



BUILD BETTER

The Economic Benefits of Licensing Building and Construction Finishing Trade Contractors in Australia

January 2017



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1. EXECUTIVE SUMMARY

It is acknowledged that regulation and intervention by governments to correct market failure should be seen as an option of 'last resort'. However, there continues to be significant market failure in the building and construction sector that, if left unchecked, will increasingly impact on home owners and the Australian economy.

Unlike other markets where de-regulation is entirely appropriate, regular media articles and statistical data suggest that the residential building sector is seriously under-regulated.

The incidence of defective building work in Australia continues unabated with the use of new and untested building products from overseas only adding to the problem.

Clearly, home (builder) warranty insurer underwriters and their actuaries appreciate the growing problem of defective work in the building and construction sector, increasing total premiums collected in Australia by 200% over the past decade from \$79m in 2006 to \$242m in 2016. As recently as December 2016 the home warranty insurance provider in NSW, iCare, indicated that premiums would be increasing in 2017 by at least 30% with possible increases of up to 100% by 2018.

Melbourne's faulty building crisis

EXCLUSIVE

Victoria is facing a crisis of faulty, dangerous and leaking buildings that experts warn is comparable in scale to the historical scourge of asbestos.

DECEMBER 18 2016

THE  AGE

Apartment building defects

Research conducted by the UNSW City Futures Research Centre in 2012 found that 72% of apartment blocks in NSW had defects. For newer units, the likelihood of defects is even higher – 85% of apartments built since 2000 have defects. And these statistics are indicative of the story of building defects all down the eastern seaboard.

15 September 2016

choice

Given these red flags the question is, why are we still seeing moves to further deregulate the building and construction sector? Or, at the very least, why is there strong resistance from governments to considering regulatory reform?

The answer to these questions is simple. Policy makers responsible for carrying out cost-benefit analysis as part of Regulatory Impact Statement (RIS) or Legislative Impact Assessment (LIA) processes have not had access to the right data sets to enable them to reach optimal conclusions regarding new regulatory proposals. For this reason, many sound proposals for regulatory change in the building and construction sector are not proceeded with.

In acknowledging this problem, the Association of Wall and Ceiling Industries - Australia & New Zealand Inc (AWCI) and Master Painters Association of Victoria and Tasmania (MPAV) have jointly commissioned a paper that brings together the relevant data with a view to assisting governments around Australia with future regulatory assessment processes.

Research conducted over the past two decades in Australia and overseas in relation to the incidence of defective building work in the residential building sector, together with the data

collected, strongly support the need for further regulation of the building and construction sector.

Research indicates that over 5% of the value of residential building work in Australia each year is defective building work requiring 'non-productive' re-work. The estimated cost of rectifying defective residential building work in Australia in 2015-16 was a staggering \$3.3 billion.

Regulator and home warranty (domestic building) insurance data suggests that approximately 10% of defective residential building work is 'minor' defective work. A significant proportion of this work is attributable to work carried out by finishing trade contractors. Analysis indicates that in 2015-16 defective residential building work, attributable to finishing trade contractors, cost the Australian economy over \$232 million.

The analysis outlined in this paper indicates that there are substantial benefits to be gained from the licensing (registration) of trade contractors, in particular finishing trade contractors, who carry out building work on behalf of registered builders. The analysis also concludes that the benefits to home owners and the economy substantially exceed the cost of further regulation with a benefit-cost ratio for all Australian jurisdictions exceeding 2:1.

A reasonable hypothesis is that the licensing or registration of finishing trade contractors will enable the economy to derive around 25% of the total potential benefits possible from further regulation. However, the implementation and linkage of a robust program of continual professional development (CPD) to licensing (registration) would increase the potential benefits to be gained from further regulation.

In summary, the analysis strongly suggests that further regulation has the potential to substantially improve consumer outcomes in terms of reducing the incidence of defective building work, but more importantly, lowering the cost of construction in Australia thereby making home ownership more affordable and attainable.

2. INTRODUCTION

Regulation is a powerful tool capable of contributing to achieving a wide range of public policy goals. However, as regulation constrains the decisions taken by free actors in the market and has the potential to lead to substantial unintended distortions, over the past decade most governments around the world have adopted deregulatory stances.

The Organisation for Economic Co-Operation & Development (OECD) rightly argues¹ that:

Government intervention should be based on clear evidence that a problem exists and that government action is justified, given: the values at stake and current government policies; the likely benefits and costs of action (based not on “perfect” government, but on a realistic assessment of government effectiveness); and alternative mechanisms for addressing the problem. Markets should always be considered as an alternative to government action and the capacity of the private sector and individuals to deal with the problem should be assessed.

Australia has followed the world trend with all governments across Australia adopting the Council of Australian Governments’ (COAG) guiding principles of “minimum necessary regulation”². The Guiding Principle document states that there should be a presumption against the use of regulation.

The COAG document suggests that for regulatory intervention to be justified, it is insufficient to merely establish that a problem exists. It must be established that the size of the problem is sufficient to warrant government action. And, most importantly, it must be established that regulatory action is likely to yield benefits that are greater than the costs entailed and that there are no other, less intrusive, measures than regulation that are likely to be able to achieve the ends sought.

In keeping with the COAG principles most Australian governments have established efficiency commissions or better regulation offices that oversee the preparation of Regulatory Impact Statements (RIS’s) or Legislative Impact Assessments (LIA’s) which assess any new proposed regulation against the COAG and OECD principles.

The value of any RIS or LIA, and the cost- benefit analysis that is undertaken as part of the process, is completely dependent upon the statistical and financial data collected for analysis. In many instances, accurate statistical and financial data is readily available for analysis. However, this is not the case for the building and construction industry.

For the most part, collecting accurate and reliable data pertaining to the building and construction industry is extremely difficult, if not impossible in some instances.

The States and Territories differ quite substantially in terms of the scope of the licensing (registration) requirements they adopt and consumer protection mechanisms they provide, particularly in terms of dispute resolution and home (builders) warranty insurance. Significant changes in dispute resolution and home (builders) warranty schemes across the country over the past two decades has fragmented data sets and made data difficult to locate.

¹ See *Recommendation of the Council of the OECD on Improving the Quality of Government Regulation*. OECD, Paris, 1995.

² See *Australian Government Guide to Regulation (March 2014)*

For this very reason, many RIS and LIA processes relating to the building and construction sector have had little choice but to utilise limited, small sample size, 'indicative' data sets (typically limited home (building) warranty defect claims data) to conduct the cost-benefit analysis of any proposed regulation being considered.

While substantially accurate regarding the likely costs of any proposed regulatory change, RIS and LIA processes conducted in this way typically significantly underestimate the potential social and economic benefits of any proposal for regulatory change. And, for this reason, many sound proposals for regulatory change in the building and construction sector are not proceeded with.

In acknowledging and understanding this problem, the Association of Wall and Ceiling Industries - Australia & New Zealand (AWCI) and Master Painters Association of Victoria and Tasmania (MPAV) have jointly commissioned a paper that brings together the relevant data with a view to assisting government's around Australia with future regulatory assessment processes.

Research conducted over the past two decades in Australia and overseas, together with the data collected, strongly support the need for further regulation of the building and construction sector.

Further regulation has the potential to substantially improve consumer outcomes in terms of reducing the incidence of defective building work, but more importantly, lowering the cost of construction in Australia thereby making home ownership more attainable.

3. THERE IS A STRONG CASE FOR REGULATING THE BUILDING & CONSTRUCTION SECTOR

The residential building sector forms an integral part of the Australian economy. Data from the Australian Bureau of Statistics showed that Australia's expenditure on new residential construction in 2015-16 totalled \$A66.5 billion. This spend on residential construction accounted for approximately 3.8% of Australia's Gross Domestic Product (GDP).

Considering the importance of the residential sector and how it supports the economy through the generation of an output multiplier effect of up to 1.93 (i.e. for every \$100 spent on residential building, \$93 is spent elsewhere in extra production), it is vital that the industry runs efficiently and effectively³.

From a home owner or consumer perspective, regulation is vital in terms of reducing risk. Constructing a new home or renovating an existing home is one of the most significant purchasing decisions made by an individual in their lifetime. The vast majority of home owners borrow significantly to undertake building or renovation projects. In this context, any failure of builders to complete construction to some appropriate standard places homeowners at significant financial risk.

In acknowledging the financial risk to consumers of poor building outcomes, all States and Territories in Australia have introduced regulation of the building and construction sector.

All States and Territories licence (register) builders and building professionals (Engineers, Building Certifiers, Building Surveyors) with a view to ensuring quality building outcomes are achieved. Some States and Territories also licence builders who deliver commercial building projects.

Three States (New South Wales, Queensland and South Australia) also licence trade contractors. Table 1 below sets out those occupations licensed (registered) in each State and Territory.

The registration of trade contractors in these three States acknowledges the fact that the vast majority of 'builders' do not, in fact, carry out the actual building work. Builders typically oversee the completion of the building work undertaken by trades people that they sub-contract to carry out various elements of a building project. The benefits of licensing trade (sub-contractors) is outlined later in this paper.

Given the 'asymmetry' of information between the builder and home owner in the building and construction transaction, all States and Territories have building legislation that regulates contracting, makes provision for statutory warranties, dispute resolution and enforcement processes. All jurisdictions, save for Tasmania, also have home warranty insurance (also referred to as Domestic Building Insurance or Builders Indemnity Insurance) regimes in place that provide a 'safety-net' further protecting home owners against financial loss.

³ *Defect Costs in Residential Construction* – Mills et.al *Journal of Construction Management* (Jan 2009)

Table 1 Licensing (registration) of building and construction occupations across Australia (2017).

Building & Construction Occupations	Occupational Categories	Victoria	NSW	Tasmania	Queensland	South Australia	Western Australia	NT	ACT
Commercial		✓		✓	✓	✓			
Residential		✓	✓	✓	✓	✓	✓	✓	✓
Building Professionals	Engineer	✓	✓	✓	✓	✓	✓	✓	✓
	Architect	✓	✓	✓	✓	✓	✓		
	Building Designer	✓		✓	✓	✓			
	Surveyor/ Certifier	✓	✓	✓	✓	✓	✓		✓
	Fire Protection			✓	✓	✓			
	Building & Swimming Pool Inspection	✓	✓		✓				
Builder	Builder	✓	✓	✓	✓	✓	✓	✓	✓
	Demolisher	✓		✓		✓			
	Swimming Pools	✓	✓	✓	✓	✓			
Builder Restricted	Kitchen Bathroom and Laundry	✓	✓		✓	✓			
	Sheds, Carports and Garages	✓	✓		✓	✓		✓	✓
	Shopfitting	✓			✓	✓			
	Structural Landscaping		✓		✓	✓		✓	
	Special Structures				✓	✓			
Specialist Trades	Electrician	✓	✓	✓	✓	✓	✓	✓	✓
	Plumber	✓	✓	✓	✓	✓	✓	✓	✓
	Drainage	✓	✓	✓	✓	✓	✓	✓	✓
	Drainage – On-site Sewerage	✓	✓	✓	✓	✓	✓	✓	✓
	Gasfitting	✓	✓	✓	✓	✓	✓	✓	✓
	Refrigeration, Air Conditioning and Mechanical Services		✓		✓	✓			
Trades	Air Handling Duct Installation				✓	✓			
	Brick and Segmental Paving				✓	✓			
	Bricklaying and Blocklaying		✓		✓	✓			
	Cabinet Making		✓		✓	✓			
	Concreting		✓		✓	✓			
	Carpentry		✓		✓	✓			
	Excavation		✓		✓	✓			
	Fencing		✓		✓	✓			
	Floor Finishing and Covering (Hard Sector)				✓	✓			
	Foundation Work (Piling and Anchors)				✓	✓			
	Glass, Glazing and Aluminium		✓		✓	✓			
	Irrigation				✓	✓			
	Joinery		✓		✓	✓			
	Metal Fascias and Gutters				✓	✓			
	Minor Maintenance & Cleaning		✓			✓			
	Minor Trade work		✓			✓			
	Non-Structural Metal Fabrication and Installation		✓			✓			
	Painting and Decorating		Decorating		✓	✓	✓		
	Plastering Drywall		✓		✓	✓			
	Plastering Solid		✓		✓	✓			
	Roof and Wall Cladding		✓		✓	✓			
	Wall and Floor Tiling		✓		✓	✓			
	Wet Plastering		✓		✓	✓			
	Roof Plumbing		✓			✓	✓		
	Roof Slating		✓			✓	✓		
	Roof Tiling		✓			✓	✓		
	Site Classifier					✓	✓		
	Shopfitting (Trade)					✓	✓		
	Steel Fixing					✓	✓		
	Stonemasonry		✓			✓	✓		
	Structural Landscaping (Trade)		✓			✓	✓		
	Structural Metal Fabrication and Erection		✓			✓	✓		
Swimming Pool Maintenance		✓			✓	✓			
Underpinning or piling		✓			✓	✓			
Waterproofing		✓			✓	✓			

 Finishing Trades

At present, when defective building work occurs and their builder is unwilling to rectify the defects, home owners seek the assistance of consumer affairs agencies or building regulators.

Many States or Territories have early dispute resolution services where rectification orders can be issued to builders to rectify defective building work or otherwise face possible licence disqualification. These dispute resolution regimes are currently mandatory in only New South Wales and Queensland. It is understood that Victoria intends to move in this direction in 2017-18.

Available data shows that at least 13,960 requests for assistance with building disputes were received by consumer affairs agencies or building regulators in 2014-15 (see Appendix C).

Where these dispute resolution regimes are unable to effect rectification of defective building work, home owners have access to State and Territory Civil and Administrative Tribunals to enforce their statutory warranty rights. Tribunal processes are both costly and time consuming for both the consumer and builder.

Available data shows that over 5,400 building Tribunal claims were lodged in 2014-15 (see Appendix D).

In cases where the builder is no longer around or willing to rectify defective building work, homeowners across Australia (excluding Tasmania) are able lodge a claim against the home warranty insurance policy issued to them.

Available data shows that 1,612 claims were lodged in 2014-15 for defective building work, totalling \$40.5 million (see Appendix E).

The efficacy of building and construction regulatory regimes in Australia, and particularly home warranty insurance schemes, are frequently called into question by home owners and governments. Most jurisdictions across Australia are currently reviewing aspects of their regulatory regimes to determine whether improvements can be made.

The data collected in developing this paper provides strong evidence that further regulatory reform of the building and construction industry is required. Regulating the sub-contractors (particularly those involved in finishing trades) involved in the building and construction process would substantially reduce the incidence of defective work, insurance claims, unproductive re-work and, most importantly reduce the cost of construction.

4. UNDER-REGULATION PRESENTS UNNECESSARY COSTS FOR HOME OWNERS

As outlined above, occurrences of defective residential building work in Australia are resolved in one of two ways. They are either rectified by the builder (otherwise known as re-work) or rectified by another builder and paid for by a home (builder) warranty insurance provider.

No matter how the defective building work is rectified, the costs of rectification are continuing to increase each year. Rectification or re-work costs are now having a significant impact on the cost of construction in Australia, the profitability of the building and construction industry, and the productive efficiency of the Australia economy.

There are three key costs to home owners of rectifying defective building work:

- Increased costs associated with dispute resolution
- Increased Home Warranty Insurance costs
- Increased building costs

Increasing costs associated with dispute resolution

From a home owners' perspective, defective building work is not only a highly emotional experience but a costly one that delays completion of the building project and/or involves considerable time and effort to resolve through dispute resolution and tribunal processes.

For example, obtaining independent building inspection reports required to support a building dispute claim lodged with regulators and tribunals is extremely costly to home owners. The reports can range from \$5,000 to \$15,000 per report.

Dispute resolution also involves an 'opportunity cost' of time that home owners and builders spend attending conciliation conferences and tribunal hearings, when they otherwise could have been at work. In some cases, direct costs of engaging legal representation are also required.

The number of building claims lodged and determined by tribunals has declined by almost 33% over the past decade (see Figure 1). However, the number of claims for 2014-15 (5,487) is still high.

While the cost associated with lodging claims in tribunals is not substantial, if we suggest a conservative estimate of the opportunity cost of time for home owners to attend conciliation conferences, prepare for and attend hearings is around \$2,000 per claim then the cost to home owners to resolve defective building work disputes in 2014-15 is estimated to have been around \$10.9 million.

Utilising data from the NCAT (NSW Civil & Administrative Tribunal) Annual Report 2015-16, the cost to Government of resolving defective building work disputes in tribunals across Australia is close to \$5 million each year.⁴

⁴ Building Claims represent 5.2% of claims within NCAT's Commercial Division (Budget of \$49.5M x 5.2% = \$2.6m/2976 cases = \$873 per case x 5487 cases across Australia in 2014-15)

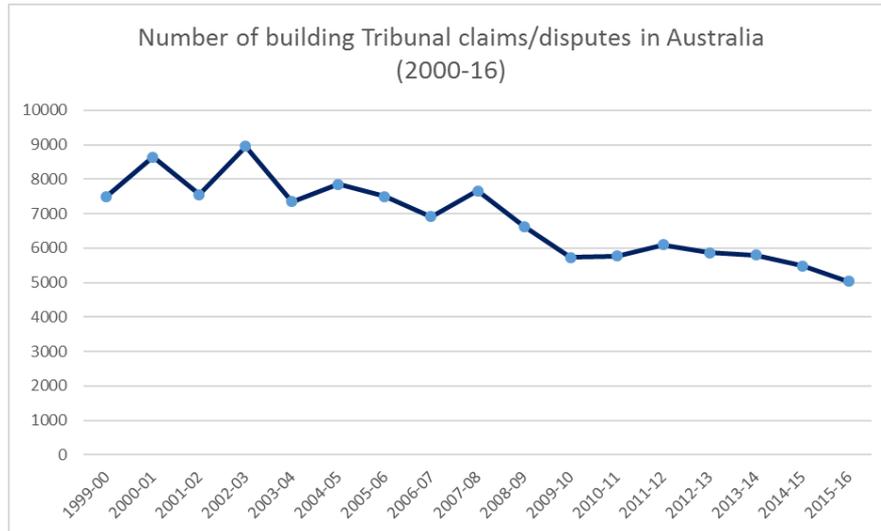


Figure 1 Building claims lodged with Australian tribunals 2000-16.

Increased Home Warranty Insurance costs

A major cost factor that is often overlooked by policy makers is the increasing cost of mandatory home warranty insurance (HWI) borne by home owners.

Over the past 10 years the premiums collected by home warranty insurers has increased by over 200% from \$79.9m in 2006-07 to \$242m in 2015-16 (see Figure 2 below).

HWI premium increases of this degree should act as a red flag to policy makers as they are indicative of an adverse view held by underwriters regarding trends in defective building work based upon recent claims experience.

In order to build or renovate a home, home owners have no alternative but to pay the HWI premium applicable. In 2016, premiums to build a \$500,000 home ranged from \$3,158 in Victoria to \$4,560 in Queensland (see Table 2).

Table 2 HWI premiums for a \$500,000 home build or renovation in 2016.

NSW	VIC	QLD
\$3590	\$3158	\$4560

While price inelastic, given they are mandatory, HWI premiums are no longer viewed as being unsubstantial or insignificant by home owners.

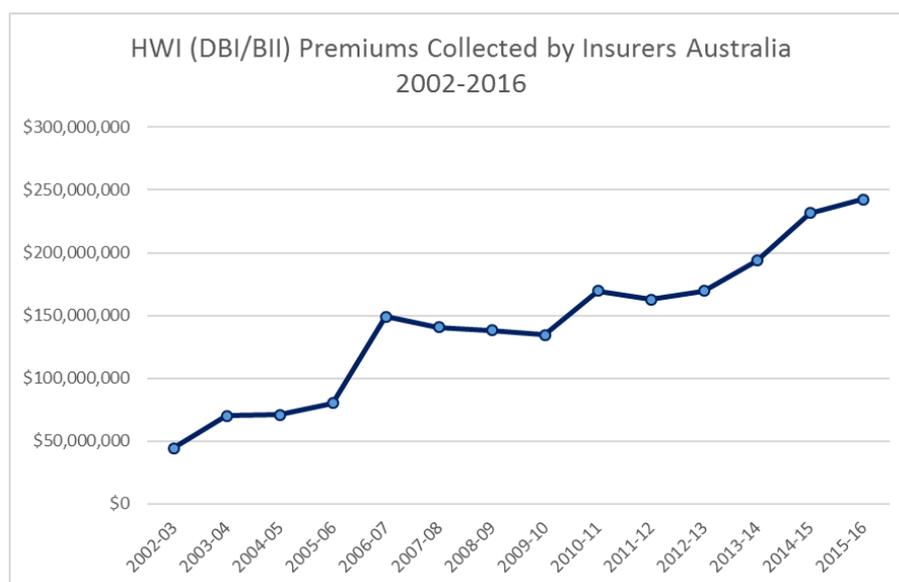


Figure 2 HWI premium collected in Australia 2002-16.

Increased building costs

On the surface, it may appear that the costs associated with the rectification of defective work are borne by the builder. However, most if not all costs associated with re-work are ultimately borne by home owners.

While the builder pays to rectify defective building work, it is common place for builders to either pass this cost on to subsequent clients by inflating the contract price for that project, or alternatively factor a “rectification contingency” into the pricing of all their building contracts.

Unlike the commercial building sector where the builder can ensure, to some degree, that rectification costs are passed onto sub-contractors by way of retentions, in the residential building sector builders factor additional contingency into their building contracts with home owners.

Whilst the size of the contingency is influenced by competition in the market, from discussion with builders and builder associations the level of these rectification contingencies is believed to range from 5-10% of the contract price.

Because of their considerable experience in dealing with defective building work carried out by sub-contractors, builders have seemingly accepted and ‘institutionalised’ what they deem to be an acceptable level of re-work cost.

The perverse outcome of this ‘institutionalised’ behaviour for home owners in Australia is that they are likely to be paying 5-10% more for their homes and renovations than they should be.

Rectification of defects represents a less preferred outcome than avoidance of defects in the first instance. Thus, to the extent that further regulation, and the registration of finishing trade sub-contractors, can reduce the incidence of defects, there are significant financial benefits to be gained by both home owners and the economy (due to better resource utilisation).

5. AVOIDING RE-WORK IS A KEY BENEFIT OF TRADE REGISTRATION WHICH IS OFTEN OVERLOOKED

Data collected from across Australia, as well as research and analysis conducted over the past decade, strongly indicate that further regulation of the building and construction sector is warranted.

Research conducted by Mills, Love and Williams in 2009 utilising Victorian Home Guarantee Fund insurance claims data (1982-1997) found that one house in eight reported defects.⁵ However, costs to the home owner and economy of the unproductive re-work that comes from defective building work is often overlooked.

So, what is the size of this problem? How much is re-work costing home owners and the Australian economy each year?

Re-work is costing Australian home owners ~\$3.3 billion per annum

There have been many research studies conducted in Australia and overseas that have attempted to answer these two questions (see Table 3 below). As research conducted by Love (2002) and Mills, Love and Williams (2009)⁶ is based on Australian residential data sets their research findings would appear to be an acceptable basis for estimating the cost of re-work in Australia (see Appendix A for further detail on the research conducted).

Table 3 Cost of re-work as a percentage of contract price.

Research Author(s)	Country	Rework Cost (% of contract price)
Cusack (1992)	Australia	10.0%
Burroughs (1993)	Australia	5.0%
Lomas (1996)	Australia	>1.0%
CIDA (1995)	Australia	6.5%
Love et al. (1999)	Australia	3.2%
Love (2002)	Australia	6.4%
Mills, Love & Williams (2009)	Australia	4.0%
Cnudde (1991)	Belgium	10.0-20.0%
CIDB (1989)	Singapore	5.0-10.0%
Nylen (1996)	Sweden	10.0%
Hammarlund & Josephson (1991)	Sweden	6.0%
Hammarlund & Josephson (1999)	Sweden	2.3%-9.3%
Farrington (1987)	USA	14.0%
Willis & Willis (1996)	USA	3.3%
Hwang et al. (2009)	USA	5.0%
Abdul-Rahman (1993)	UK	2.5-5.0%
Barber et al. (2000)	UK	3.6-6.6%

⁵ *Defect Costs in Residential Construction* – Mills et.al Journal of Construction Management (Jan 2009)

⁶ This research utilised Victorian HGF domestic building insurance claims data 1982 to 1997.

The two studies conducted by Love and then Mills, Love and Williams found that the cost of re-work in residential construction in Australia was between 4.0 and 6.4% of the contract price for the building project. This paper will use a rounded average (5.0%) of the findings of the two research papers for analysis purposes, albeit the actual cost of re-work may have increased considerably since 1997.

Utilising ABS data regarding the value of residential building and construction work carried out in Australia in 2015-16 and applying the 5.0% re-work cost rule, the estimated cost of re-work to the economy in 2015-16 was approximately \$3.3 billion (Table 4).

Table 4 Estimate of the cost of re-work in Australia 2015-16.

Jurisdiction	Value of Residential Construction 2015/16 (\$'000)	Cost of Re-Work (5% of contract value - \$'000)
ACT	\$1,279,215	\$63,961
New South Wales	\$19,579,329	\$978,966
Northern Territory	\$636,743	\$31,837
Queensland	\$12,583,725	\$629,186
South Australia	\$2,856,506	\$142,825
Tasmania	\$737,259	\$36,863
Victoria	\$20,217,822	\$1,010,891
Western Australia	\$8,611,596	\$430,580
Total	\$66,502,195	\$3,325,110

Approximately \$232 million of re-work costs each year are attributable to finishing trades

While the builder is contractually liable to rectify defective work, the builder rarely, if ever, carries out the building work. The building work is typically carried out by a range of trade sub-contractors who specialise in elements of the building project. Defects are attributable to the poor performance or lack of skill of the trade sub-contractors.

Defective building work is typically split into two categories: (1) major structural defects; and (2) minor defects.

By their very definition, major structural defects are significant defects that effect the structural integrity of the building. Typically, major structural defects are defective foundation slabs, footings or piers. Water penetration into the foundation slab, and wall and ceiling cavities are also typical major structural defects.

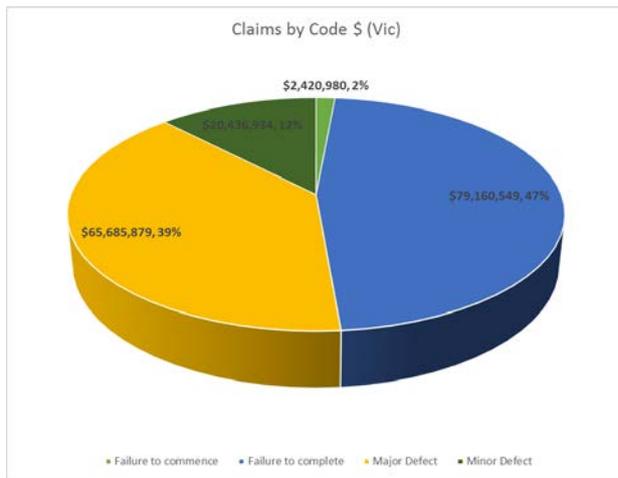


Figure 3 Victorian DBI defect claims by code 2002-16.

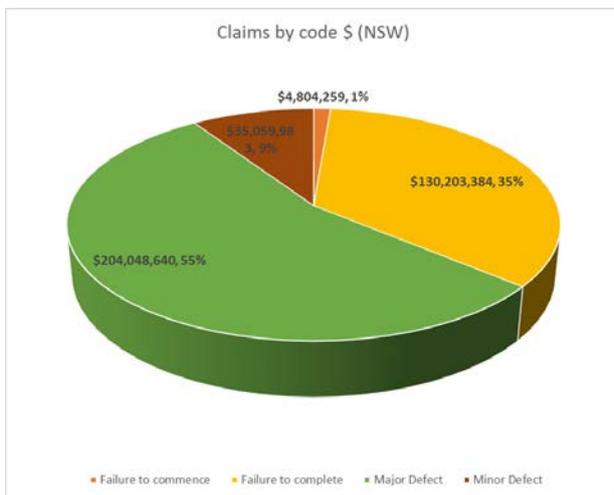


Figure 4 NSW HWI defect claims by code 2002-16.

Minor defects, on the other hand, are typically associated with the cosmetic or aesthetic appearance of a building. Poor paintwork, uneven surfaces, ceiling and wall bevelling are all examples of minor defects.

Although classified as minor, minor defects nevertheless are required by law to be rectified and constitute a significant proportion of re-work in Australia.

Domestic Builder Insurance (DBI) claims data from Victoria, and HWI claims data from NSW, indicates that minor structural defects account for approximately 12% and 9% of all defect claims, respectively (see Figures 3 and 4).

Given this data, it is safe to conclude that around 10% of re-work in Australia relates to minor defects. Accordingly, on this basis, in 2015-16 minor defects cost home owners and the Australian economy approximately \$332 million.

The first step in the process of attempting to reduce defective building work and re-work is to identify the tradespeople responsible for the defective work.

The Queensland Building & Construction Commission (QBCC) reports annually on the top ten defects occurring in the residential building sector in that State. Five of the main finishing trades were ranked in the top ten defects listed for 2015-16 (see Table 5 below), with painting receiving the second highest ranking.

Table 5 Top 10 defects occurring in the QLD residential building sector in 2015-16.

DEFECTS IN 2015-2016	RANKING	TOTAL
Joinery	1	154
Painting	2	138
Wet areas (waterproofing membranes internal)	3	102
Tiling (floor)	4	84

Drainage	5	66
Roof cladding	6	63
Tiling (wall)	7	48
Linings (wall internal)	8	46
Linings (ceiling internal)	9	43
Timber framing	10	42

 Finishing trades

Based upon the HWI data from NSW and Victoria finishing trade contractors are a major contributor to the 10% of minor defective work that occurs in Australia each year. Given the prominence of the finishing trades in the top ten defects lists it is suggested that 7% of re-work can be attributed to these occupational categories.

Given the analysis above, Table 6 below sets out the estimated re-work costs associated with finishing trade contractors in 2015-16. The estimated total contribution of finishing trade contractors to re-work in the Australia economy was approximately \$232 million in 2015-16. The table also contains a breakdown of re-work costs for each State and Territory.

Table 6 Cost of defective re-work attributable to finishing trade contractors in 2015-16.

Jurisdiction	Value of Residential Construction 2015/16 (\$'000)	Cost of Re-Work (5% of contract value - \$'000)	Attributable to finishing trades (\$'000) (7%)
ACT	\$1,279,215	\$63,961	\$4,477
New South Wales	\$19,579,329	\$978,966	\$68,528
Northern Territory	\$636,743	\$31,837	\$2,229
Queensland	\$12,583,725	\$629,186	\$44,043
South Australia	\$2,856,506	\$142,825	\$9,998
Tasmania	\$737,259	\$36,863	\$2,580
Victoria	\$20,217,822	\$1,010,891	\$70,762
Western Australia	\$8,611,596	\$430,580	\$30,141
Total	\$66,502,195	\$3,325,110	\$232,758

Appreciating the extent of this problem, in 2015 QBCC introduced a *Subcontractor Accountability Policy* with a view to reducing defective work by finishing sub-contractors, and sub-contractors more generally. As finishing trade contractors are licensed (registered) in Queensland they can be issued with rectification orders in circumstances where they refuse to return to rectify defective work that they are responsible for, and face disciplinary processes and potential disqualification for failure to comply.

6. COST-BENEFIT ANALYSIS SUPPORTS LICENSING (REGISTRATION) OF FINISHING TRADES BY JURISDICTIONS

Key benefits and costs of trade licensing

The key benefits of introducing mandatory trade registration include:

- A reduction in defective building work (and avoidance of costly re-work)
- A reduction in the cost of resolving existing disputes (through complaint and tribunal processes)
- A larger, more competitive and skilled industry
- Increased consumer confidence, and
- A more profitable industry

The key costs against which these benefits need to be evaluated include:

- Registration costs
- Training costs
- Insurance costs, and
- New regulatory (compliance and enforcement) costs associated with the registration of finishing trades

Based on data availability, some of these benefits and costs are more easily quantified than others. However, it is important to consider the full range of benefits and costs when assessing the merits of trade registration.

Outlined below are the outcomes of an indicative cost-benefit analysis of trade registration, including the key assumptions used to conduct the analysis.

Benefits of licensing finishing trades (Reduced cost of re-work)

As outlined in Section 5, a key benefit of licensing finishing trades is the avoidance of defective building work and subsequent passing on of re-work costs to home owners.

The estimated economic benefit of licensing finishing trades in Australia in 2015-16 through a reduction in defective building work is estimated at \$58 million (Table 7).

Table 7 Estimated cost of re-work that could have been avoided in 2015-16 through licensing of finishing trades.

Jurisdiction	Value of Residential Construction 2015-16	Total cost of re-work	Cost of re-work attributable to finishing trades	Cost of re-work that could be avoided through finishing trade licensing
ACT	\$ 1,279,215,000	\$ 63,960,750	\$ 4,477,253	\$ 1,119,313
New South Wales	\$ 19,579,329,000	\$ 978,966,450	\$ 68,527,652	\$ 17,131,913
Northern Territory	\$ 636,743,000	\$ 31,837,150	\$ 2,228,601	\$ 557,150
Queensland	\$ 12,583,725,000	\$ 629,186,250	\$ 44,043,038	\$ 11,010,759
South Australia	\$ 2,856,506,000	\$ 142,825,300	\$ 9,997,771	\$ 2,499,443
Tasmania	\$ 737,259,000	\$ 36,862,950	\$ 2,580,407	\$ 645,102
Victoria	\$ 20,217,822,000	\$ 1,010,891,100	\$ 70,762,377	\$ 17,690,594
Western Australia	\$ 8,611,596,000	\$ 430,579,800	\$ 30,140,586	\$ 7,535,147
Total	\$ 66,502,195,000	\$ 3,325,109,750	\$ 232,757,683	\$ 58,189,421

These estimates are based on the following key assumptions:

- The cost of re-work in the building and construction sector amounts to approximately 5% of the total value of building contracts
- Approximately 7% of all re-work costs can be attributed to finishing trades (assumes 10% of all re-work is attributable to sub-contractors, and 70% of sub-contractor re-work is attributable to finishing trades)
- Registration of finishing trades will be 25% effective in reducing defects (i.e. will achieve a 25% reduction in re-work required).

It is important to recognise that registration of finishing trades will not achieve a 100% reduction in re-work required. The effectiveness of the registration system in reducing defects (and subsequent re-work) will depend on key characteristics of the registration system adopted, including:

- The rigour of the qualifications for registration that will be imposed
- The ability of the regulator to monitor performance and impose sanctions (including loss of registration) in response to poor performance
- The effectiveness of registration in sanctioning/disciplining poor performance relative to the effectiveness of existing mechanisms such as the contractual arrangements between registered builders and tradesmen employed as sub-contractors, and
- The extent to which the current incidence of defects is due to issues of incompetence and lack of due care that may be affected by the registration system.

An effectiveness rate of 25% is considered to be a conservative estimate.

Benefits of licensing finishing trades (Reduced regulatory costs)

Governments and home owners in Australia currently spend around \$636 million per annum regulating the building and construction industry. A reduction in the cost of addressing complaints, resolving disputes and managing tribunal processes is a key benefit of trade registration.

The estimated economic benefit of licensing finishing trades in Australia in 2015-16 through a reduction in regulatory costs is estimated at \$11 million (Table 8).

Table 8 Estimated regulatory (compliance and enforcement) costs that could have been avoided in 2015-16 through licensing of finishing trades.

Jurisdiction	Home Warranty Insurance premium costs	Regulator complaint & dispute resolution costs	Tribunal dispute costs	Total Regulatory Costs 2015/16	Proportion of total regulatory costs attributable to finishing trades (7%)	Potential benefits of registering (licensing) finishing trade contractors (25%)
ACT	n/a	\$38,150,000	n/a	\$38,150,000	\$2,670,500	\$667,625
New South Wales	\$98,181,000	\$77,100,000	\$2,540,000	\$177,821,000	\$12,447,470	\$3,111,868
Northern Territory	n/a	\$14,592,000	n/a	\$14,592,000	\$1,021,440	\$255,360
Queensland	\$107,400,000	\$96,000,000	\$188,216	\$203,588,216	\$14,251,175	\$3,562,794
South Australia	\$45,253,100	\$3,250,000	n/a	\$48,503,100	\$3,395,217	\$848,804
Tasmania	n/a	\$8,613,000	n/a	\$8,613,000	\$602,910	\$150,728
Victoria	\$67,668,000	\$49,927,000	\$1,015,576	\$118,610,576	\$8,302,740	\$2,075,685
Western Australia	n/a	\$25,399,000	\$851,228	\$26,250,228	\$1,837,516	\$459,379
Total	\$318,502,100	\$313,031,000	\$4,595,020	\$636,128,120	\$44,528,968	\$11,132,242

These estimates are based on the following key assumptions:

- Approximately 7% of all regulatory (compliance and enforcement) costs can be attributed to finishing trades
- Registration of finishing trades will achieve a 25% reduction in regulatory costs.

Benefits of licensing finishing trades (Other)

Licensing of finishing trades will also lead to:

- a larger, more competitive and skilled building and construction industry
- increased consumer confidence (which will translate into greater spending in the building and construction sector), and
- a more profitable building and construction industry.

Due to data availability, these benefits are unable to be easily quantified at this time. However, these are real and significant benefits to the Australian economy, consumers, tax payers and industry which should also be considered in evaluating the merits of trade licensing.

Costs of licensing finishing trades (Registration)

Upfront costs

Description: Once-off upfront costs associated with the initial registration of 'finishing trades' trade contractors.

Cost estimate: The once-off cost of registering all 'finishing trades' trade contractors for the first time is estimated at \$15.0 million. Given that 103,000 trade contractors are expected to be registered, this would imply registration renewal fees of the order of \$146 per practitioner if a full cost recovery fee were to be set.

These estimates are based on the following key assumptions:

- There are currently 103,000 'finishing trades' trade contractors in Australia⁷
- No 'finishing trades' trade contractors are currently registered
- The assessments required to be undertaken to register a trade contractor for the first time would take, on average, 3 hours per application (employment of external assessors is unlikely to be needed; registration is expected to be an assessment based on the evidence of qualification submitted, references in relation to workmanship, length of experience and an interview if needed)
- The average salary of each registration-related officer is equivalent to APS Grade 4.1, or \$62,873 per annum⁸
- 30% is added to the base salary to account for on-costs (including superannuation and other expenses)

Additional upfront costs

A range of additional costs would also be incurred in the lead up to implementation of a new registration process. Quantitative estimation of these costs is not possible within the scope of this paper, however, they would include the following:

- Cost of policy development in relation to the setting of registration requirements, renewal periods, treatment of existing practitioners
- Cost of publicising the changes to both the affected trades, other registered trades (notably builders) and consumers, and
- Costs associated with development and implementation of necessary regulatory amendments to introduce the expanded registration arrangements.

Annual costs

Description: Costs associated with the annual registration renewal of 'finishing trades' trade contractors.

Cost estimate: The costs of registration are estimated at \$5.0 million per annum. Given that 103,000 trade contractors are expected to be registered, this would imply registration renewal fees of the order of \$49 per practitioner if a full cost recovery fee were to be set.

⁷ IBISWorld reports (1) Painting and Decorating Services in Australia: Market Research Report (May 2016); (2) Plastering and Ceiling Services in Australia: Market Research Report (July 2016); and (3) Tiling and Carpeting Services in Australia: Market Research Report (Feb 2016).

⁸ Australian Public Service Commission (APSC) Enterprise Agreement 2015-18.

These estimates are based on the following key assumptions:

- There are currently 103,000 'finishing trades' trade contractors in Australia
- No 'finishing trades' trade contractors are currently registered
- Registration renewal would be on an annual basis (insurers are unlikely to provide policies of more than 12 months' duration; the registration renewal process has historically functioned as a mechanism for verifying compliance with insurance requirements)
- The assessments required to be undertaken to renew registrations would be significantly less detailed than that conducted for the initial registration, and would take, on average, 1 hour per application
- The average salary of each registration-related officer is equivalent to APS Grade 4.1, or \$62,873 per annum
- 30% is added to the base salary to account for on-costs (including superannuation and other expenses)

Costs of licensing finishing trades (Training)

The size of training costs is necessarily directly dependent on the extent of the training requirement adopted as a condition of registration and the relationship between this requirement and the current average level of training undertaken by practitioners. Clearly, the higher is the qualification requirement set, the higher is the cost associated with this aspect of registration. However, the rigour of the qualification requirement will also be a key determinant of the effectiveness of a registration scheme in improving the observed defect rate for the relevant trades.

Upfront costs - Recognition of Prior Learning (RPL)

Description: Costs associated with 'finishing trades' trade contractors demonstrating they have the competencies to meet the requirements for registration.

Cost estimate: The upfront costs required for existing trade contractors to demonstrate they have the required level of competency are estimated at \$30.9 million.

These estimates are based on the following key assumptions:

- There are currently 103,000 'finishing trades' trade contractors in Australia
- There will be no "grandfathering" of existing practitioners (i.e. exempting them from the qualifications requirements that are to be applied to new entrants)
- The "Recognition of Prior Learning" (RPL) mechanism available under the Australian Qualifications and Training Framework will be applied (this allows practitioners to be tested and/or otherwise assessed to determine whether they meet the required competency standards for a specific vocational qualification)
- 50% of practitioners will be required to undergo RPL assessments (for example, if it is determined that all tradespersons holding qualifications at the appropriate level under the current AQTF would be accepted as qualified, then only those who were otherwise qualified would need to go through an RPL process. This would suggest that more than half of all tradespersons in the relevant categories would undergo RPL, given that the AQTF has only been in place since the second half of the 1990s)

- The cost of an RPL process covering all qualifications requirements for registration is estimated to be \$600 per practitioner

Upfront costs – Upskilling of existing practitioners

Description: Costs associated with existing practitioners - who do not meet the qualifications requirements for registration (via either demonstrating that they possess the required formal qualifications or passing through the RPL process) - obtaining the required qualifications.

Cost estimate: The upfront cost for existing trade contractors to obtain the qualifications required for registration is estimated at \$36.1 million.

These estimates are based on the following key assumptions:

- 10,300 existing practitioners will need to undertake some additional training to meet qualifications requirements (10% of the 103,000 'finishing trades' trade contractors in Australia)
- An average of 100 contact hours will be required to be completed by each practitioner (i.e. equivalent to two or three units of competency)
- Direct costs of vocational training are \$8 per student per contact hour (based on an average program cost of \$5,200 and 640 contact hours)
- The opportunity cost of practitioners' time to complete vocational training is valued at \$27.00⁹ per practitioner per contact hour (based on an average annual wage of \$56,000)

Annual costs – New entrants

Description: Costs associated with new 'finishing trades' trade contractors obtaining the required competencies to meet the requirements for registration.

Cost estimate: The annual training costs required for new trade contractors to obtain the required level of competency is estimated at \$0.5 million.

These estimates are based on the following key assumptions:

- There will be 3,605 new entrants to the 'finishing trades' each year (equivalent to 3.5% of the 103,000 'finishing trades' trade contractors in Australia)
- Each new entrant will be required to complete an additional 5 hours of training
- Direct costs of vocational training are \$8 per student per contact hour (based on an average program cost of \$5,200 and 640 contact hours)
- The opportunity cost of students' time to complete vocational training is valued at \$17.70¹⁰ per student per contact hour (based on the minimum wage)

Costs of licensing finishing trades (Insurance)

Description: Costs associated with compulsory insurance for 'finishing trades' trade contractors.

⁹ http://www.payscale.com/research/AU/Job=Painter/Hourly_Rate (Payscale website, accessed January 2017)

¹⁰ <https://www.fairwork.gov.au/how-we-will-help/templates-and-guides/fact-sheets/minimum-workplace-entitlements/minimum-wages> (Fairwork Ombudsman website, accessed January 2017)

Cost estimate: The annual insurance costs incurred by trade contractors is estimated at \$12.9 million.

These estimates are based on the following key assumptions:

- There are currently 103,000 'finishing trades' trade contractors in Australia
- Average insurance premium is \$500 per annum
- 25% of the insurance premium amount constitutes the management cost (as opposed to covering claims payments)

Comments: It is important to note that compulsory insurance may not be made a condition of registration, however the above estimates provide an indication of the possible cost impact were insurance to be required.

It should be noted, however, that the result of not requiring insurance for the finishing trades would arguably be removal of coverage for defects by these trades in the "last resort" cases covered by current insurance requirements. That is, it is unlikely that builders' warranty insurance could be made to cover "last resort" issues where another registered tradesperson, who was responsible for a defect, had died or become insolvent. If this were the position, the impact of requiring registration for these trades would, in practice, be to reduce the level of consumer protection available in some circumstances.

Costs of licensing finishing trades (Regulatory)

Description: Compliance and enforcement costs associated with regulating the registration (licensing) of finishing trades.

Cost estimate: The additional annual regulatory costs incurred by government is estimated at \$ 14.1 million.

These estimates are based on the following key assumptions:

- There are currently 103,000 'finishing trades' trade contractors in Australia
- The cost of regulating the licensing of finishing trades is equivalent to \$136¹¹ per tradesperson per annum

Cost-benefit analysis

Table 9 summarises the benefits and costs identified in the preceding sections. The projected benefits of registering finishing trades are estimated at \$69.3 million per annum. The one-off costs associated with initial registration and training could be in the order of \$82.0 million, with on-going costs of \$32.5 million per annum (primarily associated with additional regulatory costs associated with the licensing of 103,000 tradespeople).

¹¹ Ratio in NSW calculated based on the total number of licensed builders and tradespeople in NSW (187,732) and annual costs of regulation (\$25,700,000). Number of builders and tradespeople sourced from "Prevention is Better than Cure: A recommendation for the regulation of building trades-people in Australia (David Hallett, 23 December 2015)".

Table 9 Comparison of the benefits and costs of licensing finishing trade contractors.

	Once-off	Annual
Benefits		
Reduced defects	-	\$58.2m
Reduced existing regulatory costs	-	\$11.1m
Other benefits	Unquantified	Unquantified
Total benefits	-	\$69.3m
Costs		
Registration	\$15.0m	\$5.0m
Training	\$67.0m	\$0.5m
Insurance	-	\$12.9m
New regulatory costs	-	\$14.1m
Total costs	\$82.0m	\$32.5m

The overall projected annual benefits of registering finishing trades exceed annual costs (Benefit/Cost Ratio = 2.14). There is a substantial net benefit from mandatory registration of finishing trades in all jurisdictions. The net benefit is most pronounced in the ACT (2.82) and Victoria (2.55) (see Table 10).

However, it is important to consider that the full range of benefits (a more competitive and skilled building and construction industry, increased consumer confidence, and a more profitable building and construction industry) were unable to be quantified for the purposes of this analysis, and should be factored into the decision about whether to pursue trade registration in these other jurisdictions.

Table 10 Benefit/Cost Ratio of licensing finishing trade contractors in each jurisdiction.¹²

Jurisdiction	Annual benefits			Annual costs	Overall Benefit/Cost Ratio
	Reduced cost of re-work*	Reduced existing regulatory costs**	Potential benefits	Potential costs***	
ACT	\$ 1,119,313	\$ 667,625	\$ 1,786,938	\$ 632,771	2.82
New South Wales	\$ 17,131,913	\$ 3,111,868	\$ 20,243,780	\$ 8,891,242	2.28
Northern Territory	\$ 557,150	\$ 255,360	\$ 812,510	\$ 438,072	1.85
Queensland	\$ 11,010,759	\$ 3,562,794	\$ 14,573,553	\$ 7,236,303	2.01
South Australia	\$ 2,499,443	\$ 848,804	\$ 3,348,247	\$ 1,914,538	1.75
Tasmania	\$ 645,102	\$ 150,728	\$ 795,829	\$ 519,197	1.53
Victoria	\$ 17,690,594	\$ 2,075,685	\$ 19,766,279	\$ 7,755,500	2.55
Western Australia	\$ 7,535,147	\$ 459,379	\$ 7,994,525	\$ 5,062,167	1.58
Total	\$ 58,189,421	\$ 11,132,242	\$ 69,321,663	\$ 32,449,790	2.14

* Annual benefit from reduced cost of re-work broken down by jurisdiction based on the relative value of residential construction.

** Annual benefit from reduced regulatory costs broken down by jurisdiction based on figures presented in annual reports.

*** Annual costs broken down by jurisdiction based on the relative size (employment) of the construction industry.

¹² Annual costs broken down by jurisdiction based on the relative size (employment) of the construction industry as stated in the Australian Bureau of Statistics Report 8772.0 (Private Sector Construction Industry Australia 2011-12)

7. JURISDICTIONS IN WHICH TRADE LICENSING WAS INTRODUCED HAVE REALISED MANY BENEFITS

Since the late 1980's finishing trade contractors and other sub-contractors have been licensed (registered) in New South Wales, Queensland and South Australia (see Table 1). Data has been obtained from these jurisdictions with a view to comparing regulatory outcomes achieved in those States which have introduced trade licensing with the regulatory outcomes achieved in those States and Territories where finishing trade and other contractors are not licensed.

This analysis tests the hypothesis that better outcomes are being achieved in those States and Territories where the sub-contractors, who carry out the building work, are licensed and subject to a range of legislative requirements designed to reduce risk to home owners.

More specifically, direct comparisons are made having regard to the level of complaint, disputation and warranty defect claims.

(i) Complaints and disputes

The number of building complaints and disputes dealt with by State and Territory consumer affairs or building regulators is contained in Figure 5.

The relatively high number of complaints and disputes in Queensland stems from the fact that the building regulator in that State (the Queensland Building & Construction Commission - QBCC) is also the home warranty insurance provider. In what is referred to as a 'first resort' home warranty insurance scheme, when a defect occurs home owners in Queensland make a complaint to the QBCC and it is either dealt with as a dispute or insurance claim.

Notwithstanding, in real terms, since 2009-10 Queensland has experienced a downward trend in the number of defective building work complaints and disputes.

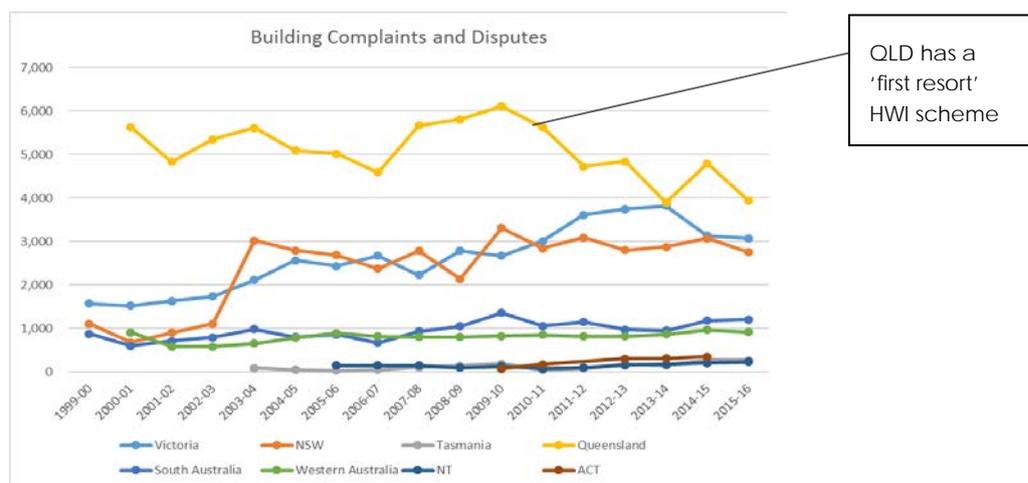


Figure 5 Building complaints and disputes 1999-00 to 2015-16.

The number of complaints and disputes in New South Wales, South Australia, Western Australia and Tasmania for the same period appear quite stable. A modest increasing trend in complaint and disputes numbers have occurred in the Northern Territory and ACT. In

contrast, throughout the entire data collection period, Victoria experienced a continual upward trend in the number of complaints and disputes.

Trends in complaint and dispute numbers, however, are affected by increases and decreases in the volume of construction in each jurisdiction each year. This influence is removed by deriving the number of complaints and disputes for every 1,000 houses constructed.

After removing the influence of changing construction volumes, the overall trends in complaints and disputes become more apparent. The analysis confirms the downward trend in complaints and disputes in both Queensland and New South Wales, particularly since 2009-10 (Figure 6).

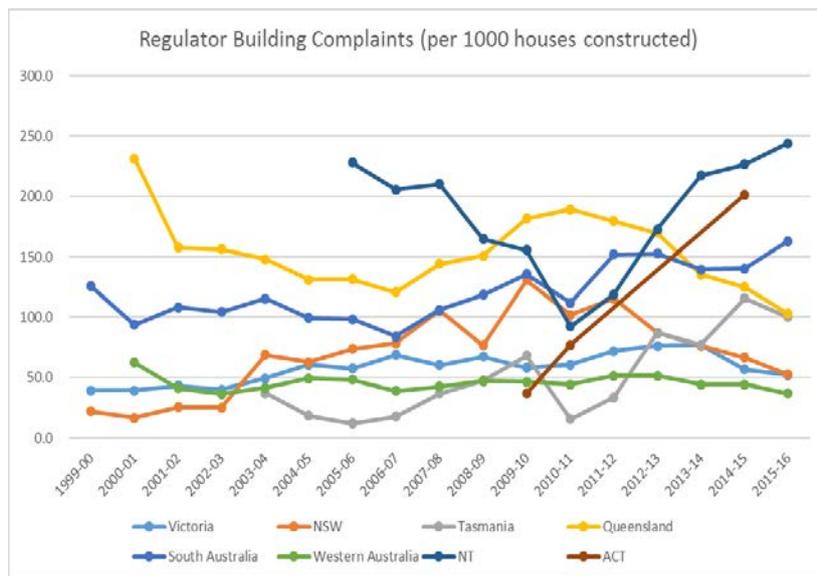


Figure 6 Building complaints and disputes per 1,000 houses (1999-00 to 2015-16).

While Western Australia has remained relatively stable over the data collection period, the remaining jurisdictions have experienced increasing complaints and disputes with the Northern Territory, ACT, South Australia and Tasmania showing dramatic increases since 2010-11.

The increasing trend in regulator building disputes and complaints in Tasmania since 2009-10 can perhaps be attributed to the establishment of the Building Director of Building Control and Building Standards and Occupational Licensing Branch within the Department of Justice in 2010 following the closure of Tasmania’s Home Warranty Insurance scheme.

While most jurisdictions across Australia experienced downward trends in relation to Tribunal building disputes (claims) over the data collection period, since 2007-08 New South Wales has experienced the most pronounced decrease (see Figure 7 below).

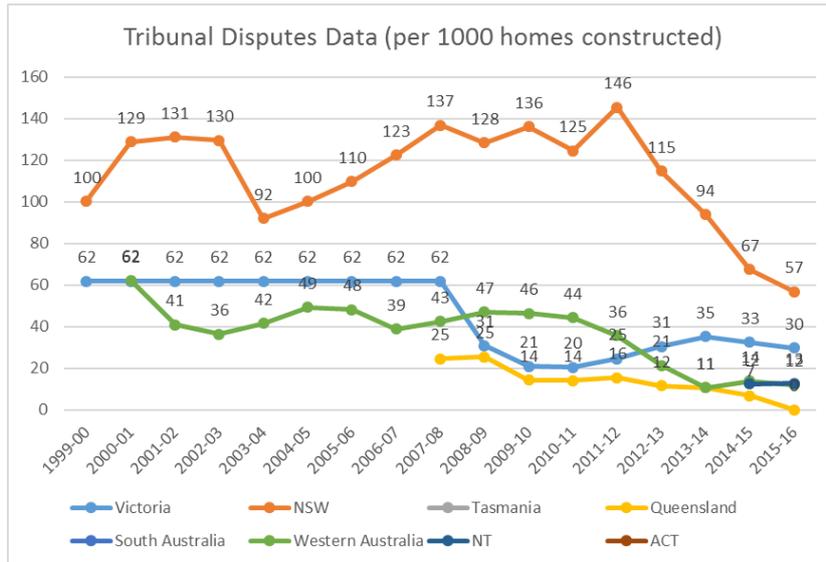


Figure 7 Tribunal Building Defect Disputes Australia 2000-16

Clearly, the declining dispute rates in both Queensland and New South Wales when compared to the increasing trends being experienced in the other jurisdictions supports the hypothesis that better outcomes in terms of lower building defect complaints and disputes are being achieved in those jurisdictions where trade contractors are licenced (registered).

(ii) Home Warranty Insurance claims

Understanding HWI data

When viewing HWI data an appreciation of the nature of the insurance product and how it is provided in each jurisdiction is required.

Firstly, it is important to understand that terminology used across jurisdictions varies. ‘Home Warranty Insurance’ provided in NSW and QLD is the same insurance product as ‘Domestic Building Insurance’ provided in Victoria, ‘Builder Indemnity Insurance’ provided in SA and ‘Home Indemnity Insurance’ provided in WA. For simplicity, the term ‘Home Warranty Insurance’ is used throughout this document to refer to the relevant insurance product in each jurisdiction.

Secondly, it is important to understand that not all jurisdictions operate mandatory Home Warranty Insurance schemes. Mandatory schemes currently operate in every Australian State and Territory except Tasmania, where the provision of Home Warranty Insurance was phased out in 2010 (Table 11) which is causing a rise in complaints and disputes in this jurisdiction.

Table 11 Home Warranty Insurance schemes in Australia, 2017.

Jurisdiction	Mandatory (Y/N)	Scheme Type	How Provided
ACT	Y	Last Resort	Hybrid - MBA (ACT) fidelity fund or private insurer
New South Wales	Y	Last Resort	Government insurer (iCare) since 2010
Northern Territory	Y	Last Resort	MBA (NT) Fidelity Fund since 2013
Queensland	Y	First Resort	Government insurer QBCC since 1980's
South Australia	Y	Last Resort	Government insurer SAI since 2011
Tasmania	No scheme	No scheme	No scheme since 2010
Victoria	Y	Last Resort	Government insurer (VMIA) since 2010
Western Australia	Y	Last Resort	Government insurer since 2010

Except for Queensland, each jurisdiction with a mandatory HWI scheme employs a 'last resort' approach which means that home owners who suffer losses because of defective building work can only lodge claims under their HWI policy if their builder dies, disappears, becomes insolvent or has their licence suspended because of an outstanding court/tribunal money order. As outlined in the previous section, the Queensland 'first resort' scheme enables home owners who suffer losses because of defective building work to lodge a claim under their HWI policy regardless of the status of the builder.

In each jurisdiction except the ACT and Northern Territory, HWI is offered by a government insurer. In the ACT, HWI can be provided by a fidelity fund run by the Master Builders Association of the ACT or a private provider. The scheme operating in the Northern Territory is a mandatory fidelity fund run by the Master Builders' Association (NT).

Finally, the HWI product provides home owners with protection against defects for several years after the construction of their home is completed. Most jurisdictional HWI products provide cover for up to six years and home owners can lodge claims at any time within that period.

For this reason, data relating to HWI claims is said to be significantly 'lagged' and not fully mature until after at least 7 years. Accordingly, any analysis of HWI data should focus on the claims experience of fully matured data.

While complete data sets for Queensland, New South Wales and Victoria could be obtained for analysis, only very limited data was available in relation to Western Australia and South Australia. No data sets could be located for the remaining jurisdictions.

HWI defect claims in Victoria, NSW and Queensland since 1999-00

The number of HWI defect claims in NSW, Victoria and Queensland since 1999-00 are set out in Table 12 and Figure 8 below.

Notably, the number of defect claims in Victoria over the data collection period was 15% higher than in New South Wales. The relatively high number of HWI claims in Queensland is a result of the 'first resort' nature of their scheme.

Table 12 Home Warranty Insurance claims in Victoria, NSW and Queensland since 1999-2016¹³.

Jurisdiction	Year	Victoria	NSW	Queensland
Number of Home Warranty Insurance claims for Defective work	1999-00			1,279
	2000-01			1,298
	2001-02			1,238
	2002-03	102	86	1,044
	2003-04	257	241	1,045
	2004-05	232	363	957
	2005-06	356	323	842
	2006-07	379	422	884
	2007-08	540	584	1,133
	2008-09	466	406	1,073
	2009-10	390	283	1,423
	2010-11	531	298	1,500
	2011-12	481	356	1,509
	2012-13	324	206	1,783
	2013-14	161	68	1,587
	2014-15	35	56	1,521
2015-16			1,509	
Total Claims		4,253	3,692	21,625

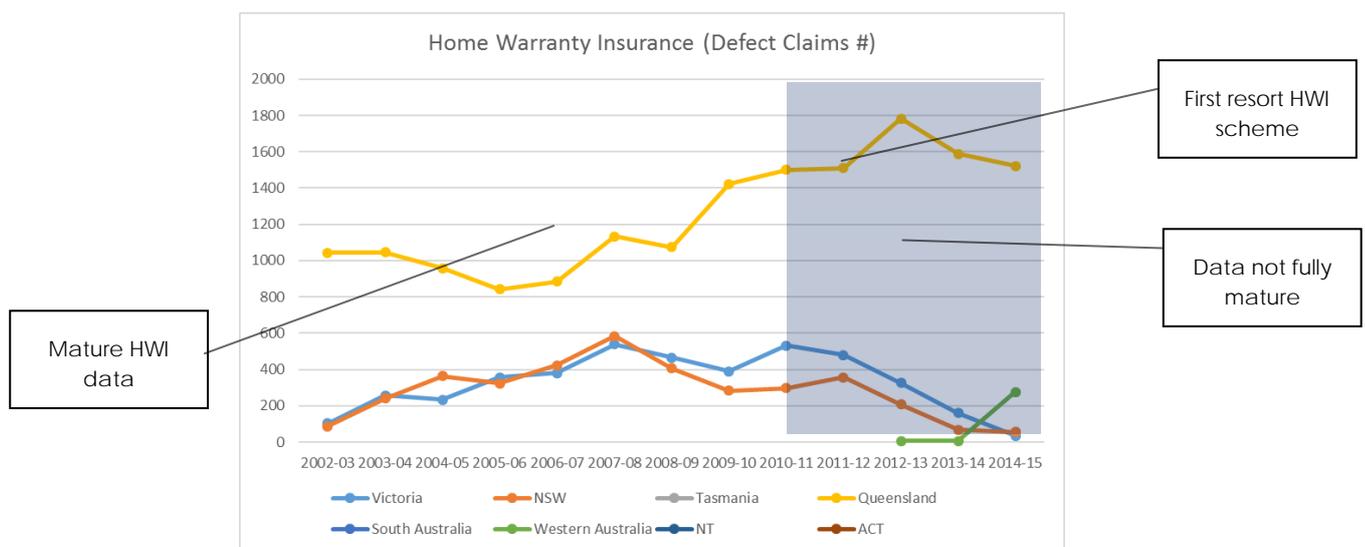


Figure 8 HWI claims in Victoria, NSW and Queensland 2002-03 to 2014-15¹⁴.

While having the highest number of defect claims, one of the most distinguishing features of the Queensland HWI scheme is the comparatively low average claim size (as the defects are dealt with during construction they are cheaper to resolve). Over the data collection period

¹³ Queensland has a ‘first resort’ HWI scheme where claims are made on policies when the builder is still capable of rectifying defective work. Victoria and NSW operate ‘Last Resort’ HWI scheme where claims can only be accepted when the builder has died, disappeared, become insolvent or has had a license suspension due to an outstanding court order.

¹⁴ HWI (DBI/BII) provides cover for 6 years. Claims can occur throughout the life of the policy and therefore claims data post 2009 is not fully mature.

(2002-03 to 2014-15), Queensland’s average claim size was \$12,441 compared to \$58,401 and \$77,343 in Victoria and New South Wales, respectively (Table 13).

Table 13 Home Warranty Insurance average claim size.

NSW	VIC	QLD	WA
\$77,343	\$58,401	\$12,441	\$30,481

Although New South Wales had the highest average claim size over the data collection period, since 2002 it has experienced a significant decrease in the average claim size from around \$220k in 2002-03 to \$75k in 2014-15 (Figure 9). The average claim size in Queensland has remained relatively stable over the same period. In contrast, the average HWI defective building work claim size in Victoria has increased.

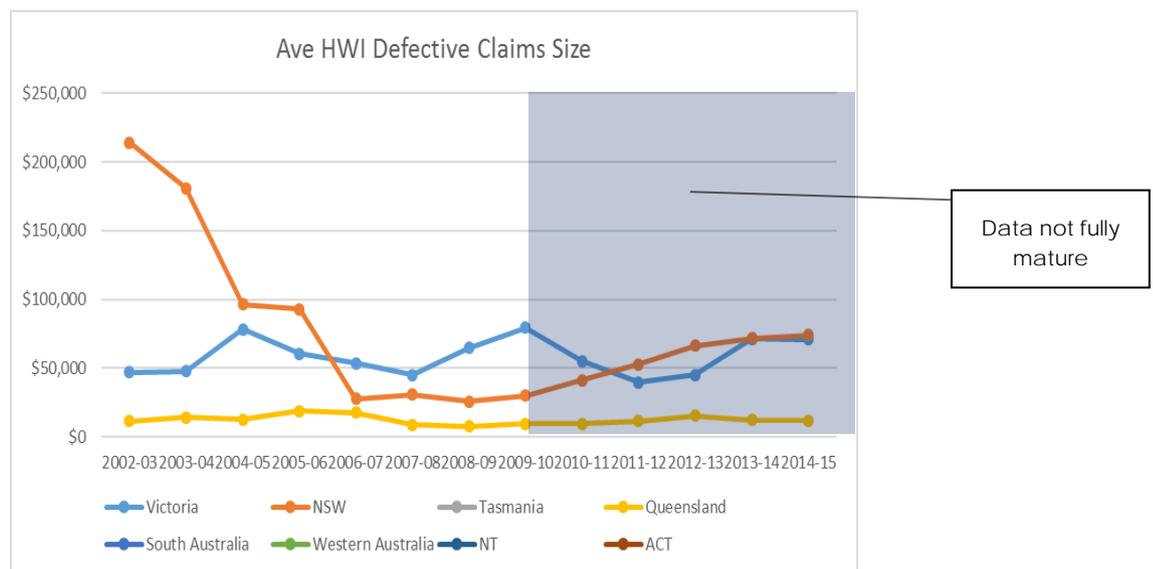


Figure 9 Average HWI claim size in Victoria, NSW and Queensland 2002-03 to 2014-15.

In Figure 10 (below), which graphically sets out total HWI claims cost over the data collection period, the contrasting outcomes in between New South Wales, Queensland and Victoria become more apparent.

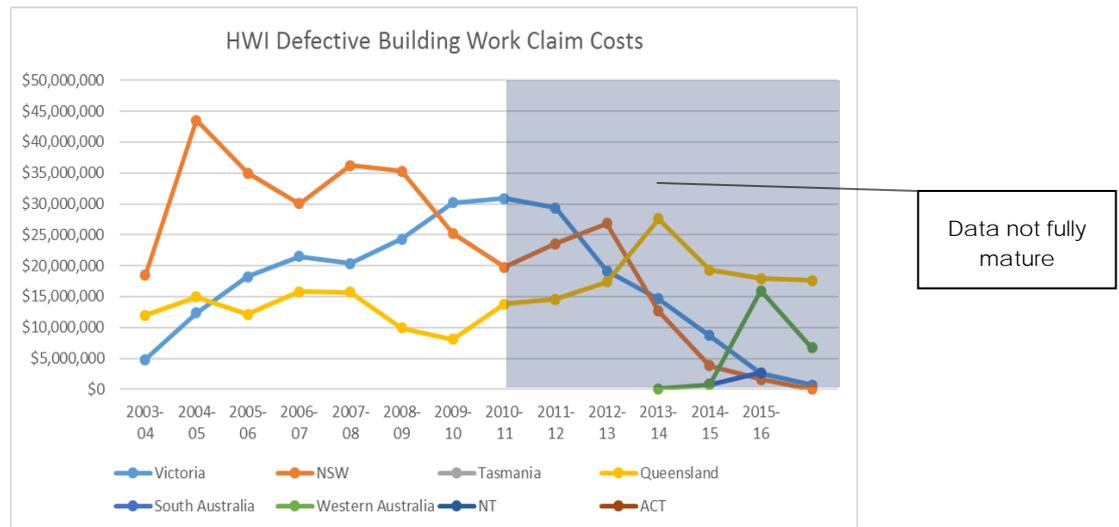


Figure 10 Total value of HWI claims in Victoria, NSW, Queensland and WA (2003-04 to 2015-16).

Perhaps not surprisingly, the outcomes in relation to home warranty insurance defect claims appear to mirror those relating to defective building work complaints and disputes.

The declining home warranty defect claim sizes and costs in both Queensland and New South Wales when compared to the increasing trends being experienced in Victoria tends to support the hypothesis that better regulatory outcomes are being achieved in those jurisdictions where trade contractors are licenced (registered).

8. THE BENEFITS DERIVED FROM TRADE REGISTRATION ARE ENHANCED THROUGH MANDATORY CONTINUOUS PROFESSIONAL DEVELOPMENT REGIMES

Continual Professional Development (CPD) schemes have been in place for several professions and industry sectors for over a century. CPD schemes for the building and construction industry are a more recent development with New South Wales introducing mandatory CPD for builders and swimming pool builders in 2004 and Tasmania in 2005.

One of the key objectives of CPD schemes introduced for the building and construction industry in Australia has been to improve the quality of construction outcomes and professionalism of the industry thereby improving consumer and investor confidence.

While no relevant studies have been conducted in Australia, several international studies have measured the effectiveness of Continuous Professional Development (CPD) schemes across various industries.

Research suggests that '*human capital development is inextricably linked with productivity growth and improvements in living standards*'¹⁵. The Leitch Report, which reviewed skills in the United Kingdom in 2005, estimated that upskilling could produce an average annual benefit of +0.3% GDP growth in the UK¹⁶.

Mandatory CPD regimes in operation in Australia

Both New South Wales and Tasmania have operated mandatory CPD regimes since 2004 and 2005, respectively. The characteristics of the CPD regimes in place in both jurisdictions is outlined in Table 14.

¹⁵ **Kennedy**, *Benefits of Continuing Professional Development in the Visual Communications sector in Ireland (2009)*.

¹⁶ **Leitch**, *Leitch Review of Skills*, HM Treasury, London, 2005.

Table 11 Continuous Professional Development regimes in NSW and Tasmania.

	NSW	Tasmania
When Commenced	2004	2005
Mandatory/Voluntary?	Mandatory	Mandatory
Who is required to undertake CPD?	Builders and swimming pool builders	Builders, Engineers, Architects, Building Professionals
Companies and individuals?	Both	Individuals
Points Requirement?	Yes	Yes
Maximum Points Required	12 points per year (36 points over three year renewal cycle)	12 Builders, 20 Engineers and 30 for other building professionals
CPD period	3 years (36 Points - 12 points per year)	Annual
Learning Activities	Prescribed learning topic areas	
Mandatory Learning?	No	No
Structured and unstructured learning?	Yes, structured and unstructured learning with structured learning attracting more CPD points. 2 points per hour for structured learning and 1 point per hour for non-structured learning	Yes
Delivery methods available	Face-to-face and online activities	Face-to-face and online activities
Who provides CPD activities	Government and RTO's	Government and RTO's
CPD points for non-learning activities?	No	No
How do participants record CPD activities?	Keep their own records for auditing purposes	Keep their own records for auditing purposes
How is CPD compliance monitored?	Random audits of licensee (around 400 each year)	Audits
What is the outcome of non-compliance	1. Not completing any CPD or fraudulently completing renewal - suspension or cancellation; 2. Failure to attain full points requirement - warning or fine and record on the public register	Licence (registration) not renewed
How is CPD administration funded	Budget funded	Budget Funded

It is worth noting that neither regime requires trade sub-contractors to meet CPD requirements. This is not unexpected in Tasmania where there is no licensing of non-specialist (electrician and plumbers) trade contractors.

A decline in complaints and disputes has been observed in NSW since the introduction of mandatory CPD for trade contractors

Since the introduction of a mandatory CPD regime in 2004, New South Wales has experienced a decline in defective building work complaints and disputes, and particularly since 2009-10 (Figure 6).

New South Wales made substantial changes to its CPD regime in 2008 following a review conducted in 2007. The changes implemented made the CPD regime more robust. The 2008 changes appear to have contributed to achieving the better outcomes observed in complaints and disputes as well as HWI claim outcomes.

Tasmania, conversely, has experienced an increase to the number of building complaints, particularly since 2010. This increase may, in some part, be attributable to the removal of mandatory HWI in 2010.

A decline in HWI claims has been observed in NSW since the introduction of mandatory CPD for trade contractors

While no HWI data is available for Tasmania, the data for New South Wales indicates that the CPD regime in that State is delivering increased benefits to home owners.

There has been a dramatic decrease in average HWI claim size in NSW since 2004 when the mandatory CPD regime was introduced (Figure 9). Likewise, a decreasing trend in the overall number of HWI claims (Figure 8) and the total value of HWI claim costs (Figure 10) have declined.

9. CONCLUSION

From the research and data collected it is clear there are substantial potential benefits to be derived for home owners and the Australian economy through the licensing of finishing trade contractors.

The evidence from the data collected also indicates that the level of these benefits can be further increased by requiring licensed occupations to keep their skills and knowledge up-to-date through mandatory continual professional development.

The comparative analysis of data relating to defective building work complaints, disputes and home warranty insurance claims provides clear evidence that jurisdictions where finishing trades are registered are deriving greater benefits and achieving better outcomes for consumers in those States.

Most notable for regulators and governments is that the potential benefits of the further regulation outlined in this paper far exceed the anticipated costs.

10. ABOUT THE AUTHOR



As the former Commissioner of the Queensland Building & Construction Commission (QBCC), Deputy Commissioner of NSW Fair Trading and Assistant Commissioner NSW Home Building Service (NSW Fair Trading), Steve has over 20 years' experience in regulating the building and construction sector.

In both Queensland and NSW Steve was responsible for implementing substantial reforms to the building and construction sector in those States. Steve was the Chair of Building Licensing Australasia from 2004 to 2007 and a member of the NSW Building Professional Board Disciplinary Committee from 2007 to 2010. More recently in a management consultancy capacity Steve has been assisting the Victorian Government with building industry reforms.

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12. DATA SOURCES

The table below lists the sources of data used for analysis

	Regulator Complaints and Disputes data	Tribunal Disputes/Claims data	Home (Builders) Warranty claims data
ACT	<ul style="list-style-type: none"> Building Quality in the ACT Report (2010) Environment & Sustainability Directorate Annual Reports 	Not Available	Not Available
NSW	<ul style="list-style-type: none"> NSW Fair Trading Year in Reviews (2004-2015) 	<ul style="list-style-type: none"> NCAT Annual Reports (2012-2016) CTTT Annual Reports (2001-2012) 	<ul style="list-style-type: none"> HBCF Data (2002-2016)
Northern Territory	<ul style="list-style-type: none"> NT Consumer Affairs Annual Reports (2007-16) 	Not Available	Not Available
Queensland	<ul style="list-style-type: none"> QBCC Annual Reports (2013-16) QBSA Annual Reports (2001-2012) QBCC data sheets 	<ul style="list-style-type: none"> QCAT Annual Reports (2007-2016) Building Tribunal 	<ul style="list-style-type: none"> QBCC Annual Reports (2013-16) QBSA Annual Reports (2001-2012) QBCC data sheets
South Australia	<ul style="list-style-type: none"> SA Consumer Affairs Annual Reports (2001-2016) 	Not Available	Not Available
Tasmania	<ul style="list-style-type: none"> Building Co (Department of Justice) Annual Reports (2003-16) 	Not Available	Not Available
Victoria	<ul style="list-style-type: none"> CAV Annual Reports (2001-2016) Building Commission Reports (2001-2013) VBA Annual Reports (2013-2016) VBA Data (5 Year) 	<ul style="list-style-type: none"> VCAT Annual Reports (2007-2016) 	<ul style="list-style-type: none"> VMIA Annual Reports (2012-16) VMIA data sets Essential Services Commissioner Report 2015
Western Australia	<ul style="list-style-type: none"> Building Commission Annual Report (2012-16) BRB (2004-2012) 	<ul style="list-style-type: none"> SAT (WA) (2011-2016) Building Disputes Tribunal (2001-2011) 	<ul style="list-style-type: none"> WA Building Commission data sheets

13. APPENDIX A: Re-work cost data

Research Author(s)	Country	Rework Cost (% of contract price)	Comments
Cusack (1992)	Australia	10%	Identified errors in design documentation to be the primary cause of rework
Burroughs (1993)	Australia	5%	Reported the causes of rework in major project were due to poor documentation produced by design consultants. Burroughs (1993) also revealed that a concreting subcontract experienced an increase of 31% due to rework
Lomas (1996)	Australia	>1%	Rework less than 1% when a QA system is implemented. Lomas reported that rework costs were approximately 5% prior to the introduction of QA
CIDA (1995)	Australia	6.5%	CIDA (1995) found that projects with a formal quality management system in place recorded lower levels of rework. The average cost of rework as a percentage of contract value for projects with a quality system was found to be 0.72%. Whereas those projects without a quality system in place have been found to have an average cost of rework 6.5%. Project procured using lump sum contracts were found to have rework costs as high as 15% of contract value
Love et.al (1999)	Australia	3.15%	Residential project procured using a traditional lump sum contract. Changes initiated by the client and end-user, as well as errors, and omissions in contract documentation were found to be the primary causes of rework
Love (2002)	Australia	6.4%	Sampled 161 Australian residential projects and found the mean direct and indirect rework costs were found to be 6.4% and 5.6% of the original contract value, respectively. Rework costs were found not to significantly vary with project type and procurement method used
Mills, Love & Williams (2009)	Australia	4%	Utilised Victorian HGF Home Warranty Insurance data 1982 to 1997.
Cnudde (1991)	Belgium	10%-20%	Reported that 46% of total deviation costs were created during design, compared to 22% for construction deviations, which were due to poor execution of work
CIBD (1989)	Singapore	5%-10%	CIBD stated that a proper quality management system would cost in the range of 0.1 to 0.5% of total project cost and return a saving of 3%
Nylen (1996)	Sweden	10%	This research examined quality failure costs in four major railway-engineering projects. In the four cases studies, 232 failures during the production phase of the project were identified, which account for 10% of each project's production costs. It was found that 10% of failures contributed to 90% of failure costs. 51% of failure originated from design due to communication problems between client and consultants.
Hammarlund & Josephson (1991)	Sweden	6%	79% of failure costs were attributed 20% of the failures that were recorded.

			Approximately 34% of failures were attributed to ineffective site management, 20% to design, and 13% to poor communication. It was found that 10% of production time was spent remedying failures
Hammarlund & Josephson (1999)	Sweden	2.3%-9.3%	This study examined the defect costs of seven building projects. The number of defects that occurred ranged from 283 to 480. 32% of defect costs were found to originate from design (design team), 45% originated from on-site (site management/ subcontractors) and 20% from materials, plant and equipment. Lack of motivation due to 'carelessness or forgetfulness' was attributed as a cause of 50% of defect costs
Farrington (1987)	USA	14.0%	Design changes, errors and omissions averaged 78% of total deviations and 79% of total deviation costs. Construction deviations averaged 16% of total deviations. These findings also reported in Burati <i>et al.</i> (1992)
Willis & Willis (1996)	USA	3.3%	Willis and Willis reported that the total cost of quality, which is the costs of prevention and appraisal plus cost of failure and correction was 12% of project cost: 8.7% prevention and appraisal costs and 3.3% deviation correction
Hwang et.al (2009)	USA	5%	Analysis of a sample of US commercial and residential construction projects
Abdul-Rahman (1993)	UK	2.5% - 5%	Estimated cost of non-conformance to be 6% of project cost Non-conformance 5%* In a highway project 72 non-conformances were identified. The reported figure of 5% did not include material wastage and head office overheads. Non-conformances were attributable to the subcontractor, construction and design-related issues
Barber et.al (2000)	UK	3.6% - 6.6%	Revealed that quality failure costs were 16% and 23% of contract value. These estimates include the costs of delay. When these are removed then it was estimated that quality failure costs were 3.6% and 6.6%. Design-related failures accounted for 50% failures

*Extract from Table I *Forensic Project Management: The underlying causes of rework in construction projects* (Love and Davies 2004)

14. APPENDIX B: ABS building and construction data

Jurisdiction	Year	Victoria	NSW	Tasmania	Queensland	South Australia	Western Australia	NT	ACT	Totals
Total number of residential properties constructed (ABS Data 8752)	1999-00	39,894	50,127	1,675	31,970	6,955	16,720	1,120	1,371	149,832
	2000-01	38,586	41,490	1,359	24,345	6,358	14,501	580	1,236	128,455
	2001-02	37,713	35,370	1,454	30,645	6,554	14,130	679	1,163	127,708
	2002-03	43,428	43,856	1,836	34,206	7,625	15,837	559	1,283	148,630
	2003-04	42,865	43,937	2,256	37,896	8,476	15,596	517	1,778	153,321
	2004-05	42,357	44,389	2,618	38,897	8,033	15,922	510	968	153,694
	2005-06	42,193	36,495	2,655	38,172	8,730	18,388	636	1,115	148,384
	2006-07	38,648	30,250	2,433	38,006	7,996	20,976	715	1,135	140,159
	2007-08	36,892	26,385	2,788	39,333	8,789	18,780	690	1,173	134,830
	2008-09	41,301	27,807	2,797	38,436	8,806	17,008	583	1,235	137,973
	2009-10	45,822	25,343	2,733	33,604	10,020	17,809	823	1,976	138,130
	2010-11	49,684	27,880	3,129	29,706	9,435	19,183	781	1,964	141,762
	2011-12	50,133	26,757	2,468	26,280	7,555	15,801	833	1,575	131,402
	2012-13	49,055	32,251	2,066	28,504	6,378	15,803	879	1,839	136,775
	2013-14	49,423	37,727	1,843	28,811	6,801	19,629	787	1,553	146,574
	2014-15	55,190	46,054	2,403	38,308	8,411	21,808	882	1,739	174,795
2015-16	58,768	52,341	2,657	38,127	7,362	24,802	939	1,114	186,110	
Total Value of Residential Construction (ABS Data) in '000\$	1999-00	\$11,323,639	\$15,689,851	\$437,775	\$8,080,438	\$2,008,814	\$6,114,693	\$536,868	\$713,118	\$44,905,196
	2000-01	\$9,250,246	\$10,620,084	\$314,879	\$5,886,877	\$1,469,559	\$4,549,248	\$313,940	\$462,885	\$32,867,718
	2001-02	\$11,021,610	\$12,787,492	\$425,581	\$8,363,353	\$1,813,420	\$5,106,304	\$340,003	\$594,752	\$40,452,515
	2002-03	\$12,256,631	\$15,431,398	\$488,612	\$10,174,070	\$2,149,355	\$5,717,011	\$388,060	\$825,810	\$47,430,947
	2003-04	\$12,740,994	\$15,969,550	\$689,301	\$11,738,082	\$2,465,348	\$5,835,535	\$386,141	\$821,234	\$50,646,185
	2004-05	\$12,555,125	\$14,842,434	\$730,353	\$12,268,786	\$2,604,849	\$6,119,427	\$495,305	\$756,906	\$50,373,185
	2005-06	\$11,855,820	\$12,794,193	\$732,428	\$12,028,225	\$2,600,659	\$6,784,624	\$546,347	\$764,445	\$48,106,741
	2006-07	\$11,768,745	\$11,973,902	\$756,081	\$12,703,955	\$2,678,221	\$7,429,422	\$539,580	\$837,236	\$48,687,142
	2007-08	\$12,128,218	\$11,577,960	\$790,636	\$12,823,496	\$2,814,108	\$7,756,885	\$544,645	\$767,781	\$49,203,729
	2008-09	\$13,504,439	\$11,075,359	\$794,586	\$11,580,139	\$2,939,587	\$7,730,201	\$496,732	\$823,982	\$48,945,025
	2009-10	\$14,922,876	\$11,417,448	\$815,215	\$11,234,937	\$2,915,128	\$7,648,588	\$625,301	\$1,139,048	\$50,718,541
	2010-11	\$16,291,381	\$12,381,226	\$831,236	\$10,043,350	\$3,002,620	\$7,841,354	\$806,586	\$1,404,786	\$52,602,539
	2011-12	\$16,273,779	\$11,484,148	\$730,093	\$9,020,819	\$2,673,676	\$6,740,009	\$755,577	\$1,511,323	\$49,189,424
	2012-13	\$16,599,534	\$13,330,874	\$618,515	\$8,851,366	\$2,245,467	\$6,941,428	\$639,922	\$1,432,111	\$50,659,217
	2013-14	\$16,311,190	\$14,475,298	\$576,314	\$9,469,280	\$2,580,485	\$8,213,901	\$820,258	\$1,303,198	\$53,749,924
	2014-15	\$17,764,548	\$16,750,269	\$737,652	\$10,817,739	\$2,928,862	\$8,839,227	\$725,499	\$1,374,836	\$59,938,632
2015-16	\$20,217,822	\$19,579,329	\$737,259	\$12,583,725	\$2,856,506	\$8,611,596	\$636,743	\$1,279,215	\$66,502,195	

15. APPENDIX C: Complaints data

Jurisdiction	Year	Victoria	NSW	Tasmania	Queensland	South Australia	Western Australia	NT	ACT	Totals
Number of Building Complaints/Disputes to Regulator	1999-00	1,571	1100			873				3544
	2000-01	1,518	681		5631	596	905			9331
	2001-02	1,624	903		4830	710	579			8646
	2002-03	1,736	1108		5347	795	577			9563
	2003-04	2,114	3018	84	5610	978	649			12453
	2004-05	2,563	2793	48	5094	799	785			12082
	2005-06	2,428	2689	32	5021	859	888	145		12062
	2006-07	2,666	2377	43	4590	673	818	147		11314
	2007-08	2,227	2784	103	5669	932	799	145		12659
	2008-09	2,782	2133	133	5805	1045	799	96		12793
	2009-10	2,667	3310	186	6113	1360	828	128	73	14665
	2010-11	3,008	2837	49	5625	1055	852	72	151	13649
	2011-12	3,612	3091	83	4726	1148	815	99		13574
	2012-13	3,742	2799	180	4843	975	815	152		13506
	2013-14	3,814	2876	142	3894	948	868	171		12713
	2014-15	3,128	3066	278	4793	1181	964	200	350	13960
2015-16	3,071	2754	266	3927	1201	912	229		12360	
Complains/Investigations PER 1000 completed residential constructions	1999-00	39.4	21.9			125.5				23.7
	2000-01	39.3	16.4		231.3	93.7	62.4			72.6
	2001-02	43.1	25.5		157.6	108.3	41.0			67.7
	2002-03	40.0	25.3		156.3	104.3	36.4			64.3
	2003-04	49.3	68.7	37.2	148.0	115.4	41.6			81.2
	2004-05	60.5	62.9	18.3	131.0	99.5	49.3			78.6
	2005-06	57.5	73.7	12.1	131.5	98.4	48.3	228.0		81.3
	2006-07	69.0	78.6	17.7	120.8	84.2	39.0	205.6		80.7
	2007-08	60.4	105.5	36.9	144.1	106.0	42.5	210.1		93.9
	2008-09	67.4	76.7	47.6	151.0	118.7	47.0	164.7		92.7
	2009-10	58.2	130.6	68.1	181.9	135.7	46.5	155.5	36.9	106.2
	2010-11	60.5	101.8	15.7	189.4	111.8	44.4	92.2	76.9	96.3
	2011-12	72.0	115.5	33.6	179.8	152.0	51.6	118.8		103.3
	2012-13	76.3	86.8	87.1	169.9	152.9	51.6	172.9		98.7
	2013-14	77.2	76.2	77.0	135.2	139.4	44.2	217.3		86.7
	2014-15	56.7	66.6	115.7	125.1	140.4	44.2	226.8	201.3	79.9
2015-16	52.3	52.6	100.1	103.0	163.1	36.8	243.9		66.4	

16. APPENDIX D: Tribunal disputes data

Jurisdiction	Year	Victoria	NSW	Tasmania	Queensland	South Australia	Western Australia	NT	ACT	Totals
Number of building Tribunal claims/disputes	1999-00	2468	5,032							7500
	2000-01	2388	5,347				905			8640
	2001-02	2333	4,641				579			7553
	2002-03	2687	5,685				577			8949
	2003-04	2652	4,048				649			7349
	2004-05	2621	4,446				785			7852
	2005-06	2611	4,004				888			7503
	2006-07	2391	3,709				818			6918
	2007-08	2283	3,610		966		799			7658
	2008-09	1278	3,571		978		799			6626
	2009-10	964	3,451		484		828			5727
	2010-11	1016	3,475		422		852			5765
	2011-12	1229	3,894		409		563			6095
	2012-13	1497	3,703		329		339			5868
	2013-14	1743	3,543		307		210			5803
	2014-15	1801	3,105		265		305	11		5487
2015-16	1746	2,976				302	12		5036	
Tribunal disputes PER 1000 completed residential constructions	1999-00	62	100							50
	2000-01	62	129				62			67
	2001-02	62	131				41			59
	2002-03	62	130				36			60
	2003-04	62	92				42			48
	2004-05	62	100				49			51
	2005-06	62	110				48			51
	2006-07	62	123				39			49
	2007-08	62	137		25		43			57
	2008-09	31	128		25		47			48
	2009-10	21	136		14		46			41
	2010-11	20	125		14		44			41
	2011-12	25	146		16		36			46
	2012-13	31	115		12		21			43
	2013-14	35	94		11		11			40
	2014-15	33	67		7		14	12		31
2015-16	30	57		0		12	13		27	

17. APPENDIX E: Home Warranty Insurance data

Home Warranty (Builders Warranty) Data

Jurisdiction	Year	Victoria	NSW	Tasmania	Queensland	South Australia	Western Australia	NT	ACT	Totals
Number of Home Warranty Insurance claims for Defective work	1999-00				1,279					1279
	2000-01				1,298					1298
	2001-02				1,238					1238
	2002-03	102	86		1,044					1233
	2003-04	257	241		1,045					1543
	2004-05	232	363		957					1552
	2005-06	356	323		842					1520
	2006-07	379	422		884					1685
	2007-08	540	584		1,133					2256
	2008-09	466	406		1,073					1945
	2009-10	390	283		1,423					2096
	2010-11	531	298		1,500					2328
	2011-12	481	356		1,509					2346
	2012-13	324	206		1,783		7			2321
	2013-14	161	68		1,587		5			1821
	2014-15	35	56		1,521		275			1887
2015-16		12		1,509		121			1642	
Number Insurance claims PER 1000 residential constructions	1999-00				40.0					8.5
	2000-01				53.3					10.1
	2001-02				40.4					9.7
	2002-03	2.4	2.0		30.5					8.3
	2003-04	6.0	5.5		27.6					10.1
	2004-05	5.5	8.2		24.6					10.1
	2005-06	8.4	8.8		22.1					10.2
	2006-07	9.8	13.9		23.3					12.0
	2007-08	14.6	22.1		28.8					16.7
	2008-09	11.3	14.6		27.9					14.1
	2009-10	8.5	11.2		42.3					15.2
	2010-11	10.7	10.7		50.5					16.4
	2011-12	9.6	13.3		57.4					17.9
	2012-13	6.6	6.4		62.6					17.0
	2013-14	3.3	1.8		55.1					12.4
	2014-15	0.6	1.2		39.7					10.8
2015-16	0.0	0.2		39.6					8.8	

The Economic Benefits of Licensing Building and Construction Finishing Trade Contractors

Jurisdiction	Year	Victoria	NSW	Tasmania	Queensland	South Australia	Western Australia	NT	ACT	Totals
Cost of total Home Warranty Insurance claims for Defective work p.a.	1999-00									
	2000-01									
	2001-02				\$12,900,000					\$12,900,000
	2002-03	\$4,834,000	\$18,483,715		\$11,987,200					\$35,304,915
	2003-04	\$12,337,000	\$43,553,507		\$14,950,000					\$70,840,507
	2004-05	\$18,189,000	\$35,009,854		\$12,150,000					\$65,348,854
	2005-06	\$21,498,000	\$30,034,331		\$15,770,000					\$67,302,331
	2006-07	\$20,333,000	\$36,178,335		\$15,750,000					\$72,261,335
	2007-08	\$24,331,000	\$35,277,792		\$9,950,000					\$69,558,792
	2008-09	\$30,195,000	\$25,274,147		\$8,100,000					\$63,569,147
	2009-10	\$30,899,000	\$19,738,843		\$13,800,000					\$64,437,843
	2010-11	\$29,338,000	\$23,552,024		\$14,600,000					\$67,490,024
	2011-12	\$19,136,000	\$26,836,724		\$17,400,000					\$63,372,724
	2012-13	\$14,662,000	\$12,666,647		\$27,600,000		\$119,667			\$55,048,315
	2013-14	\$8,687,000	\$3,825,594		\$19,303,720	\$1,200,000	\$743,808			\$33,760,122
	2014-15	\$2,499,200	\$1,587,098		\$17,900,000	\$4,200,000	\$15,936,212			\$42,122,510
2015-16	\$693,000	\$25,176		\$17,610,000	\$5,800,000	\$6,730,672			\$30,858,848	
Average Cost PER Home Warranty Insurance claims for Defective work	1999-00									
	2000-01									
	2001-02									
	2002-03	\$47,207	\$213,932		\$11,482					
	2003-04	\$47,952	\$180,990		\$14,306					
	2004-05	\$78,293	\$96,478		\$12,696					
	2005-06	\$60,415	\$93,112		\$18,729					
	2006-07	\$53,666	\$27,877		\$17,817					
	2007-08	\$45,097	\$31,026		\$8,782					
	2008-09	\$64,807	\$25,886		\$7,549					
	2009-10	\$79,277	\$29,958		\$9,698					
	2010-11	\$55,296	\$41,190		\$9,733					
	2011-12	\$39,814	\$52,763		\$11,531					
	2012-13	\$45,186	\$66,502		\$15,480					
	2013-14	\$71,200	\$71,638		\$12,164					
	2014-15	\$71,000	\$74,106		\$11,769					
2015-16										

AVE

\$58,401

\$77,343

\$12,441

\$30,481