

EMPLOYERS' GUIDE TO plumbing and gasfitting apprenticeships





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INTRODUCTION

The apprenticeship training system is essential to maintaining a sound industry that can prosper and continue to deliver value to New Zealanders. Taking on an apprentice not only helps to ensure a solid future for your industry, it is also an opportunity to build your own business success. A well managed apprentice can allow you to take on more work and contribute significantly to business profitability.

A recent survey shows that employers who put the time and effort into training their apprentices generally get significant business benefit.

“I definitely get major benefit from employing apprentices, they contribute significantly to my business profitability, often within a relatively short time of starting their apprenticeship”

– Certifying plumber, gasfitter and drainlayer

“I find that often the apprentices I have trained from day one are much more competent part way through their apprenticeship than qualified and licensed guys I have employed”

– Certifying plumber, gasfitter and drainlayer

Plumbing and gasfitting apprenticeships are almost always done together. This is because much of the learning applies to both. Some people also do a drainlaying apprenticeship before or after doing plumbing and gasfitting. For more information about drainlaying apprenticeships go to our website (www.ito.co.nz), email us at info@ito.co.nz or call us on 0800 277 736.

TAKING ON AN APPRENTICE

If you are considering taking on an apprentice selecting the best possible person is obviously very important. Most employers believe that attitude, work ethic and communication skills are more important than any existing trade related knowledge and skills a person may have gained from school or a pre-trade course. The pre-apprenticeship programmes that are available are a good way for someone to get an idea of what plumbing and gasfitting is all about and can help them to decide if they want to go into an apprenticeship.

“The most important things I look for when considering someone for an apprenticeship are attitude, presentation and communication skills”
– *Certifying plumber and gasfitter*

Regardless of what is important to you when looking for an apprentice, we strongly recommend that you think about how you can get good information about the things that are important to you. Getting them to tell you about specific things they have done in the past that demonstrate what you are looking for is generally much better than just relying on your gut feel when interviewing someone.

As you know plumbing and gasfitting is complex work requiring a lot of knowledge and skill. This doesn't mean a person has to have done well at school to become an apprentice, but they do need reasonably good reading and maths skills. Assistance is available to help them to develop these skills if they don't already have them. Just contact us if you want more information about this (0800 277 736 or info@ito.co.nz).

Once you have agreed to take on an apprentice, there is some simple paperwork to complete to get them formally enrolled in their apprenticeship. Government pays part of the cost of their training, but there are also fees that must be paid by them (or by you). They also need to have special apprentice licences to do plumbing and gasfitting work (known as a limited certificates). These free limited certificates are issued by the Plumbers, Gasfitters and Drainlayers Board (PGD Board). You have to make sure they have a current limited certificate at all times during their apprenticeship.

The apprenticeship agreement is not an employment contract. You need to make sure you have a separate employment contract with them. We do recommend that their employment contract requires them to complete their training agreement on time, as this helps to emphasise the importance of the training programme. Once they complete their apprenticeship, you will probably need to agree a new employment contract with them.

CAREER PATHWAY

An apprenticeship should take four years to complete, provided the apprentice regularly works through their distance learning study, attends block courses (practical hands-on courses run at the polytechnic) and completes written assessments at the block courses.

Deciding on your career:

Some ways of finding out if plumbing and gasfitting is for you:

- BConstructive course
- gateway programme
- careers advisor
- family & friends
- pre-trade course
- talk to the ITO
- work experience

Your apprenticeship:

- an agreement between you, your boss and the ITO
- 4 years for plumbing and gasfitting (2 years for drainlaying)
- you have to get limited certificates each year from the PGD Board
- you have to be supervised
- National Certificates awarded on completion

Getting registered and licensed:

- you have to pass PGD Board exams after you complete your apprenticeship
- you have to pay the one off registration fee
- you have to pay the annual licence fee
- you still have to be supervised
- you have to do some ongoing learning each year

Getting your certifying licence:

- you have to be licensed for 2 years minimum
- you have to pass PGD Board exams
- you have to pay the annual licence fee
- you have to do some on-going learning each year
- you can supervise apprentices and other workers

It's really important that they don't fall behind in their study. The Government funding for their apprenticeship is only available for four years, so if they take longer than this they will have to pay the extra cost. Your support and encouragement throughout their apprenticeship can make a huge difference to ensure they keep up to date with their study.

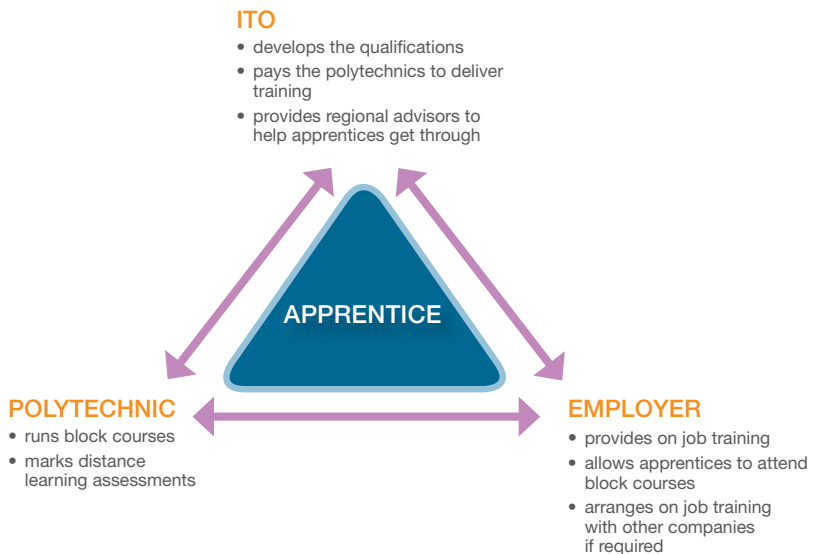
Once they have successfully completed all the requirements of their apprenticeship they are awarded National Certificates in plumbing and gasfitting. They then have to sit exams to prove that they are ready to become a registered and licensed plumber and gasfitter. Once they have passed the exams, which are set by the PGD Board, they can then get their license by applying to the PGD Board (and paying the registration and license fee).

When they first become a licensed plumber and gasfitter they still have to be supervised by you or by another certifying plumber and gasfitter. This means that you have overall responsibility to make sure their work is done properly and is safe, but doesn't mean that you have to visit every job they do.

After holding a license for two years a licensed plumber and gasfitter can sit more exams to qualify them for a certifying license. Once they have passed these exams they get their certifying license by paying the registration and licence fees to the PGD Board. Certifying plumbers and gasfitters no longer need any supervision, in fact they are now able to supervise others and will hopefully at some stage take on an apprentice themselves.

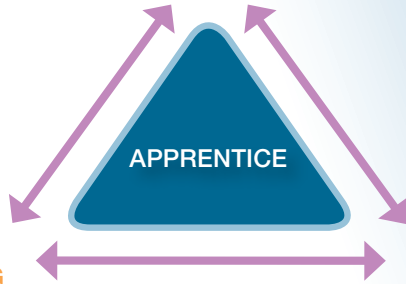
To continue to hold their annual license certifying plumbers and gasfitters have to complete a small amount of study each year to make sure their skills and knowledge are kept up to date. There are a wide range of courses and seminars they can attend to qualify them to renew their licence.

THE APPRENTICESHIP TRAINING SYSTEM



ON THE JOB LEARNING

- your boss showing you how to do things and explaining why they are done that way



DISTANCE LEARNING

- study you must do in your own time
- gives you an understanding of the theory behind the practical work you do on the job
- involves working through study guides

BLOCK COURSES

- run at the polytechnic – hands on practical work
- can cover types of work that you might not learn on the job
- designed to test the knowledge and skills that you should have gained by completing your distance learning
- includes written assessments of distance learning work

Your role as employer and supervisor

You are the person who an apprentice will learn most from. Their apprenticeship is mainly about learning on the job. Most plumbers and gasfitters are very good at training, even though many of them don't realise it. One of the key aspects of good on the job training is encouraging apprentices to ask questions when they are not sure about how to do something. Always try to explain to them why something is done a particular way, rather than just telling them how to do it.

Developing a great working relationship with your apprentice is possibly the most important thing for you to get the most from them and for them to get the most from you. Good working relationships don't happen by chance. If you work at it, you will get the rewards.

“My boss is really good at explaining why a job is done a particular way and what happens if it is done wrong. This is heaps more helpful than just telling me to do it his way” – Apprentice

Some specific ways you can help your apprentice to learn and develop skills are:

- asking them about how they would do a specific task, rather than just telling them how to do it
- check their understanding by asking them questions
- asking them about what they are currently studying and sharing your knowledge on that subject
- organising their work so they can get practical experience relating to the theory they are currently studying
- reviewing their work and providing positive feedback on tasks they have done well
- identifying work that they have done the wrong way, explaining the correct way, and explaining why it should be done that way
- telling them where they can get more information e.g. Building Code compliance documents, manufacturers instructions etc

One of your most important responsibilities is to ensure that the supervision requirements of the apprentices' limited certificates are met. The apprentice supervisor must hold a certifying licence, but doesn't have to be their employer. In most cases the employer is a certifying plumber and gasfitter and formally takes on the role of supervisor of the apprentice. In some cases there may be one person supervising the plumbing work and another supervising the gasfitting. However, in all cases the certifying licence holder must notify the PGD Board that they are taking on the supervision responsibility.

For the first year of their apprenticeship the apprentice must work in the presence of a licence holder. This person could be their supervisor, or could be another licence holder who is supervised by the same certifying licence holder.

Regardless of how supervision is managed, the certifying licence holder has ultimate responsibility for making sure:

- the work is done competently
- the work is done safely
- the work complies with all regulations

The following table lists the documents that provide ways to comply with regulations. You should make sure that your apprentice has access to these documents. They will also need your help to understand how to use them.

PLUMBING		GASFITTING	
Building Code Compliance document ¹	Referenced NZ Standard ²	Building Code Compliance document	Referenced NZ Standards
E1 – Storm water		G11 – Gas	NZS 5261, AS/NZS 5601
E2 – Flashings		G4: Ventilation	
G1 – Showers & toilets			
G2 – Laundries			
G3 – Kitchens			
G12 – Water supply	AS/NZS 3500		
G13 – Sanitary plumbing	AS/NZS 3500		
H1 – Hot water energy efficiency	NZS 4305		
Simple house compliance document			

1 Published by Department of Building and Housing – available free from www.dbh.govt.nz

2 Published by Standards New Zealand – available for purchase at www.standards.co.nz

They should also be familiar with some specific relevant parts of the following documents:

Building Act 2004

Building Code Compliance Document B2: Durability

Health (Drinking Water) Amendment Act 2007

Plumbers, Gasfitters, and Drainlayers Act 2006

Health and Safety in Employment Act 1992

Gas Act 1992

Gas (Safety and Measurement) Regulations 2010

NZS 5262:2003 Gas appliance safety.

AS/NZS 1596:1997 Storage and Handling LP Gas.

NZS 5428:2006 Installation and Use of LPG for Non-Propulsive Purposes in Caravans and Boats.

AS/NZS 3604:1999 Timber Framed Buildings – Holes and checks in studs, plates and joists.

If you specialise in certain types of jobs you might not be able to give your apprentice all the practical experience they need. You may need to arrange for them to spend some time with another company, so they can get the broad range of practical experience necessary for them to complete their apprenticeship. There may also be some polytechnics or other training providers able to provide some specific hands on training to fill any gaps.

The ITO provides each apprentice with an on-site record book where details of jobs they do that demonstrate they have gained specific skills must be recorded. Make sure that they keep this record book up to date and complete, as this is important to keep them on track to complete their apprenticeship on time. For many of the practical tasks they do you will have to confirm that they have completed the task competently before they can attend the related block courses. They also have to take their on-site record book with them to block courses for assessment.

You will need to give your apprentice time off to attend block courses. Make sure they tell you dates for block courses as soon as they know them so you have plenty of time to make arrangements to cover while they are away.

Some employers find it works really well to let their apprentice do some study during normal work hours. This can be a regular scheduled study session at a specific time and day of the week, or it might be just using time between jobs to get the apprentice in the habit of using down time efficiently rather than just wasting it.

The polytechnic

The apprentice's block courses and marking of their written assessments is looked after by a polytechnic (or a private training provider). There are several of them around the country so your apprentice can be enrolled at one that is convenient for you and them. The locations and contact details for these organisations are provided on page 18.

Distance learning

Distance learning is a term used to describe the part of the apprentice training that they have to do in their own time. Distance learning involves them working through study guides to prepare them for assessments that are done

at block courses. Their distance learning gives them an understanding of the theory behind the practical work they do on the job. It teaches them about why certain skills are important and why specific tasks are done in a certain way. It provides knowledge they might not need until later in their career, but when they need it they will be pleased they learned it.

It is really important that they keep up to date with their distance learning. If they fall behind they run the risk of not completing their apprenticeship within the four years and having to pay the additional cost of completion.

“The apprentices that do some study every week always do much better than those who leave their study to the last moment”

– Regional Training Advisor

The amount of time it takes to do this distance learning obviously depends on the individual, but if they do a few hours every week they should be fine – and they will soon work out if they need to do more to keep on track. If they are worried that their reading and maths skills might hold them back on their distance learning get them to contact the ITO. We can arrange for them to get some help (see page 14 for contact details).

Block Courses

Block courses are run at the polytechnic and involve hands-on practical tasks. They can sometimes also cover types of work that an apprentice might not get the opportunity to learn about on the job. They are also designed to test the knowledge and skills that they should have gained by completing their distance learning. At each block course apprentices have to complete written assessments relating to their distance learning.

All polytechnics regularly run an initial introductory one week block course to get apprentices started and answer any questions they may have about their apprenticeship. They should be able to attend this first block course soon after enrolling in their apprenticeship. Following the introductory block course there is a one week block course every 17 weeks or so throughout their apprenticeship.

If you have any questions or problems relating to the polytechnic training programme you can contact the polytechnic tutor, or the ITO, at any time.

The Industry Training Organisation (ITO)

The Plumbing, Gasfitting, Drainlaying and Roofing Industry Training Organisation (ITO) gets government money to pay for part of the apprentice's training. We then pay a polytechnic (or a private training provider) to run block courses that apprentices must attend and to mark their written assessments.

The ITO will stay in touch with your apprentice during their apprenticeship to make sure everything is going OK. You can contact us at any time if you have any questions or problems regarding any aspect of the apprenticeship.

“My ITO training advisor has been a great help to me. I know I can call him whenever I have a question or problem and he has always been able to help me.”

– Apprentice

If your apprentice is less than 22 years old they may be eligible for extra assistance under the Modern Apprenticeship Scheme. The ITO can give you and your apprentice information about this scheme.

CONTENT OF THEIR FOUR YEAR JOURNEY

Most apprentices will probably be familiar with the Unit Standard system from their study at school. Unit Standards are just small chunks of a bigger subject (in this case plumbing and gasfitting). Apprentices are awarded National Certificates once they complete the required unit standards.

The National Certificates in plumbing and gasfitting is broken down into 45 unit standards. Some of these unit standards are achieved by completing distance learning written assessments at block courses, some are achieved through practical assessments at block courses, and a small number are achieved by attending other short courses. Apprentices may even have achieved some of

Our Four Regional Training Advisors and Their Coverage



1

Peter Gembitsky

Auckland and
Northland

021 318 435



2

Gillian Abbott

Waikato, Bay of
Plenty, Gisborne

021 822 718

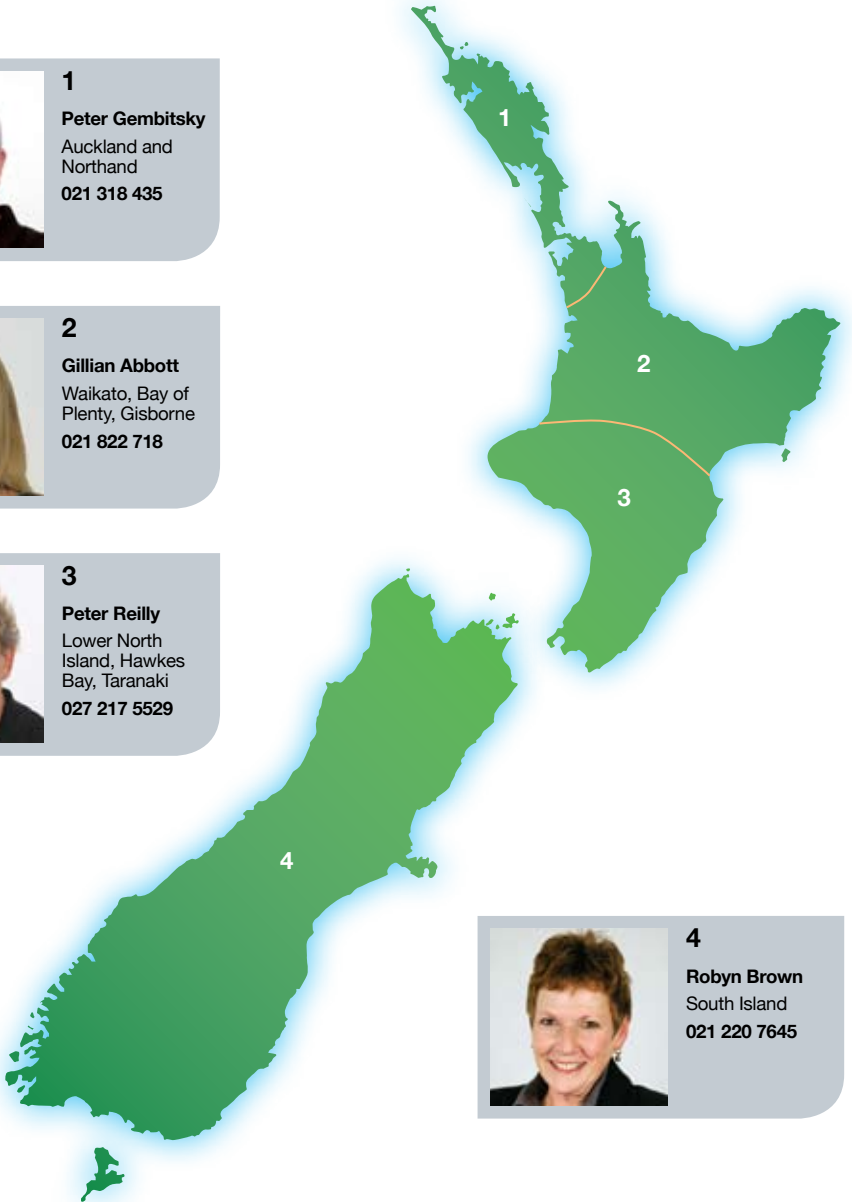


3

Peter Reilly

Lower North
Island, Hawkes
Bay, Taranaki

027 217 5529



4

Robyn Brown

South Island

021 220 7645

these unit standards at school.

The 45 unit standards that make up the National Certificate are as follows:

Units achieved by attending a course

- 6400** Manage first aid in emergency situations
- 6401** Provide first aid
- 6402** Provide resuscitation level 2
- 15757** Employ fall arrest systems on building and construction sites
- 18426** Demonstrate knowledge of hazards associated with confined space

(The ITO can give you information about where and when these courses are held)

Units achieved by completing distance learning written assessments at block courses

- 2138** Demonstrate knowledge of asbestos and safety procedures
- 2136** Identify and describe hand tools and testing equipment for plumbing
- 2137** Identify and describe trade equipment and power tools for plumbing
- 2114** Identify and describe hand tools and testing equipment for gasfitting
- 2115** Identify and describe trade equipment and power tools for gasfitting
- 21883** Demonstrate knowledge of hazards and precautions for working with gas in plumbing, gasfitting or drainlaying
- 21897** Demonstrate knowledge of the gasfitting of LPG cylinder supply systems for gas installations
- 21900** Demonstrate knowledge of safety requirements in gasfitting
- 21881** Describe ethical and legal considerations for plumbing, gasfitting or drainlaying services
- 21886** Demonstrate knowledge of specialist sanitary appliances and fixtures
- 2159** Demonstrate knowledge of the installation and maintenance of compressed air and vacuum services
- 21896** Demonstrate knowledge of the installation of Type 3 gas appliances and equipment

Unit standards achieved through practical assessments on block courses

- 57** Provide customer service in given situations
- 3490** Write an incident report
- 4249** Demonstrate care and timeliness as an employee

- 21209 Demonstrate knowledge of and carry out health and safety procedures for a building construction site
- 2116 Install, commission and maintain consumer gas pipework
- 1099 Excavate and trench for plumbing, gasfitting or drainlaying
- 1122 Establish line, level and gradient for plumbing or drainlaying
- 21890 Install, commission and maintain Type 1 gas appliances and equipment
- 21884 Install and maintain roofing, rainwater handling, and cladding systems and flashings
- 2143 Install secure and maintain water supply pipework in buildings
- 2157 Install and maintain air heating and ventilation ducting and equipment
- 23849 Install and maintain water mains and water supply systems and reticulation
- 23850 Install, commission and maintain open vented and push through hot water supply systems
- 23851 Install, commission and maintain valve-vented hot water supply systems
- 23845 Demonstrate metal welding for plumbing or gasfitting
- 21893 Install and commission Type 2 gas appliances and equipment
- 2117 Install, test and maintain water supply backflow prevention devices
- 2144 Install, secure and maintain foulwater systems
- 2149 Select, install and maintain pumps and controls for water supply and disposal systems in plumbing
- 2153 Install and maintain solid fuel space heaters and flues
- 21899 Identify, test and maintain control and safety devices in gas appliances
- 21887 Draw patterns and construct sheet metal products for plumbing or gasfitting requirements
- 21879 Determine job requirements and describe job costing factors for plumbing, gasfitting or drainlaying
- 21882 Interpret drawings and specifications and draw drawings for plumbing, gasfitting, or drainlaying
- 21885 Install and maintain sanitary appliances and fixtures
- 24305 Install solar water heating systems
- 2132 Install, commission and maintain gas metering equipment and interpret and record gas meter data

ORGANISING THEIR STUDY PROGRAMME

The apprentice's ITO support staff, their friends and family can all help them to get through their apprenticeship, but the most important thing that will get them through is their own commitment and being well organised. You can have a big influence on their commitment and organisation by encouraging them and reinforcing to them the benefits of completing their apprenticeship. Having a written study plan that they follow and regularly review is probably the most important thing they can do to keep them on track. A study plan template is available from our website. You might be able to assist them to complete this and certainly will be able to encourage them to do it.

“The guys who have written down their study plan always do much better than the ones who say they have a plan but reckon they

KEEPING TRACK OF THEIR PROGRESS

You can keep track of your apprentice's progress through their apprenticeship by logging on to the ITO website. This online system is easy to use and gives you a simple way of regularly checking that they are on track.

KEY ORGANISATIONS AND HOW THEY FIT TOGETHER

Plumbers, Gasfitters and Drainlayers Board (PGDB)

- issues licences to suitably competent people
- investigates complaints against people

Tertiary Education Commission (TEC)

- allocates Government funds to ITO
- monitors ITO performance

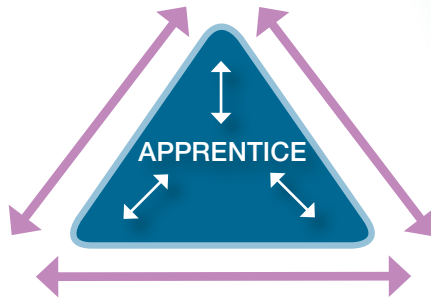
NZ Qualifications Authority (NZQA)

- records unit standards achieved
- monitors quality of ITO developed qualifications



ITO

Freephone: 0800 277 736
Email: info@ito.co.nz



POLYTECHNICS

G & H Training Ltd (Auckland)
Tel: 09 273 2093

Manukau Institute of Technology MIT (Auckland)
Freephone: 0800 83 44 253

Waikato Institute of Technology WINTEC (Hamilton)
Freephone: 0800 2 WINTEC (2 946 832)

Wellington Institute of Technology WelTec (Petone)
Freephone: 0800 WelTec (935 832)

The Open Polytechnic of New Zealand TOPNZ (Lower Hutt)
Freephone: 0508 650 200

Christchurch Polytechnic Institute of Technology CPIT (Christchurch)
Tel: 03 940 6073

Southern Institute of Technology SIT (Invercargill)
Freephone: 0800 403 337

EMPLOYERS

- potentially any plumbing and gasfitting business
- Masterlink (part of Master Plumbers, Gasfitters and Drainlayers)
0800 502 102
- Apprenticeship Training Trust
0800 18 78 78



