



Training Needs Analysis for the Commercial Construction Sector

November 2016



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1. Executive Summary

During 2014-15, Construction Training Fund (the Fund) stakeholders within the Commercial Construction sector raised concerns that current trade training and assessment is focused on the residential sector of the industry and does not meet the needs of the commercial sector. It was suggested that this approach can lead to skill gaps and that the situation could be addressed by developing a new trade qualification or qualifications. Stakeholders also raised concerns about the quality of the workforce available to the sector.

This report is based on research undertaken by a consultancy company, Workplace Skills Management, and was funded by the Construction Training Fund.

1.1 Project Aims

The project aimed to describe the current training situation in the commercial sector, identify any issues and their impacts, and propose solutions. This was to be achieved by identifying the skills required by workers in the commercial construction sector and determine how well these requirements are being met by the current approach to training. An assessment of the costs, risks and benefits of the training approach would also be included.

A key aim of the research was to develop a framework for the training of the commercial construction sector workforce and seek industry feedback on the feasibility of introducing any new qualification(s). If new qualifications were found to be feasible, there would need to be on-going development of a new trade qualification or qualifications.

For the purposes of this project, 'accredited trade training' refers to formal training and assessment in technical skills and theory provided by a TAFE or private RTO. This is usually integrated with on-the-job training provided by an employer.

1.2 Findings

In consultation with key industry stakeholders, four main themes relating to workforce skills development in the commercial sector were identified with:

- 61% supporting establishment or utilisation of a Certificate II entry level qualification
- 63% supporting maintaining the current training system/qualifications
- 50% supporting establishment of a dedicated Certificate III Commercial qualification
- 80% supporting establishment or utilisation of a Certificate IV in Project Management

Based on the above responses, and due to the sector comprising of a wide range of business contexts and skill requirements, a multifaceted approach to a qualification framework was considered suitable. Each approach is not mutually exclusive and all could be considered for inclusion in a workforce development framework:

- **Trade-level training is not required for all workers. However, there is a place for entry-level skills training.**

Almost twenty-five percent of those interviewed perceive that the most useful new qualification and training initiative would be a lower-level qualification targeting existing and migrant workers. This would be a more effective and efficient approach than simply targeting young people entering the workforce, as this group has already been catered for by VET in schools and pre-apprenticeship programs, or via a direct indenture pathway.

The reliance on subcontractors, trade-qualified and unqualified workers, to undertake short-term specialised work tasks appears to be a barrier to employment of apprentices.

- **There is a need to strengthen the current trade training model, especially in the carpentry trade, to ensure that all facets of a trade are addressed to place a stronger emphasis on commercial work requirements.**

The majority of those interviewed were of the view that the current approach to apprenticeship training is acceptable, though in need of ongoing review.

To ensure that qualifications remain current and reflect new construction materials and methods there may need to be an increased number of 'elective' competencies included within qualifications and a reduction in the number of core competencies. This particularly applies to apprentice carpenters employed in the commercial sector.

- **In some contexts, a specific commercial sector trade qualification is required.**

A number of stakeholders expressed a counter view to the above, and felt that a new trade qualification should be established. Again, this specifically related to carpentry apprenticeships.

- **Project managers would benefit from some broad trade-skills training to provide them with the ability to ensure and maintain high quality construction practices.**

A common response throughout the research identified the heavy reliance on carpenters who become project managers and supervisors. These people could benefit from training or up-skilling to broaden their industry knowledge, particularly of trade-related requirements of projects which were not part of their initial trade training.

The research also identified that the commercial sector does not appear to access accredited 'trade' training or view the necessity for qualified workers to the same level as the residential sector. It is therefore apparent, that if the residential housing sector did not employ and train apprentices to the extent that it does, the commercial sector could experience difficulty in accessing the skilled workforce it requires.

In further discussion between the Fund and a major tier one construction company regarding management of waterproofing issues, it appears there is a need for a specific training program, such as a Certificate II or III traineeship, and possible licensing of the waterproofing occupation.

1.3 Conclusions

From the findings, the research identified the need for a qualification and training framework to meet the needs of the Commercial sector, as proposed in Appendix 1.

The framework would:

- provide training opportunities for existing 'skilled workers' who currently do not hold formal qualifications.
- provide training opportunities for existing workers to up-skill.
- provide an additional trade qualification specifically targeted to the commercial sector.
- fit within existing qualifications at Australian Qualification Framework (AQF) levels II, III and IV.

If an additional 'specific' qualification is required, it will involve the development of a qualification that can be accredited or included within the relevant Training Package. The existing qualifications are currently on the scope of several TAFEs and private RTOs in Western Australia.

However, while the industry is generally supportive of the proposed framework and/or development of new qualifications, it is apparent that significant work will be required to encourage the industry to adopt and utilise the qualifications for the training of its workforce.

1.4 Recommendations

From the identified findings, a number of recommendations emerged:

- **Develop and introduce a Certificate II in Commercial Construction as a traineeship.**

This qualification will provide both existing workers and migrants with the opportunity to obtain a flexible Certificate II entry-level qualification that has specific technical content relevant to employer needs. In the case of recent migrants, it could provide a set of skills that include Occupational Safety and Health and the White Card and also provide them with an understanding of the construction workplace and the ability to complete construction work to local industry standards.

This option would require development of an accredited course OR submission to the Skills Service Organisation (Artibus Innovation) and its Industry Reference Committee for inclusion within the relevant Training Package.

- **Retain the current Carpentry qualification, but ensure trade training covers all facets of the trade through choice of electives that place stronger emphasis on commercial work requirements.**

This would encourage employers to engage with RTOs in the design of a training pathway/model that suits their specific needs while retaining an equivalent trade qualification outcome for both residential and commercial apprentices. This approach could be managed within the existing Training Package qualification structure if; the number of core competencies are reduced and the elective competencies available for selection is increased.

- **Develop and introduce a new, broad-based Certificate III trade qualification (apprenticeship) for the commercial sector.**

This would be an alternative to modifying any existing qualifications and would need to be approved by the Skills Service Organisation (Artibus Innovation) and their Industry Reference Committee for inclusion within the relevant Training Package.

- **Develop an add-on Certificate IV qualification for the commercial sector to cover a range of trades and management skills for completion after an existing trade qualification.**

Given the wide variance of opinions on this issue, it is recommended that the Construction Training Fund increase promotion of the established traineeship 'Site Management (Level 4)' and qualification CPC40508 Certificate IV in Building and Construction (Site Management) to the commercial sector. Both the HIA and MBA now offer Certificate IV programs as a fee-for-service option.

- **Introduction of a Waterproofing qualification to be referred to the Fund's Strategic Industry Stakeholder Forum in March 2017 for consideration.**

Although this recommendation was identified by a major tier one company as a serious issue, it did not become apparent until late into the research project. They viewed the issue of licensing of a 'waterproofing' trade as their main concern due to high remediation costs for poor quality work. There is a Waterproofing qualification within the Training Package but no recognised 'trade'; therefore, a trade classification may need to be established.

The detailed qualification outlines are provided in Appendix 1.

2. Methodology

The consultant undertook the following activities:

- Commercial construction site visits to interview workers about the skills used by tradespeople and other workers.
- Face-to-face meetings and interviews with peak industry bodies, Unions, construction company management staff, site supervisors and tradespeople at commercial construction enterprises.
- A mapping of skills and tasks against the competencies in existing trade qualifications.
- Development of a framework outlining broad content and structure of new qualifications.
- Consultation with stakeholders to determine the costs, benefits and feasibility of introducing the new qualification(s).
- A case study of a national commercial construction company's approach to addressing its identified training requirements.

2.1 Population in scope

For the purposes of this project, 'commercial construction' has been taken to mean any building activity not described as domestic residential dwellings or civil construction. However, as the building techniques employed in multi-story apartment construction can be similar to those employed on a commercial construction site, this sub sector was included in the scope of the project.

Similarly, the definition of a 'commercial' construction company or subcontractor includes any organisation that does not specialise purely in residential or civil construction work. This recognises that subcontractors and building companies may work across all building and construction sectors, as the work arises. For the purposes of this research, 'commercial construction' organisations are those that undertake any amount of work in the commercial sector and therefore need to have the suite of skills appropriate to that sector.

Electricians and plumbers were not included in the scope of this project as stakeholders had not identified any issues with the level of these workers' skills in the commercial sector. In addition, as these are licensed trades, any alterations to trade training would require a degree of consultation which is outside the scope of the current project. Similarly, engineers and engineering trades were not included in the scope of this project.

2.2 Research sample and recruitment

The Fund assisted in the research by identifying participants and arranging site visits and interviews. The ten largest commercial construction companies operating in Western Australia were invited to participate. Additional participants were then recruited using referrals from each interviewed person.¹

The consultant and researcher accompanied a Training Support Officer from the Fund on a selection of commercial sites in metropolitan Perth. The Fund also arranged interviews with RTOs, industry associations and Unions. This again resulted in further referrals.

Thirty-one organisations were consulted, covering industry associations, Unions, medium to large commercial construction enterprises and subcontractors in Western Australia.

¹ Chain Referral Technique

Of these, two site visits were in the regional areas of Bunbury and Geraldton. In addition, six RTOs were consulted, including one in each regional location as above.

Responses were received from:

- Fifty-one management staff, site supervisors, tradespeople and apprentices at medium to large commercial construction enterprises within ten tier-one companies and twelve mid-tier companies.
- Twenty-eight participants from the Fund's 2016 Strategic Industry Stakeholder Forum.
- Twelve representatives from eight industry associations and one Union.
- Six completed industry survey responses.
- Thirteen personnel from six RTOs serving the construction sector.
- A survey to validate the interview findings.

2.3 Research approach and data collection

The research investigated complex issues among the stakeholder group, with the aim of designing feasible solutions. In this context, qualitative research methods were considered most appropriate.

Qualitative Data was collected over a six month period through face-to-face interviews with stakeholders in the commercial sector. This involved peak industry bodies, trade associations, construction company management staff, site supervisors and subcontractors. Site visits were arranged to interview commercial site managers about the skills used in the sector.²

The skills were then mapped to units of competency from the current CPC08 Construction, Plumbing and Services Training Package, to identify similarities and gaps.

A proposed qualification framework was developed and refined through the consultation phase of the project.³ The framework was presented for discussion at the Fund's 2016 Strategic Industry Stakeholder Forum. This was a key stage of the research, as the project was initially raised at the 2015 annual forum. Following round-table discussions, written feedback was provided by 28 of the attendees.⁴

Through the assistance of a private RTO and a Fund researcher, the consultant was invited to attend a seminar involving a major national commercial contracting company. The seminar involved commercial construction project managers from across the nation who reviewed the organisation's training requirements. The information gained from this event provided the basis for the case study which exemplifies the issues, solutions and barriers described in this report. It also assisted in the development of the proposed qualification framework.

A final round of consultation with stakeholders, via telephone interviews and an online survey sought feedback on the feasibility of introducing the new qualification framework. Respondents were commercial sector subcontractors and representatives from building companies who were identified through referrals, online directories and the Fund's Client Records Management system.

Quantitative data collection involved an additional round of consultation with stakeholders, via a second survey, to seek validation of the research findings with a

² Interview schedules are provided in Appendix 2 to 4

³ Qualification Framework in Appendix 1

⁴ Round Table Discussion Papers in Appendix 5

focus on the feasibility of introducing new qualifications. Respondents were again commercial sector subcontractors and representatives from building companies. However, only 23 responses were received from the 426 stakeholders contacted. This is unlikely to be a statistically significant sample of the commercial sector.

The researcher also analysed Australian Bureau of Statistics labour force data, and the Fund's Training Record System data, to determine the levels of training activity in relevant trades. In addition, the Australian Qualifications Framework and existing trade qualifications were analysed to expand the proposed qualification framework across levels II, III and IV suitable for the sector's identified needs.

3. Training activity by sector

The residential sector employs apprentices at almost four times the rate of the commercial sector.

In relation to the Fund, comparing value of Levy contributions with Direct Indenture subsidy payments allows a broad comparison between the sectors, as it provides a rough indication of the relative size of each sector. However, this approach is used with caution as it assumes that employers in each sector are equally aware of the Direct Indenture subsidy and take advantage of it. It also relies on self-reporting of commercial or residential building activity, when claiming the Direct Indenture subsidy.

The Fund investigated a statistically significant sample of its Direct Indenture subsidy records for all trades (n=370, N=10,262) to validate the nominated sector. It was confirmed that there were very low levels of error in the self-reporting, as employers had worked in the nominated sector. However, it should be noted that many employers work across a range of sectors, and the Direct Indenture subsidy records describe the sector that the apprentice has worked in for the 6 months preceding the claim.

Using this approach with current data suggests that the level of training activity in the commercial sector may be lower than expected. The proportion of Levy contributions by sector does not align with the proportion of Direct Indenture subsidy payments by sector. In the most recent analysis, the residential sector contributes 54% of the Levy but receives 74% of Direct Indenture subsidies. Meanwhile, the commercial sector contributes 36% of the Levy but receives 21% of Direct Indenture supplements.

However, the commercial sector accesses a significant amount of training support through the Supplementary Skills training subsidies available through the Fund. This is significant when compared to the smaller amount of supplementary funding accessed by the residential sector. This demonstrates a commitment to 'up-skilling' the existing commercial workforce where the training is deemed necessary.

3.1 Levy contributions and direct indenture claims by sector (all trades)

By \$ Value	Proportion of BCITF Levy contributions from sector (projected 2015-16 financial year)	Proportion of Direct Indenture payments to sector (four year average to Feb 2016)	Proportion of Supplementary Skills payments to sector (2015-16 financial year)
Residential	54%	74%	15%
Commercial	36%	21%	66%
Engineering/resources	10%	6%	20%

Source: Construction Training Fund CRM February 2016 (rounded percentages)

It would appear that, given the high number of apprentices in the residential sector compared to commercial, the commercial sector relies on the residential sector for a future supply of skilled labour. Most of the industry stakeholders interviewed considered this acceptable.

3.2 Supplementary Skills Funding Claims

The following chart shows total percentage allocation of expenditure, sector by sector, in the Fund's Supplementary Skills program for 2015-16, as at 7 July 2016. The majority of subsidies were claimed for OH&S training and Construction Skills Training – this last category covers short courses relevant to work roles.

Training stream	Commercial	Residential	Engineering	Mining	Scheme as % of all recipients
Occupational Health & Safety	64%	13%	23%	0%	48%
Construction Skills Program	72%	9%	19%	0%	42%
Industry Skills Program	48%	41%	11%	0%	3%
White Card Safety	4%	96%	0%	0%	3%
Trade & Occ. Licensing	78%	22%	0%	0%	3%
Software Skills Program	73%	23%	4%	0%	1%
TOTAL CLAIMS	66%	15%	20%	0%	

Source: Construction Training Fund CRM July 2016.

3.3 Value of Work Done

ABS data were investigated to validate the estimate of the relative size of the commercial and residential sectors. The 'value of work' undertaken in residential is roughly 1.7 times the commercial sector, which supports the Levy contribution data. ABS and Fund data on the value of engineering work is different, as some exemptions from the Levy apply to engineering and resources-related construction.

Value of work done (in 000's) YTD Sept 2015 (Western Australia)		
Residential	\$8,947,108.00	33.4%
Commercial	\$5,171,208.00	19.3%
Engineering	\$12,656,426.00	47.3%
Total	\$26,774,742.00	100.0%
Ratio of work value: Commercial to Residential		1 to 1.7

Source: ABS 8755.0 (via ABS Tablebuilder)

4. Justification for Change and Cost/Benefits

A common theme identified by stakeholders is that tradespeople complete their apprenticeship or traineeship in the residential sector and then, after a period of trade work experience, progress into the commercial sector. This is reflected in the data which shows that only 21% of apprenticeship subsidies are paid to commercial sector employers or sub-contractors.

In this transition, any extra skills that the tradesperson requires are developed on the job. It is considered that their initial trade training in the residential sector provides a foundation which helps them learn new skills relatively quickly. This approach is generally seen to be acceptable to the majority of those consulted as it ensures that the commercial sector has access to experienced and qualified staff. It is also viewed as beneficial for the tradesperson as they can move between sectors as needed, to maintain employment.

There were numerous reasons cited as to why the sector has limited engagement in providing apprentice training opportunities. It was suggested that commercial work sites are less suitable for young and inexperienced workers such as apprentices and trainees.

It is also claimed that a commercial worksite is more complex, with more risks and more severe consequences, for example, workers are more likely to be 'working at heights'. In addition, many trades can be operating on the site at the same time and inter-related work functions need to be considered and managed. The movement of plant and construction materials on the site was identified as being hazardous and challenging.

Some stakeholders expressed that there is a need for some form of mechanism that will encourage the commercial sector to engage in providing 'trade or apprenticeship' training opportunities for the future development of the workforce. Licensing of the construction trades was frequently mentioned as an option to encourage skills development. However, there were strong views for and against the introduction of some form of licensing regime. As trade licensing was not within the scope of this project, the issue was not explored further.

Sub-contract employment arrangements.

The subcontract system used within the commercial construction industry has resulted in companies not directly employing tradespeople or apprentices in any great numbers.

Commercial construction work is regularly performed by subcontracting firms that generally specialise in one trade area with a significant proportion of the workforce not being trade qualified. However, the sub-contract firms employ workers who are skilled and specialise in their area of expertise, for example, carpentry/formwork, concreting, waterproofing, fit-out, cladding etc.

Subcontractors identified that the short-term nature of contracts is the main reason they are unable, nor can they afford, to put their workers through a four year apprenticeship. The narrow scope of work in which they generally specialise also limits their ability to cover all the requirements of a trade qualification. Therefore, it would appear there is insufficient 'benefit' for these businesses to invest in a 'full' apprenticeship for their workers.

Subcontractor firms were generally of the view that their workers do not require formalised training or qualifications as the workers learn while 'on-the-job'.

All participating commercial construction companies stated that while it appears that there are many workers without qualifications, generally they had very little difficulty finding skilled sub-contract firms. Many prefaced their comment with an explanation of how they tend to use the same subcontractors for all projects and that it is the subcontractors' role to ensure they have the labour required to complete allocated work. However, a number of key stakeholders viewed the employment practices of subcontractors as a source of workforce 'quality' issues.

4.1 Introduction of an entry level qualification

Construction companies and subcontractors both reported that it is now commonplace to employ migrants on various forms of working visas. It was identified that there is a great variation in the skills of these migrant workers. It was suggested on a number of occasions that some form of entry-level training, other than the white card, would be useful to build an awareness of local construction practices, standards and occupational health and safety requirements.

Similar qualifications and pathways already exist, however, given that the target audience would be existing workers; many of whom would be migrants, it is expected that some modification would be required to ensure commercial sector requirements are included.

The benefits of introducing this qualification as a traineeship in the commercial sector are seen to be workplace safety, work readiness and the specific technical requirements of the individual's workplace:

- Safety awareness of migrant workers could be improved.
- Individuals gain a nationally recognised qualification and are exposed to the Australian training system.
- Articulation to a Certificate III trade qualification could be achieved.
- Employer needs can be accommodated in the training program.
- The commercial sector would have a minimum entry-level qualification which can be delivered through employment arrangements.

The costs associated with introducing this Certificate II may rely on some form of incentive or training subsidy. Further industry advice would determine potential numbers that might be financially supported by their employer to undertake such a traineeship. It should be noted that Government traineeship subsidies exclude 'existing worker' traineeships. Therefore, there could be a potential impact on the Fund regarding provision of training subsidies.

It is anticipated there would likely be costs that RTOs would incur in preparation for delivery of the program, however, these would likely be minimal given much of the content has already been developed for VET in schools and pre-apprenticeship delivery.

A Certificate II level qualification may be sufficient with stakeholders suggesting that the course could include additional units addressing English language competency.

4.2 Strengthening Existing Qualifications.

A large number of respondents from across the stakeholder groups were of the view that the current approach to training in the commercial sector is acceptable though in need of review to ensure training content remains relevant and contemporary.

Sub-contractors employing apprentices

Of the subcontractors that **do** employ apprentices, they believe the current training arrangements mostly meet their needs. However, there is a common view that they would prefer a wider range of additional or alternative competencies in the current qualifications.

Tier One Companies

Where qualified workers are sought, commercial construction companies and their subcontractors report that they will initially seek 'carpenters'. This trade is seen as providing the most suitable skill-set that is readily transferable to the commercial construction sector. Respondents also indicated that carpenters on commercial construction projects undertake a

wide range of activities, including tasks which require skills that are outside the scope of the current Certificate III in Carpentry and Joinery.

Mid-Tier Companies

Mid-Tier companies often 'directly' employ trades people and apprentices. While they are generally accepting of the current apprentice training arrangements, they indicated a preference for their apprentices, mainly carpenters, to undertake training that is more aligned to commercial construction than residential. It was stated on many occasions that their apprentice carpenters may not ever have occasion to work with traditional timber materials, yet their trade training is still placing a very strong emphasis on working with timber.

Regional Companies

Within regional companies it was found that they undertake a broader scope of work than their metropolitan equivalents. They require their tradespeople, again mainly carpenters, to undertake a much broader range of construction tasks as they do not have access to specialist subcontractors that are available in the metropolitan area.

To ensure that this approach works as well as possible, with the minimum impact on employers, trade training should cover all facets of a trade. This could include ensuring the apprentice has the opportunity to work, and train, in both the residential and commercial sectors which may require additional effort to manage work placements for each apprentice.

The regional companies interviewed were however, accepting of the current apprenticeship training arrangements as they tend to undertake both residential and commercial projects. The companies also believe they are able to provide apprentices with a broader on-the-job training experience than metropolitan apprentices might receive.

General Feedback

From employees' feedback, it appears that a full trade qualification for workers is seen as the best option, as it helps ensure that they remain employed. It is suggested that a full set of trade skills helps workers move between sectors and also allows them to 'specialise' in any aspect of their trade as required.

The benefits of strengthening the current trade qualification using a larger number of elective competencies and a reduced number of core competencies will:

- Expose apprentices to all facets of the trade regardless of their employer's capacity to support the whole-of-trade training.
- Increase flexibility for tradespersons pursuing employment options and provide the ability to transition across workplaces and roles more effectively.
- Increase confidence in employers that qualified tradespeople have acquired wider work experience allowing them to adapt to new work contexts and be productive more quickly.
- Allow training providers to develop training that meets industry needs.

The costs associated with this approach would be incurred where apprentices are required to have work placements in the commercial sector, if their employer operates solely in the residential sector and they are not employed by a Group Training Organisation.

It was suggested that, for any apprentices employed in the commercial sector, a specific 'stream' be added to the existing trade qualifications to cater to the commercial sector.

4.3 Specific Trade Qualification

Stakeholder opinion was sought on whether there are occupations within the commercial sector that require the establishment of a specific apprenticeship or traineeship to ensure the industry has continuing access to skilled workers that are immediately 'fit for purpose'.

A smaller number of stakeholders proposed that a new trade qualification is required, being a derivative of the current carpentry qualification where the emphasis on working with timber products is reduced. It would however, need to include a greater range of elective options that would be reflective of the employer's needs or specialisation.

As previously stated, it was identified that carpenters are the most commonly employed tradespeople in the commercial sector. They often apply their building construction knowledge and techniques to a wide range of tasks that would not normally fall within the traditional understanding of a carpenter's job role.

It should be noted that, the introduction of any new trade or qualification may increase the total number of apprentices employed in the commercial sector. However, it could also mean a reduced number of traditional carpentry apprentices as employers may elect to utilise the new apprenticeship. Therefore, impact on the provision of incentives is likely to increase marginally.

This option would require the establishment of a new qualification and trade, the basis of which would be similar to the current carpentry apprenticeship and qualification framework.

The benefit of establishing a new trade/qualification specific to the commercial sector could:

- Increase the number of apprentices employed in the commercial sector.
- Provide apprentice's with off-the-job training that is more efficient and effective as it is specific to the commercial sector.
- Increase confidence in commercial sector employers that qualified tradespeople can complete a broad range of tasks specific to the sector.
- Reduce RTOs wasted training effort by providing training that is relevant to the sector.

Costs associated with this approach will require;

- Development of the proposed qualification and its endorsement or accreditation.
- Establishment of an apprenticeship through the State Training Board.
- Resource development costs to either modify existing materials or produce new products.

Some stakeholders perceive that current off-the-job training effort focuses on the residential sector and that a specific Certificate III commercial sector trade qualification should be considered. Their view is that commercial construction projects are more complex than residential projects and that trade training should recognise this.

4.4 Project Managers

All construction companies accept responsibility for the quality of their subcontractor's work, yet few of the companies consulted place demands on subcontractors to utilise qualified tradespersons.

Stakeholders cited examples of poor workmanship, incorrect construction techniques and lack of awareness of material capabilities to emphasise the limitations of workers employed in the commercial sector.

It was reported that many companies 'micromanage' their subcontractors to ensure quality work. This is overseen by site managers and project managers, who are often ex-tradespeople. It was the view of those interviewed that managers can better supervise specialist subcontractors if they have a broad understanding of individual trades. Some respondents questioned that where the site manager or project manager is not a tradesperson,

their ability to discern the quality of workmanship and understand construction techniques was compromised.

It is recognised that project managers are required to have a technical understanding of the project; communication, supervision and time management skills to coordinate the workforce and the business acumen to control the project. It was therefore suggested that a traineeship, at a suitable level, be established to provide a training pathway for project managers.

The suggested training framework includes a qualification to train project managers and supervisors from the commercial sector in a range of trade and management skills. It is suggested the qualification could be completed either post-trade, prior to employment or via a Certificate IV traineeship. In addition, the qualification could also be made available to those individuals who have current construction industry experience but no specific trade qualification.

The benefits of implementing such a qualification or traineeship would be:

- The qualification would provide the means for career development for tradespeople.
- A traineeship being an employment-based pathway to the qualification would provide the means for most of the training to take place in the workplace.
- Employers would be assured that qualified project managers would have the skills required to manage a commercial sector project.
- Project managers would be better able to identify faults and poor work practices leading to reduced construction costs.

Establishment costs could be minimal as:

- The CPC40508 Certificate IV in Building and Construction (Site Management) qualification is already registered as a traineeship in Western Australia.
- There are at least seven RTOs operating in Western Australia with a scope of registration that includes this qualification. Therefore, training resource development costs would likely be minimal.
- However, the increased take up of this Class B qualification would likely mean additional costs to the Fund in the form of employer and training subsidies.⁵
- This traineeship would most likely be targeted at existing workers and as such may not attract government subsidies nor be funded by the Department of Training and Workforce Development.

It was determined that the CPC08 Industry training package includes the CPC40508 Certificate IV in Building and Construction (Site Management) qualification which has been developed to specifically address the training needs of project managers.

4.5 Identified need - Waterproofing

Late in the research, a major tier one construction company reported that poor waterproofing practices are a significant contributor to cost overruns that construction companies experience due to re-work and warranty claims. It was suggested that some form of traineeship, possibly based on the Queensland model, could be introduced in Western Australia as a mechanism for improving the skills of the workforce and in so doing reduce construction costs.

It was also suggested a traineeship with a Certificate II or III outcome would establish a benchmark for employers when recruiting individuals to complete waterproofing works; and that it could lead to some form of licensing framework for those providing waterproofing services.

⁵ Class B Qualifications can be delivered under a Training Contract (Traineeship) or institutional pathway

4.6 Industry engagement with the training framework.

Many respondents identified a need for a mechanism that will encourage the commercial sector and the construction industry generally, to take up training and help ensure the future development of the workforce.

While the value of existing training subsidies was recognised, stakeholders stressed that there needs to be some other form of incentive, such as regulatory incentives, that will require the industry and individual workers to take up the available training opportunities. The Government's Building Training Policy is an attempt to raise the 'training rate' in the commercial sector.

5. Recommendations

From the identified findings, the following recommendations emerged:

- **Develop and introduce a Certificate II in Commercial Construction as a Traineeship.**

This option would require development of an accredited course OR submission to the Skills Service Organisation (Artibus Innovation) and its Industry Reference Committee for inclusion within the relevant Training Package.

- **Retain the current Carpentry qualification, but ensure trade training covers all facets of the trade through choice of electives that place stronger emphasis on commercial work requirements.**

This option could be managed within the existing Training Package qualification structure if; the number of core competencies are reduced and the elective competencies available for selection is increased.

- **Develop and introduce a new, broad-based Certificate III trade qualification (apprenticeship) for the commercial sector.**

This option would be an alternative to modifying any existing qualifications and would need to be approved by the Skills Service Organisation (Artibus Innovation) and their Industry Reference Committee for inclusion within the CPC08 Training Package.

- **Develop an add-on Certificate IV qualification for the commercial sector to cover a range of trades and management skills for completion after an existing trade qualification.**

Given the wide variance of opinions on this issue, it is recommended to promote the established traineeship 'Site Management (Level 4)' and qualification CPC40508 Certificate IV in Building and Construction (Site Management) to the commercial sector. Both the HIA and MBA now offer Certificate IV programs as a fee-for-service option.

- **Introduction of a Waterproofing qualification to be referred to the Fund's Industry Stakeholder Forum in March 2017 for consideration.**

Although this recommendation was identified by a major tier one company as a serious issue, it did not become apparent until late into the research project. They viewed the issue of licensing of a 'waterproofing' trade as their main concern due to high remediation costs for poor quality work. There is a Waterproofing qualification within the Training Package but no recognised 'trade'; therefore, a trade classification may need to be established.

The detailed qualification outlines are provided in Appendix 1.

6. Appendix 1 - Proposed qualification framework

This proposed framework for new trade qualifications was developed and reviewed through consultation with commercial construction companies, subcontractors and the Fund's industry stakeholders.

Certificate II: Commercial Construction Skills*

CORE (do all units)		
Work safely in the construction industry		Carry out measurements and calculations
Work effectively and sustainably in the construction industry		Read and interpret plans and specifications
Plan and organise work		Apply OHS requirements, policies and procedures in the construction industry
Conduct workplace communication		Work safely at heights
ELECTIVE OPTIONS (choose any <8> units) - examples		
Wall and floor tiling	Concreting	Waterproofing
Handle wall and floor tiling materials	Apply basic levelling procedures	Handle waterproofing materials
	Handle concreting materials	Use waterproofing tools and equipment
Use wall and floor tiling tools and equipment	Use and maintain concreting plant, tools and equipment	
	Place concrete	
Prepare surfaces for tiling application	Finish concrete	Prepare surfaces for waterproofing application
	Cure concrete	
Fix floor tiles	Place and fix reinforcement materials	Frame and fit wet area fixtures
Fix wall tiles	Construct tilt panels on site	
Carry out concreting to simple forms	Repair and rectify concrete	Apply waterproofing process to below ground level wet areas
	Apply reinforcement schedule	
Repair wall and floor tiles	Place and fix reinforcement materials	Apply waterproofing process to internal wet areas
Tile curved surfaces	Identify requirements for safe tilt-up work	
Apply waterproofing process to internal wet areas	Cut and core concrete	Apply waterproofing process to external wet areas
	Construct tilt panels on site	
Carry out decorative tiling	Carry out setting out	Apply waterproofing remedial processes
Apply basic levelling procedures	Erect and dismantle formwork for footings and slabs on ground	
		Carry out high performance concreting
	Install topping slabs	

*Delivery options

- Class B qualification:
 - Traineeship for existing workers; or
 - TAFE-based course for entry-level workers; or
- TAFE-based course for overseas-qualified workers

Certificate III (apprenticeship): Commercial Construction Tradesperson*

CORE (do all units)			
Use carpentry tools and equipment		Carry out measurements and calculations	
Handle carpentry materials		Read and interpret plans and specifications	
Carry out general demolition of minor building structures		Carry out excavation	
Carry out setting out		Use explosive power tools	
Carry out levelling operations		Erect and dismantle restricted height scaffolding	
Work effectively and sustainably in the construction industry		Work safely at heights	
Plan and organise work		Carry out concreting to simple forms	
Conduct workplace communication		Apply OHS requirements, policies and procedures in the construction industry	
ELECTIVE OPTIONS (choose any <10> units) - examples			
Steel Fixing	Wall and Ceiling Fixing	Concreting	Fitout and Finish
Handle steel fixing materials	Fix standard plasterboard wall sheets	Handle concreting materials	Install and replace windows and doors
Use steel fixing tools and equipment	Fix standard plasterboard ceiling sheets	Use concreting tools and equipment	Use static machines
Cut and bend materials using oxy-LPG equipment	Mix plastering compounds	Cure concrete	Cut and install glass
Place and fix reinforcement materials	Cut and fix paper-faced cornices	Install trench support	Prepare surfaces
Arc weld reinforcement steel	Manually sand plasterwork	Construct, erect and dismantle formwork for stairs and ramps	Use aluminium sections for fabrication
Machine cut reinforcement materials	Finish plasterboard joints manually	Erect and dismantle formwork to suspended slabs, columns, beams and walls	Set out and assemble cabinets, showcases, wall units, counters and workstations
Apply reinforcement schedule	Install exterior cladding	Erect and dismantle jump form - formwork	Set out and fabricate shopfront commercial entries bulkheads and component fittings
Splice and anchor using mechanical methods	Install dry wall passive fire-rated systems	Erect and dismantle slip form formwork	Assemble and install shopfront commercial entries bulkheads and components
Carry out monostrand post-tensioning	Construct bulkheads	Erect and dismantle formwork for footings and slabs on ground	Apply and trim decorative finishes
Carry out multistrand post-tensioning	Assemble partitions		Apply finishes
Carry out stressbar post-tensioning	Install curtain walling		
	Install suspended ceilings		
	Install and finish columns		

*Delivery requirements

- Class A qualification: can only be obtained by fulfilling the obligations of an apprenticeship under a training contract.

CPC40508 Certificate IV in Building and Construction (Site Management)*

CORE (do all units)		
Promote team effectiveness		Apply legal requirements to building and construction projects
Apply building codes and standards to the construction process for low rise building projects		Apply structural principles to residential low rise constructions
Manage occupational health and safety in the building and construction workplace		Apply structural principles to commercial low rise constructions
Plan building or construction work		Read and interpret plans and specifications
Conduct on-site supervision of building and construction projects		
ELECTIVE OPTIONS (choose any <6> units) - examples		
Deliver and monitor a service to customers	Write complex documents	Resolve business disputes
Produce simple word processed documents	Produce labour and material schedules for ordering	Manage personal work priorities and professional development
Create and use spreadsheets	Prepare simple building sketches and drawings	Arrange building applications and approvals
Create and use databases	Prepare specifications for all construction works	Prepare design brief for construction works
Implement continuous improvement	Arrange resources and prepare for the building or construction project	Supervise asbestos removal
Apply quality management techniques	Apply site surveys and set-out procedures to building and construction projects	Supervise concreting work
Apply risk management techniques	Apply sustainable building design principles to water management systems	Work safely in the construction industry
Undertake project work	Build thermally efficient and sustainable structures	Implement and monitor environmentally sustainable work practices
Establish effective workplace relationships	Minimise waste on the building and construction site	Work effectively with culturally diverse clients and co-workers
		Plan, organise and facilitate learning in the workplace

*Entry Requirements

- Could be the completion of an apprenticeship in a Construction trade (Certificate III)
- Could be direct entry for those with construction industry experience wishing to complete a Certificate IV
- Developed language, literacy and numeracy skills

*Delivery requirements

- Class B qualification:
 - Traineeship for existing workers; or
 - TAFE-based course for workers looking to change careers

7. Appendix 2 - Peak industry representative interview schedule

The following interview schedule was used in face to face interviews with twelve representatives from the eight industry associations and union organisations that contributed to the project.

Peak industry representative interview questions:

Organisation:	Representative:
Introduction and discussion about the project:	
Can you comment of whether your industry experiencing skill shortage difficulties? Does your industry have difficulty in sourcing the skilled labour it requires? How do you believe the industry addresses its skilled labour needs?	
Has your membership raised issues about the training of apprentices? What are these issues? Which trades?	
Are there job roles in your industry you would consider to be “trades” that are not currently available?	
Do you consider your sector could do more in promoting the employment of apprentices: What is it that prevents your industry (members) employing apprentices?	
Are the current trade occupations (noted above) equipped to undertake the work tasks required by your industry? What additional skills would your industry require of (XXX) trade qualifications?	
What are your views of the current trade training arrangements? How could the current trade training arrangements be improved?	
What is it that would likely influence your industry to engage more in trade training? Prompts: <ul style="list-style-type: none"> • Licensing of tradespersons • Contract requirements • Greater incentives (Government/CTF) • Government Building Training Policy • Quality product • Construction project cost savings 	

8. Appendix 3 - Industry representative interview schedule

The following industry representative interview schedule was used in face to face interviews with over fifty representatives from the 31 different organisations that contributed to the project.

Industry Representative Interview Questions:

Management / Site Supervisor

Organisation:	Representative:
Introduction and discussion about the project:	
What construction trade occupations do you currently employ?	
How many apprentices do you employ? Which trades?	
If Not: What is it that prevents your organisation employing apprentices?	
Are the current trade occupations (noted above) equipped to undertake the work tasks required by your enterprise?	
What additional skills would your organisations require of (XXX) trade qualifications?	
Are there job roles you would consider to be “trades” that are not currently available?	
Do you have difficulty in sourcing the skilled labour you require? How do you recruit your labour needs?	
What are your views of the current trade training arrangements?	
How could the current trade training arrangements be improved?	
What is it that would likely influence your organisation (industry) to engage more in trade training? Prompts: <ul style="list-style-type: none"> • Licensing of tradespersons • Contract requirements • Greater incentives (Government/CTF) • Government Building Training Policy • Quality product • Construction project cost savings 	

Tradesperson /Apprentice

Organisation:	Representative:
Introduction and discussion about the project:	
What is your trade / apprenticeship Where were you trained? If local - which RTO did you attend? Why did you choose this apprenticeship / trade?	
In which sector of the industry did you complete your trade training? Do you consider your trade training equipped you to work in the commercial sector? What was the most relevant part of your trade training What was the most irrelevant part of your trade training What would you add to the XXX trade training to make it more relevant? What would you suggest could be omitted from the XXX trade training?	
What are your views of the current trade training arrangements?	
How could the current trade training arrangements be improved?	

9. Appendix 4 - RTO interview schedule

The following interview schedule was used in face to face interviews was used during discussions with thirteen (13) personnel from six RTOs servicing the construction sector.

RTO interview questions:

Organisation:	Representative:
Introduction and discussion about the project:	
<p>What are the construction trades this RTO delivers?</p> <p>What are your views of the current trade training arrangements?</p> <p>Do you believe it is meeting the needs of all sectors of the industry?</p> <p>Do you believe the commercial sector has specific trade training needs distinct to the residential sector?</p> <p>Is there content you deliver that is targeted to the commercial sector?</p>	
<p>Have you received industry feedback about the content delivered in your trade training programs?</p> <p>Is there content industry would like to see changed? What might this be?</p> <p>Is there content you believe should be added to the current training programs to make it more suitable to the commercial sector?</p> <p>How could the current trade training arrangements be improved?</p>	
<p>Are there other job roles industry has sought assistance from your RTO to train?</p> <p>Does our organisation deliver Certificate II entry level training programs?</p> <p>What might be the demand for such programs?</p> <p>Does our organisation deliver Certificate IV post trade training programs?</p> <p>What might be the demand for such programs?</p>	
<p>Do you consider your RTO could do more in promoting the employment of apprentices:</p> <p>What do you believe prevents your industry employing apprentices?</p>	

10. Appendix 5 - Stakeholder Forum Feedback

The following is a summary of feedback received from 28 attendees at the *2016 Construction Training Fund Stakeholder Forum* on the proposed framework.

Rating of training options

Participants were asked to rate the following options and explain their ratings:

- Maintain the current system, ensuring that apprenticeships cover all facets of a trade
- Certificate II: Commercial Construction Skills
- Certificate III (apprenticeship): Commercial Construction Tradesperson
- Certificate IV: Commercial Construction Project Manager

All respondents provided comments and 19/28 respondents provided numerical ratings. Of these, 6/28 did not rate all options. All respondents appear to have interpreted the activity as a ranking exercise – there were no instances of two options being awarded equal ratings.

Due to the variation in responses, a pairwise comparison was considered the most appropriate method for analysing respondents' preferences. The below table shows the number of times an option was favoured more than another option, and its total number of 'preferences'. Where a participant did not allocate a rating to the two options being compared, this was viewed as a 'draw'. The Certificate IV was most often favoured over others.

		Referent item				Preferences
		Certificate II	Current model	Certificate III	Certificate IV	
Measured item	Certificate II	-	7	7	7	21
	Current model	8	-	7	7	22
	Certificate III	7	10	-	8	25
	Certificate IV	10	9	8	-	27

Maintain current model

Mandatory - assuming other options progress
This would go hand in hand with cert IV below
Does it work? Does it suit?
Retain subsidy to help with expense of members
Knowledge of all facets of a trade is still more highly sought after for upskilling to another level.
The model needs to be refined.
The current training model works reasonably well at present, I believe that the traditional training needs to evolve with a younger generation which is very open to online training
In the trades of plumbing and gas fitting - painting and decorating - I agree
There are skills [such as tilt up construction], metal cladding, metal roofs, casting slabs,
Keep this going and find an RPL process for existing workers
VET in schools promoted

If the industry recognised and sought 'qualified' employees - maybe this would be applicable but all they want is "experienced workers"
The existing programme should be maintained and have separate training for modern commercial projects. See latest technology in building methods being used in Perth.
In some apprenticeships this still works, e.g. electrical
There is strength in the GTO model here. Increased use of GTOs rotating apprentices can address skills gaps.
better contextualisation would be required here
not that effective as training model is not used that much
The commercial sector needs to provide its own training regime - currently subsidised by the residential (housing) sector
residential training model - commercial sector needs their own

Certificate II

Can understand value but is it truly necessary?
Don't believe this is beneficial
Is this an identified need? If yes, then yes.
Prefer cert II for all fire industry workers. Some testing (extinguishers hose reels etc.) skills can be covered by cert II
To go with current trends, less disruptive option, most likely to succeed
-You need to put a value on this one?
Youth of today do not have long term ideas with regards to work/careers. Shorter and consecutive training with certificate recognition could be beneficial to this group.
Cert II at too low level for the skills required for the Commercial sector
The package is in place to qualify people, why add a qualification? This will confuse people and reduce quality
agree in principle
If the industry recognised and sought 'qualified' employees - maybe this would be applicable but all they want is "experienced workers"
short-term solution - yes
similar to a cert II, but more "specialised" skills training
This may be a "stop-gap" measure for the current workers but a higher cert III qual at a later date should be discussed
Good to recognise skills formally
immediate impact on current workforce to close the gaps in high risk areas
To what end? Is this training for training's sake or aimed at improving build quality?
Improve on training and give extra skills to trade certified people

Certificate III

Yes - particularly for greater understanding of other trades and flexibility
Trades are coming from residential to commercial. Offering a Cert III in commercial may not work, considering trades do not may take on apprentices due to not having permanent work for entire apprenticeship
Sound foundation is needed to develop and train a tradesman that is qualified in industry specific applications. More valuable onsite.
This needs to be flexible to capture the commercial sector.
Training needs to be relevant to the place of employment, this can be challenging but it is extremely important to industry
Not in the licensed and regulated trades particularly in plumbing and gas fitting - painting and decorating
Need a specific trade qualification for specific type of work done in Commercial sector. Tilt Construction/rigging/metal cladding/metal roofing
Bolster elective subjects already in current cert III
If the industry recognised and sought 'qualified' employees - maybe this would be applicable but all they want is "experienced workers"
Essential also regulate all trades to bring value in the industry making it professional and creating trade responsibility
Base for residential/commercial then specialise
too long to develop and deliver and unlikely to remain current for very long
Trade registration
Best long term. Look at licensing
New workforce and future workforce for commercial giving a broader approach
New skills which can impact commercial quality, However limits tradies to a certain area

Certificate IV

Good suggestion - for parties who do not hold a tertiary qualification (i.e. degree in construction etc.)
Believe this is more important - PMs/supervisors are ex-trades but only know their area of expertise. *Need to become a regulated state*
Yes, definitely. This will add depth of skills and knowledge to the existing base.
Add-on is always good
Definitely more educated managers would allow for better supervision of work force over a broader area of trades involved.
This would add value
Upskilling of training site supervisors is extremely important in maintaining the standard and quality of work completed. HIA currently trains in this area.

Would solve some of the needs but not for contractors. This would be more for leading hand or supervisors who are contractors.
If the industry recognised and sought 'qualified' employees - maybe this would be applicable but all they want is "experienced workers"
Add site skill training and identification
cert IV or "specialised" skills training to ensure they are up to date and knowledgeable in a broad range of trades
Project managers could be looking after multiple trades and miss jobs and risk areas due to workload. Too many people to manage and can't be specialised.
Not convinced you would get the take up. Is it reasonable for project managers to be expected to micromanage?
Include supervisors knowledge base to cover multiple trades
I like the notion of project managers/site supervisors training about how to deliver quality supervision/management of other trades at high level. Very relevant to residential too. This will minimise risk - safety risks and financial risks for the consumer.

Other comments

Business course -> small business for transition from app to subcontractor. Targeted program (VET) for low socioeconomic
Trades are coming from residential to commercial. Offering a Cert III in commercial may not work, considering trades do not may take on apprentices due to not having permanent work for entire apprenticeship
A sustainable VETiS program that is a generic Cert II. This needs to work for low socioeconomic schools. This needs to have a new model! Model: funding/partnerships/pathways/program structure
Make allowance for Cert II to go with current trend of specialising. But not at the expense of promotion for the full Cert II. To go against the flow would be disruptive with limited effect for changing industry requirements. Courses specialising in new products and their application. Working in association with manufacturers. Cost assessment on training courses ran by RTO on behalf of the manufacturers and cost assessment on training courses on the students.
Maybe a Cert II qualification that covers a broad aspect of the commercial industry: maybe a cert II in commercial construction.
More must be done to train and support VET coordinators in the schools, this is the starting process of a young person's career ambitions in many cases
Commercial construction in plumbing and painting is a progression from the current training package which is primarily residential, which covers a broad range of skills.
*There is a big need for business training for small builders, contractors and sub-contractors. This would include residential.
RPL process for a period of time to qual existing workers.
Licence of trades. Retention of apprentice subsidy. Small business course - starting from apprentices upwards
Research actual 'needs' of the industry and see if assistance can be provided to assist

supplementary training of difficult areas of shortage or regulate/license the industry and formalise training
Training for self-training programme under supervision, focus is to achieve many trades all in one. Adopted by [?] description
quality of assessment - outcomes based
Research projects required in identifying how long a qualification remains current before industry changes require "upskilling" that could be supported from Supplementary Skills.
The system needs to be reviewed - there is no avenue for failure, needs - further funding for "top up" scenarios - get rid of the "tick and flick" system.
Trade license. "Super TAs"
Skills set training
Apartment building - where does CTF fit in?
Broader range of trade skills i.e. Wet trades pre-apps and construction apprenticeships 4-5 years 2-3 trades covered
Redefinition of commercial skills that could replace traditional skills of separate trades. Note: commercial sector consists of a wide variety of systems and procedures.
Building supervisor - building quality control - what are the skills, how do you get them? Should there be a qualification?

11. Appendix 6 – Feasibility survey instrument

You should have received the outline of three proposed qualifications - please share your thoughts about them

Create your own
FREE ONLINE SURVEY

Everything you say will be confidential. You will not be identified in the report. The research findings will be published on the Construction Training Fund website in September 2016.

1 Firstly, please share some background information about your work. This is confidential.

What does your company do? (for example, Wall and Floor Tiling, Painting and Decorating, mid-tier commercial building company)

What region(s) do you work in? (for example, metropolitan Perth, South West, Pilbara)

How many workers does your company have at the moment?

Over the last year, how much of your work was in 'commercial' construction (please estimate as %)

2 Please share your views about formal trade training - this means training at a TAFE or a private Registered Training Organisation (RTO).

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable / Don't know
I would take on a trainee doing an entry-level qualification (Certificate II)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would take on an apprentice (apprentices do a certificate III)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would take on a trainee doing a higher-level qualification (Certificate IV)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If one of my workers wanted to do a qualification, I would give them paid leave to study at TAFE (or a private RTO)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If one of my workers wanted to do a qualification, I would pay their TAFE (or private RTO) fees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3 If you disagreed with any statements in question 2, please describe the reasons why:

4 Please share your views on the Certificate II in Commercial Construction Skills

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable / Don't know
I would take on a trainee doing this qualification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If one of my workers wanted to do this qualification, I would support them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I hire people, I would prefer them to have this qualification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5 Any further comments about the Certificate II in Commercial Construction Skills?

6 Please share your thoughts about the Certificate III: Commercial Construction Tradesperson

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable / Don't know
I would take on an apprentice doing this qualification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I hire people, I would prefer them to have this qualification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If one of my workers wanted to do this qualification, I would support them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Any further comments about the Certificate III: Commercial Construction Tradesperson?

8 Please share your thoughts about the Certificate IV: Commercial Construction Project Manager

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable / Don't know
I would take on a trainee doing this qualification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If one of my workers wanted to do this qualification, I would support them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I hire people, I would prefer them to have this qualification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9 Any further comments about the Certificate IV: Commercial Construction Project Manager?

12. Appendix 7 - Case study: International Construction Company

Training Packages as a Benchmark

An international Tier One construction company (the company) in WA has developed a two-pronged approach to addressing the quality of work delivered by the trade workforce. This includes a top-down approach which upskills project managers through a Certificate IV qualification and a proposed ground-up approach which aims to upskill subcontractors with a certificate II qualification.

In 2014, the defects cost for the company was in the tens of millions of dollars. This was mainly due to issues with tiling, masonry and stonework, corrosion, waterproofing and fire protection. The company began investigating new approaches to reducing these costs. As the company has a long-standing commitment to training and development, it looked to training for a solution. In collaboration with a private 'training provider' (TP), the company identified that these quality issues should not have occurred if the work had conformed to the standards described in the relevant trade Training Packages.

Training Packages are industry-endorsed, nationally accepted statements of competency across all aspects of a trade. As they are developed and endorsed by specialists in each trade area, it is reasonable to expect subcontractors to accept their trade's Training Package as a quality benchmark. The TP proposed that project managers should use Training Packages as the benchmark of quality workmanship when inspecting subcontractors' work and negotiating any remedial work. To implement this approach, the TP arranged for key staff to undertake a Certificate IV in Training and Assessment. This would enable staff to interpret Training Packages and map them to the work undertaken by their subcontractors. This approach was successful, and has seen defects costs reduced by around 70%.

Following on from this success, the company investigated further training solutions with a Group Training Organisation (GTO) and training provider that offered courses in Building and Construction trades. As a preliminary example, the GTO developed a qualification addressing one of the company's identified risk areas – waterproofing. By selecting appropriate elective units within an existing qualification (the Certificate II in Construction), the training provider created a qualification which they are able to offer within their existing scope and resources. Using flexible delivery arrangements allowed the qualification to target existing workers as well as entry-level workers. Labour pool testing through an on-line recruitment agency found that there is a sufficient supply of suitable lecturers for the course. The development process took four weeks and the GTO predicts that the lead time to enrol students and deliver the course would be similarly short.

The company is now investigating ways to ensure that their subcontractors take advantage of accredited training and the use qualified workers.

