

CSQ

STRONGER FUTURES
IN CONSTRUCTION



2018

Women in Construction

AN OPPORTUNITY LOST?

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Foreword

More women are working than ever before. Around 60% of working-age Australian women are currently participating in the workforce, compared to around 70% of working-age men. The rate of female participation has improved significantly over recent decades — from around 40% in the 1970s — while the male participation rate has steadily fallen (from 80%) over the same period.

While questions remain around the gender distribution at senior levels, there is a growing consensus that female participation in the Australian workforce has steadily improved over time and is approaching equitable levels.

The construction industry remains an exception to this progressive story. As this report demonstrates, a close survey of any Australian construction site is likely to reveal few, if any, women present. The rare woman who is spotted on-site is likely to be working outside of the traditional trades that form the core of the construction workforce.

This is not just an equity issue. An industry that ranks as one of the three highest creators of economic value in Australia, and its second biggest employer, needs to draw from the widest pool of talent the country has to offer. In that calculus, gender is irrelevant.

The low number of women in the construction industry is likely to be felt in the coming decades as Australia's population ages. One important consequence of an ageing population is that the growth in demand for construction services will outpace the growth in the industry's workforce. Construction businesses will increasingly find themselves seeking out alternative sources of labour, and the female working population is an obvious candidate.

Too often, the problem of female participation is framed as a problem for women themselves, as if the main challenge is to persuade women of the virtues of construction work. This ignores the reality that the construction environment is unattractive to many women. Not because of the physical nature of the work — this explanation becomes weaker by the year — but because of the culture of construction.

The root of construction's gender problem is not women's preferences; it is the industry's culture and those who perpetuate it. As long as the culture of construction remains unattractive to women, we will continue to see little progress made. Excellent work is being done by organisations such as the National Association for Women in Construction (NAWIC), but we must focus our sights on enrolling men into the project.

We have done this before. The success of the *MATES in Construction* movement in raising awareness of suicide and mental health demonstrates that, with the right leadership, the industry is capable of challenging deeply-seated stereotypes and changing behaviour within our industry.

In releasing this report, we aim to move the debate about women in construction to new, more practical, territory. This report is a beginning. Tackling this problem will require coordinated leadership at all levels of the industry and, most importantly, consistency and patience.

On behalf of CSQ, I present the *Women in Construction* report and commend its findings.

Brett Schimming
CEO



The low number of women in the construction industry is likely to be felt in the coming decades as Australia's population ages.

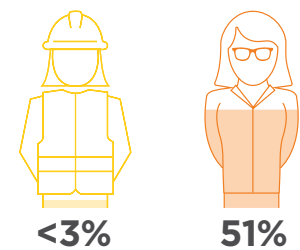
1 The gender disparities among Australia's managerial class was highlighted recently by new ABS data (Cat No. 8172.0)

01 Female participation in construction trades

Women make up a very small proportion of construction trades workers. Last year women accounted for less than 3% of construction trades workers across Australia, while making up 51% of the non-construction workforce'. (Figure 1).

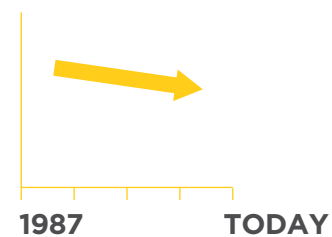
This is an entrenched pattern for which there are no clear signs of a turnaround. While women have steadily made up a greater share of the non-construction workforce over the last 30 years, the same cannot be said for the construction trades. In Queensland, the proportion of construction tradespeople who are female has been higher than 1987 levels for less than half of the last 30 years (Figure 2). At the national level, the situation is even worse — women improved their representation in construction trades compared to 1987 levels in only eight of the last 30 years.

Key finding



A LONG WAY TO GO:

Women account for less than 3% of construction tradespeople in Australia. This compares to 51% of the non-construction workforce.



30 YEARS IN ARREARS:

There are no clear signs of a turnaround. Female participation was higher in 1987 than it was in most of the years since.

Fig. 1 – Female workforce participation
Female representation, 2016-17

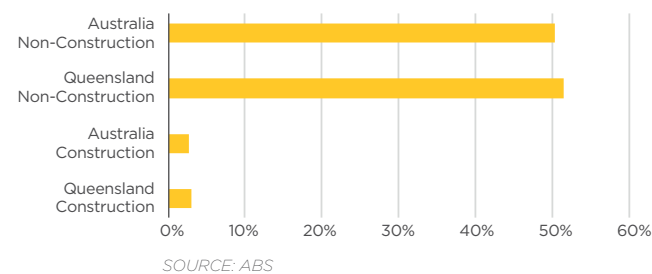


Fig. 2 – Female participation in construction trades compared to 1987

Change in female participation, Queensland



02 Female representation by trade

While the overall pattern across construction trades is one of long-term female under-representation, there is some variability from trade to trade.²

There are approximately 375,000 electricians, carpenters and plumbers in Australia. These three occupations account for over 30% of all construction trades workers. Yet only 3,000 women participate in these three occupations nationwide — less than 1% of all electricians, carpenters and plumbers. Again, this is not a new pattern; the figure has remained below 2% over three decades (Figure 3). Of these occupations, only plumbers have exceeded 2% female representation, and even then only in the latest two quarters.

There are, however, some trades where females can be more easily found. These roles generally relate to the ancillary and miscellaneous aspects of construction work, such as crane chaser, surveyor's assistant, line marking and sign writing. Yet even in these occupations, female participation is significantly lower than in non-construction occupations (Figure 4).

Fig. 3 – Female representation in top 3 construction trades

Female Participation, Australia

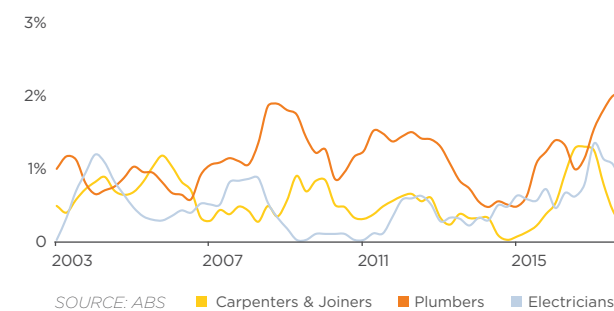
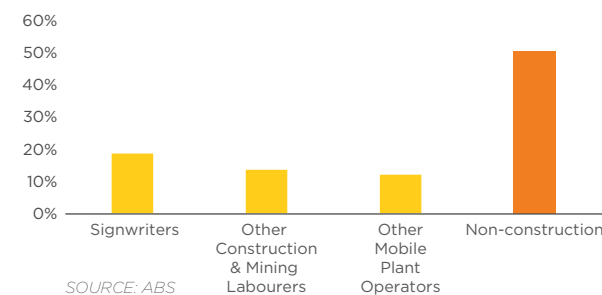


Fig. 4 – Most popular trades amongst females, Australia

Female participation, Australia



Key finding



HARD TO SEE IN THE TOP THREE:

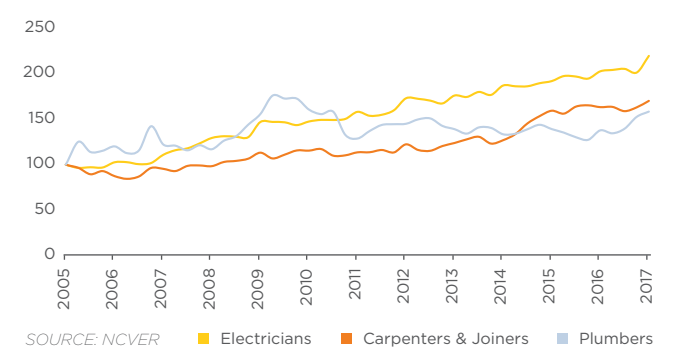
Electricians, carpenters and plumbers account for a third of all construction trades workers. Less than 1% of them are women.

03 Training by trade

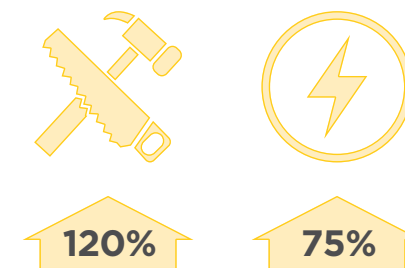
While the trends in female employment in construction are not encouraging, the training statistics provide some reason for optimism. Female representation among apprentices of the popular construction trades is rising steadily across Australia (Figure 5).

The electrical trade, in particular, is attracting more and more female apprentices every year, albeit from a low base. Currently around 2.8% of electrical apprentices are female, compared to 1.1% and 0.7% for carpentry and plumbing respectively. It is to be hoped that these increasing proportions of female apprentices will ultimately translate into more female workers in these trades over the coming years.

Fig.5 – Growth in female representation among construction apprentices
Indexed growth, Australia

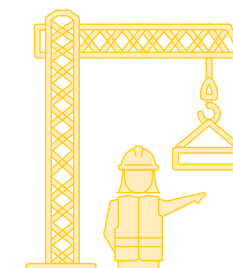


Key finding



GLIMMER OF HOPE:

The female % of carpentry and electrical apprentices has been rising steadily since 2005 — growing 120% and 75% respectively.



ON THE EDGE OF GLORY:

The trades where women are found more easily are generally ancillary roles: crane chasing, surveyor's assistant, line marking and signwriting.

² Due to data limitations it is only possible to report occupational results at the national level.

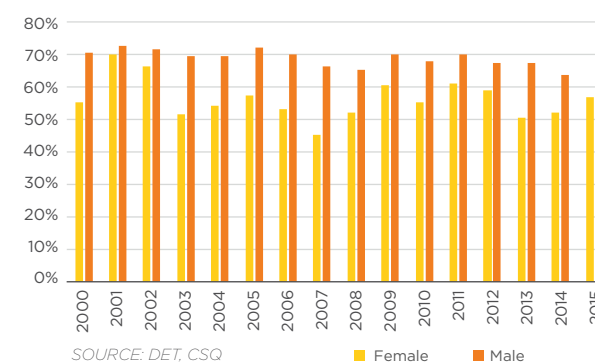
04 Completion rates

Compounding the issue of low female participation in the construction workforce is that female apprentices are significantly less likely to complete their training and remain in the workforce than their male counterparts (Figure 6).

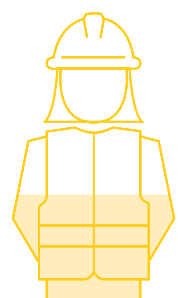
The lower completion rates among female construction apprentices likely reflect the broader difficulties faced by women working in construction. These issues are discussed later in the report.

Fig. 6 – Construction apprentice individual completion rates

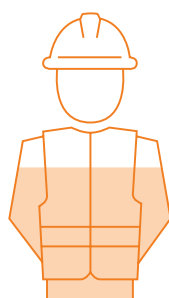
Apprentice completion rates, Queensland



Key finding



12% LESS



2ND PLACE IN THE COMPLETION RACE:

Female completion rates for apprenticeships are typically 12% lower than for men.



05 Female apprentices more likely to be older

The age distribution of construction workers in Australia is fairly similar across the genders (Figure 7). Among construction apprentices, however, females are twice as likely to be of mature-age compared to their male counterparts.

Half of all female construction apprentices (56%) are aged 25 and over, whereas only 28% of male construction apprentices fall into that age bracket (Figure 8).

Fig. 7 – Construction workforce age distribution
Age distribution, Australia 2016

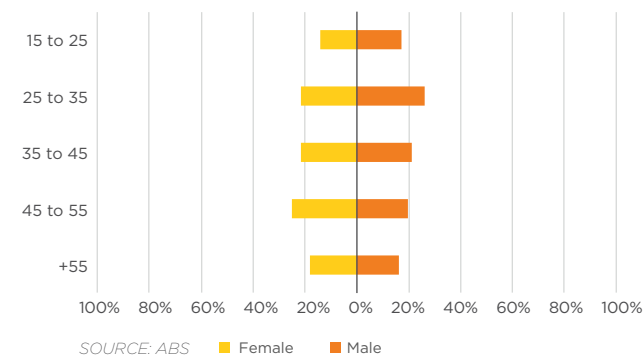
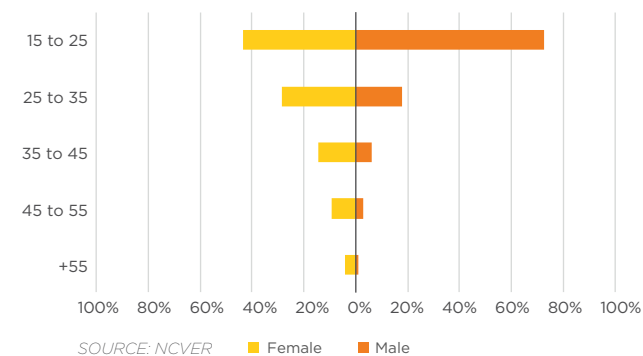


Fig. 8 – Construction apprentice age distribution
Age distribution, Australia 2016



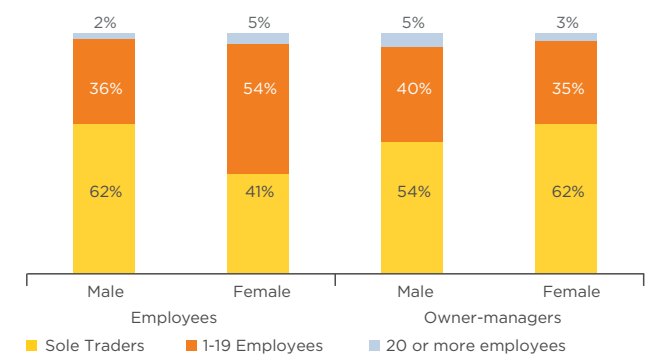
06 Construction business women

Women are better represented among owner-managers in the construction industry compared to the non-construction sector.

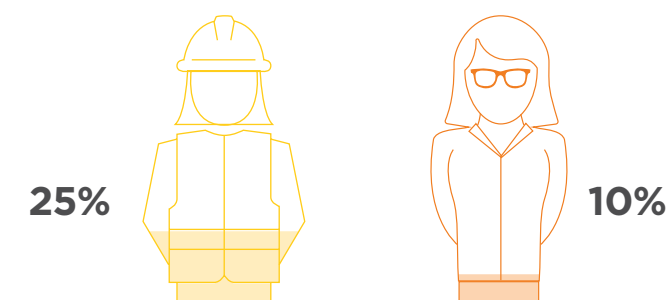
Of the roughly 25,000 women working across Queensland's construction industry, 25% are business owner-managers. This compares to only 10% of women working across all other industries.

Among construction business owner-managers, over half (60%) of women employ other people, compared to only 38% of their male peers. These businesswomen are also more likely to employ others than those who own and manage non-construction businesses, be they male or female.

Fig. 9 – Distribution of construction owner-managers by number employed
Owner-manager distribution, Queensland 2016

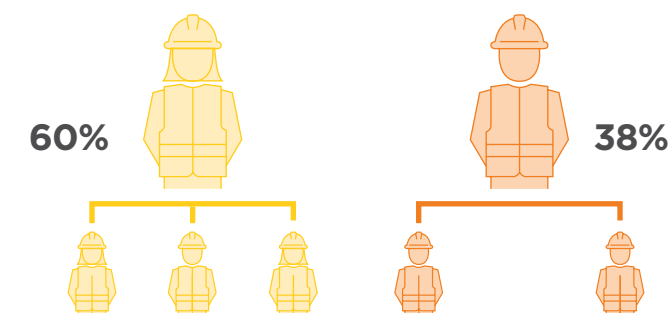


Key finding



SISTERS ARE DOING IT FOR THEMSELVES:

The women who are in construction are 2.5x as likely to own and run their own business than women not in construction.



IN GOOD COMPANY:

Female construction owner-managers are also much more likely to employ other people in their business than their male counterparts (60% vs. 38%).

07 International comparison

Female under-representation is a common issue across the world.

European countries boast higher female participation rates, which may reflect their more active gender diversity policies, while Australia underperforms relative to other countries (Table 1).

Table 1: Female representation in construction occupations³

France	16.8%
United Kingdom	15.6%
Germany	14.7%
Switzerland	10.1%
European Union (28 countries)	10.0%
Sweden	9.6%
Netherlands	8.3%
Belgium	8.1%
Spain	7.1%
Italy	5.3%
Canada	4.8%
Australia	4.7%
Turkey	4.4%
Queensland	4.2%
United States	3.0%
Japan ²	1.7%

³ Sources: Eurostat, Bureau of Labor Statistics (US), Statistics Canada, Statistics Bureau of Japan, ABS. Construction Occupation for European Nations is defined under NACE Rev. 2 F41 – Construction of Buildings; Canada under (NOC) 72 – Industrial, electrical and construction trades’ and 76 Trades helpers, construction labourers and related occupations; US under SOC 47-0000 Construction and Extraction Occupations’ and Japan under ‘Construction and mining workers’. Australian and Queensland figures are defined in Appendix 1

² Japan’s percentages are 2015 figures from the 2016 handbook in tables 12.2 and 12.3

Key finding



12TH PLACE IN THE PARTICIPATION RACE:

Most countries do poorly, but we do more poorly than most — ranking 12th out of 15 countries on female participation rates.

Female under-representation is a common issue across the world.

08 Barriers and opportunities

The physical nature of construction work is often offered as an explanation for the low level of female participation. While there is no doubt that construction remains a physically demanding occupation, the suite of tools and assistive technologies now in common use mean that very few construction jobs, if any, require a level of physical ability outside the reach of most women in the labour force. Meanwhile, advances in equipment such as exoskeletons and robotics are increasingly making physical considerations altogether irrelevant to construction work.

The reality is that, in Australia and abroad, construction sites are often unattractive work environments for women. There are no legal or regulatory barriers to women entering the construction industry, but regulation often matters less than the attitudes and practices behind it. For example, one study found that very few Australian construction employers exercise a strong commitment to gender equality.^{4 5}

A substantial body of international literature points to construction's heavily masculine culture as the primary factor keeping a lid on the numbers of women entering the industry.^{6 7} Like any established industry, construction has its own unique DNA — a particular professional culture and way of working. This DNA has many positive dimensions, including a culture of safety, skill and hard work. But it also carries a highly masculine set of values, norms and language, which is too often expressed as thinly veiled misogyny, homophily, or outright sexual

harassment. It is this entrenched culture that many women understandably find difficult to accept and internalise, and which works against the efforts of those committed to increasing female participation in construction.⁸

For this reason, it is insufficient to dismiss female under-representation with the observation that 'women simply prefer not to work in the industry'. While there is a superficial truth to this argument, its logic is circular. When an industry operates in a way that systematically excludes women, it should come as no surprise when most women choose not to participate. To argue that women are under-represented because they choose to be is to miss the point that a less gendered construction industry would almost certainly attract more women.

While the challenges of increasing female representation are substantial, rich returns are available to industries that rise to them. The business benefits of greater female representation are well-documented. Compelling enough is the simple observation that businesses that ignore women are ignoring half of the available talent pool.

But there are more than simply quantitative gains on offer. When it comes to a diverse workforce, the whole is greater than the sum of its parts. Employing more women brings diversity of skills and thought — a key ingredient of organisational creativity and innovation.⁹ This is more important than ever, as increasingly turbulent markets reward companies that adapt, while punishing those who rigidly cling to old ways of working.

More women also makes for better economic outcomes overall. It has been estimated that increasing women's representation in the overall workforce could boost Australia's GDP by 11%.¹⁰ In an industry as poorly attended by women as construction, the economic gains are likely to be significantly higher.

A common assumption is that the value women can offer employers is limited by their preference for flexible work — 46% of female workers are part-time, compared to 20% of men. Yet an Ernst & Young study found that women in flexible roles waste less time at work than others, thus offering their employers a significant productivity dividend. The study recommends that organisations should expand flexible work options to attract and retain highly motivated, productive women — for commercial, not equity, reasons.¹¹

09 What is to be done?

Increasing gender diversity is, of course, far easier to recommend than achieve.

Most challenging, perhaps, is facing up to the reality that diversity is a mixed blessing. While the research clearly shows that diverse workforces make for better businesses, it is also linked with conflict among co-workers and the erosion of organisational cohesion. One systematic review of 40 years of research on the topic found that, left unmanaged, diversity is more likely to have negative rather than positive effects on group performance.¹²

The negative effects of diversity cannot be ignored or trivialised. The tension and conflict arising from gender diversity must be actively counteracted if the benefits are to be realised. Dismissive diagnoses of sexism within the industry — as if simple labels make solutions just as simple — are counter-productive. Similarly, efforts to encourage more women to pursue a career in construction are, by themselves, unlikely to be effective. Indeed, there is a sense in which advertising the benefits of an industry ill-equipped to employ women is doing female entrants a disservice.

The central goal must be to address the culture within construction that tends to exclude women. This requires careful and sustained attention from the inside out. It is only construction employers and workers themselves — not policy-makers, administrators or diversity experts — who can create an environment within their industry that women find accepting.

The attitudes and behaviours of management are key. Yet managers often find themselves in the difficult position of promoting gender diversity while at the same time supporting the constructive and empowering traditions of the existing workforce. Managers must be careful to avoid falling into the trap of paying lip-service to the goals of diversity while reinforcing the very conditions that oppose it. Managers should avoid overly punitive measures, which only serve to create martyrs, and instead seek to identify and celebrate examples of good behaviour.

Recent research has also highlighted the importance of female mentors, employers and managers in not only encouraging females to enter a trade, but also to understand the broader career opportunities available within the industry.¹³

Other male-dominated sectors have chosen more affirmative strategies. The Australian Federal Police, for example, recently took the unprecedented step of excluding men from a period of recruitment activity. The female-only recruitment drive was conceived as an attempt to offset the heavy male bias in previous recruitment rounds, which was jeopardising the force's goal of increasing the proportion of female officers to 50% by 2026.¹⁴

Such strategies of affirmative action are vexed. While they undoubtedly succeed in increasing female representation, they do so at a cost. Research has found that women hired under affirmative action strategies are generally regarded by their colleagues, and by themselves, as less competent than identically qualified men.¹⁵ In this sense, such strategies can undermine their own goals, ironically causing more damage to women's performance than any actual deficits in capability. This is an acute example of how gender diversity initiatives must be very carefully managed to avoid doing more harm than good.

Much good work is being done to lift female participation in construction across Australia. Several government and non-government programs are currently underway to assist and promote gender diversity in the industry. A growing number of for-profit and not-for-profit organisations are also working actively to encourage greater female participation in the construction industry; to name but a few:

- The National Association for Women in Construction (NAWIC)

- Fanelle: Apprentice and Tradeswomen Network

- The Lady Tradies

- Skills One
- Women Into Construction

- Eve Workwear
- She Wear

- Supporting and Linking Tradeswomen (SALT).

4 Burgess, J., Henderson, L., Strachan, G. (2005) 'Women Workers in Male Dominated Industrial Manufacturing Organisations: Contrasting Workplace Case Studies from Australia', *Management Revue*, 16(4)

5 French, E. and Strachan, G (2015) Women at work! Evaluating equal employment policies and outcomes in construction, *Equality, Diversity and Inclusion: An International Journal*; Birmingham 34(3)

6 Galea, N., Loosemore, M., Powell, A., & Chappell, L. (2014). Gender Equity in Construction Professions: A New Institutional Perspective. *Procs 30th Annual ARCOM Conference*, 1111-1119

7 Sang, K., & Powell, A. (2012). Gender Inequality in the Construction Industry. *Procs 28th Annual ARCOM Conference*, 237-247

8 Watts, J. (2007) Porn, pride and pessimism: experiences of women working in professional construction roles. *Work, Employment & Society*, 21, 299-316

9 Bassett-Jones, N. (2005) 'The paradox of diversity management, creativity and innovation', *Creativity & Innovation Management*, 15(2)

10 Australian Human Rights Commission (2013) Women in male-dominated industries: A toolkit of strategies

11 EY (2013) Untapped opportunity: the role of women in unlocking Australia's productivity potential

12 Williams, K. and O'Reilly, C. (1998) Demography and Diversity in Organizations, *Research in Organizational Behavior*, 20(1)

13 Simon, L., & Bonnici, A. (2014). Where are the female trades teachers? A study of view on increasing the number of female trades teachers. *Australian Vocational Education and Training Research Association*

14 <http://www.abc.net.au/news/2017-09-28/afp-female-only-recruitment-drive/8995484>

15 <https://www.themonthly.com.au/issue/2012/march/1330562640/cordelia-fine/status-quote>

10 Shifting the focus

Globally, it is becoming accepted that correcting severe gender imbalances requires, above all, the active engagement of men. A leading international research program has found that, while women-centric strategies dominate the policy landscape, real gains in this space will depend on supporting men to become more gender-equitable on a large scale.¹⁶

Strategies that move the industry forward are likely to include:

- A coordinated and concerted campaign by industry leaders for the hearts and minds of construction workers. Success will only come by way of a multi-decade effort, driven by leaders who understand that success will be slow and patchy, often taking two steps forward and one back. Without genuine, widespread and long-term commitment at the most senior levels, efforts to fold women into the mainstream of construction will fail.
- The gender equality movement has an image problem, and its language needs to change. The frame of reference must be that more women in construction benefits all workers, not just women. Gender equality is not a threat to men, but an important opportunity to guarantee the industry's future. It is critical that any campaign frames these issues in ways that both women and men find compelling.
- There is a growing group of men advocating for change across the economy.¹⁷ These men are leading the way in replacing overt masculinity with less gendered ideas about what it means to be a 'real man'. These men exist in construction, but often succumb to the pressure to conform to — or at least accept — the industry's prevailing attitudes. Efforts should be made to relieve these men of this pressure, to celebrate and promote those who behave decently and to object to those who do not.

- Young workers should be a focus for cultivating new attitudes for a new generation. Emerging generations of men harbour increasingly gender-neutral views of the world, having grown up alongside equal numbers of girls in school and witnessing unprecedented numbers of women in the workforce. The challenge is to create an environment where the budding female-friendly attitudes of these young men continue to be cultivated, rather than quashed.
- This is not to say that women should be excluded from the change process. Men in construction, particularly the leaders, need to engage more effectively with the women's agenda. Dialogue and collaboration between women-centric initiatives and men with influence in the industry will be critical to promoting the common cause of gender equality. There is no place for perspectives on gender that pit the needs of men against the needs of women. What is needed now are alliances — between women's rights activists, male workers and their leaders, as well as policy makers.

These aspirations are ambitious, but they are not out of reach. The construction industry has been able to shift hearts and minds on other issues. The substantial rise in awareness of mental health across the industry, for example, offers a useful model. Driven largely by the *MATES in Construction* movement, significant cultural change is being achieved in this area. The standout feature of this movement has been the strong and genuine support provided across employer groups, unions and governments, over a long period of time.

If it is to be successful, the women-in-construction movement must be taken up by men as well as women, with the aim of relieving men of the pressures to conform to outdated stereotypical forms of masculinity. We must tap into men's self-interest for change in their industry. While not without significant challenges, positioning men as the lynchpin for change is the only way forward for those who believe in the benefits of gender equality in construction.

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Appendix 1

ANZSCO occupations used to define ‘construction trades’.

This report is based on the following occupations:

ANZSCO unit groups
Airconditioning and Refrigeration Mechanics
Bricklayers and Stonemasons
Building and Plumbing Labourers
Cabinetmakers
Carpenters and Joiners
Concreters
Crane, Hoist and Lift Operators
Earthmoving Plant Operators
Electricians
Fencers
Floor Finishers
Gardeners
Glaziers
Industrial Spraypainters
Insulation and Home Improvement Installers
Other Construction and Mining Labourers
Other Mobile Plant Operators
Painting Trades Workers
Paving and Surfacing Labourers
Plasterers
Plumbers
Railway Track Workers
Roof Tilers
Signwriters
Structural Steel and Welding Trades Workers
Structural Steel Construction Workers
Telecommunications Trades Workers
Wall and Floor Tilers

Appendix 2

Female participation in Queensland construction apprenticeship system, March 2017.

Construction occupation	Female apprentices	Total number of apprentices	% Of females	% Three years ago
Airconditioning and Refrigeration Mechanics	8	910	1%	1%
Bricklayers and Stonemasons	4	452	1%	0%
Building and Plumbing Labourers	61	395	15%	0%
Cabinetmakers	33	873	4%	3%
Carpenters and Joiners	67	4831	1%	1%
Concreters	0	86	0%	0%
Construction Trades Workers — nfd	2	52	4%	6%
Crane, Hoist and Lift Operators	1	11	9%	0%
Earthmoving Plant Operators	50	1999	3%	7%
Electrical Distribution Trades Workers	11	199	6%	2%
Electricians	212	5552	4%	3%
Electrotechnology and Telecommunications Trades Workers — nfd	0	18	0%	3%
Floor Finishers	0	120	0%	0%
Gardeners	43	778	6%	4%
Glaziers	2	210	1%	1%
Miscellaneous Technicians and Trades Workers — nfd	13	95	14%	13%
Other Construction and Mining Labourers	0	27	0%	0%
Other Mobile Plant Operators	101	352	29%	65%
Other Stationary Plant Operators	13	109	12%	6%
Painting Trades Workers	68	926	7%	6%
Plasterers	4	512	1%	1%
Plumbers	23	2263	1%	1%
Roof Tilers	0	24	0%	0%
Signwriters	15	102	15%	12%
Structural Steel and Welding Trades Workers	0	18	0%	0%
Structural Steel Construction Workers	3	78	4%	0%
Telecommunications Trades Workers	11	361	3%	2%
Wall and Floor Tilers	14	432	3%	1%

Note: nfd — not further defined

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