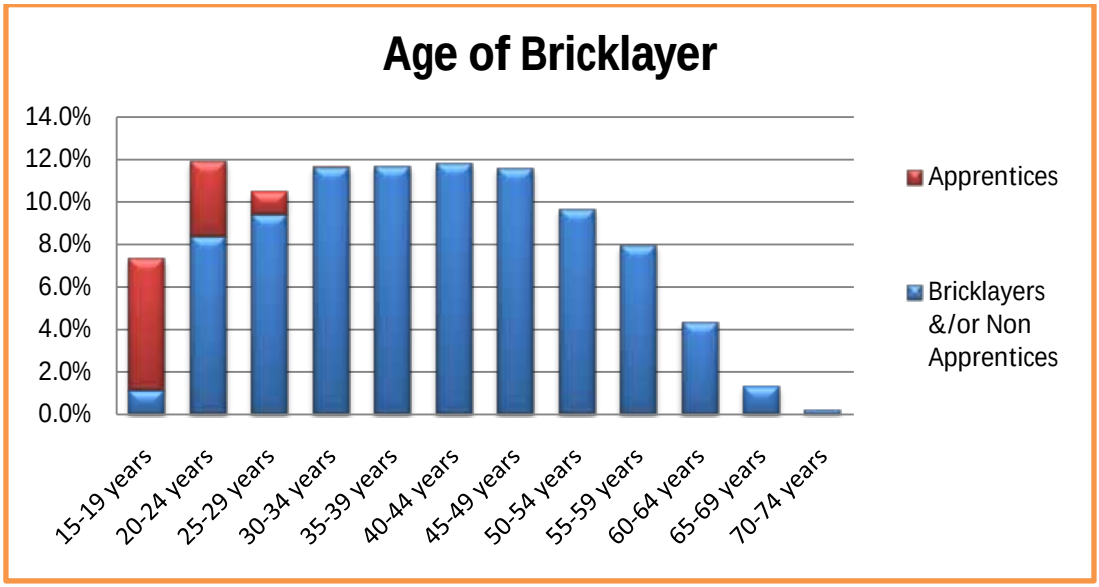


Chart 11 – Age of Bricklayers (Sources – ABS for bricklayers; NCVER for Apprentice ages) [25 & 26]

In 2006, roughly 47% of bricklayers were over the age of 40 and 24% were over the age of 50. This presents a very dramatic challenge for the industry in coming years. Many of these older bricklayers also retain a great deal of industry knowledge gained from years of experience. Further, many of these bricklayers have come from overseas and therefore provided a range of skills and knowledge that may not always be gained in the current building environment.

This aging of the workforce will also place extreme pressure on the apprenticeship training scheme. The current financial crisis will certainly have a negative impact on

[25] Australian Bureau of Statistics 2006, CDATA Database(Feb 2009).
[26] NCVER Report 2009, Apprentice and Trainee numbers for each quarter from March 1998 to June 2008 by Occupation group for Bricklaying (ASCO - 4414) by State/Territory

current industry work and thereby reduce the numbers of apprentices entering the industry.

> *'... the problem that we've got is that in 5-10 years we are going to lose 50% of our bricklayers and you won't get the experience'.*
>
> *'The blokes that will leave first ... are the guys that have been in the industry a fair while and have had a couple of these cycles and have had enough'.*
>
> *'Not everyone will come back. They may go out west ... and think this is a good life. Having been a sole trader, you do get sick and tired of being stressed about work and pricing and arguing with builders about your rates'.*
>
> *'I'm sure there is a great group of people that, if there was no work, they would find other work that is physical and maybe they would stay with that. And I think these days young people are less likely to do the same job for 25 years, so they might enjoy the experience of moving on'.*

At the same time information continues to highlight the current shortage of housing within Australia. All this points to a growing pent up demand for housing that will eventuate after this current downturn. If the industry and Registered Training Organisations are not set to increase the number of apprentices and/or improve completion rates – currently around 50% - at the cycle turnaround, then industry revenue and capacity to meet construction deadlines is very much at risk.

Geographical Spread

Important to the understanding of labour demands and training needs is the distribution of bricklayers and apprentices across states and regions throughout Australia. In essence, this is a review of the trade to service various regions of the country. In addition, it is important to understand whether we are training enough apprentices within these areas to replace those leaving the trade.

The table below reviews how many bricklayers there are servicing the population by State. To overcome the varying population size, the number of bricklayers per 10,000 in population was used as a measurement of service levels.

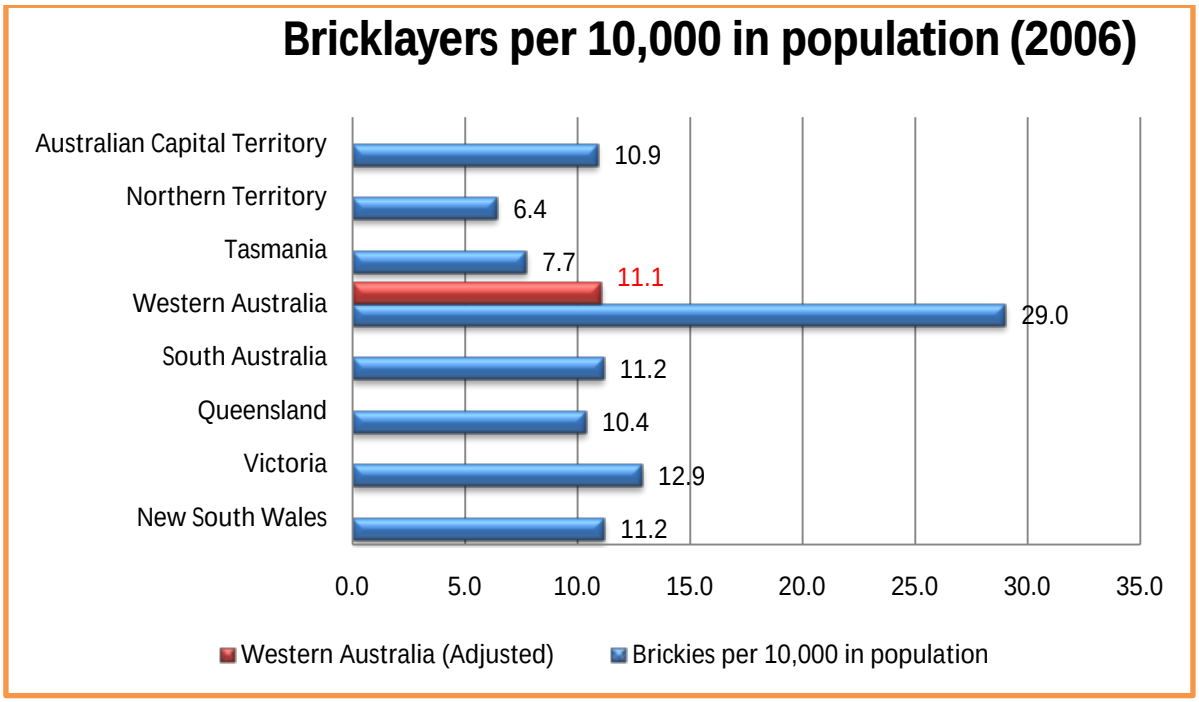


Chart 12 – Bricklayers per 10,000 in population by State -2006[27]

Immediately obvious is the high number of bricklayers in Western Australia due to the double brick construction that is prevalent in that State. Whereas most brick homes in WA use roughly 21,000 bricks on average, other states use roughly 8,000 (i.e. there are 2.63 times more bricks in a WA home). Adjusting for the WA preference for double bricking, WA is much more in line with the national average – equating to 11.1 bricklayers per 10,000 in population (i.e. 29/2.63). While this overcomes the preference for brick construction within this State, it also suggests a market that is serviced very close to the national average.

Adjusting for Western Australia's double brick preference, the national average is 11.3 bricklayers per 10,000 in population. At present, the only State above the national average is Victoria. New South Wales, South Australia, Queensland, Western Australia and the ACT are presently slightly lower than the national average. However, the extreme cases of underserviced areas are represented by Tasmania and the Northern Territory.

These service rates for each of the States have some correlation with the DEEWR labour market rating[28]. In fact, each State that is below the national average of 11.3 bricklayers per 10,000 in population is listed on the 2007 DEEWR labour market rating as being in shortage, except for Western Australia. The only State that is above the national average –Victoria – DEEWR has rated as not in shortage.

[27] Australian Bureau of Statistics 2006, CDATA Database(Feb 2009).
[28] DEEWR Labour Economics Office State reports for December 2007

State/Territory	Bricklayers per 10,000 in Population	Difference to National Average of 11.3 bricklayers per 10,000 in population	DEEWR Labour Market Rating
New South Wales	11.2	-1%	Shortage
Victoria	12.9	14%	No shortage
Queensland	10.4	-8%	Shortage
South Australia	11.2	-1%	Shortage
Western Australia	11.1 (adj)	-2%	No shortage
Tasmania	7.7	-32%	Shortage
Northern Territories	6.4	-43%	Shortage
ACT	10.9	-3%	Shortage
Australia	11.3		

Table 10 – Comparing the level of bricklaying services by State - 2006

The number of bricklayers servicing a state is influenced by a number of factors, not the least of which is the housing starts and construction activity that are strongly related to brick usage. Building design preferences also have an impact as in Queensland and Tasmania (i.e. a preference for timber construction) and Western Australia (i.e. preference for double brick construction). At the same time New South Wales, Queensland and the Northern Territory have somewhat lagged in residential construction during this period.

Despite these influences, the numbers do indicate somewhat where there are stronger needs for apprenticeship training to overcome shortages in labour supply within this trade.

Increasing apprenticeship training is not only the concern of training organisations, but also employers. Apprenticeship training involves a training contract between the training organisation and the employer, reflecting the importance of on-the-job skill development that is integral to the learning outcomes within trades. This employer responsibility is not present in most other non-apprenticeship learning environments. Whilst the apprenticeship training regime is reviewed in a later section, it is important to highlight the industry response to apprenticeships.

Many employers take on apprentices for various reasons. While those from non-employer groups suggest that financial incentives drive the use of apprentices, most employers across all trades highlight that apprentices are a financial cost in the first two years with some recouping of costs in the third and fourth year. These costs include low productivity, coaching on life skills (e.g. financial, planning, relationship, etc.), and paid time while in training.

'[Apprentices are] good support for them in their operation providing that they are not employing them for the wrong reasons – the labour component'.

'Bricklayers are getting paid less, travelling greater distances to work so costs have gone up, and income down. It's harder for them to employ apprentices and maintain them. The tolerance rate of apprentices is far less. They are getting rid of apprentices that are not as good as others'.

'A lot look at it as a form of cheaper labour'.

'Some of them are blocked by the cost factor and also blocked by [the struggle] to find a good one'.

Employers tend to take on apprentices for the following stated reasons:

'... a lot of guys who were an apprentice, put on an apprentice [because] of the opportunity they were given'.

'Most of the guys are pretty genuine. They do want to take an apprentice on'.

'Some do it for the generous reasons. That's how I started ... I should give someone a go and I need another person in the gang ... if I put on a labourer he's not going to get any better – the apprentice is on a learning curve'.

'In the past, a fair percentage ... struggled getting quality staff and more often ... they demand top dollar and payment at the end of the day ... it makes taking on apprenticeships an attractive proposition'.

The relationship between employers and apprentices is an important one. In other trade research, most apprentices take on an apprenticeship because of someone they know in the trade[29]. Hence, an important indicator for labour development within the trades is the number of apprentices taken on by qualified bricklayers. The following chart shows how many bricklaying apprentices there are per 100 bricklayers.

[29] Powers T & Walker J 2008, *Plumbing Apprenticeships: Drivers and Impediments*, Victoria.

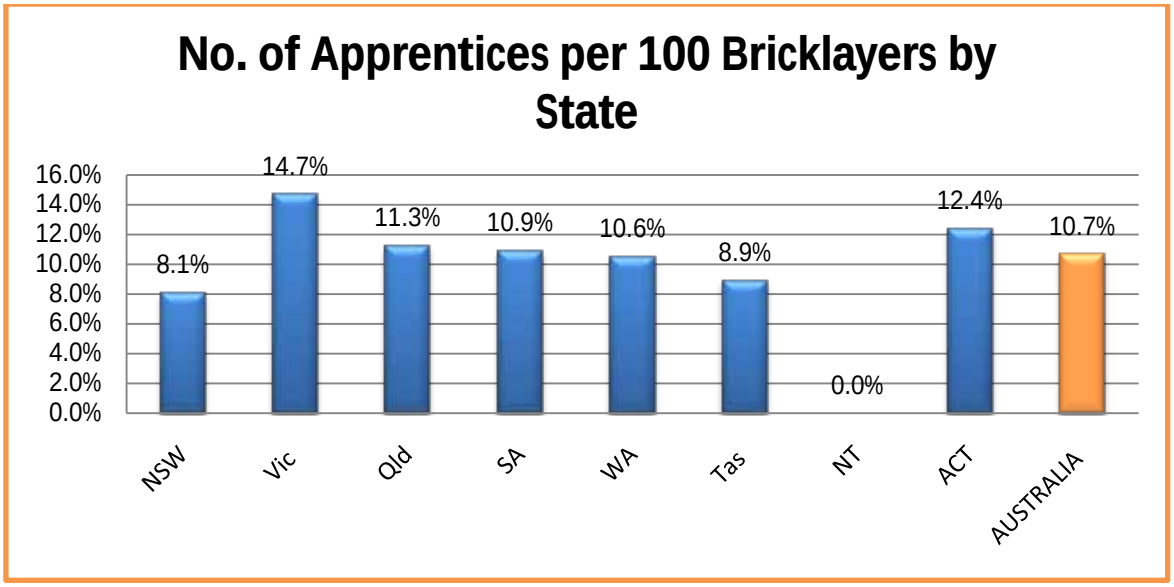


Chart 13 – Number of Apprentices per 100 Bricklayers by State - 2006

(Sources – ABS for bricklayers; NCVER for Apprentice in Training as of Sept 2006) [30 & 31]

With a national average of 10.7 bricklaying apprentices per 100 bricklayers, it becomes somewhat evident as to which States are more prone to use the apprenticeship scheme for new labour and which States rely on non-apprenticeship labour. Once again, we highlight that DEEWR and ABS data suggest that only 45% of bricklayers in Australia have bricklaying trade qualifications. Further, the rates in the graph above are influenced by market trends in construction. However, they still represent a strong indicator as to the use of apprenticeship training for replacing an aging labour group with inherently high turnover in skilled labour.

Particularly worrisome is the low rate in the Northern Territory and New South Wales. Acknowledging that the apprenticeship training for bricklaying is 3-4 years (depending upon the State), there should be some concern in these two areas for any resurgence in the construction industry.

Another view of how well different areas are serviced by the bricklaying services trade is to consider regions by remoteness. Although it is quite obvious that most construction activity happens in major populated regional centres, it is also important to know that bricklaying services are adjusting appropriately to the population trends. In other words, are there certain regions by remoteness that are experiencing a skills shortage?

Looking nationally, it is possible to compare how many bricklayers are available per 10,000 in population by remoteness (Note: remoteness is used by ABS reflecting geography and population characteristics. For more information see ASGC Remoteness Classification: Purpose and Use on www.abs.gov.au).

[30] Australian Bureau of Statistics 2006, CDATA Database(Feb 2009).
[31] NCVER Report 2009, Apprentice and Trainee numbers for each quarter from March 1998 to June 2008 by Occupation group for Bricklaying (ASCO - 4414) by State/Territory

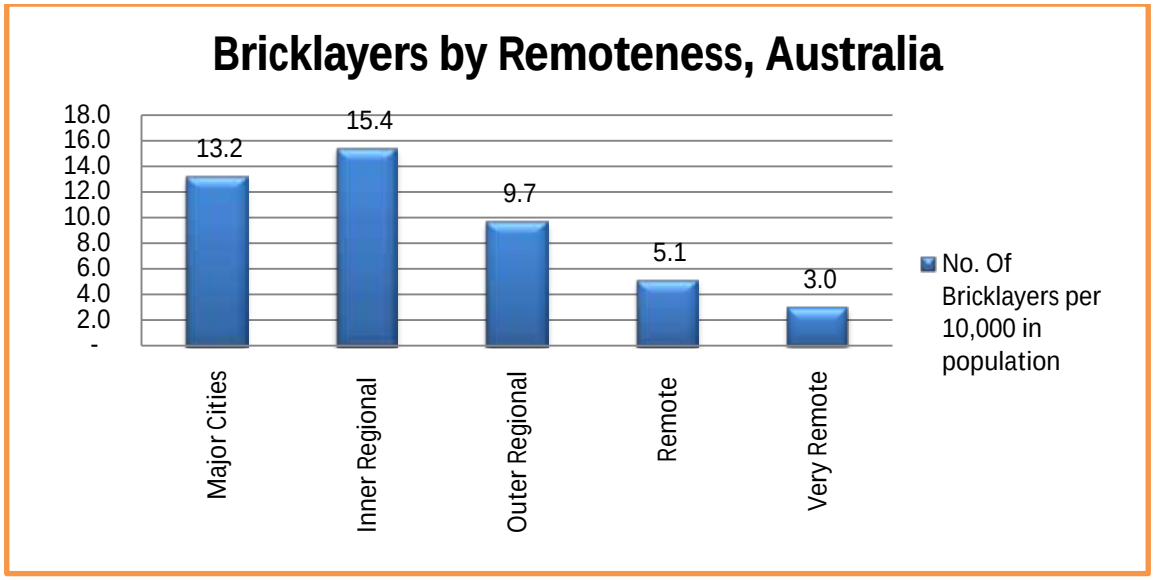


Chart 14 – Bricklayers by Remoteness[32]

It is evident that those in outer and remote regions do not have bricklaying services available to them in their region. Inevitably, remote residences must often pull in services from regional centres and/or major cities for bricklaying services.

In meeting those demands, the following chart reveals the number of apprentices per 100 bricklayers by remoteness.

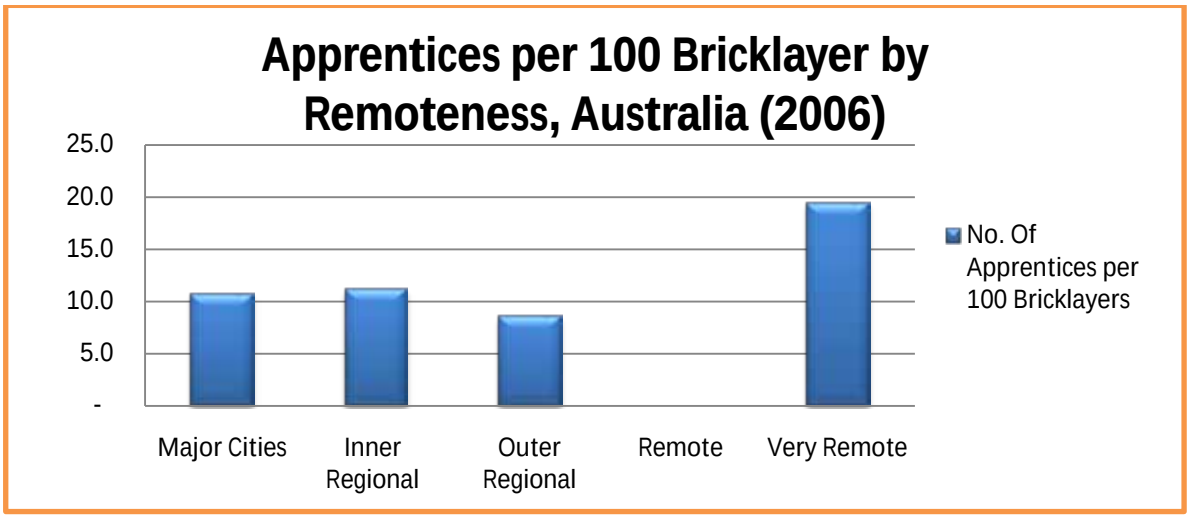


Chart 15 – Apprentices per 100 Bricklayers by Remoteness - 2006[33]

It is interesting to note that there are many more apprentices with very remote bricklayers, while there are none in the remote area. This high number of apprentices with 'very remote' bricklayers is almost exclusively located in Queensland.

[32] Australian Bureau of Statistics 2006, CDATA Database(Feb 2009).
[33] Australian Bureau of Statistics 2006, CDATA Database(Feb 2009).

A New Model to Track Labour Needs for Bricklaying Services

In order to better manage turnover, aging of the trade and training needs, the industry would benefit from a clear understanding of the current and future labour needs. An appropriate measure for an industry should be accurate, timely and meaningful response to the needs of different regions.

Tracking labour needs and skill shortages is often deduced by using data that are available as future or past indicators of labour needs. For the bricklaying services, these indicators have included:

- New housing starts
- New 'other than residential'
- Non-residential building
- Clay brick (SBE) production
- Total value of construction
- Survey of Employers Who Have Recently Advertised (SERA)

The challenge in these measures is that they are not 100% linked with bricklaying services. Inevitably, each of these measures fluctuates in their use of bricklayers or may not include all segments of the market or materials used within the trade.

In the last year however, there has become available a rich source of data for tracking the specific labour requirements for bricklayers. This information is imbedded in the levy collection managed by the Australian Brick and Blocklaying Training Foundation. As previously described, this levy is paid on almost all bricks and blocks used within the industry by bricklayers. The levy has evolved during the last six years. As of April 2007, the brick levy has included all States and the ACT. Currently, only the Northern Territory does not pay the levy. It is estimated that the levy includes 96-98% of all bricks and blocks used nationally.

The brick levy provides the ability to track the exact number of bricks and blocks used by the trade. There are many advantages to this indicator for labour purposes.

- Each manufacturer reports their levy by product segment

- The levy is paid on product that 'clears the gate', as opposed to production. This is much more aligned with bricklaying services labour since brick deliveries to job sites are quickly converted at the construction site with very little time delay. This is an improvement over production measures, since there may be some inventory fluctuations by manufacturers.
- The levy amount is reported to the ABBTF on a monthly basis
- The levy amount is reported by State

With the ability to measure accurately the number of bricks and blocks equivalents laid each month, it becomes much easier to track the labour requirements of bricklayers that are required to do the work.

In order to work from the total number of bricks and blocks installed to the labour needs, the following basic information was required:

- The typical gang size for different segments of the market
- The average number of bricks/blocks laid by a gang over a period of time
- The number of working days for each month

Forums and interviews with bricklayers provided these estimates and presented below are some initial data on the bricklaying labour force for Australia and each State.

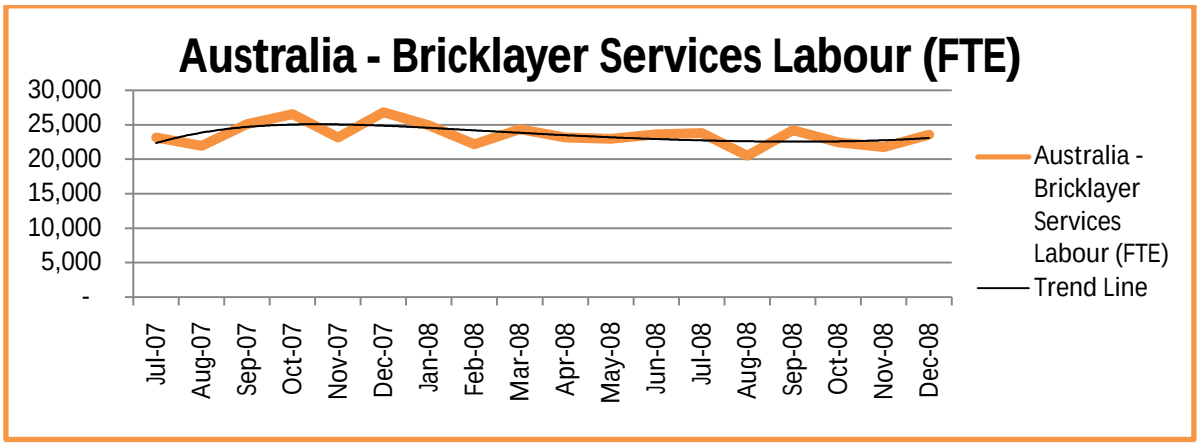


Chart 16 – Australia - Bricklayer Labour Tracking (Full-Time Equivalent)
* Full-Time Equivalent

The monthly tracking of changing labour usage within the bricklaying services provides a much stronger ability to track trends and regional differences. This provides a more timely and informed response to changing industry labour needs.

Below is the labour usage by State to highlight some of the differences within each State and some broad comparisons with recent housing starts as reported by HIA (i.e. as presented in a previous section).

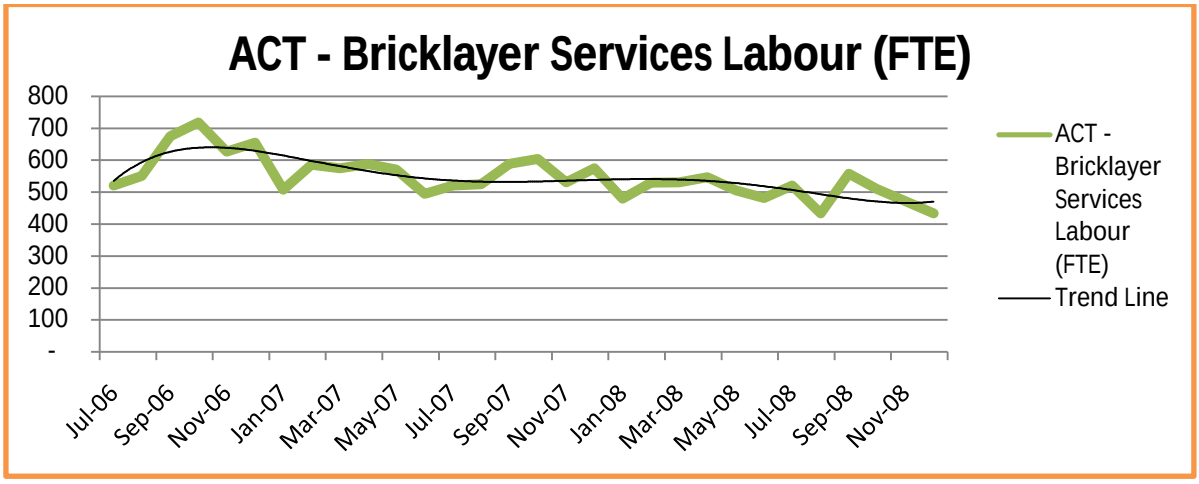


Chart 17 – ACT Bricklayer Labour Tracking (Full-Time Equivalent)

The ACT came off a strong increase in late 2006 and then gradually reduced, until levelling off mid - 2007. The following year, the bricklaying services labour usage gradually declined during the winter before showing levelling off near the end of 2008.

This generally reflects the housing start indicator as reported. HIA reported year over year changes within housing starts of:

	2007	2008
Aust. Capital Territory	-6%	-3%

Source: HIA

Table 11 – HIA ACT housing starts (2007/08)

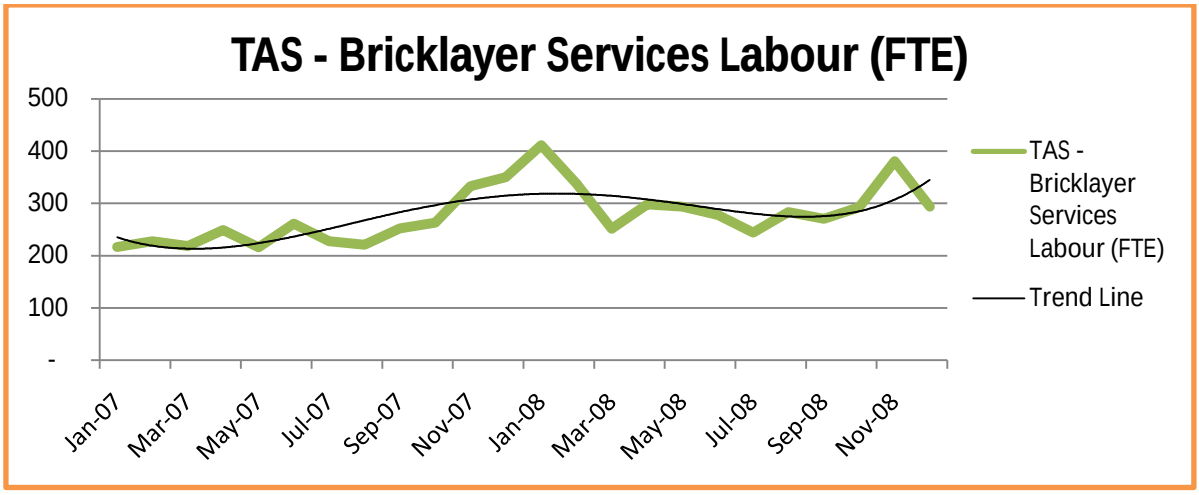


Chart 18 – Tasmania Bricklayer Labour Tracking (Full-Time Equivalent)

Tasmania shows some fluctuations in bricklaying labour needs. However this may be attributed to collection anomalies and/or the impact of major jobs within a small state. In general, the bricklaying labour usage showed some strong increases since April 2007 which plateaued during the Summer of 2007-08. The labour market softened during the Winter of 2008 before showing some strength at the end of the year.

This tends to show much stronger growth in bricklaying services labour usage during 2007 when compared to the more broadly based housing starts as reported by HIA:

	2007	2008
Tasmania	5%	-3%

Source: HIA

Table 12 – HIA Tasmanian housing starts (2007/08)

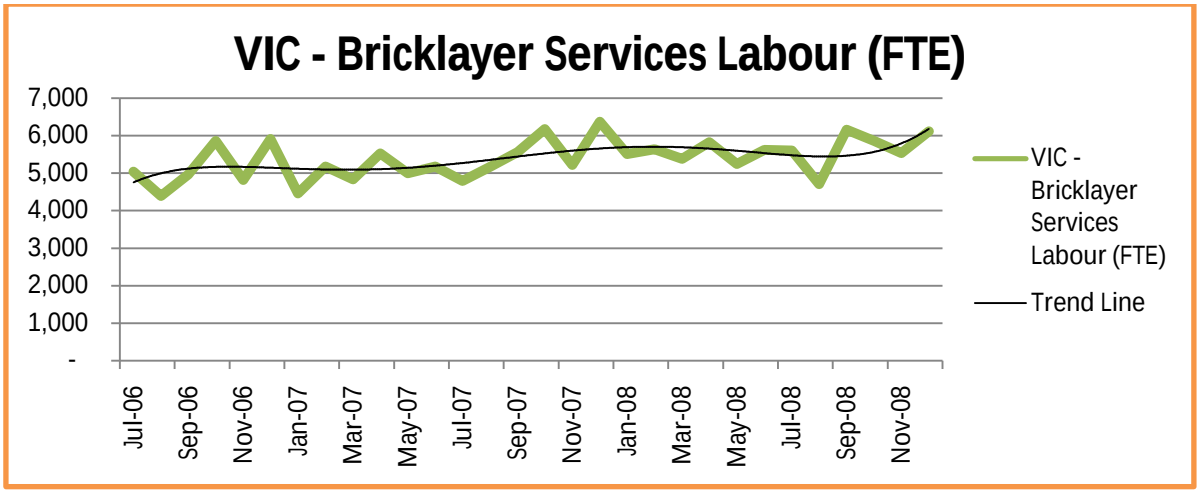


Chart 19 – Victoria Bricklayer Labour Tracking (Full-Time Equivalent)

Victoria's labour usage strengthened during the latter half of 2007 and then levelled off during the first half of 2008. Towards the end of the year however, there was a noticeably strong increase in bricklaying services labour.

It would appear that Victoria's bricklaying services labour increased more than would otherwise be suggested by the 2007 housing starts. HIA reported year over year changes within housing starts of:

	2007	2008
Victoria	2%	0%

Source: HIA

Table 13 – HIA Victorian housing starts (2007/08)

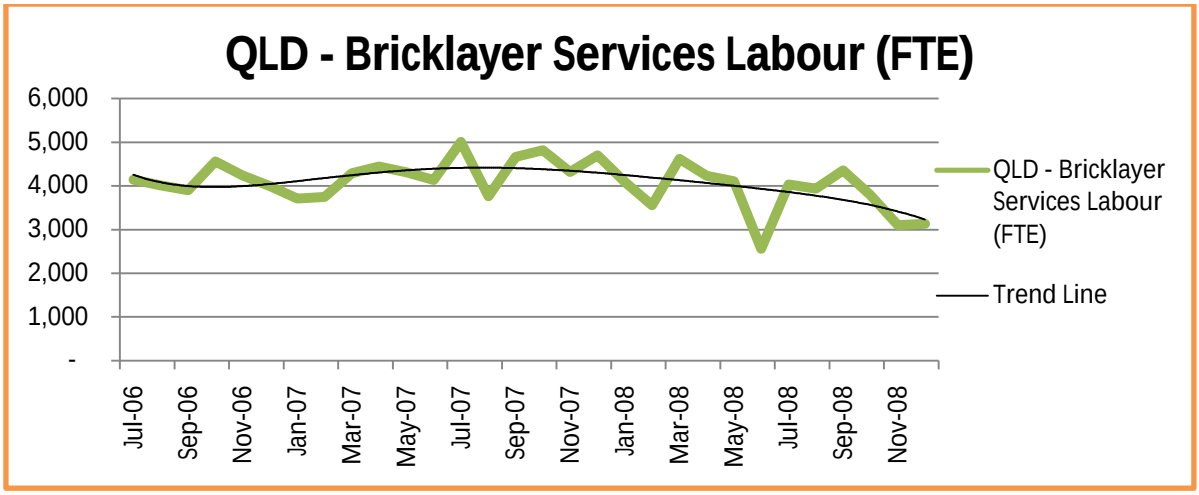


Chart 20 – Queensland Bricklayer Labour Tracking (Full-Time Equivalent)

Queensland labour usage reveals steady increase through the first half of 2007 followed by an even decline for the rest of the year. Overall, 2008 has shown a gradual decrease that in general for the total year.

Whilst the labour information generally follows the trend suggested by the housing starts data, 2007 labour usage is somewhat less than suggested by housing starts. The bricklaying services labour model above would suggest a smaller increase in 2007. However, 2008 would appear relatively accurate to the HIA housing starts data below.

HIA reported year over year changes within housing starts of:

	2007	2008
Queensland	12%	-10%

Source: HIA

Table 14 – HIA Queensland housing starts (2007/08)

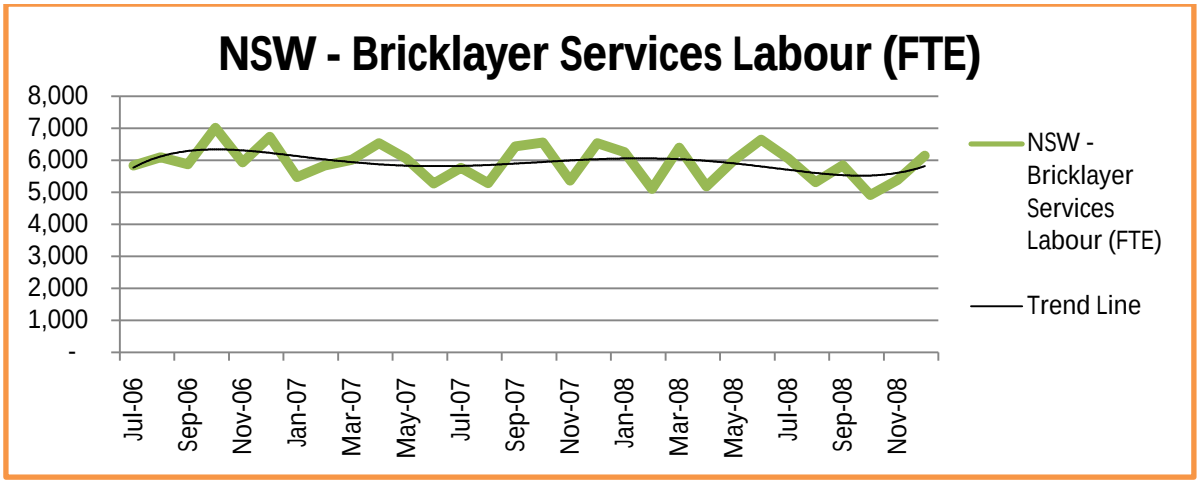


Chart 21 – New South Wales Bricklayer Labour Tracking (Full-Time Equivalent)

New South Wales shows some softening of labour usage during the mid - 2007 period with some rebound the following summer. 2008 shows a similar winter decline followed by a slight increase at the end of the calendar year.

Although the housing starts are a future indicator, they do not match up quite as strongly with the bricklaying labour which would suggest a relatively stable labour market for bricklaying with only minor declines in labour usage. HIA reported year over year changes within housing starts of:

	2007	2008
New South Wales	-6%	-9%

Source: HIA

Table 15– HIA NSW housing starts (2007/08)

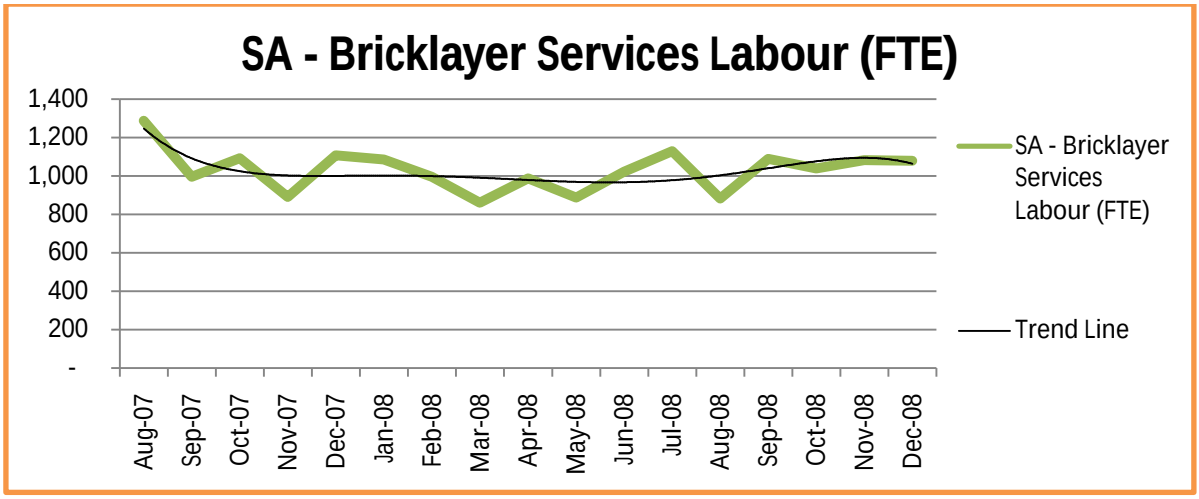


Chart 22 – South Australia Bricklayer Labour Tracking (Full-Time Equivalent)

Although SA only joined the levy collection in mid - 2007, SA labour declined during the winter period, but remained steady for the summer period and much of the first half of 2008. This was followed by a mild rally during the second half of the year. The last two months were somewhat soft for SA in regards to bricklaying labour usage.

The housing starts data shows a strong correlation to the bricklaying labour tracking in 2008. HIA reported year over year changes within housing starts of:

	2007	2008
South Australia	1%	9%

Source: HIA

Table 16 – HIA SA housing starts (2007/08)

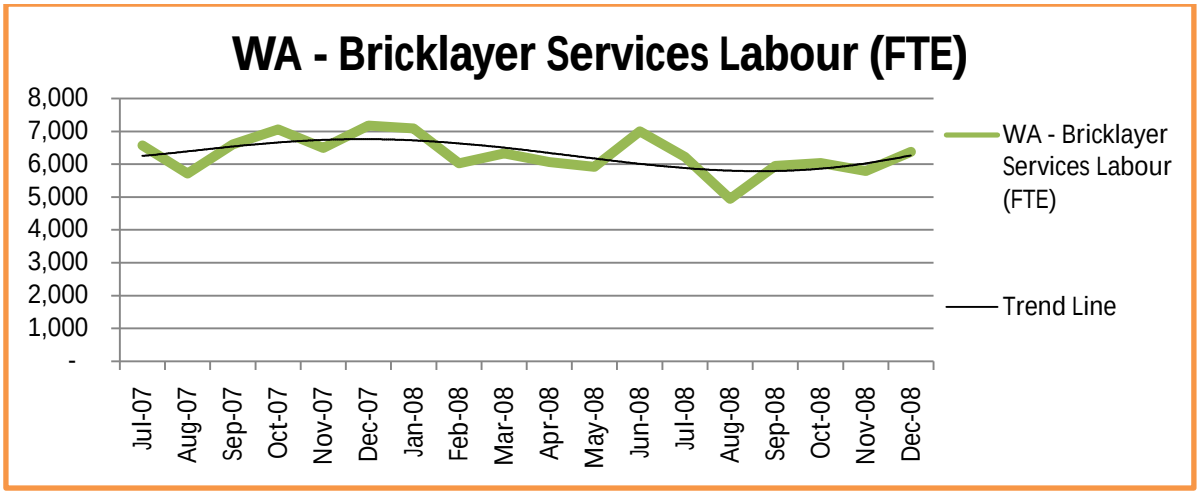


Chart 23 – Western Australia Bricklayer Labour Tracking (Full-Time Equivalent)

Although WA only joined the levy collection in April 2007, the labour tracking data suggests the latter half of 2007 increased in labour usage. However, 2008 began with a steady decrease in bricklaying services and showed some resurgence in the latter three months of the year.

Although it is difficult to report on 2007, it appears that the labour tracking supports the 2008 housing start indication reported below – although with more detail.

HIA reported year over year changes within housing starts of:

	2007	2008
Western Australia	-14%	-11%

Source: HIA

Table 17 – HIA WA housing starts (2007/08)

Background on Bricklaying Training

'Sun-baked clay bricks were used in constructing buildings more than 6,000 years ago in Mesopotamia. Along with brick, stone was used in ancient Egypt in many structures. The Romans introduced masonry construction to the rest of Europe and made innovations in bricklaying, including the use of mortar and different types of bonds, or patterns. As the Roman Empire declined, so did the art of bricklaying.

During the period of cathedral building in Europe, from about the 10th century to the 17th century, stonemasons formed guilds in various cities and towns. These guilds functioned much as today's unions do. They had the same categories of workers, apprentices, journeymen and masters. Not until the Great Fire of London in 1666 did the English start to use brick again in building.

The Chinese also were experts in bricklaying and stonemasonry, the best example of their work being the Great Wall of China. High in the Andes of South America, Incan stoneworkers had perfected their art by the 12th century.

Although some brick houses made of imported bricks were built in Florida by the Spaniards, the first bricks made by Europeans in North America were manufactured in Virginia in 1612. These bricks were handmade from clay, just as they were in ancient times. Machines were not used in the manufacturing of bricks until the mid-18th century. Changes in the content of bricks came shortly afterwards. Concrete and cinder blocks were developed at this time, as was structural clay tile'[34].

Beyond Australia

As can be seen from the above, bricklaying and blocklaying form one of the oldest crafts in existence. Around the world, as populations both increase and age, the demand for skilled bricklayers has been increasing whilst their availability has been decreasing. For a number of years, the popularity of trades in general declined with parents encouraging

Early Beginnings for the trade in Australia…

The bricklaying trade played on the minds of the early European settlers and planners for the First Fleet. Records show that the cargo of the transport, *Scarborough*, included 5,000 bricks, relatively few in number, but presumably enough to construct solid foundations for a select number of government buildings.

Despite having familiarised himself with the trade and occupation of each of the fleet's 700 convicts, Phillip could find only one man skilled in the craft of making bricks. This was James Bloodworth, a London bricklayer and builder.

Excerpt from the book: ***The Brickmakers - 1788 to 2008*** by Ron Ringer (2008)

[34] http://www.associatedcontent.com/article/1131995/the_6000_year_old_history_of_bricklaying_pg2.html?cat=37

children to articulate from school to university in search of a profession. This has resulted in a global skills shortage for trades in general, and bricklaying in particular. Over the past several years, the popularity of the trades has steadily increased again and this has resulted in larger numbers of apprentices taking up bricklaying, with a resulting increase in the demand for bricklaying training. The current global economic crisis is now affecting the construction industry, but it is too early to tell what the longer term impact will be.

The following sections give a snapshot of the bricklaying training processes in some other countries, and are designed to give a 'taste' only rather than an in-depth analysis.

England

In England, counties around the country are examining their construction needs. For example, in 2006, the West Midlands estimated that they would need 8,600 bricklayers, with historic training enrolment data showing a decreasing trend with only 1001 enrolments across the county for 2002/03, 693 in 2003/04 and 665 in 2004/05[35]. Bricklaying training in the UK is described as follows:

> 'Certification in the bricklaying trades is voluntary. Trade certification may be obtained by completing an apprenticeship program that allows the individual to gain experience on the job while taking college or industry courses. Typically, apprentices go through four terms of training, with each term ranging from 1200 -1400 hours. Experienced bricklayers may still continue to upgrade their skills in order to make themselves more versatile and employable. It is preferable for a bricklayer to have completed high school however it is not mandatory. Unions tend to look for applicants with at least a grade twelve education although some may accept those with only grade ten. Unions may also have skills and practical testing as part of the admission process. Motivation, common sense and a sincerity to learn the trade are generally viewed as just as important as a formal education. Bricklaying is physically demanding work. It requires that one be physically fit and able to work with materials that are heavy. Successful bricklayers are also technically skilled. They are able to lay bricks with both speed and precision. A bricklayer must be able to read construction plans and understand how buildings respond to the elements. It is also important that a bricklayer is knowledgeable about safety and fire regulations. Bricklayers must be able to adapt their skills to meet the requirements of a new job or situation and be able to relate to clients and other trades-people in a professional manner'[36].

Today, bricklaying training has increased significantly, with courses being offered by 159 Colleges throughout England[37].

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[35] Review of Education and Training within the Construction Sector in the West Midlands, August 2006, CITB
[36] A Report on Employment Trends in the Construction Industry: London, Middlesex, Elgin, Oxford, Huron and Lambton, http://www.ssc.uwo.ca/sociology/hrdc-london/apf.htm
[37] http://www.hotcourses.com/uk-courses/Bricklaying-training-courses-in-England/hc2_search.adv_col_do/16180339/0/search_category/TG.21/qualification/O,P,B,Z,Y,U,C/town_city/ENGLAND/page.htm

United States

According to a 1999 report[38], 'the construction industry is the largest user of apprenticeships in the United States, with nearly two-thirds of all registered American apprentices in construction trades'[39]. Employment in this sector was expected to grow significantly as shown by the tables below[40], although the current global financial crisis is likely to impact on these figures.

Construction Industry Employment

Thousands of Jobs			Average Annual Rate of Change	
1992	2002	2012	1992-2002	2002-2012
4,608	6,732	7,745	3.9	1.4

BLS Industry Employment by Occupation

Table 18 – US Construction Industry Employment

BLS Expected Growth for Top-10 Wage and Salary Construction Occupations 2002-2012 (%)		
1	Heating, air conditioning, and refrigeration mechanics and installers	37.5
2	Electricians	27.3
3	Masons, concrete finishers, and terrazzo workers	25.5
4	Drywall installers, ceiling tile installers, and tapers	24.3
5	Sheet metal workers	22.8
6	Pipelayers, plumbers, pipefitters, and steamfitters	22.5
7	Cost estimators	19.6
8	Roofers	18.8
9	Brickmasons, blockmasons, and stonemasons	17.4
10	Industrial machinery installation, repair, and maintenance workers	17.0

Table 19 – US expected growth for construction occupations 2002-12

According to a study conducted by the National Center for Construction Education and Research (NCCER), 'Today, 50 percent of high school graduates go to college, but only

[38] Key workforce challenges facing the American construction industry, University of Texas, 1999
[39] ibid, p. 12
[40] The Skilled Workforce Shortage: White Paper, NCCER, p. 2, 2006

half of these students earn a degree. The result is that 75 percent of our high school graduates are looking for jobs that do not require a college degree. Unfortunately, we are not attracting them to our industry. It is essential to our future that we reach out to our young people and expand career-training opportunities to them. Today's secondary, postsecondary, career and technical education students can benefit greatly from the career opportunities our industry has to offer. However, it is incumbent upon the industry to form relationships that will facilitate the transition of young people from the classroom to the job site. Currently, only 26 percent of high school students who take craft training while in school enter the industry. Of postsecondary students who take craft training while in school, 64 percent enter the industry'[41].

In the United States, the bulk of masonry training is conducted by the International Union of Bricklayers and Allied Craftworkers in conjunction with groups of employers.

Canada

In 2000, the Canadian Government commissioned research into the masonry (bricklaying) trade, including the training process. This research identified a number of issues. The data showed that:

- only 47.6% of qualified bricklayers and 31.5% of unqualified bricklayers have undertaken basic health and safety training[42].
- overall, employers felt that it was 'very important to ensure the trade remains intact and that there is a basic common core of skills'[43].
- 'In some regions ... there was a general lack of satisfaction with apprenticeship training (in-school portion). Issues ranged from questions around the instructors' skills, to the components that the contractors felt were left off the lesson plans'[44].
- 'The contractors definitely thought that the industry had a role to play in apprenticeship training. This included:
    - being more active in curriculum development;
    - being more involved in instructor selection;
    - having direct input on the material taught in class; and
    - supporting the training financially'[45].
- When examining how masonry training should be delivered, the report examined the following issues:
- *'Regulatory Requirement for Training* — Is there a legislative or regulatory requirement that workers be formally trained?

[41] ibid, p. 3
[42] Canadians Building Canada: Performance through partnership. National Masonry Human Resources Analysis, 2000, p 5-4.
[43] ibid, p. 6-9
[44] ibid, p. 6-10.
[45] ibid, p. 6-10

- *Characteristics of the Trade* — Is this a trade that one can learn on-the-job, or is formal training necessary in achieving competence?
- *Industry Demand for Improved Skills* — Are there skill gaps among existing workers such that certain types of work are not being done or are being done incorrectly?
- *Industry Demand for More Workers* — Do skills shortages restrict the operations of employers?
- *Technological Change* — Does the existence or introduction of new materials, equipment, or installation methods require that workers be formally trained?
- *Barriers to Accessing Training* — What kind of barriers are preventing workers from acquiring formal training?
- *Sources of Funding for Training* — Are training providers unable to offer programs or courses because of a lack of funding sources?'[46]

The report identified the fact that there is no consistency across provinces as regards apprentice training. However, it was also noted that 'there does not seem to be difficulties in providing training opportunities to apprentices. Most are satisfied with the level and competency of training they are receiving'[47].

As a result of the above report, the Canadian Masonry Human Resources Council was created and the following recommendations developed:

Recommendation: Form the Canadian Masonry Human Resources Council (CMHRC)

It is proposed that a new group be created to implement the findings and recommendations reported here. The CMHRC will include representatives from labour (both organized and independent), contractors, manufacturers, distributors, designers and trainers. The key operating decisions for this group will be determined in the first meetings. Membership of the CMHRC will be determined in cooperation with industry, labour, Human Resources Development Canada, the CCQ and the Canadian Council of Directors of Apprenticeship. In the long run the CMHRC will need to find industry based funding for its work. The CMHRC will set goals and establish activities in eight areas.

Recommendation: Recapture Masonry Market Share

The first priority is a general initiative targeting a gain in market share with particular emphasis on the repair, restoration and renovation segments. This effort will include designers (architects, engineers, interior designers) who now receive too little training in masonry products.

Recommendation: Strengthen Management Skills (Business Acumen) of Contractors

Masonry contractors must find new skills and systems that will raise the quality and the image of their products. In particular, bidding, accounting, marketing and planning systems must improve and new standards are needed to prevent inexperienced entrants from undercutting realistic bids and weakening efforts by others to rebuild the industry's image.

[46] ibid, p. 8-2
[47] ibid, p. 8-15

Recommendation: Improve Health and Safety Practices within the Industry

Improving health and safety training is a priority for the new CMHRC. Particular focus is needed on new entrants — especially those entering outside of apprenticeship — as well as independent operators or Mason Tenders.

Recommendation: Improve and Expand Apprenticeship Training

Apprenticeship is the best system for certifying workers and improvements are essential. Many new apprentices will need to be recruited in the next decade. The Red Seal program must be expanded as too few masonry workers are now qualified. Enhancing national training standards is needed because of the widely varying apprenticeship programs among provinces. One potential solution here is a core curriculum for the masonry trades. The CMHRC will promote national initiatives and work with government to improve training standards.

Recommendation: Maintain Size of Workforce by Balancing Entry and Exit to and from the Trade, to Meet Projected Market Demands

More intense efforts are required to monitor the trades and attract new entrants. Both long-term trends and short-term cycles must be balanced in the plans for intakes. A target of increasing the number of certified masonry workers must guide the planning. Immigration should be viewed as an important tool for managing the labour market and encouraged by the CMHRC. Likewise, recruiting from non-traditional groups such as women and Aboriginal people should be included.

Recommendation: Improve Relations (Communication) with CCDA and PAC/TACs

The CMHRC must improve the industry's relationship with the Canadian Council of Directors of Apprenticeship (CCDA) and provincial PAC/TACs. In particular, the CMHRC should accumulate and maintain a complete inventory of masonry training opportunities in Canada to provide an accurate and comprehensive reference source for improving training in the trade.

Recommendation: Improve Work and Career Opportunities Available to the Workforce

Upgraded training will add depth and breadth to a worker's career. In particular, masonry journeymen are traditional candidates for promotion to supervisor and management positions. Demographics and changing technology are threatening these opportunities. Also, the CMHRC recognizes that there are special needs to upgrade the workforce in refractory, renovation and restoration work.

Recommendation: Improve Labour Market Planning

The need for trained masonry workers will fluctuate between dramatic peaks and troughs. Planning to sustain the quality and quantity of the workforce will be a major challenge. Continuous monitoring and regular projections are essential. Even the best planning will often fail to

anticipate events. Flexibility in management plans and mobility among the workers are key features of an effective human resource planning strategy. It is further proposed that masonry contractors, working with general contractors, could find means to extend seasonal working periods. This would increase the effective utilization of the workforce.

The report went on to say,

> 'These findings and the recommendations have been validated by industry and provincial groups and will be the basis for national initiatives. A crucial component of the implementation plan will be gaining further support from industry groups and each province for specific changes in labour market support systems. The committee recognizes that the authority and jurisdiction to manage most of these systems rests with these other groups. To effect change in the current situation, the onus is on the national group to prove the merit of its recommendations and to convince the industry, province or training institutions to change the existing situation. Care must be taken, with any new initiatives, to avoid duplicating or interfering with efforts now in place'[48].

Strategies developed by the CMHRC include:

1. Industry representatives will establish a National Masonry Human Resources Committee;
2. Establish and improve relationships/linkages with academic groups to promote design in masonry;
3. Carry out a detailed review and analysis of apprenticeship training in Canada for the masonry trades;
4. Undertake a review of the current Bricklayer National Occupational Analysis (NOA) and determine the need to develop a National Core Curriculum;
5. Research availability of refractory training across Canada and assess requirements for enhancements and/or updating;
6. Carry out a review and evaluation of Occupational Health and Safety Training for masonry trades in Canada;
7. Undertake a review of current industry health and safety conditions for masonry trades in all provinces and develop a strategy for making appropriate improvements;
8. Develop a strategy to promote certification and mobility for masonry trades across Canada;
9. Develop a strategy to address shortages of supervisory personnel;
10. Develop a strategy/plan to increase the number of certified new entrants to the masonry labour force;
11. Develop a strategy and implementation plan to seek provincial support for expanding certification in the masonry trades;
12. Develop a recruiting strategy for designated groups/visible minorities;

[48] http://www.canadamasonrycentre.com/cmca/training_strategies.asp

13. Review management training programs available in other industries across Canada and develop a national competency program for masonry contractors;
14. Develop a communication strategy designed to establish and improve linkages/relationships with provinces and their respective masonry Provincial/Trade Advisory Committees (PAC/TACs)[49].

New Zealand

In New Zealand, in 2005, the Department of Labour reported that '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. 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'[50].

[49] http://www.canadamasonrycentre.com/cmca/hr_dev_project.asp
[50] http://www.dol.govt.nz/PDFs/trade-report-bricklayer.pdf

Australian Bricklaying Training

In gaining an understanding of the training context for brick and blocklaying in Australia, a number of issues need to be considered.

Data limitations

Firstly, it must be said that there are some problems in accessing accurate, timely data. The four main sources of data with regard to brick and blocklaying in Australia are:

1. Australian Government census data
2. National Centre for Vocational Educational Research (NCVER) data which is gathered from RTOs and State Departments of Education and Training around Australia
3. Department of Education, Employment and Workplace Relations (DEEWR) data
4. Data provided by ABBTF staff in the various States. ABBTF personnel are in close contact with employers, RTOs and State Departments of Education and Training, so are able to provide a great deal of current, accurate data.

In examining these data sources, a number of challenges are present. Firstly, there often is a significant lag in official Government generated data being available. This is not surprising when considering the work involved in collecting data relating to employment numbers, numbers in training and training outcomes across all States and Territories and for all occupations. However, given the pace of change, this lag causes some difficulty for policy makers and industry analysts in being able to make confident predictions based on sound data.

Secondly, there is little consistency across data sources. The census data provided through the Australian Bureau of Statistics is, of necessity, only collected every five years. The last Census relates to the evening of 8 August 2006. In the Census collection, individuals are asked to self-identify against a number of personal and professional categories. Thus, the Census data relies on the correct self-identification by most individuals to provide accurate data.

When trying to compare the statistics provided by the Census data against those from NCVER, the closest data collection point for NCVER was September 2006 (as opposed to August 2006 for the Census). The Census data relating to occupation uses the Australia New Zealand Standard Classification of Occupations (ANZSCO) codes which, for bricklayers and stonemasons, is 3311. The Census also includes the minor group relating to Bricklayers, Carpenters and Joiners, nfd (not further defined). NCVER uses the Australian Standard Classification of Occupations (ASCO) code 4414.

When we compare the data relating to individuals in training, we are able to note some discrepancies:

ABS: Currently Attending Technical and Further Educational Institution (including TAFE Colleges)

Occupation 06 (ANZSCO) (OCC06P)	Bricklayers, and Carpenters and Joiners, nfd	Bricklayers and Stonemasons	Total
New South Wales	271	376	647
Victoria	282	370	652
Queensland	61	151	212
South Australia	14	68	82
Western Australia	8	277	285
Tasmania	59	10	69
Northern Territory	3	0	3
Australian Capital Territory	5	10	15
Other Territories	0	0	0
Total	703	1,262	1,965

Data Source: 2006 Census of Population and Housing
Table 20: Bricklayers and stonemasons who have identified that they are still in vocational education

NCVER data for 'in-training' by State as at September 2006 shows the following:

NSW	597
Vic	936
Qld	457
SA	185
WA	600
Tas	33
NT	0
ACT	44
Australia	2852

Table 21: NCVER data for 'in training' for September 2006

When we compare these two data sets, we find:

NCVER data		Census data	Discrepancy
NSW	597	647	50
Vic	936	652	-284
Qld	457	212	-245
SA	185	82	-103
WA	600	285	-315
Tas	33	69	36
NT	0	3	3
ACT	44	15	-29
Australia	2852	1965	-887

Table 22: Comparative data from NCVER and Census

Whilst the category for 'in training' used by the Census data is not as precise as that used by NCVER, there is still a significant discrepancy between these two sets of figures. The DEEWR information relating to occupations and training also relies on NCVER data for its analysis.

Whilst the NCVER data would appear to be more accurate than that from the Census, there are still some problems with the NCVER data as well. These include the lag in time to ensure that all necessary data has been included. This means that current data may change as more accurate and complete data comes to hand. In the general information available from NCVER, data is also not sufficiently disaggregated to allow most people to gain easy access to relevant information. For instance, in many publications, apprentice information is only discussed at the 'construction' level, rather than by specific trades[51]. Reporting statistics at this level distorts the interpretation for smaller construction trades such as brick and blocklaying when compared to trades such as plumbing and carpentry. This is not only true of NCVER publications but also relates to other Government funded reports[52] which draw conclusions and make recommendations on higher level aggregates of data.

There is also some confusion about the interpretation of some of the codings used. For example, when advised that an apprentice intends to leave an employer, the codes used by Field Officers include 'stood down', 'suspended' and 'cancelled'. There appears to be no rigour or single interpretation used for these codes within and between States, and this impacts on the accuracy of the NCVER data. This is a matter of concern if Governments are then using this data to inform policy and labour market programs.

Additionally, there are some challenges specific to recording completions for apprenticeships due to the required on-the-job experience. Whilst, finishing a training

[51] *Australian vocational education and training statistics: Apprentices and trainees*, June quarter, 2008
[52] Huntly Consulting Group Pty. Ltd., *Exits from the Trades, 2008*, a DEEWR funded report
Toner, P 2003, *Declining Apprentice Training Rates: Causes, consequences and solutions,* University of Western Sydney

qualification at an RTO would suffice for most NCVER completion counts, apprenticeships require two components for the record of completion:

- The qualification from the RTO
- On-the-job experience

Some state DETs only reports apprenticeship completions to NCVER when both components have been lodged. Although RTOs report qualification completion, the on-the-job experience lodgement is often managed by the apprentice - with help from the employer and/or GTO. We acknowledge that there is anecdotal evidence that on-the-job reporting is overlooked by some apprentices and therefore understates the true completion rate. This issue runs across all unlicensed trades. The scale of this issue is beyond the scope of this project and it is highlighted as an area for further research.

Additionally, whilst there is much focus on tracking apprenticeship completions, there are other certified pathways for those beyond 21 years of age which are not currently tracked. Many States have some form of trade recognition that allows people to take the training outside of an apprenticeship arrangement. By combining their qualification training and proof of on-the-job experience, these individuals become trade qualified without inclusion in the official 'apprenticeship completions'. This information is a critical gap for the industry labour management.

These recording issues are in no way a criticism of the agencies collecting the data, but are a reflection of the complexity of the process.

The teaching workforce

> *'One of the greatest challenges faced by RTO's will be to source appropriately qualified trainers to deliver quality training using up to date equipment and work practices'.*
>
> Major Industries Training Advisory Council Ltd
> Feedback on the Skilling Australia for the Future: Discussion Paper
> 29 April 2008

One of the major impediments to the successful uptake of bricklaying apprenticeships relates to the ability of RTOs to deliver quality, timely training. As with most other parts of the Vocational Education and Training (VET) sector, trade teachers represent an aging group and are leaving the workforce more rapidly than new teachers are entering.

Anecdotal evidence from RTOs around the country is that the replacement of retiring teachers will become a major issue over the next five to ten years.

Introduction of the Training Package

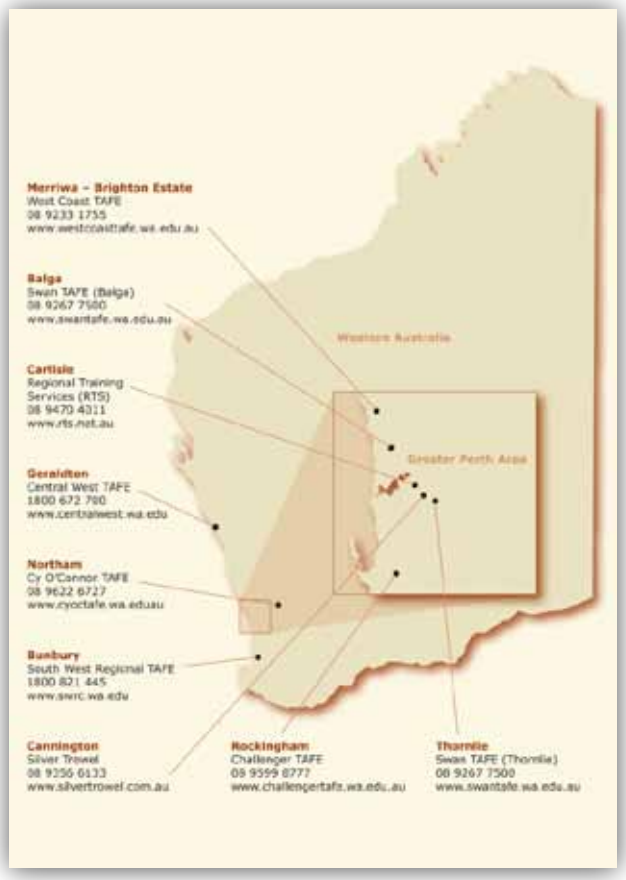
In 1998, bricklaying training moved from a curriculum based model to a competency based model with the introduction of the BCG98 General Construction Training Package, which has now been superseded by the BCG03 General Construction Training Package. This updated package has made minimal changes to the brick and blocklaying qualifications.

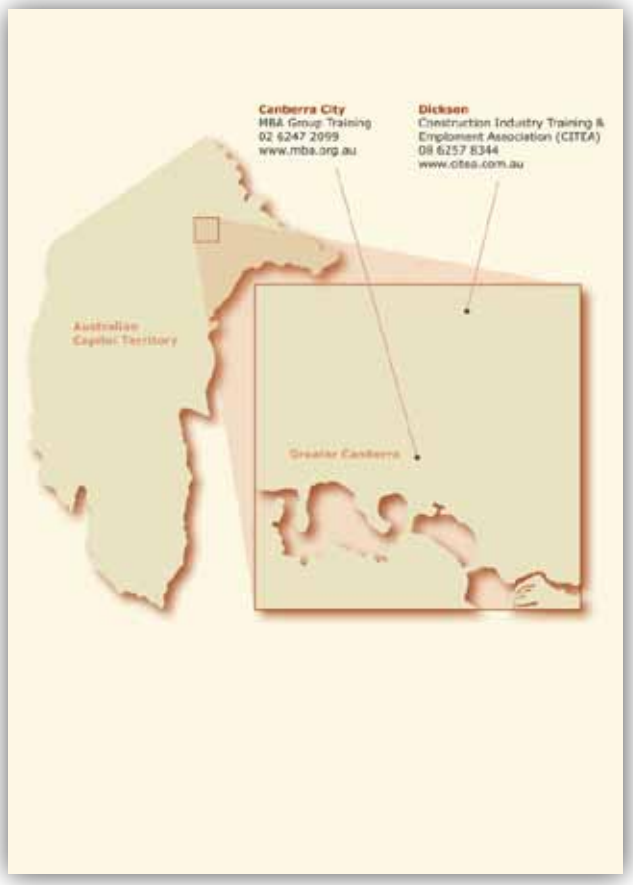
> *'From 2007, the Queensland Government fully implemented the competency-based training system to allow earlier completion for a selection of [bricklaying] apprentices. Consequently, the expected timeframe for gaining qualifications as a bricklayer in Queensland has been reduced from 48 months to 42 months'.*
>
> Labour Economics Office Queensland
>
> DEEWR
> December 2007

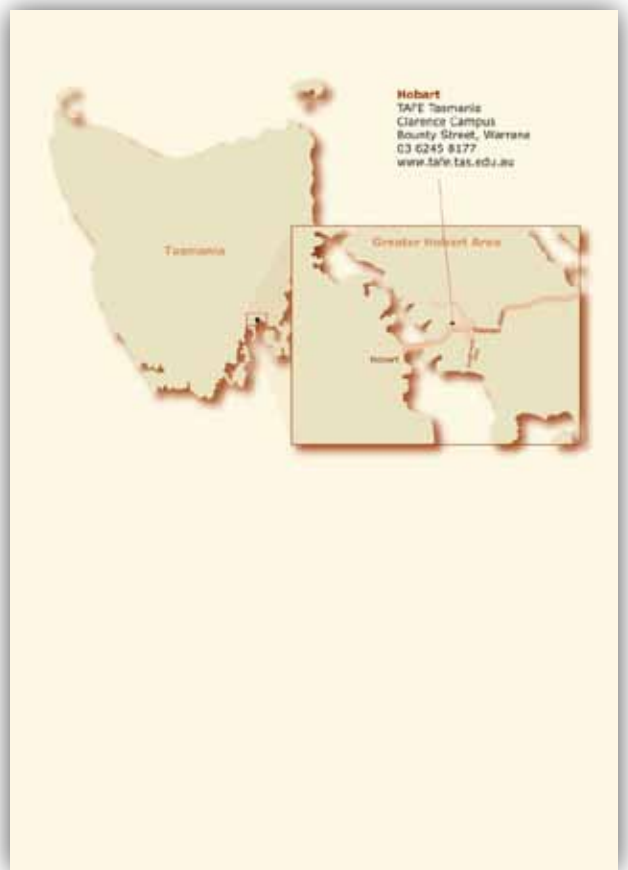
Feedback from RTOs across the country is that, in the initial implementation of the Training Package, most trainers simply overlaid the old curriculum onto the new qualifications. Many RTOs are now using the Training Package more effectively to build programs using blended delivery and on-site training and assessment. This has enabled students to progress more quickly in some instances. However, there is still significant concern expressed by teachers about the focus on compliance, audit and administrative processes rather than teaching.

Bricklaying Training Structure

Program Location and Delivery







Figures 2 to 8 – State locator maps of public and private RTOs
(courtesy of ABBTF)

Brick and blocklaying qualifications are on the Scope of Registration for Registered Training Organisations (RTOs) around the country, but are not necessarily delivered by all of those RTOs. The preceding maps show all of the training organisations in Australia which are delivering bricklaying apprentice training. This includes both public and private RTOs.

In the past

In New South Wales and the Australian Capital Territory, TAFE bricklaying training has traditionally been delivered in a day release format and students have attended throughout the first three years of their apprenticeship. In many other States, training has been delivered in a block release format. Block lengths have varied from one to four weeks. Training has been delivered in a 'lock step' process with the entire cohort progressing at the same pace regardless of skill levels or prior experience.

Program delivery in the current environment

Whilst most public RTOs have maintained the existing program structure and delivery formats, others have been impacted by the increased competition from private RTOs, reduced student numbers or changed Government policies. This has necessitated a more flexible approach to apprentice training.

Wollongong TAFE conducts a twelve months pre-apprenticeship program in which students attend the College for four days per week and undertake work experience on the fifth day. This program follows on from the Step Out taster program run in secondary schools and funded by the ABBTF. The Step Out program has been so successful that 'kids are knocking on the door looking for the full-time course'.

Apprentices at Wollongong TAFE still attend for one day per week. However, first second and third years have been replaced by Stages 1, 2 and 3. This has been combined with a continuous intake in which students can enrol any time during the year, and these two initiatives mean that apprentices can now complete their schooling in 2.5 to three years, depending on their skill levels. Students from remote areas are offered a one week block release program, whilst unqualified industry workers can attend evening classes two nights per week to gain their bricklaying trade papers.

TAFE SA has implemented some on-site training delivery and assessment as part of their program. Students attend the College for one week blocks for other parts of the course and are able to fast-track through the program. TAFE SA also runs a pre-apprenticeship course and a program for mature age industry workers seeking qualification. Their pre-apprenticeship course runs for twenty weeks and exposes students to bricklaying, tiling and plastering.

The private training provider in South Australia, Flexible Construction Training and Assessment (FCTA) operates on a flexible, block release basis in which Stages 1, 2 and 3 students work together, with the older students partially mentoring the younger ones. The program is project based and involves some on-site assessment. The course focuses on mastery of practical skills and uses creative techniques to improve literacy and numeracy.

Increase in apprentices in training - Commencements

The skills shortage which has been felt in the trade areas over the past five to six years has seen a resurgence in the popularity of the construction trades.

Apprenticeship commencements for Bricklaying by March quarters - NCVER data									
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
1998	96	70	24	10	24	(a)	(a)	(a)	228
1999	134	99	43	8	21	(a)	(a)	5	311
2000	147	122	51	18	30	(a)	(a)	6	374
2001	83	49	25	3	22	(a)	(a)	(a)	187
2002	125	101	28	17	18	(a)	(a)	10	301
2003	119	114	43	21	29	(a)	(a)	12	342
2004	124	149	74	34	51	6	(a)	9	447-451[a]
2005	115	132	63	31	100	5	(a)	17	463-467[a]
2006	87	139	55	31	108	7	(a)	9	436-440[a]
2007	100	107	73	39	119	6	(a)	17	461-465[a]
2008	107	173	69	44	67	7	(a)	18	485-489[a]

Table 23: Apprenticeship commencements by March quarters – NCVER data

(a) Due to confidentiality reasons (a) represents figures 1-4 inclusive[53]

As can be seen from the above March quarter data and the full year data in the next table, there has been a general trend upwards with regard to bricklaying commencements. Whilst the increase is not as significant as for the licensed trades for electricians and plumbers, in the eleven years from 1998 to 2008, commencements for the March quarter have increased by 257 or 113%, and full year by 668 or 95.6%.

	NSW		Vic		Qld		SA		WA		Tas		NT	ACT		Aust	
1998	251		283		68		22		56		6		0	5		**691**	
1999	294	17%	362	28%	143	110%	46	109%	103	84%	(a)		0	8	60%	**956-960**[a]	**39%**
2000	298	1%	331	-9%	102	-29%	37	-20%	89	-14%	(a)		(a)	8	0%	**871**	**-9%**
2001	174	-42%	183	-45%	55	-46%	17	-54%	72	-19%	(a)		0	(a)		**509**	**-42%**
2002	260	49%	345	89%	98	78%	51	200%	104	44%	9		0	14		**881**	**73%**
2003	283	9%	346	0%	155	58%	79	55%	159	53%	8	-11%	(a)	18	29%	**1048-1052**	**19%**
2004	307	8%	458	32%	218	41%	74	-6%	240	51%	15	88%	(a)	17	-6%	**1329-1333**	**27%**
2005	237	-23%	433	-5%	165	-24%	75	1%	301	25%	8	-47%	(a)	37	118%	**1256-1260**	**-6%**
2006	185	-22%	423	-2%	221	34%	71	-5%	341	13%	14	75%	0	13	-65%	**1268**	**1%**
2007	235	27%	379	-10%	252	14%	100	41%	353	4%	17	21%	0	22	69%	**1359**	**7%**

Table 24: Apprenticeship commencements by full years – NCVER data

(a) Due to confidentiality reasons (a) represents figures 1-4 inclusive

[53] NCVER requirement

Whilst both sets of data show a fairly significant increase in student numbers, anecdotal evidence from TAFE Colleges in most States shows a steady decline in enrolment numbers, resulting in the need to reduce the number of classes being run and moving to more flexible training delivery and assessment processes. If enrolments in the TAFE sector are declining, it may be presumed that the increase in the number of private RTOs is part of the cause. The decline could also be partially attributed to an increase in withdrawals during the first three months of the apprenticeship and before they commence with an RTO.

> *'Our student numbers have been decreasing for the past ten years'.*
>
> *Head of School, TAFE College*
> *10 March 2009*

Attrition rates

Whilst the above data shows a fairly steady increase in apprenticeship commencements, both ABBTF and NCVER show that there are major issues relating to attrition, particularly in the first year of the apprenticeship.

First year attrition rates for supported apprentice bricklayers commencing in 2007 - ABBTF data

	Directly employed			GTC employed			Total		
	Total	**Left**	**Attrition rate %**	**Total**	**Left**	**Attrition rate %**	**Total**	**Left**	**Attrition rate %**
Vic	206	55	**26.7**	64	28	**43.8**	270	83	**30.7**
NSW	52	11	**21.2**	34	11	**32.4**	86	22	**25.6**
ACT	12	1	**8.3**	8	2	**25**	20	3	**15**
Qld	87	14	**16.1**	63	30	**47.6**	150	44	**29.3**
Tas	18	3	**16.7**	0	0	**0**	18	3	**16.7**
SA	40	8	**20**	14	3	**21.4**	54	11	**20.4**
WA	42	6	**14.3**	95	41	**43.2**	137	47	**34.3**
	457	98	**21.4**	278	115	**41.4**	735	213	**29**

Table 25: First year attrition rate – ABBTF data

First Year Attrition comparison - ABBTF/NCVER data

	NCVER Stats				ABBTF supported stats
Start year	**2003**	**2004**	**2005**	**2006**	**2007**
Vic	33.5	36.8	38.2	35.3	30.7
NSW	29.4	43.3	34.6	39.4	25.6
ACT	42.3	47.6	38.3	25	15
Qld	34.3	34.7	31.8	32.9	29.3
Tas	22.2	20	20	40	16.7
SA	30.4	16.2	25.3	31	20.4
WA	31.9	39.9	32.7	34.5	34.3
	32.2	**37.7**	**34.8**	**35.1**	**29**

Table 26: Attrition comparison – ABBTF/NCVER data

The ABBTF data in Table 24 shows that the Group Training Companies (GTC's) have a significantly higher attrition rate in most States than the rate for those apprentices who are directly employed. This is somewhat surprising considering the infrastructure in GTC's to support the apprentice and host employer. It is also an issue for the ABBTF which pays a higher subsidy through GTC's than directly to employers for some States (for instance, in Queensland, the ABBTF funds $6000 to an employer who directly employs an apprentice and $8000 for employment through a Group Training Organisation).

However, GTC's offer the capability to rotate the apprentices through different employers, providing a rounded experience that is often lacking in the direct employment with a bricklayer. It should be noted, that GTC's must also contend with the phenomenon of 'poaching', whereby an host employer convinces an apprentice to transfer from the GTO to the host employer (i.e. directly employed). Often this occurs because the host employer is quite happy with the apprentice's performance and does not want to lose them to rotation. Additionally, there may be some financial incentive to circumvent the GTC service charge. Anecdotal evidence suggests that this practice of poaching is prevalent in the construction trades.

'61.9% of group training organisations surveyed reported employing [bricklaying] apprentices'.

Investigation into apprentices in the building and construction industry in Queensland: Matching supply and demand with results
Deborah Wilson Consulting Services
4 November 2004

Also of interest is the NCVER data in Table 25 which shows a generally increasing rate of attrition over the four years 2003 to 2006.

The ABBTF and NCVER data accords with more general apprenticeship data across all construction trades on attrition rates, which shows that:

- '3.7% of trade apprentices withdraw/cancel after only one month in training;
- a further 5.4% leave within three months;
- a total of 24.2% of trade apprentices withdraw/cancel after only one year in their apprenticeship; and
- that the next largest single proportion to cancel/withdraw do so in their second year of an apprenticeship (10%);
- about 40% of all trade apprentices, over the 1995 to 2005 period, cancelled/withdrew from their apprenticeship'[54].

Given the fact that the numbers of commencements are not sufficient to offset the exit from the trades of older tradespeople, much less to cope with any increase in work, this attrition rate is a cause for concern.

Completion rates

NCVER provides data on a range of statistical information regarding apprenticeship training. This includes information on commencements, in-training, cancellations and completions. As mentioned earlier in this report, the data on cancellations is somewhat problematic as there is some inconsistency in the use of various codes by Field Officers, so this report does not examine this category.

This section of the report will examine the completion rates of apprentices who undertake bricklaying training qualifications. In this context, completion data relates to those students who have finished all of the required components of the training program.

The tables below show completion rates by State for those apprentices who commence between the period of 1998 to 2004 and the percentage variation from year to year. As can be seen, there are some significant variations on a yearly basis. For example:

- between the years 2001 and 2002 there is a variation of 75% in NSW completions;
- in the 2000-2001 period, Victorian completion figures show a 92% variation;
- for 2005-2006 Queensland data shows a variation of 130%;
- SA has variations of over 100% for several periods (although these data are somewhat distorted by the small numbers of students in this State, so that variations appear larger).

[54] Huntly Consulting Group Pty. Ltd. 2008, *Exits from the Trades: Final Report, p. 28*

Completions

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
1998	111	57	65	21	23	6	0	6	289
1999	92	54	36	14	36	(a)	0	7	239-43
2000	63	53	21	(a)	29	(a)	0	(a)	175
2001	56	102	32	9	28	5	0	6	238
2002	98	142	40	19	41	5	(a)	(a)	349
2003	118	119	69	25	56	(a)	0	(a)	392
2004	114	92	40	23	37	(a)	0	7	313-17
2005	75	148	30	17	43	6	0	10	329
2006	106	177	69	36	69	(a)	(a)	10	473
2007	121	219	77	51	116	10	0	6	600

Table 27: State completion rates

(a) Due to confidentiality reasons (a) represents figures 1-4 inclusive[55]

Much of the variation in intra-State figures can be traced back to cyclical construction upturns and downturns. However, it is perhaps more useful to examine the data on completions vs. commencements to gain some idea of the success rates of the program in various States.

In trying to understand completion rates and their meaning for apprenticeship training, it is necessary to compare completion figures for a year against the commencement data for the year in which the apprenticeship would have commenced. For example, as can be seen from the chart below, Victorian apprentices who commenced in 1998 would have completed their apprenticeship training in 2001, whereas those apprentices who commenced in 2005 are still in training and there is, therefore, no completion data yet available for them.

Presented below are the completion rates for each of the States. Unfortunately, the Territories have not been included because of the small number of apprentices. For raw data, please see Appendix 2.

[55] NCVER data reporting requirement

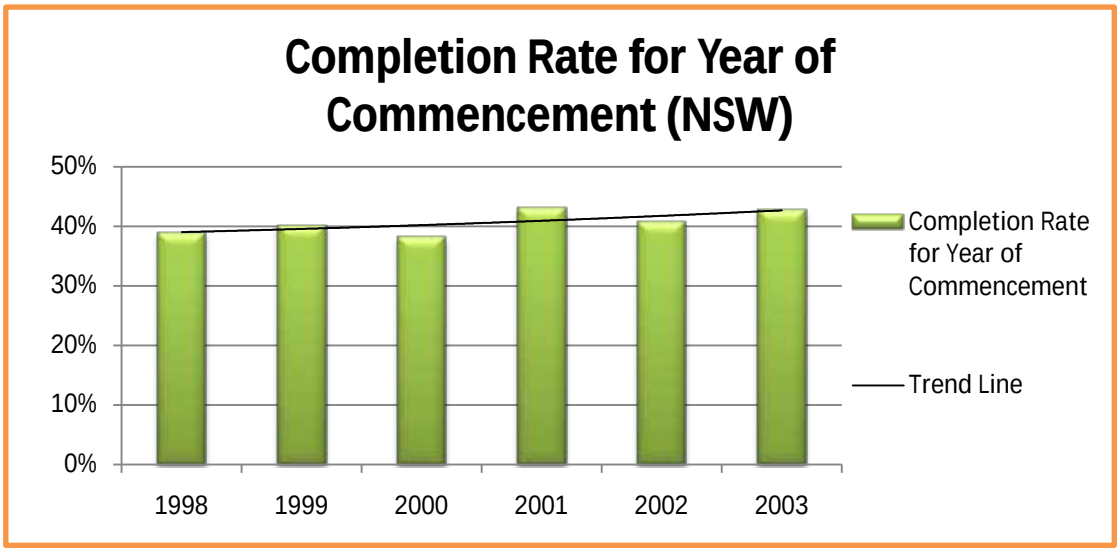


Chart 24: NSW completion rate by year of commencement

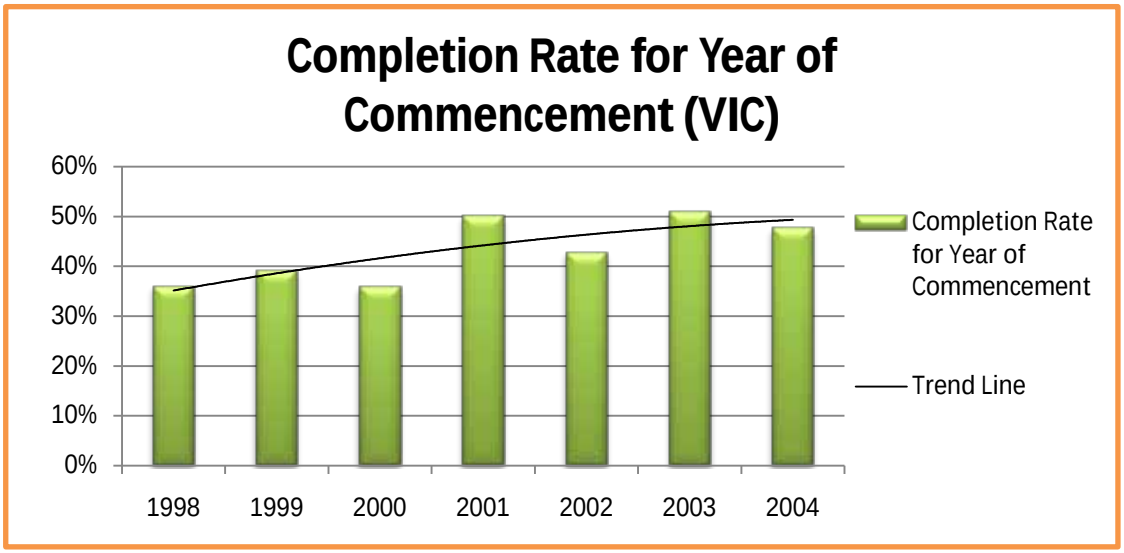


Chart 25: Victorian completion rate by year of commencement

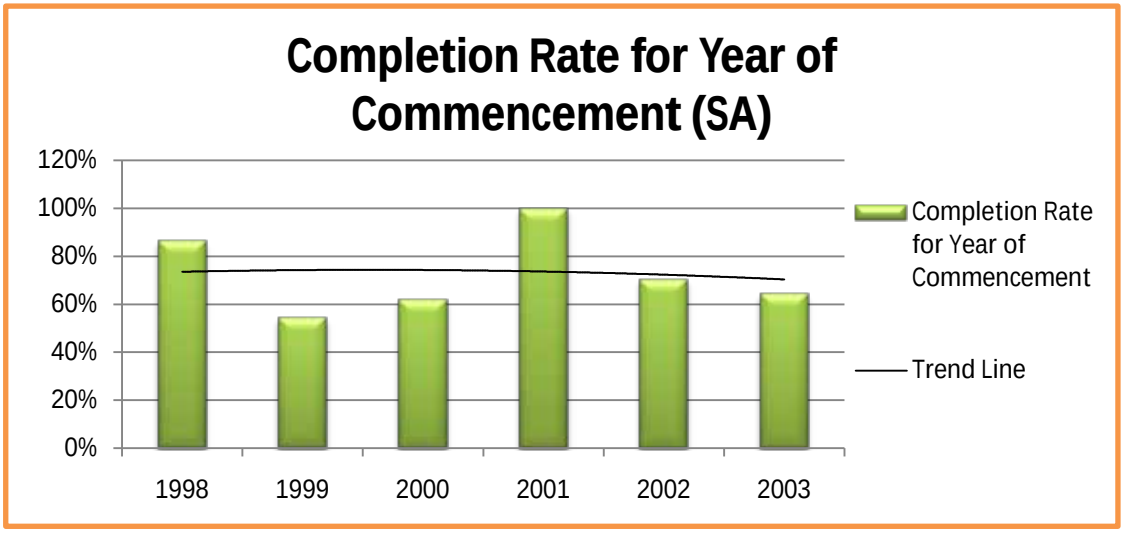


Chart 26: SA completion rate by year of commencement

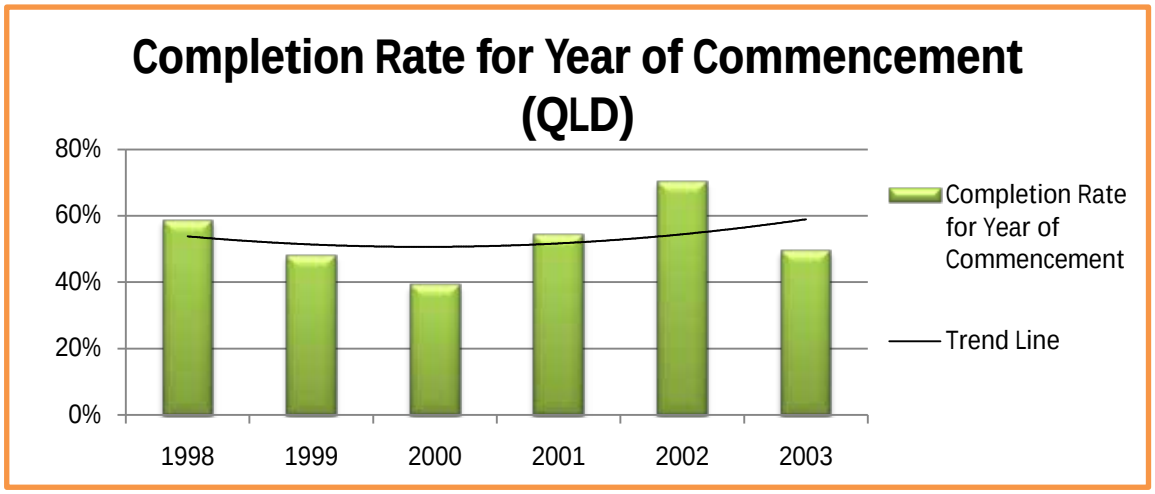


Chart 27: Qld completion rate by year of commencement

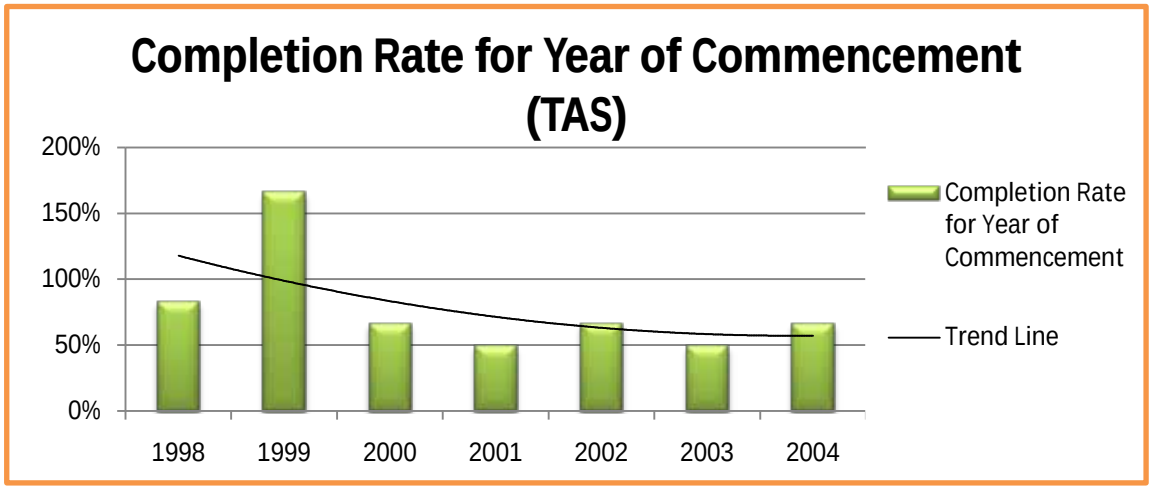


Chart 28: Tasmanian completion rate by year of commencement

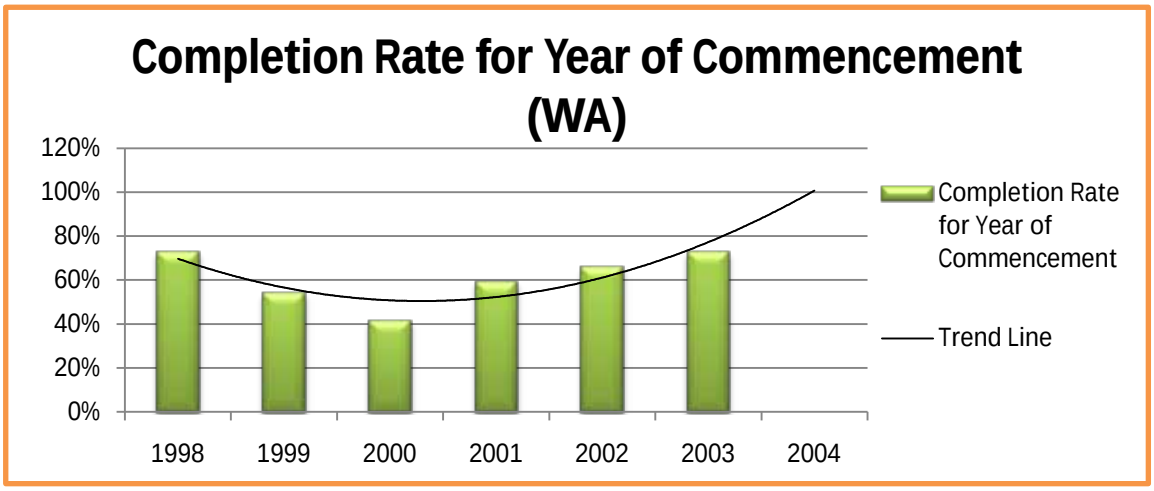


Chart 29: WA completion rate by year of commencement

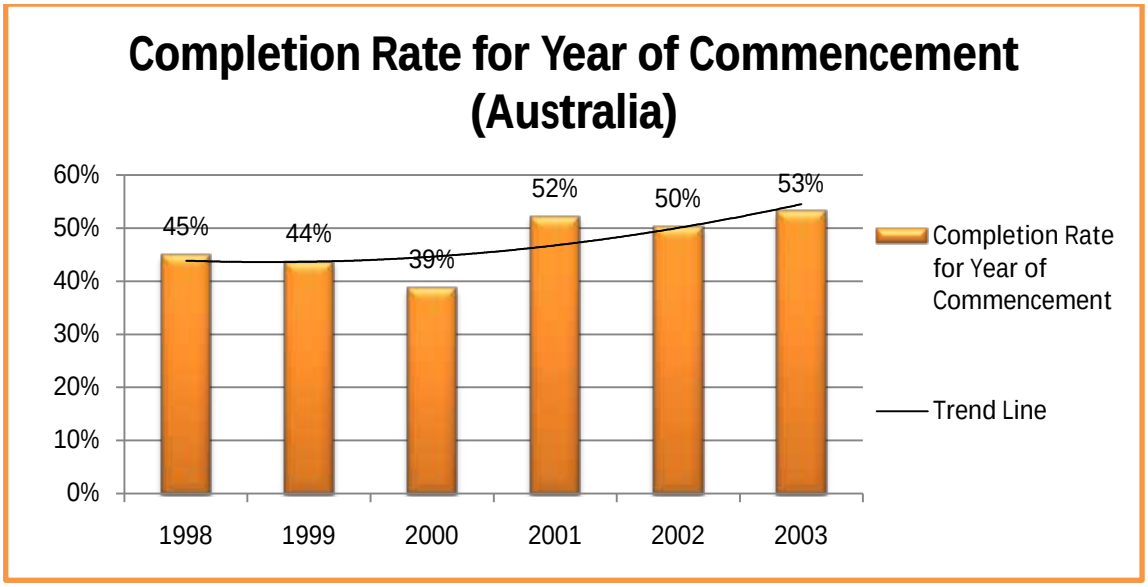


Chart 30: Australian completion rate by year of commencement

As can be seen, there is some inconsistency between average completion rates across States, with much of the variation being due to much smaller numbers in some States. The average completion figures for the various States show:

- NSW – 41%
- Victoria – 43%
- SA – 68%
- WA – 62%
- Qld – 52%
- NT – 57% (although this figure should be disregarded given that very few bricklaying apprentices are taken on in the NT)
- Tas – 71%
- ACT – 59%

The figures for NSW and Victoria are interesting, given that these two States are the two largest training States for bricklaying apprentices, and yet have the lowest rates for successful completions.

The table above shows that overall completion rates for the whole of Australia average close to 50%. This should be cause for concern as there are already insufficient people commencing apprenticeships to replace the numbers exiting from the trade. As discussed earlier, the numbers of commencements are also reducing in many public RTOs. This is likely to become more severe, with employers being less willing to take on bricklaying apprentices due to the expectation of a significant reduction in construction during the current economic downturn.

Whilst a number of RTOs have reported increases in the numbers of mature age industry workers seeking to become trade qualified, if 50% of young people who commence a bricklaying apprenticeship are withdrawing from their training before completion, then the future looks bleak for the ongoing skill levels of bricklayers.

Conclusion

The brick and blocklaying trade has a long and well respected history. Whilst there is a perception of the trade being less 'glamorous' than other trades such as plumbing and electrical work, it is in fact a more complex trade than many people are aware. Bricklayers are involved in much more than simply laying straight lines of bricks or blocks. They also create complex structures such as archways and fireplaces, and their work involves the need to estimate and quote on jobs. They must have a high level of hand skills as power tools are seldom used and their workmanship is on display for all to see.

This report has 'set the scene' with regard to the current situation of the brick and blocklaying trade and its associated apprenticeship training. The next stage of the project will involve further forums and interviews which will be used to gather data to inform a national survey of employers, bricklaying trainers, apprentices and those individuals who have elected to work in the industry without taking up the option of becoming trade qualified.

The qualitative and quantitative data collected through the survey and the resulting analysis will identify the barriers to the uptake of apprenticeship in the brick and blocklaying trade, and this will enable the industry and Governments to implement appropriate strategies to work towards improving the intake and successful completion of apprentices.

Appendices

Appendix 1 – Masonry Contractors Associations

Masonry Contractors Association of Tasmania	
Members:	This Association currently has eleven members, who mainly work in residential bricklaying
Inception	Since the 1970's. It was in abeyance for about ten years and restarted in the 1990's.
Meetings:	The group meets once every two months. Items for discussion include: · how members are finding work · new products · training issues. Paul teaches at the TAFE College, so uses the Association to discuss how to improve apprentice training
Achievements:	Paul is very proud of the role of the Associations in helping the ABBTF institute the brick levy. This has resulted in apprentice numbers increasing from 8-9 first year apprentices in 2007 to 20 in 2008. Currently there are seven apprentices enrolled. Paul puts this down to the global financial crisis with its impact on the construction industry. However, he is hopeful that numbers will reach ten this year.

Masonry Contractors Association (Central West, NSW)	
Members:	This Association currently has fifty members, who mainly work in residential bricklaying, representing about 80% of the market
Inception	Approximately eight years
Meetings:	The group meets once every month. Items for discussion include: · guest speakers such as ABBTF · how people are going with work · what's happening with pricing · guests from other regional areas such as Bathurst · OH&S issues · Central West Group apprenticeship centre come every couple of months · TAFE representatives also attend
Achievements:	Have input to how training is being delivered for apprentices. Go into schools for trainee days to encourage young people to consider bricklaying as a trade. Take Year 10 students and give them some hands on experience. Currently undertaking their own survey of bricklayers in the Region to identify issues which need to be addressed to improve the trade

Masonry Contractors Association of NSW & ACT	
Members:	This Association currently has sixty members, who mainly work in large commercial bricklaying projects. This association represents 90% of the commercial market and about 12% of the overall market. Members work on schools, casinos, shopping centres, retirement villages and unit developments. Their gangs never go below 15 to 20 bricklayers and, on large jobs, can have as many as 200-300. The Association also has a sub-branch in the ACT with approximately ten members
Inception	Started in 1993
Meetings:	The group meets once every month. Items for discussion include: · guest speakers such as Workcover and brick manufacturers demonstrating new products · sharing of information, such as safe work practice processes, labour availability and referrals · what's happening with pricing · OH&S issues
Achievements:	Conduct annual Masonry Contracts Annual Awards for Bricklaying Excellence. The awards involve seven categories and attract approximately 50 nominations each year. The Association also worked with the National Federation of Masonry Employees and the Australian Taxation Office to set new benchmarks for bricklaying. They also represent on the Australian Standards Committee and bring a practical marketplace voice to this group

Masonry Contractors Association of Victoria	
Members:	This Association currently has fifty to sixty members, who work in commercial bricklaying.
Inception	Started in 1999
Meetings:	The group meets once every month. Items for discussion include: · guest speakers · sharing of information · what's happening with pricing · OH&S issues
Achievements:	Trying to develop more equitable rates for members

Appendix 2 – Commencements vs. Completions by State

NSW (4 year Apprenticeship for period below)				
Commencements		Completions		
1998	251	2002	98	39%
1999	294	2003	118	40%
2000	298	2004	114	38%
2001	174	2005	75	43%
2002	260	2006	106	41%
2003	283	2007	121	43%
2004	307			
2005	237			
2006	185			
2007	235			
			Avg	41%

Table 28: NSW commencements vs. completions

VIC (3 year Apprenticeship for period below)				
Commencements		Completions		
1998	283	2001	102	36%
1999	362	2002	142	39%
2000	331	2003	119	36%
2001	183	2004	92	50%
2002	345	2005	148	43%
2003	346	2006	177	51%
2004	458	2007	219	48%
2005	433			
2006	423			
2007	400	*		
* skills vict correction			Avg	43%

Table 29: Victorian commencements vs. completions

SA (4 year Apprenticeship for period below)				
Commencements		Completions		
1998	22	2002	19	86%
1999	46	2003	25	54%
2000	37	2004	23	62%
2001	17	2005	17	100%
2002	51	2006	36	71%
2003	79	2007	51	65%
2004	74			
2005	75			
2006	71			
2007	100			
			Avg	68%

Table 30: SA commencements vs. completions

QLD (4 year/42 mos. Apprenticeship for period below)				
Commencements		Completions		
1998	68	2002	40	59%
1999	143	2003	69	48%
2000	102	2004	40	39%
2001	55	2005	30	55%
2002	98	2006	69	70%
2003	155	2007	77	50%
2004	218			
2005	165			
2006	221			
2007	252			
			Avg	52%

Table 31: Qld commencements vs. completions

TAS (3 year Apprenticeship for period below)				
Commencements		Completions		
1998	6	2001	5	83%
1999	(a)	2002	5	167%
2000	(a)	2003	(a)	0-133%
2001	(a)	2004	(a)	0-100%
2002	9	2005	6	67%
2003	8	2006	(a)	0-50%
2004	15	2007	10	67%
2005	8			
2006	14			
2007	17			
			Avg	71%

Table 32: Tasmanian commencements vs. completions

(a) Due to confidentiality reasons (a) represents figures 1-4 inclusive[56]

WA (4 year Apprenticeship for period below)				
Commencements		Completions		
1998	56	2002	41	73%
1999	103	2003	56	54%
2000	89	2004	37	42%
2001	72	2005	43	60%
2002	104	2006	69	66%
2003	159	2007	116	73%
2004	240			
2005	301			
2006	341			
2007	353			
			Avg	62%

Table 33: WA commencements vs. completions

[56] NCVER data reporting requirement

ACT (3 year Apprenticeship for period below)				
Commencements		Completions		
1998	5	2001	6	120%
1999	8	2002	(a)	0-50%
2000	8	2003	(a)	0-50%
2001	4	2004	7	175%
2002	14	2005	10	71%
2003	18	2006	10	56%
2004	17	2007	6	35%
2005	37			
2006	13			
2007	22			
			Avg	59%

Table 34: ACT commencements vs. completions

(a) Due to confidentiality reasons (a) represents figures 1-4 inclusive[57]

NT (3 year Apprenticeship for period below)			
Commencements		Completions	
1998	0	2001	0
1999	0	2002	(a)
2000	(a)	2003	0
2001	0	2004	0
2002	0	2005	0
2003	(a)	2006	(a)
2004	(a)	2007	0
2005	(a)		
2006	0		
2007	0		

Table 35: NT commencements vs. completions

(a) Due to confidentiality reasons (a) represents figures 1-4 inclusive[58]

AUSTRALIA				
Commencements		Completions		
1998	691	various	311	45%
1999	959	various	419	44%
2000	871	various	338	39%
2001	509	various	266	52%
2002	881	various	444	50%
2003	1049	various	558	53%
2004	1332			0%
2005	1257			
2006	1268			
2007	1379			
			Avg	47%

Tables 36: National comparisons of commencements and completions

[57] NCVER data reporting requirement
[58] NCVER data reporting requirement