

11.12.2023

To Waihanga Ara Rau.

Re- PGD training reimagined, feedback on Plumbing and Drainlaying (combined).

The below feedback is provided by the Association of Hydraulic Services Consultants Australia – New Zealand Branch (AHSCA-NZ)

Hydraulic services consulting is a specialised discipline concerned with the flow and conveyance of, water, sewer, stormwater and gas services.

Hydraulic Services, and the design of these services, help maintain a minimum level of public health standards throughout the developed world, and it helps prevent the spread of disease.

Just like builders need architectural plans to construct a building, Plumbers, Drainlayers and Gasfitters need a set of hydraulic drawings to ensure liquids safely go where they need to.

The World Health Organisation (WHO) has produced a document, Health Aspects of Plumbing, which “examines the microbiological, chemical, physical and financial risks associated with plumbing”. If minimum standards are not followed, there can be dramatic effects on worldwide health. The WHO estimates that approximately 3.1 million people die per year because they do not have access to safe drinking water and sanitary systems.

Hydraulic Services in New Zealand is the design and documentation of plumbing, drainage and gas services including, but not limited to:

Sanitary/Sewer plumbing and drainage.	Potable Hot, cold, and warm water supply.
Onsite wastewater treatment including grey water and black water treatment systems.	Hot water generation plant.
Trade waste.	Non -potable water supplies.
Pumpstations, sewer and stormwater.	Natural gas and liquefied petroleum gas (LPG) supply.
Backflow prevention.	Laboratory Gases (not all Hydraulic consultants cover this).
Stormwater systems, including downpipes (excludes water proofing).	Medical gases (not all Hydraulic consultants cover this).
Syphonic rainwater systems.	Fire protection (not all Hydraulic consultants cover this).
Stormwater treatment systems.	Expert Witness services (not all Hydraulic consultants provide this)
Rainwater and stormwater reuse.	Peer reviews and Site Observations

The New Zealand Association is made up of members based in different parts of New Zealand, almost all the members have come from a plumbing and drain laying background where they have eventually moved away from day-to-day hands on work and into Hydraulic Consulting and Design, therefore have a wide a varied range of skills, knowledge and experience to be able to comment on the proposed qualifications.

Members have provided feedback; this has been summarised as below.

Outcome Statements:

Plumbing:

The outcome statement is somewhat misleading, especially when reviewing the proposed qualification and limitations, it should read as “to safely carry out a limited scope of sanitary plumbing work” not all sanitary plumbing work.

OUTCOME STATEMENT/TE TAUĀKI Ā-HUA
Strategic Purpose statement/ Te rautaki o te tohu
The purpose of this qualification is to provide the plumbing sector with people who are skilled plumbing tradespersons and ready to apply for registration as a licensed plumber under the Plumbers, Gasfitters, and Drainlayers Act 2006.
This qualification is targeted at people working in the plumbing industry and who can fulfil the requirements to obtain a limited trainee authorisation issued by the Plumbers, Gasfitters and Drainlayers Board.
Graduates will have the skills and knowledge required to be, once registered and licensed, authorised to safely carry out all sanitary plumbing work essential for the safe delivery and removal of water.

Drainlaying:

Like plumbing, the outcome statement for Drainlaying is somewhat misleading, especially when reviewing the proposed qualification and limitations, it should read as “to safely carry out a limited range of Drainlaying work” not all drainlaying work.

OUTCOME STATEMENT/TE TAUĀKI Ā-HUA
Strategic Purpose statement/ Te rautaki o te tohu
The purpose of this qualification is to provide the drainlaying sector with people who are skilled as drainlaying tradespersons and ready to apply for registration as a licensed drainlayer under the Plumbers, Gasfitters, and Drainlayers Act 2006.
This qualification is targeted at people working in the drainlaying industry and who can fulfil the requirements to obtain a limited trainee authorisation issued by the Plumbers, Gasfitters and Drainlayers Board.
Graduates will have the skills and knowledge required to be, once registered and licensed, authorised to legally carry out all drainlaying work . A licensed drainlayer can lay, alter, reconstruct, extend, repair, and open up drains and associated traps and connect drains up to and away from wastewater treatment stations.

Credit comparison.

Credit Comparison			
Trade	Credits		Loss of Credits
	Exiting version	Proposed New Version	
Plumbing	250	210	40
Drainlaying	140	125	15

Effectively if 1 credit is known to be approximately 10 hours of learning time, then:

- Plumbing has lost 400 hours.
- Drainlaying has lost 150 hours.

It is noted within the Drainlaying proposal that with the reduction of credits has come the reduction of scope, two examples of particular note are stormwater and onsite wastewater systems, both extraordinarily complex areas within the Drainlaying trade. There is a very real possibility that persons coming through this new system may not be suitably qualified in respect to installing and/or maintaining these on-site wastewater systems within certain jurisdictions (Local Authorities) across New Zealand, especially if there is a common theme with failed inspections and consultant feedback to the local authorities.

Stormwater is disappointing given the ever-increasing frequency of storm events and the increase in complexity requirements around stormwater catchment/treatment and disposal.

Looking at Plumbing, it is noted that roofing has taken a massive hit and we can only assume this is the beginnings of phasing out roofing altogether from the plumbing training system, this will no doubt have a detrimental downstream affect with the rural plumbers where they still carry out a lot of roofing installations, there is a very real possibility the LBP regime will look to strike plumbers off with respect to roofing given the lack of training that is being put forward with this qualification.

Roofing is out of step in comparison to the Australian Cert III, as are many of the proposed units.

There is a potential risk that the reciprocity agreement with the qualifications and licensing may need to be reviewed, with New Zealand Trained plumbers and drainlayers requiring additional training to work within Australia.

This is something we will likely raise with the Australian AHSCA Chapters and their State Licensing Regulators, in respect to Plumbing and Drainlaying.

Level of complexity

With the loss of learning credits, the diminishing of demonstrating knowledge and a move to more onsite assessments whereby the employer (assume they are accredited to assess) can tick the box for some assessments. There is consensus that the qualification potentially could be reframed as a level 3, whilst the Level 3 (we have not seen this yet) potentially could be reframed as a L2.

Very few employers cover every single aspect of the two trades, with many focusing on what they know, i.e., domestic only, maintenance only etc. It must also be noted that plumbing and Drainlaying is varied depending on which area/region you are situated, a rural plumber, drainlayer will require distinctly different skill sets and knowledge to say a plumber drainlayer engaged in multi-story high rise work, in any instance no matter what part of the country you are trained in, an employer should be confident to employ anyone from around the country based on an educationally sound national apprenticeship qualification/programme.

The complexity and embedded knowledge of the training syllabus must take this into account and shouldn't try and form a cookie cutter type approach to the training.

The foul water units appear to be limited in scope with mention up to 3 floors only, this will heavily restrict the training and what can be covered including the sciences behind what occurs within a stack system. There will no doubt be a very limited scope of what can be taught and installed with respect to AS/NZS 3500.2, we suggest that the "Purpose" needs to be re-written noting the restrictions of up to 3 floors only, as this will miss many important installation requirements, and is no doubt based on a domestic type of situation only, whereby seismic and expansion, acoustics, structural constraints and passive fire implications are almost always excluded, as is vacuum and reduced velocity aerator stack systems.

<p>Purpose</p>	<p>This unit standard is for people who work in the plumbing industry.</p> <p>People credited with this unit standard are able to install and secure foul water systems in buildings in accordance with Building Code Clause G13 Acceptable Solution 3 and job specifications.</p>	<p>Purpose</p>	<p>This unit standard is for people who work in the plumbing industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> - demonstrate knowledge of the installation and supporting of foul water systems in buildings in accordance with job specifications and regulatory requirements, and - demonstrate knowledge of regulatory requirements, processes selection of methods and materials, and underpinning concepts and principles, as applied to the installation, supporting, and maintenance of foul water systems.
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We also appreciate many of the polytechnics and other training providers are more suited to pre-trade training with their facilities as opposed to the wider scope of requirements with apprenticeship training, we are unsure if any of the institutes have a 3+-story training platform to allow the different multitude of stack work configurations as an example.

Regulatory Requirements

One question raised was around persons undertaking the qualification whilst working fulltime in another industry or another job. How is this going to be managed? The purpose of an apprenticeship is learning on the job whilst being employed in plumbing and/or Draining, so actively working in either trade every day, every week, every year.

Therefore, is this proposed qualification open to anyone who can get someone to provide/sign for supervision then that person just takes time off their usual work to attend block courses (if any, especially if the person signing off the work just ticks everything as competent), basically what measures are to be put in place to prevent manipulation of the system?

<p>Other requirements for the qualification (including regulatory body or legislative requirements)/ Kō ētahi atu here o te tohu (tae atu hoki ki ngā here ā-hinonga whakamarumarū, ki ngā here ā-ture rānei)</p>	<p>Regulatory Requirements</p> <p>Potential learners must be made aware that to become licensed they are required to meet the competencies, registration, and licensing requirements specified by the Plumbers, Gasfitters and Drainlayers Board (Plumbing Registration and Licensing) Notice 2016, or any amendments or replacements, referred to as "PGD Board Competencies".</p> <p>Learners enrolled in this qualification and undertaking sanitary plumbing in New Zealand must hold a current limited certificate trainee authorisation or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006 by the PGD Board.</p>
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Observations:

Whilst conducting site inspections, members know very quickly if the installers are either domestic, commercial, or industrial plumbers based on the installation methods, many moving from domestic into commercial learn the hard way with rejected works requiring rework.

With respect to site inspections, our members are engaged in construction monitoring and attend site inspections on a regular basis, they cover all aspects of the trades, domestic, commercial industrial and civil works, the consensus of members is the skill sets and knowledge is noticeably diminishing onsite, especially with the newer generations coming through the industry, especially over the last the 5-6 years, potentially from constant training disruptions due to numerous reasons.

What is of concern is that this generation will be passing on already limited knowledge to another generation that will come through, with what is appearing to be even less knowledge, this is of a concern, especially when the health and safety of the public is potentially at stake.

If we turn to our colleagues in Australia, their training system is longer and is getting longer at every training review, they appear to understand the complexities of the industry and appreciate education must not be sacrificed just to appease fast tracking for the sake of fast tracking and tick boxing.

Ultimately the devil will be in the detail at programme delivery level, hopefully training will not be compromised even further than it has over the past 10 years where the focus from the outside looking in appears to be on assessment and gaining credits as opposed to actual training of the trade intricacies and more importantly trades sciences. We fully appreciate you cannot learn everything in 5 years, you still continually learn throughout your career, however the underpinning fundamentals of the “why” is critically important as a foundation of learning.

With a strong drive from many areas to allow plumbers and drainlayers to self-certify, this newly proposed qualification does not provide a whole lot of confidence as a first step towards self-certification.

The Association will watch with interest to see how these qualifications progress, the Association is also intrigued to see what happens with the governments proposal to de establish Te Pukenga, hopefully this uncertainty and continual restructuring does not impact on apprenticeship training for the Plumbing, Drainlaying and Gasfitting trades.

Lastly, thank you for the opportunity to provide feedback on these proposed new qualifications, it is great to see work being done on these and hopefully the final refined product in conjunction with a well thought through educationally sound approved programme will produce world class plumbers and drainlayers!

11.12.2023

Regards

A handwritten signature in black ink, appearing to read 'Nick Fleckney', is written over a light blue grid background.

Nick Fleckney
President AHSCANZ



Website : [Home - AHSCA](#)