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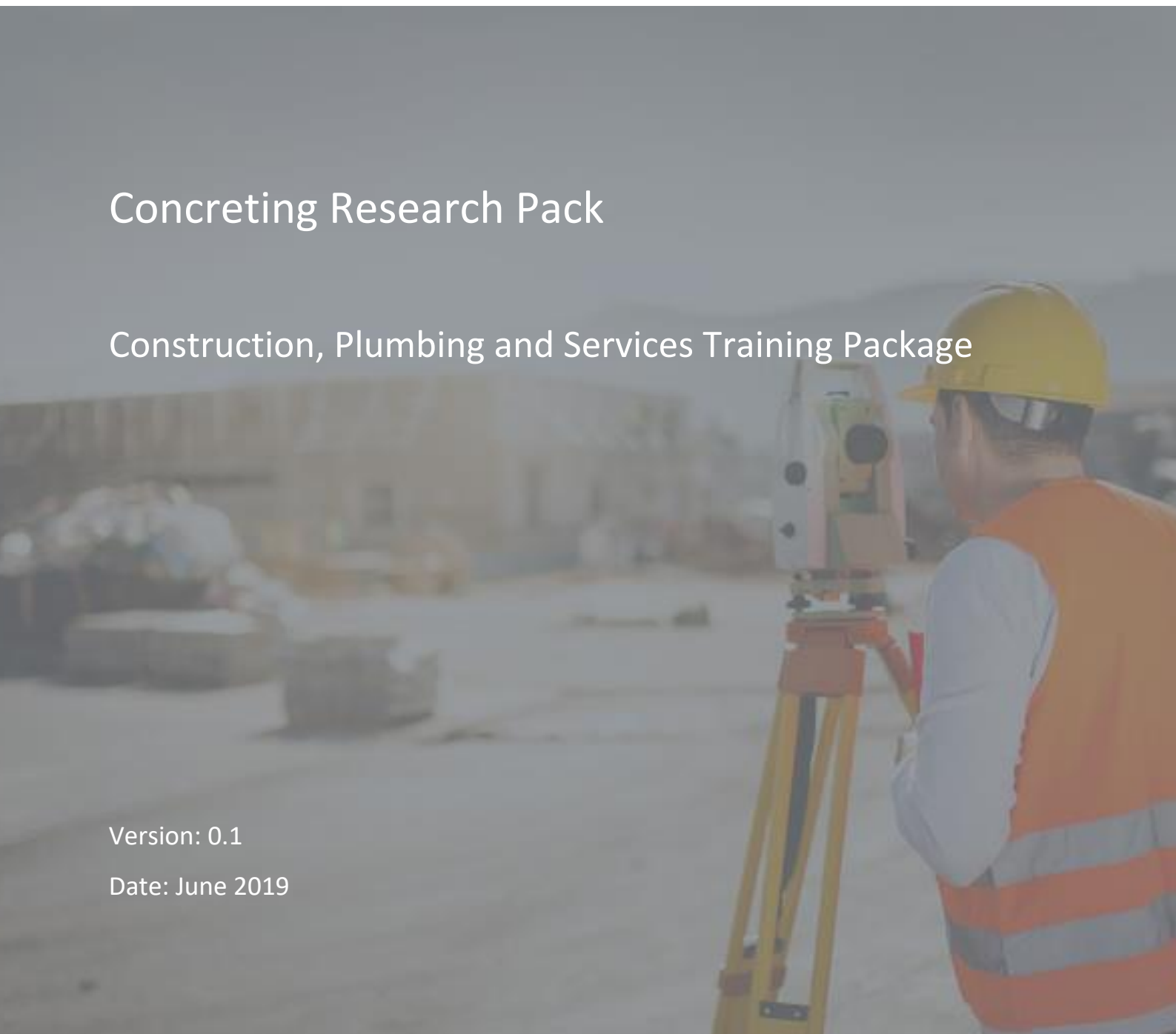
Developing industry skills

Concreting Research Pack

Construction, Plumbing and Services Training Package

Version: 0.1

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Concreting Industry Overview



Industry Description

The Concreting Services industry is integral to the construction of many types of buildings and structures.

The industry is one of the largest in the Construction Services industry, and its performance usually fluctuates in response to trends in the building and infrastructure markets. The most notable decline in demand over the past five years has been from the non-building infrastructure market but this has largely been offset by strong demand on multi-unit apartment construction and commercial building projects.¹

The industry is characterised by mostly small-scale contractors that service narrow geographic markets, with the four largest players contributing less than 5% to annual industry revenue.²

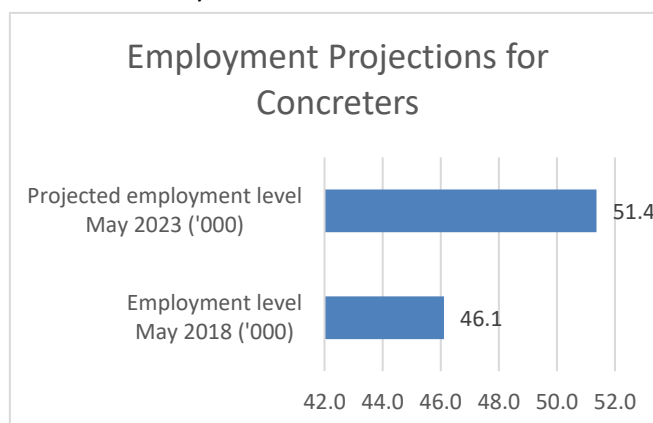


Occupations

The occupation of concreting is coded under the ANZSCO as 821211 Concreter. Concreters

pour, spread, smooth and finish concrete for structures such as floors, stairs, ramps, footpaths and bridges.³

As shown in the below graph, concreters are forecast to increase in employment by 11.4% in the next 5 years.⁴



Regulation and Licencing

The concreting industry is a lightly regulated industry. There are limited formal qualifications and licensing requirements, though many operators hold qualifications in aligned building trades such as carpentry and joinery. Most concreting contractors begin their careers as builder's labourers and obtain experience in concreting through on-the-job training.⁵

¹ IBIS World, 2018, Concreting Services in Australia, accessed online 22/05/2019 at: <http://clients1.ibisworld.com.au/reports/au/industry/ataglance.aspx?entid=319>

² IBIS World, 2018, Concreting Services in Australia, accessed online 22/05/2019 at: <http://clients1.ibisworld.com.au/reports/au/industry/ataglance.aspx?entid=319>

³ ABS, 2009, ANZSCO, First Edition, cat no. 1220.0, accessed online 22/05/2019 at: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/F9EB177EAC8B0DC8CA2575DF002DA77B?opendocument>

⁴ Labour Market Information Portal, 2019, Data file: Occupation Projections – five years to May 2023, accessed on 22/01/2019 at: <http://lmip.gov.au/default.aspx?LMIP/GainInsights/EmploymentProjections>

⁵ IBIS World, 2018, Concreting Services in Australia, accessed online 22/05/2019 at: <http://clients1.ibisworld.com.au/reports/au/industry/ataglance.aspx?entid=319>

Concreting Industry Trends

This section describes current and future trends projected to impact on the surveying and spatial information sector. The trends are presented in five umbrella categories however, they may impact several related categories as well.



Technological Trends

Due to developments in building technology, there has been trend of substituting traditional building materials with concrete, such as timber being replaced with concrete slab floors and bricks being replaced with tilt-walls.⁶

Significant developments have also occurred in the actual machinery used for concrete contracting, including extruders used in kerbing and channelling, vibrators used to settle the concrete and mechanical and ride-on trowel machines. This has given a competitive advantage to companies that have invested in such technology, though such equipment is generally available for hire.⁷



Political Trends

National Construction Code (NCC) updates

An updated version of the NCC will be adopted in May 2019, which includes updates regarding the building of concrete structures. A major revision includes the performance of concrete during an earthquake based on lessons-learned from the earthquake in Christchurch in 2011. Considerations such as steel fibre reinforced concrete, new formulae on shrinkage and creep, a section on diaphragms and a renewed focus on fatigue, have been included.⁸ The newest version of the NCC must be adopted by states and territories by 1 May 2019.



- 1. Will technological updates in the industry need to be considered as part of this review?***
- 2. Will the NCC updates need to be considered as part of this review?***

⁶ IBIS World, 2018, Concreting Services in Australia, accessed online 22/05/2019 at: <http://clients1.ibisworld.com.au/reports/au/industry/ata glance.aspx?entid=319>

⁷ IBIS World, 2018, Concreting Services in Australia, accessed online 22/05/2019 at:

<http://clients1.ibisworld.com.au/reports/au/industry/ata glance.aspx?entid=319>

⁸ Australian Building Code Board, *National Construction Code*, 2019, accessed 14/01/19 from <https://ncc.abcb.gov.au/ncc-online/NCC>

Concreting Training Information



Relevant VET Qualifications

This project involves the following qualification:

- CPC30318 Certificate III in Concreting

This qualification has 18 units of competency specific to concreting. Additionally, nine units that are packaged in the core of CPC30318 Certificate III in Concreting are being reviewed in other CPC projects currently and, as per policy, these updated units need to be reviewed against this qualification to make sure they are still fit for the concreting industry's needs. The units are:

1. CPCCCA2003 Erect and dismantle formwork for footings and slabs on ground
2. CPCCCM1012 Work effectively and sustainably in the construction industry
3. CPCCCM1013 Plan and organise work
4. CPCCCM1014 Conduct workplace communication
5. CPCCCM1015 Carry out measurements and calculations
6. CPCCCM2001 Read and interpret plans and specifications
7. CPCCCM2006 Apply basic levelling procedures
8. CPCCSF2004 Place and fix reinforcement materials
9. CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry.

See Appendix A for unit of competency enrolment numbers.

There are currently 53 RTOs with this qualification on scope across Australia – see Appendix C for a list of RTOs and states.



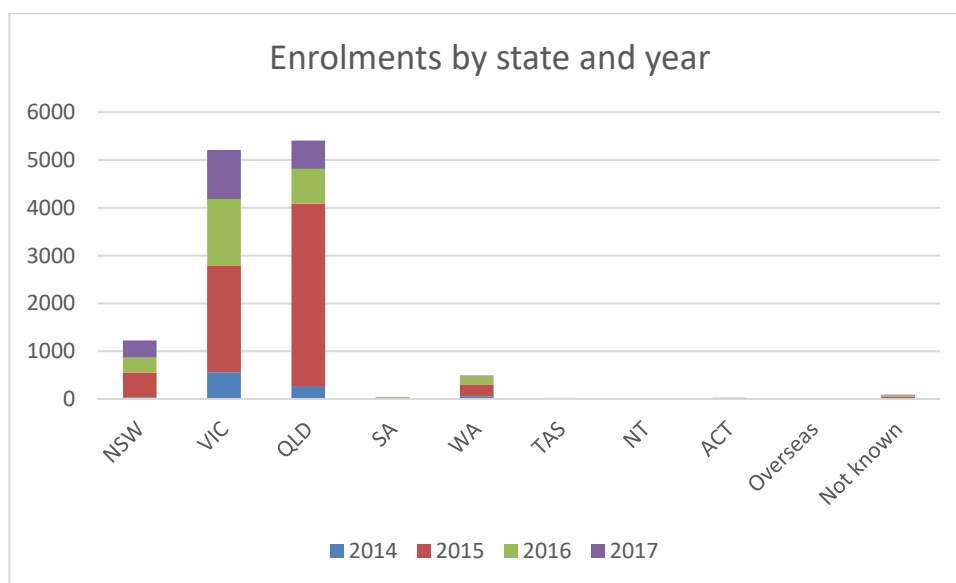
- 1. Will the update of these nine units of competency affect the qualification's fit for the needs of the concreting industry?***



Enrolment Numbers

The below graph shows the enrolments for CPC30313 Certificate III in Concreting* by state and year.⁹ See Appendix B for further details on enrolment numbers.

Though the trend for enrolments in the Certificate III in Concreting is an increase over the past four years, the numbers year to year are inconsistent, with a large spike in 2015. A state breakdown of the enrolment numbers shows the spike is most noticeable in VIC and QLD, which may have been a result of funding, given the low enrolment numbers in 2014.



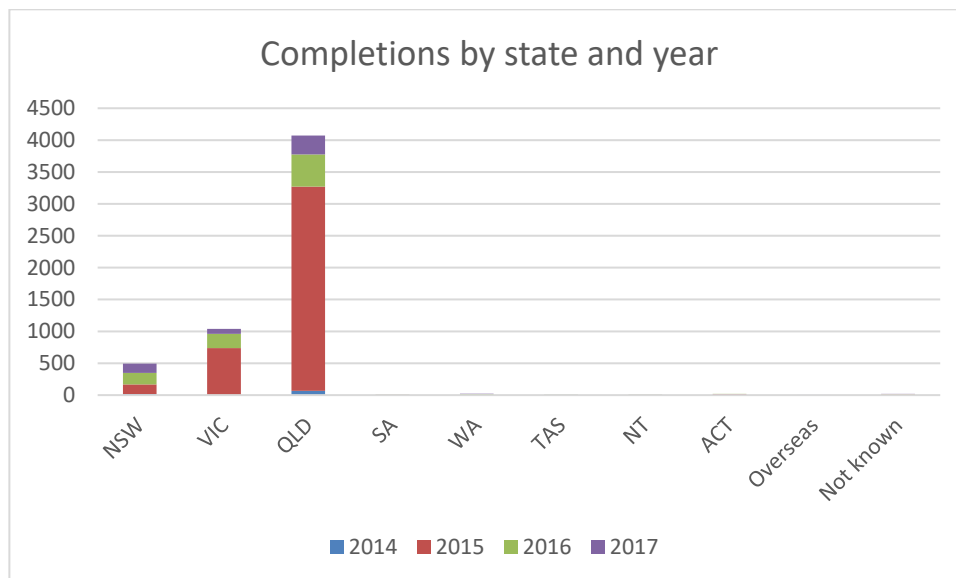
**CPC30313 Certificate III in Concreting enrolment numbers reported because CPC30318 does not have any reportable enrolment figures yet.*

⁹ NCVER, 2019, VOCSTATS Portal – Total VET program enrolments, accessed online on 22/05/2019 at: <http://vocstats.ncver.edu.au/>



Completion Numbers

The below graph shows the total completions for CPC30313 Certificate III in Concreting* by state and year.¹⁰ See Appendix B for further details on completion numbers.



**CPC30313 Certificate III in Concreting completion numbers reported because CPC30318 does not have any reportable completion figures yet.*



- 2. What do the enrolment and completion numbers tell us about the uptake of the qualification?**
- 3. There are clear differences in state enrolment and completion numbers – what might this mean for the qualification review?**

¹⁰ NCVER, 2019, VOCSTATS Portal – Total VET program enrolments, accessed online on 22/05/2019 at: <http://vocstats.ncver.edu.au/>

References

Australian Building Code Board, *National Construction Code*, 2019, accessed 14/01/19 from <https://ncc.abcb.gov.au/ncc-online/NCC>

ABS, 2009, ANZSCO, First Edition, cat no. 1220.0, accessed online 22/05/2019 at: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/F9EB177EAC8B0DC8CA2575DF002DA77B?opendocument>

IBIS World, 2018, Concreting Services in Australia, accessed online 22/05/2019 at: <http://clients1.ibisworld.com.au/reports/au/industry/ataglance.aspx?entid=319>

Labour Market Information Portal, 2019, Data file: Occupation Projections – five years to May 2023, accessed on 22/01/2019 at: <http://lmip.gov.au/default.aspx?LMIP/GainInsights/EmploymentProjections>

NCVER, 2019, VOCSTATS Portal – Total VET program enrolments, accessed online on 22/05/2019 at: <http://vocstats.ncver.edu.au/>

Appendix A – Unit of Competency Enrolment Numbers

CPC30313 Certificate III in Concreting units of competency enrolments by state and year 2014-2017. Enrolments show only those enrolled in the Certificate III in Concreting, not enrolments in units where they have been imported into other qualifications.

Code	Title	2014	2015	2016	2017	Total
CPCCCO3029A	Apply and finish sprayed concrete	0	0	0	2	2
CPCCCO3049A	Apply and finish sprayed concrete	73	1013	233	171	1485
CPCCCO3035A	Assess and specify concrete supply requirements	139	1048	938	832	2951
CPCCCO2014A	Carry out concrete work	0	174	167	83	426
CPCCCO2013A	Carry out concreting to simple forms	1	61	1	20	85
CPCCCO3024A	Carry out decorative finishes to concrete	0	0	0	5	9
CPCCCO3044A	Carry out decorative finishes to concrete	169	3121	1314	1140	5744
CPCCCO3030A	Carry out high performance concreting	0	2	0	5	7
CPCCCO3050A	Carry out high performance concreting	18	1753	187	171	2123
CPCCCO3026A	Carry out repair and rectification of concrete	0	8	0	2	13
CPCCCO3034A	Conduct concrete agitator truck operations	2	0	0	0	2
CPCCCO3052A	Conduct concrete boom delivery operations	5	62	314	282	664
CPCCCO3031A	Conduct off-form vertical concrete operations	0	0	0	9	9
CPCCCO3051A	Conduct off-form vertical concrete operations	21	535	63	31	653
CPCCCO3048A	Construct tilt panels on site	67	1021	74	113	1276
CPCCCO3023A	Cure concrete	4	3	2	6	10
CPCCCO3043A	Cure concrete	366	4947	1722	1347	8378
CPCCCO3027A	Cut and core concrete	0	2	2	2	4
CPCCCO3047A	Cut and core concrete	143	3551	1104	909	5699
CPCCCO3022A	Finish concrete	5	0	0	5	9
CPCCCO3042A	Finish concrete	361	4914	1731	1355	8360
CPCCCO2011A	Handle concreting materials	1	0	4	1	10
CPCCCO2001A	Handle concreting materials	0	0	2	0	2
CPCCCO2021A	Handle concreting materials	374	5100	1768	1433	8687

Code	Title	2014	2015	2016	2017	Total
CPCCCO3055A	Install topping slabs	29	201	128	142	495
CPCCCO3054A	Operate concrete agitator trucks	8	122	9	12	149
CPCCCO3021A	Place concrete	4	0	2	1	3
CPCCCO3041A	Place concrete	371	4951	1803	1385	8510
CPCCCO3036A	Plan concrete work and brief team	38	1417	1268	1099	3825
CPCCCO3046A	Repair and rectify concrete	188	3892	1189	919	6185
CPCCCO3025A	Resurface concrete	2	4	0	2	9
CPCCCO3033A	Slump test concrete	4	0	2	0	0
CPCCCO3053A	Slump test concrete	41	856	790	703	2389
CPCCCO2022A	Use and maintain concreting plant, tools and equipment	390	5062	1860	1506	8815
CPCCCO2012A	Use concreting tools and equipment	1	7	3	6	12

The below table shows the enrolment numbers for the nine imported units of competency that were updated in other CPC projects. The enrolment numbers below are reflective of only those that have enrolled in the Certificate III in Concreting.

Code	Title	2014	2015	2016	2017	Total
CPCCCA2003A	Erect and dismantle formwork for footings and slabs on ground	320	4983	1737	1377	8424
CPCCCM1012A	Work effectively and sustainably in the construction industry	758	5672	1649	1359	9446
CPCCCM1013A	Plan and organise work	503	5232	1688	1400	8823
CPCCCM1014A	Conduct workplace communication	727	5570	1631	1381	9311
CPCCCM1015A	Carry out measurements and calculations	393	5250	1725	1394	8755
CPCCCM2001A	Read and interpret plans and specifications	389	5232	1649	1334	8604
CPCCCM2006A	Apply basic levelling procedures	4	0	0	2	9
CPCCCM2006B	Apply basic levelling procedures	323	5055	1739	1392	8510
CPCCSF2004A	Place and fix reinforcement materials	300	4741	1733	1350	8132

Appendix B – Qualification Enrolment and Completion Numbers

CPC30313 Certificate III in Concreting **enrolments** by state and year 2014-2017.

State	2014	2015	2016	2017	Total
NSW	34	514	319	359	1228
VIC	552	2232	1397	1029	5203
QLD	254	3830	731	592	5409
SA	5	21	14	2	46
WA	57	237	181	18	482
TAS	0	8	9	7	29
NT	0	0	18	0	23
ACT	0	19	3	5	26
Overseas	0	0	0	1	1
Not known	11	36	25	17	88
Total	920	6891	2697	2034	

CPC30313 Certificate III in Concreting **completions** by state and year 2014-2017.

State	2014	2015	2016	2017	Total
NSW	16	151	182	145	492
VIC	2	736	224	77	1035
QLD	68	3202	506	296	4080
SA	0	5	4	4	12
WA	3	0	14	6	23
TAS	0	3	4	3	6
NT	0	2	5	3	10
ACT	0	18	2	0	23
Overseas	0	0	0	2	2
Not known	0	11	6	3	22
Total	97	4121	954	537	

Appendix C – RTOs with Qualification on Scope

The table below shows the RTOs that have CPC30318 Certificate III in Concreting and what states and/or territories they deliver in.

RTO	QLD	NSW	ACT	VIC	TAS	SA	WA	NT
Ascent Training Solutions Pty Ltd	✓							
Major Training Group	✓							
Australian Consolidated Training	✓							
Australian National Education and Training Pty. Ltd.		✓						
Australian Skills Group Pty Ltd	✓							
Bendigo Kangan Institute				✓				
City-Wide Building & Training Services Pty Ltd	✓	✓	✓					
Construction Industry Training Pty Ltd	✓							
Construction Trade Qualifications Pty Ltd		✓						
Construction Training College Pty Ltd	✓							

RTO	QLD	NSW	ACT	VIC	TAS	SA	WA	NT
Construction Skills Training Centre	✓							
Everthought Education Pty Ltd	✓							
Foundation Training Australia Pty Ltd	✓							
Frontier Training and Technology Pty Ltd				✓				
Construction Training Institute	✓	✓						
Gordon Institute of TAFE				✓				
Goulburn Ovens Institute of TAFE				✓				
Step into Training Services (SITS)	✓							
Training and Assessment Mentor	✓	✓		✓				
Specialised Career Solutions (SCS)	✓			✓	✓	✓		
Australian Industrial Systems Institute				✓				
Master Builders Association of New South Wales Pty Ltd		✓						

RTO	QLD	NSW	ACT	VIC	TAS	SA	WA	NT
Masters in Building Training Pty Ltd	✓	✓	✓		✓			
North East Vocational College						✓		
North Metropolitan TAFE							✓	
Gold Coast Trades College	✓							
Realistic Training Options	✓							
S/T Construction Techniques	✓							
Staysafe Industry Training Pty Ltd	✓							
TAFE Queensland	✓							
TAFE SA						✓		
TasTAFE					✓			
TAFE NSW		✓						
Train N Trade		✓						

RTO	QLD	NSW	ACT	VIC	TAS	SA	WA	NT
Training Professionals Pty Ltd	✓							
IPS Institute	✓							
Get Education Australia				✓				