

Qualification Title: New Zealand Certificate in Plumbing (Level 4)

Qualification number: 2663

Date of review: 12 July 2022

This report refers to graduates awarded this qualification prior to: December 2021

Final decision on consistency of the qualification: National consistency is confirmed

It was agreed at the review meeting that the threshold, for the purpose of this consistency review, was aligned with the graduate profile outcomes of the qualification (version one).

Threshold:

The threshold to determine sufficiency with the graduate profile was determined as evidence of graduates who are able to:

- Install, maintain and repair plumbing in accordance with the legal requirements for a licensed plumber
- Interpret plumbing drawings and specifications and produce drawings and records of as-built work
- Understand and apply the legislative responsibilities of a licensed plumber
- Make, install and repair flashings and penetrations and repair external envelope claddings that are associated with plumbing systems
- Install, maintain and repair solid fuel space heaters
- Install, maintain and repair profiled metal roofing and wall cladding
- Work with consideration of other construction trades and related services on site and practice ethically
- Apply material science and selection, trade physics, and environmentally sustainable considerations for plumbing systems
- Apply safe working procedures and practices; identify and control hazards in a working environment; and isolate and test for safety and explain the limitations on plumbers carrying out electrical work.
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Education Organisations with sufficient evidence

The following education organisations have been found to have sufficient evidence.

MOE Number	Education Organisation	Final rating
6004	Unitec New Zealand Ltd	Sufficient
6006	Ara Institute of Canterbury Ltd	Sufficient

Introduction

The purpose of this level 4, 249 credit qualification is to provide the plumbing sector with people who are suitably skilled as plumbing tradespersons and ready to apply for registration as a licensed plumber under the Plumbers, Gasfitters, and Drainlayers Act 2006. This qualification provides an entry into the plumbing industry and the training is generally undertaken in conjunction with an apprenticeship agreement in plumbing.

Once registered and licensed, graduates are able to legally carry out all sanitary plumbing work, essential for the safe delivery and removal of water, and carry out any work involved in fixing or unfixing pipes, plumbing fixtures or appliances including; traps, waste or soil pipes, ventilation pipes, or overflow pipes and pipes that supply water. Licensed plumbers are qualified and licensed but must be supervised by a certifying person who is ultimately responsible for ensuring the work is done competently.

This qualification provides an entry into the plumbing industry and may build on the National Certificate of Educational Achievement (Level 2) [Ref: 0973]. The Vocational Pathway Award in Construction and Infrastructure is also relevant but not required. The other entry pathway to the plumbing industry is the New Zealand Certificate in Plumbing, Gasfitting and Drainlaying (Level 3) [Ref: 2660] that is intended for learners who do not have an apprenticeship agreement in any of those trades. The Level 3 qualification is not a pre-requisite for this qualification, but some credits gained from the lower level qualification will contribute to this Level 4 qualification. This qualification may lead to a higher level qualification in a related field.

The earlier version of this qualification was developed by The Skills Organisation in 2015 in collaboration with the plumbing sector and was listed on the New Zealand Qualifications Framework (NZQF). A review was held in 2020 and version 2 is now listed on the framework.

There were two education organisations with graduates from their programmes of study leading to the award of this qualification. These organisations had a total of 78 graduates over the reporting period.

The consistency review was held via an online meeting, and was attended by representatives of the education organisations, Waihanga Ara Rau (Construction and Infrastructure) Workforce Development Council (WDC) and several observers.

Evidence

The education organisations provided a range of evidence to demonstrate that their graduates met the graduate profile outcomes.

The criteria used to judge the evaluation question were:

- The nature, quality and integrity of the evidence presented by the education organisation
- How well the organisation has analysed, interpreted and validated the evidence, and used the understanding gained to achieve actual or improved consistency

- The extent to which the education organisation can reasonably justify and validate claims and statements relating to the consistency of graduate outcomes, including in relation to other providers of programmes leading to the qualification.

The evidence included:

- Confirmation that each education organisation had a coherent programme of study which ensured that programme components led to the graduate profile.
- Evidence that learners were in work (apprentices) and that their competency could be demonstrated in a workplace environment, as well as in the simulated environment at block courses.
- Internal and external moderation evidence that assured the programme was assessed at an appropriate level, and assessment was valid.
- Feedback from graduates, employers, and next-level tutors, confirming that the programme had provided graduates with a range of skills aligned to the graduate profile.
- Destination data showing that graduates had remained in the plumbing industry, and many had become registered as tradesman plumbers under the Plumbers, Gasfitters, and Drainlayers Act 2006.

How well does the self-assessment and supporting evidence provided by the education organisation demonstrate that its graduates match the graduate outcomes at the appropriate threshold?

The education organisations submitted a good range of evidence that could be triangulated to demonstrate that their graduates match the graduate outcomes at the agreed threshold.

The education organisations provided good evidence related to their approved programmes of study and how the course learning outcomes were mapped against the qualification's graduate profile outcomes, and of the quality and suitability of assessments. All learners were employed as apprentices, giving them ample opportunities to demonstrate their competency in the workplace environment.

Evidence relating to moderation demonstrated good internal moderation processes and generally positive results. External moderation had been carried out. However, this had been disrupted by the restrictions of the pandemic. Overall, this evidence attested to the validity of the assessment practices supporting graduates' consistency with graduate outcomes.

Graduate, employer, and in one case next-level tutor survey results and feedback, generally confirmed that graduates had gained, and were using, the skills and knowledge outlined in the graduate profile. The feedback relating to two GPOs (install, maintain and repair solid fuel space heaters, and install, maintain and repair profiled metal roofing and wall cladding) was less positive, reflecting the specialisation of the industry, and the limited opportunities graduates had to perform the skills related to these outcomes.

Destination data was generally strong, showing graduates were working in plumbing roles that required the application of skills and knowledge required by the graduate profile. Many had become registered plumbers, and some were continuing with their studies for the allied trades of gassfitting and drainlaying.

Overall, the self-assessment and supporting evidence supplied, by the education organisations, demonstrates that their graduates meet the graduate outcomes at the determined threshold.

Special Focus (includes special focus on a strand or outcome)

None.

Issues and concerns

As noted above the feedback from graduates and employers indicated that the GPOs - install, maintain and repair solid fuel space heaters, and install, maintain and repair profiled metal roofing and wall cladding, are becoming less relevant to those working in the plumbing industry, as more specialisation occurs. This is limiting graduates' opportunities to become fully competent in the skills related to these outcomes, and is impacting on employers' perceptions of graduates' preparedness in these outcomes.

Recommendations to Qualification Developer

It was recommended to Waihanga Ara Rau (Construction and Infrastructure) Workforce Development Council (WDC) that the issue outlined above be taken into consideration at the next qualification review.