PGDB & Mico 2016
CPD Training Roadshow
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Topic 1: Supervision

Topic 1 of PGDB & Mico CPD Training Roadshow 2016 for plumbers, gasfitters and drainlayers focuses on supervision.

This topic covers the following:

• Supervision guidelines developed by the Plumbers, Gasfitters and Drainlayers Board.

• What supervision is and why it is important.

• Important terms.

• Who is responsible for supervision?

• Key aspects to proper supervision.

• Persons who must be supervised when carrying out restricted work:
  » trainees
  » exemptions under supervision
  » provisional licence holders (eligible overseas people)
  » licensed tradespersons (plumbers, gasfitters, drainlayers).

• Ensuring the appropriate level of direction and control for a job.

• Types of supervision:
  » direct supervision
  » general supervision
  » broad supervision.

• Remote supervision.

• Template for determining level of supervision required.

• The number of people who can be supervised by one supervisor.

• Weekend work.

• Systems and processes the certifier should have in place.

• Audit of your supervision system checklist.
Supervision guidelines

Supervision requirements have been prescribed in Registration and Licensing Gazette notices published by the Plumbers, Gasfitters and Drainlayers Board. These prescribed requirements and the supervision guidelines developed by the Board form the basis of Topic 1.

The Board developed supervision guidelines in response to industry feedback that there is a lack of clarity around how supervision should be implemented.

The purpose of these guidelines is to give practical guidance to the industry on what the Board considers to be best practice supervision.

These are guidelines only, as opposed to rules, and, are therefore not binding. However, as best practice statements, they will be used by the Board to assist it in determining when to take action against individuals for not exercising proper supervision. For that reason, it is important the industry understands and follows the guidelines provided.

What supervision is and why it is important

The definition of supervision in the Plumbers, Gasfitters, and Drainlayers Act 2006 (the Act) makes it clear that the supervision must involve direction and control that is sufficient to ensure the following occurs:

- That the work is performed competently.
- That appropriate safety measures are adopted.
- That the work is performed in compliance with the Act and regulations, and in the case of sanitary plumbing or drainlaying, regulations under the Building Act 2004; and in the case of gasfitting, regulations under the Gas Act 1992.

Supervision has two main purposes:

- It ensures standards of competency and safety are achieved by those who are authorised to undertake restricted work (quality control).
- It helps to build the overall capability of the industry.
Important terms

It is important to understand the following terms:

- ‘Restricted work’ means sanitary plumbing, drainlaying or gasfitting as those terms are defined in the Plumbers, Gasfitters, and Drainlayers Act 2006 (the Act).

- **Note:** Unauthorised people are NOT to carry out work even if the supervision is efficiently and sufficiently exercised.

- ‘Certifier’ means the registered and licensed certifying plumber, gasfitter or drainlayer who is the person responsible for supervision and who is recorded as the nominated supervisor on the Board’s database.

- ‘Nominated person’ means a person registered and licensed as a certifying or licensed plumber, gasfitter or drainlayer who performs physical supervision on behalf of the supervisor.

- ‘Supervisor’ means the certifier or nominated person who is physically supervising the work.

Who is responsible for supervision?

In the case of each trade, the certifier must supervise the relevant restricted work.

This doesn’t mean that the certifier actually has to physically supervise all the restricted work themselves. The certifier can also allow a nominated person (from the relevant trade) to physically supervise the work. This provides flexibility to arrange for someone else to actually physically supervise the work.

On most occasions the nominated person will be someone from within the same business. If someone from outside the business is engaged to physically supervise the work, the Board recommends that some sort of written acknowledgment or contract is entered into between the certifier and the nominated person recording this arrangement.

Even when a nominated person physically supervises restricted work on behalf of a certifier, it is the certifier who remains ultimately responsible for supervision at all times. This means that the certifier is responsible for having appropriate systems and processes of supervision in place and for ensuring an appropriate level of oversight is applied to each task even if the physical supervision of the work is being carried out by a nominated person.
Question

Answer the following question.

1. If a nominated person is carrying out supervision, who is ultimately responsible for meeting overall supervision requirements?
Key aspects to proper supervision

The Board considers that there are two key aspects to proper supervision.

- The certifier must ensure that there are good systems and processes in place for exercising supervision. Without good systems and processes, it will be much more difficult for the supervision to be effective.

- The certifier must ensure that in relation to each particular task the appropriate level of ‘direction and control’ is applied.

Who must be supervised

The following persons must be supervised when carrying out restricted work:

- trainees
- exemptions under supervision (under sections 19, 21 and 25 of the Act)
- provisional licence holders (usually issued to overseas-qualified people)
- licensed tradespersons (plumbers, gasfitters, drainlayers).

Trainees

During their first year of holding a limited certificate (issued under section 14 of the Act) a trainee carrying out restricted work must be in the presence of the certifier or a nominated person (from the relevant trade). After the first year, trainees still have to be supervised but it doesn’t need to be at the ‘in the presence of’ level.

In the case of plumbing and drainlaying, the certifier must ensure that it has been performed competently and complies with the requirements of regulations under the Act and regulations under the Building Act 2004.

In the case of gasfitting, only a certifying level tradesperson can certify that the work complies with regulations under the Gas Act 1992.
Exemptions under supervision (under sections 19, 21 and 25 of the Act)

During the first two years of working under an exemption under supervision, a person carrying out restricted work must be in the presence of the certifier or a nominated person (from the relevant trade). After the first two years the person must still be supervised but it doesn’t need to be at the ‘in the presence of’ level.

In the case of plumbing and drainlaying, the certifier must ensure that work has been performed competently and complies with the requirements of regulations under the Act and regulations under the Building Act 2004.

In the case of gasfitting, the person physically supervising the work (the supervisor or nominated person) must be the person who disconnects the gas supply before the work commences, must ensure that no pipe or appliance is connected to the gas supply while the work is being carried out and must be the person who connects the supply of gas to the work when it is completed. The certifier supervisor or nominated person must be the person who tests the work. A certifying level tradesperson must certify that it complies with regulations under the Gas Act 1992.

Provisional licence holders

Provisional licenses are temporarily issued to overseas-qualified people who are potentially eligible to apply for registration in New Zealand subject to them sitting and passing their Board exams.

A person holding a provisional licence must be supervised by the certifier or a nominated certifying person when carrying out restricted work.

In the case of plumbing and drainlaying, the certifier must ensure that work has been performed competently and complies with the requirements of regulations under the Act and regulations under the Building Act 2004.

In the case of gasfitting work, a certifying level tradesperson must certify that the work complies with regulations made under the Gas Act 1992.

Licensed tradespersons (plumbers, gasfitters, drainlayers)

Certifiers are responsible for the supervision of restricted work performed by the licensed tradespersons who work under them. Any physical supervision that may be required may be carried out in any particular case by the supervisor or a nominated person if they are a certifier in the relevant trade.

In the case of plumbing and drainlaying, the certifier must ensure that it has been performed competently and complies with the requirements of regulations under the Act and regulations under the Building Act 2004.

In the case of gasfitting work, a certifying level tradesperson must certify that the work complies with regulations made under the Gas Act 1992.
Ensuring the appropriate level of direction and control for a job

In each case the certifier must ensure that the level of ‘direction and control’ that they apply is appropriate.

This means that in each case the certifier should be assessing the following factors before deciding which level of direction and control needs to be applied:

- The level of competence of the person being supervised to perform that work. Have they been trained to do this work? Is there anything in their work history that affects the assessment of their competence? The more experienced and competent they are, the lower the level of supervision required.

- Any actual or potential issues with the work and the reasons for those issues. If there are issues with the work, a higher level of supervision may be required.

- The job’s geographical location.

- The type and complexity of plumbing work being undertaken. More complex work will require a higher level of supervision.

- The time lines, costs and risks of the work. Tight timelines, higher cost work and higher risk work may all indicate the requirement for a higher level of supervision.

- The overall risk to safety, health and the environment. Higher risk work will require a higher level of supervision.

Once the certifier has balanced these factors they can then ensure that the appropriate level of direction and control is applied.

Study Notes
Question

Answer the following question.

2. What six factors should be assessed when deciding the level of direction and control that needs to be applied?

Types of supervision

There are three types of supervision:

- Direct supervision.
- General supervision.
- Broad supervision.

The chart that follows on the next two pages compare these different types of supervision.

Note: In each category ‘supervisor’ means the certifier or the nominated person who is appointed by the certifier and carries out the physical supervision.
Direct supervision

- Direct supervision is when the supervisor constantly monitors the supervisee, reviewing their work practices and standards of work. This includes dedicated oversight of all activities performed and requires the supervisor to be in the presence of the supervisee at all times. This means within visual contact and / or earshot (audible range).

  » Direct supervision is required of all trainees during the first year of their limited certificate and must always be performed by the certifier or nominated person.

  » Direct supervision is required of all persons working under an exemption under supervision (under sections 19,21 or 25 of the Act) during the first two years and must always be performed by the certifier or a nominated person (from the relevant trade).

  » In the case of gasfitting work carried out under supervision pursuant to section 21 of the Act, the person physically supervising the work must be the person who disconnects the gas supply before the work commences, must ensure that no pipe or appliance is connected to the gas supply while the work is being carried out and must be the person who connects the supply of gas to the work when it is completed.

  » In the case of gasfitting, for all levels of supervision, only a certifying level tradesperson can certify that the work complies with regulations under the Gas Act 1992.

General supervision

- General supervision describes a situation in which the supervisor is not constantly reviewing the supervisee but remains in face-to-face contact on a recurrent (periodic) basis.

  » The supervisor continues to provide instruction and direction for tasks to be performed and must test the supervisee’s work prior to commissioning.

  » Although not necessarily in close proximity, the supervisor must be contactable for assistance or instruction as required.

Broad supervision

- Broad supervision is only suitable for supervisees who have demonstrated an ability to conduct the intended work autonomously.

  » In this situation, the supervisor need only make occasional face-to-face contact but should continue to provide instruction and direction for tasks to be performed and the supervisor must inspect and test the supervisee’s work prior to commissioning.

  » Although not necessarily in close proximity, the supervisor must be contactable for assistance or instruction as required.
## Direct supervision
Will also be appropriate in the following circumstances:

- When the supervisee is new to the task or has not yet demonstrated consistent ability to perform the task to a minimum standard.
- The job contains variations to basic work that are new.
- The formally assessed hazards and risks related to the task indicate direct supervision is appropriate.
- The supervisee has not yet completed off the job training that supports competent performance of the task.
- There is a reasonable chance for unplanned events that may be beyond the supervisee’s current ability to manage.

## General supervision
Is normally appropriate where:

- The supervisee has previously demonstrated their ability to perform the task safely and to minimum standards without the need for constant intervention.
- The supervisee clearly understands when and how to seek assistance and support.
- The formally assessed hazards and risks related to the task indicate general supervision is appropriate.
- The supervisee has an appropriate level of knowledge and practical skill from either or both on-the-job or off-the-job learning.
- The supervisee has previously demonstrated an ability to manage reasonably predictable unplanned events.

## Broad supervision
May be appropriate where:

- The supervisor has knowledge of the work.
- The supervisee has previously demonstrated their ability to perform the task safely and to acceptable standards without the need for supervisor intervention.
- The formally assessed hazards and risks related to the task indicate broad supervision is appropriate.
- The supervisee clearly understands when and how to seek assistance and support.
- The supervisee has demonstrated an understanding of any hazards and risks involved with the task and an ability to manage the risks appropriately.
- The formally assessed hazards and risks related to the task indicate broad supervision is appropriate.
- The supervisee has a significant level of knowledge and practical skill from both on-the-job and off-the-job learning.
- The supervisee has previously demonstrated an ability to manage (or seek assistance with) unplanned events that may occur.
Remote supervision

If the circumstances dictate that direct supervision is required, then it will never be acceptable to use technology such as iPads and mobile phones to perform that supervision remotely.

However, if the circumstances indicate that either general or broad supervision is suitable then some level of technology use will be appropriate.

The Board has become aware of the practice of certifiers from the three trades essentially making a business of farming themselves out to businesses that do not employ certifiers. The Board is of the view that this practice is an acceptable way of providing supervision only in very limited circumstances. The certifier remains responsible for ensuring that there are appropriate systems and processes in place for dealing with supervision and will be responsible for ensuring that all auditing and training required by that system is delivered. The certifier also remains responsible for the identifying and implementing the appropriate level of supervision required for each particular task. The view of the Board is that these responsibilities mean that it is unlikely that supervision from a different geographic location will be appropriate.

Although technology such as iPads and mobile phones make some remote supervision possible, the certifier still has to have sufficient information to adopt the appropriate level of supervision in each case and provide appropriate physical assistance when required.

The Board is of the view that in most circumstances these important roles cannot be performed exclusively at the end of a phone or internet connection.
Question

Answer the following question.

3. Can direct supervision duties be adequately carried out through remote supervision? Why or why not?

Study Notes
Template for determining level of supervision required

To assist you in keeping yourself safe, the Board has developed a template to assist you when making a decision about what level of supervision is required for a particular job.

Use of this template is not mandatory, but the value of using the template is that it is a practical way of being able to demonstrate that you did consciously address the issue of supervision in relation to a particular job.

If the Board is ever in a position of investigating a complaint, the existence of this template on the job file, or a similar one of your design, will be evidence that supervision was properly addressed by you.

The supervision template is reproduced on the next two pages. Work through the template and use it to answer the questions that follow.
## Template for determining level of supervision

### Job description:

- [ ]

### Supervision assessment:

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the person a Trainee in their first year? Yes / No</td>
<td>If yes then they require <strong>direct supervision</strong></td>
</tr>
<tr>
<td>Is the person an exemption under supervision in their first two years?</td>
<td>If yes then they require <strong>direct supervision</strong></td>
</tr>
<tr>
<td>What is the level of competence of the person performing the work? High,</td>
<td>Low = <strong>direct supervision</strong></td>
</tr>
<tr>
<td>Medium or Low</td>
<td>Medium = <strong>general supervision</strong></td>
</tr>
<tr>
<td></td>
<td>High = <strong>broad supervision</strong></td>
</tr>
<tr>
<td>Have they had problems with this type of work in the past? Yes / No</td>
<td>Yes = <strong>direct supervision</strong></td>
</tr>
<tr>
<td></td>
<td>No = <strong>general or broad supervision</strong></td>
</tr>
<tr>
<td>How complex is the work? Are there any particular issues with the work?</td>
<td>Yes = <strong>direct supervision</strong></td>
</tr>
<tr>
<td></td>
<td>No = <strong>general or broad supervision</strong></td>
</tr>
<tr>
<td>What is the geographic location of the work? Nearby / Remote</td>
<td>Remote = generally only suitable for <strong>broad supervision</strong></td>
</tr>
<tr>
<td></td>
<td>Nearby = <strong>direct or general supervision</strong></td>
</tr>
<tr>
<td>Timelines – Tight / Flexible</td>
<td>Tight = <strong>general or direct supervision</strong> with less experienced staff.</td>
</tr>
<tr>
<td></td>
<td><strong>Broad</strong> for experienced staff.</td>
</tr>
<tr>
<td></td>
<td>Flexible = any form of supervision probably appropriate</td>
</tr>
<tr>
<td>Costs – Tight / Flexible</td>
<td>Tight = <strong>general or direct supervision</strong> with less experienced staff.</td>
</tr>
<tr>
<td></td>
<td><strong>Broad</strong> for experienced staff.</td>
</tr>
<tr>
<td></td>
<td>Flexible = any form of supervision probably appropriate</td>
</tr>
</tbody>
</table>
### Health and safety risk to person performing work. High / Medium / Low

<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>Direct or general supervision with less experienced staff. Broad for experienced staff.</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>General supervision generally ok unless other factors indicate direct supervision required.</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Any form of supervision probably appropriate.</td>
</tr>
</tbody>
</table>

### What is your assessment of overall risk to public health and safety and the environment? High / Medium / Low

<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
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</tr>
<tr>
<td><strong>Low</strong></td>
<td>Any form of supervision probably appropriate.</td>
</tr>
</tbody>
</table>

### Name of employee assigned work and method of supervision of each employee:

### Note:

**Direct supervision**: Supervisor constantly monitors the Supervisee reviewing their work practices and standards of work. This includes dedicated oversight of all activities performed and requires the Supervisor to be in the presence of the Supervisee at all times. This means visual contact and/or earshot (audible range.)

**General supervision**: Supervisor is not constantly reviewing the Supervisee but remains in face-to-face contact on a recurrent (periodic) basis. The Supervisor continues to provide instruction and direction for tasks to be performed and must test the Supervisees work prior to commissioning. Although not necessarily in close proximity, the Supervisor must be contactable for assistance or instruction as required.

**Broad supervision**: Only suitable for Supervisees who have demonstrated an ability to conduct the intended work autonomously. The Supervisor need only make occasional face-to-face contact but should continue to provide instruction and direction for tasks to be performed and the Supervisor must inspect and test the Supervisee’s work prior to commissioning. Although not necessarily in close proximity, the Supervisor must be contactable for assistance or instruction as required.
Supervision scenarios

Read the information about the team at PGD Co and the work scenarios that follow.

Using the template for determining level of supervision on the previous pages, decide whether direct, general or broad supervision would be required in each of the situations described. Give reasons for your answers.

The Firm

PGD Co is a small to medium sized plumbing, gasfitting and drainlaying business owned and operated by Dave located in Gunnison in the Waikato.

Dave has 2 office staff and 7 employees working on the tools. Information about the team follows:

Dave:
Dave is a certifying plumber, gasfitter and drainlayer with 30 years’ of wide ranging experience in all three trades. Dave is the supervisor for all employees requiring supervision.

Morris:
Morris is a certifying gasfitter and a licensed plumber and drainlayer. He has been working in these trades for 20 years. Morris has worked for Dave for 4 years and has demonstrated he is an excellent communicator, is very experienced in all types of gasfitting and very competent in plumbing and drainlaying work. He has worked on a wide range of new house builds and is often sent on the larger jobs with the other workers. He works well with all members of staff who respect his knowledge and experience. He holds an Associated Trade Plumber & Gasfitter Registration from the Electrical Workers Registration Board as well as F,R,T and W endorsements on his driver’s licence.

John:
John has worked for Dave since starting his apprenticeship and then becoming registered in all three trades 1 year ago. He is a good solid worker with good practical experience and competent on new house work. However, John struggles with reading and understanding site plans.

Eric:
Eric has worked for Dave for 7 years and is currently working under an exemption under supervision. For the majority of that time he has worked on site with Dave on new house builds. These have been standard 3-4 bedroom single floor dwellings.
Sam:
Sam is a ¾ way through his 3rd year as trainee plumber, gasfitter and drainlayer. He has shown himself to be a quick learner, pays attention to detail and has a good level of competence particularly in maintenance and general plumbing work. He has had limited experience in drainlaying and gasfitting work.

Aaron:
Aaron has been working for Dave for 7 months and is a 1st year trainee plumber and gasfitter and is in his 1st year holding an exemption for drainlaying under supervision.

Michael:
Michael has completed his National Certificate in plumbing, gasfitting and drainlaying but is not yet registered. He has held an exemption under supervision for all three trades since completing his training 6 months ago.

Harry:
Harry is new to the trade and has held an exemption for plumbing and gasfitting under supervision for 13 months.
Questions

Using the template for determining level of supervision on the previous pages, read the following scenarios and decide whether direct, general or broad supervision would be required. Give reasons for your answers.

4. A client in Gunnison calls PGD Co to say a washhouse tap over the tub has broken. Water is coming out from around the top tap part where it goes to the washing machine. The water has been turned off at the street. Analysis of the job is that it has low risk and hazards. Dave is sending Sam around to fix the problem.

What type of supervision is required in this situation?

Direct supervision [ ] General supervision [ ] Broad supervision [ ]

Give reasons for your answer:
5. PGD Co has a contract to carrying out the plumbing and drainlaying on 20 houses for a group housing company in a new subdivision in Gunnison. The houses are to be stage built 2-3 houses at a time.

These houses are all similar single storey 3-4 bedroom domestic dwellings with low risk and hazards. Two of the houses are now framed up and ready for pre-line pipe out. Dave provides instructions and guidance for the work.

Analysis of the job is that it has low risk and hazards.

Dave intends to send John and Eric to carry out this work.

What type of supervision is required in this situation?

[ ] Direct supervision
[ ] General supervision
[ ] Broad supervision

Give reasons for your answer:
6. PGD Co has a contract on a farm out of town to carry out all plumbing, gasfitting and drainlaying work for a large 5-bedroom 3-storey house.

The plans show all 3 floors are to include facilities for people with disabilities, also the kitchen is to have special plumbing features. Gas water heating is to supply a special large bath on the second floor.

Analysis of the job is that it has low risk and hazards.

Dave intends to send Morris, Sam and Aaron to carry out this work.

What type of supervision is required in this situation?

- Direct supervision
- General supervision
- Broad supervision

Give reasons for your answer:
7. PGD Co has been called to carry out maintenance and repairs on restricted plumbing, gasfitting and drainlaying work.

As part of his ongoing training and gaining experience, Michael is to carry out this work.

What type of supervision is required in this situation?

- Direct supervision
- General supervision
- Broad supervision

Give reasons for your answer:
8. PGD Co is installing a new complicated large storm water system in a supermarket carpark.

Stage one has been approved with the understanding there may be modifications should alterations to the building be approved. This is the first time PGD Co has carried out this type of work.

Analysis of the job is that it has high risk and hazards.

John, Eric Sam, and Aaron are to install the storm water system.

What type of supervision is required in this situation?

[ ] Direct supervision  [ ] General supervision  [ ] Broad supervision

Give reasons for your answer:
How many people can be supervised by one supervisor?

How many people can be supervised by one supervisor very much depends on a number of factors that need to be balanced by the certifier.

The factors that the certifier should balance are:

- The level of supervision required in terms of the complexity of the work being performed.
- The risks involved.
- The experience of those performing the work.

A certifier trying to determine this issue must always remember that the supervision they put in place has to be capable of being effective.

The types of questions that the certifier should consider are:

- Will the supervisor be in eyesight / earshot of those requiring direct supervision?
- Will the supervisor have the time to be able to train those who need to be trained in the skills required for the job?
- Will the supervisor have time to review the work of those they are supervising?
- Will the supervisor have the ability to manage any unforeseen events that may occur?

If a supervisor can’t answer yes to the above, they are trying to supervise too many people.
After-hours work

The Board recommends that all employers have employment agreements with their employees detailing what after-hours work a tradesperson may carry out, if any, and under what conditions.

If after-hours work is allowed, then the agreement should provide that it be done with the supervisor’s knowledge and approval.

In addition, any employer who does allow after-hours work should have a discussion with their insurance provider regarding cover for such work. If after-hours work is not permitted, then the contract should forbid them from carrying out after-hours work.

This will mean that any after-hours work that their employee carries out will be unsupervised and, as a consequence, will be unauthorised work.
Questions

Answer the following questions.

9. List four warning signs that a supervisor is trying to supervise too many people.

10. What factors are important to ensure that all weekend work carried out is properly authorised?
Systems and processes the certifier should have in place

It is an important part of supervision that the certifier has good systems and processes in place.

The Board considers that this means that the certifier will ensure that the systems and processes they establish have the following features:

• A practical management system in place demonstrating (through checks and balances) that the restricted work performed has been carried out safely, competently and in accordance with the regulations and the prescribed standards.

• Regular assessments of performance and skills of those supervised to highlight areas where further training may be required.

• The provision of corrective and further training where required.

• The provision of regular instruction and / or guidance to those being supervised.

• Knowledge of daily work activities and supervision.

Audit of your supervision system

To assist you in keeping yourself safe, the Board has developed an audit checklist to help you determine whether or not you have adequate systems and processes in place for managing supervision.

Use of this checklist is not mandatory but, as with the supervision template, the value of using the checklist is that it is a practical way of being able to demonstrate that you have consciously addressed the issue of supervision.

If the Board is ever in a position of investigating a complaint, the existence of this template on the job file, or a similar one of your design, will be evidence that supervision was properly addressed by you.

The checklist is reproduced on the next page. Work through the checklist and use it to answer the question that follows.
Audit of your supervision system

(You should use this form to determine whether or not your current system of supervision is adequate.)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have systems and processes in place for managing supervision?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does that system result in you having a record that would demonstrate your imposition of effective supervision?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do those systems and processes include checks and balances to ensure that all restricted work is performed safely, competently and in accordance with the Regulations and the prescribed standards?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you routinely assess the performance and skills of those supervised to highlight areas where further training may be required?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you provide corrective and further training where a need is identified?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you otherwise provide regular instruction and/or guidance to those being supervised?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you answer no to any of these questions, then that is an area where you will need to focus some attention to improve your supervisory practices.
Question

Answer the following question.

11. Using the checklist for audit of your supervision system on the previous page, is your current system of supervision adequate? Yes, or no?

If you have answered ‘no’ to any of the items on the checklist, what do you need to do to improve your current system of supervision?
PGDB & Mico 2016
CPD Training Roadshow

Topic 2: Health and safety
Topic 2: Health and safety

Topic 2 of PGDB & Mico CPD Training Roadshow 2016 for plumbers, gasfitters and drainlayers focuses on health and safety.

This topic covers the following:

- Injury statistics for the plumbing services sector.
- Common injuries in the plumbing, gas fitting and drainlaying industry.
- The Health and Safety at Work Act 2015.
  - Duty holders under the Health and Safety at Work Act.
  - ‘Reasonably practicable’ action.
  - General duty on all PCBUs.
  - Positive duty on ‘officers’ to exercise due diligence.
  - Offences and penalties under the Health and Safety at Work Act 2015.
- Practical ways of reducing your health and safety risk.
  - Worksite safety.
  - Personal protective equipment (PPE).
  - Workplace practices.
  - Lifting.
» Back / spine / shoulder protection.
» Knee protection.
» Finger / thumb protection.
» Ear protection (noise).
» Manual and power tools.
» Hazardous substances.
» Biohazards.
» Burns.
» Working at heights.
» Working in confined spaces.

**Injury statistics for the plumbing services sector**

The following information was calculated by ACC:

* Plumbing services
  * Total days lost to injury in 2014: 30,884.
  * Cost to business for injury in 2014: $9.26m+.
  * Number of claims in 2014: 2,775.
  * Cost of active claims to ACC in 2014: $5.6m+. 
Case Study

Answer the following question and check your ideas against the table provided on the next page.

1. What do you think are the most common types of injury in our industry?
## Common injuries in the plumbing, gas fitting and drainlaying industry

<table>
<thead>
<tr>
<th>Injury Type</th>
<th>Number of claims</th>
<th>Injury cost</th>
<th>Days lost</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ear injuries</td>
<td>410</td>
<td>$316,998</td>
<td>0</td>
<td>“I have had continuous exposure to loud noise in the work environment over the last 20 years, and now have poor hearing and tinnitus.”</td>
</tr>
<tr>
<td>Finger / thumb injuries</td>
<td>274</td>
<td>$338,516</td>
<td>2,188</td>
<td>“I was pulling iron guttering, the gutter hit in on the right hand, cutting my finger.”</td>
</tr>
<tr>
<td>Knee injuries</td>
<td>182</td>
<td>$562,767</td>
<td>3,356</td>
<td>“I was walking on a pipe while drainlaying and my left leg slipped and my left knee became trapped between the pipe and the trench.”</td>
</tr>
<tr>
<td>Shoulder / clavicle injuries</td>
<td>167</td>
<td>$793,811</td>
<td>3,672</td>
<td>“I was breaking up concrete on the footpath with a sledge hammer, swinging the hammer back, I had a sudden onset of pain in my shoulder.”</td>
</tr>
<tr>
<td>Lower back / spine injuries</td>
<td>401</td>
<td>$706,607</td>
<td>4,819</td>
<td>“I was lifting a toilet pan and had sudden onset of pain in the right side of my back which spread down the right leg as far as the ankle.”</td>
</tr>
<tr>
<td>Hand / wrist injuries</td>
<td>186</td>
<td>$354,635</td>
<td>2,212</td>
<td>“I was putting up spouting at work which caused an old injury to split open on my right hand.”</td>
</tr>
</tbody>
</table>

The information in the table above was calculated by ACC using data from 2014.

**Note:** Because of ‘near misses’ / lack of reporting, incidents within the industry are likely to be much higher.
The Health and Safety at Work Act 2015

In New Zealand, the Health and Safety in Employment Act 1992 has been the piece of legislation that puts obligations on employers, employees, self-employed people, people who hire contractors, and other people in control of a workplace.

Under health and safety legislation, employers, employees, self-employed people, people who hire contractors, and other people in control of a workplace must make sure that no action or inaction by them, while at work, causes harm to any other person.

As of 4 April 2016, new responsibilities are brought to everyone in the workplace by the Health and Safety at Work Act (HSWA) 2015. The new law is part of a reform package aimed at reducing the number of serious work-related injuries and deaths in New Zealand by at least 25 percent by 2020. Everyone who goes to work deserves to come home healthy and safe.

Duty holders under the new health and safety legislation include ‘PCBUs’ (persons conducting a business or undertaking).

A PCBU will usually be a business entity, such as a company, rather than an individual.

This does not include directors, board members or partners who are classed as ‘officers’. It does not include ‘workers’ (persons carrying out work in any capacity for a PCBU).

‘Reasonably practicable’ action

Under the Health and Safety at Work Act, ‘reasonably practicable’ action must be taken in relation to health and safety.

Under section 22 ‘reasonably practicable’ is:

‘…that which is, or was, at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters, including:

- the likelihood of the hazard or the risk concerned occurring
- the degree of harm that might result from the hazard or risk
- what the person concerned knows, or ought reasonably to know about the hazard or risk; and ways of eliminating or minimising it
the availability and suitability of ways to eliminate or minimise the risk; and,

- after assessing the extent of the risk and available ways of eliminating or minimising
  the risk, the cost associated with available ways of eliminating or minimising the risk,
  including whether the cost is grossly disproportionate to the risk.’

**General duty on all PCBUs**

The Health and Safety at Work Act 2015 introduces a new general duty on all PCBUs to
ensure, so far as reasonably practicable, the health and safety of all workers, and to make
sure that the health and safety of other people is not put at risk from work carried out by
the PCBU.

PCBUs need to have health and safety policies and instructions in place which cover all
of the following:

- Identification of health and safety hazards and risks, and steps to prevent these
  from happening.

- Methods to ensure health and safety policies are led by management, understood by all
  staff and reviewed regularly.

- Regular training on health and safety matters.

- Engagement of workers in health and safety matters that affect them.

- Support for all ‘officers’ to ensure they are up to date with health and safety issues and
  key risk factors.

- Reporting and monitoring of health and safety goals.

- Regular review of any incidents.

- Frequent health and safety audits.

A PCBU may also need to consult with other PCBUs where it shares a worksite or are part
of a contracting or supply chain, to make sure all workers are safe and healthy.

**Positive duty on ‘officers’ to exercise due diligence**

The Health and Safety at Work Act 2015 also introduces a positive duty on ‘officers’ (such
as a director, board member or partner) to exercise due diligence to ensure that the PCBU
complies with that duty or obligation.
Offences and penalties under the Health and Safety at Work Act 2015

Under the Health and Safety at Work Act 2015, three offence tiers apply.

- **Reckless conduct** – fines up to $3 million (or $600,000 and / or up to 5 years’ imprisonment for individuals).

- **Failure to comply with a duty (with exposure to risk of death or serious injury / illness)** – fines up to $1.5 million (or $300,000 for individuals).

- **Failure to comply with a duty (no exposure to death or serious injury / illness)** – fines up to $500,000 (or $100,000 for individuals).

Orders may also be imposed including adverse publicity orders, restoration orders, health and safety project orders and / or court-ordered enforceable undertakings.
Health and safety scenario

Read the information about XYZ Ltd., and the responsibilities of the company, director, worker and customer under the Health and Safety at Work Act 2015. Answer the questions that follow.

XYZ Ltd.:

XYZ Ltd. is a plumbing company co-owned by plumber John White and office manager Julie White. The company employs two plumbers Jake Black and Joe Grey. Work is carried out at various locations, including the company’s registered office and on site at customers' homes and workplaces.

Under the new health and safety legislation, XYZ Ltd., the company itself, is classed as the Person Conducting a Business or Undertaking (PCBU).

XYZ Ltd. will have overall responsibility for the health and safety of its staff and others affected by its work. The company is responsible for discussing health and safety matters with its staff (and in practice, usually does this through its managers).

John and Julie White:

As directors (and ‘officers’ under the Health and Safety at Work Act 2015), John and Julie are required to make sure XYZ Ltd. complies with its health and safety obligations.

As workers, John and Julie also have to take reasonable care for the health and safety themselves and others, and follow XYZ Ltd.’s health and safety policies and instructions.

Jake Black and Joe Grey:

Workers have to take reasonable care for the health and safety themselves and others, and follow XYZ Ltd.’s health and safety policies and instructions.

Customers:

Customers have to take reasonable care for their own and others’ health and safety on their premises, for example, taking care around where plumbers are working.

They also have to follow on site safety instructions from XYZ Ltd.’s staff.
Questions

2. Which party is classed as a PCBU and has the primary health and safety duty?
   - The company
   - The directors
   - The workers
   - The customers

3. Which party has the responsibility to make sure the company is meeting its health and safety obligations?
   - The company
   - The directors
   - The workers
   - The customers

4. Which parties have to take reasonable care for the health and safety themselves and others, and must follow XYZ Ltd.’s health and safety instructions?
   - The company
   - The directors
   - The workers
   - The customers
Practical ways of reducing your health and safety risk

The following information will help you to reduce your health and safety risk at work.

You should always follow these tips to help keep yourself, your workmates and other people safe at a worksite.

Remember that many workplace accidents and injuries may have not only short term, but also long term effects on health, ability to return to work and overall quality of life.

Worksite safety

- Always follow company health and safety policies and instructions.
- Make sure you are familiar with any hazards present at a site you are working at.
- Get / provide training on the potential hazards at the work site where you / your workers are assigned.
- Always think before you act.
- Remember a tidy worksite is a safe worksite.
  - Place, stack, or store materials and equipment so they will not cause injury to yourself or other workers.
  - Remove unwanted materials and construction waste from the worksite so that it does not accumulate.
  - Empty waste containers often; discard oily rags and other flammable waste materials safely.
  - Ensure that all power leads and other tools and equipment are not in places where they are a tripping hazard.
- Avoid attaching bracing across door frames where people are likely to walk through.
- Slips, trips and falls can cause injuries on worksites especially when working in wet environments. Clean up spills quickly.
Personal protective equipment (PPE)

- Use appropriate PPE for the task at hand. For example, hard hats, eye protection, face protection, gloves.
- Wear appropriate footwear (safety footwear with toe protection and a non-slip sole).

Workplace practices

- Follow a recommended shift work pattern and make sure you rotate your tasks and take appropriate breaks.
- Avoid awkward body positions and repetitive manual tasks, or take frequent breaks.

Lifting

- Use mechanical load shifting devices such as cranes, hoists and hand trucks to move materials around the worksite.
- Fit temporary lifting points or handles to heavy or awkward loads.
- Consider whether it is possible to reduce the size and / or weight of the load.
- Learn safe lifting techniques.
- If you are required to manually lift or carry a heavy object or awkward materials that you cannot safely manage alone, make sure you have adequate help.
**Back / spine / shoulder protection**

- Avoid working in awkward positions, or performing awkward manual tasks which increases the risk of musculoskeletal injuries.
- Avoid twisting when carrying or lifting a heavy load.
- Reduce the amount of bending and reaching forward you need to do. Change position where you can.
- Avoid overreaching when carrying out your work. This is one of the major contributions to a person overloading shoulder and back muscles.
- Avoid sudden, uncontrolled or jerky movements.
- Use mechanical load shifting devices such as cranes, hoists and hand trucks to move materials around the worksite.
- Fit temporary lifting points or handles to heavy or awkward loads.

**Knee protection**

- Wear knee pads when you are required to kneel on the ground as this reduces the contact pressure.
- Avoid jumping down from step ladders, ladders and platforms or down to the next level.
**Finger / thumb protection**

- Wear gloves suitable for the task, if appropriate.
- Check that all tool guards function correctly and are safe to use.
- When using an electric drill, be aware of the dangers of applying too much pressure and jamming the drill.
- Keep your hands clear of any moving parts on any equipment you are using.
- Make sure that any exposed nails and other sharp objects are removed or knocked in.

**Ear protection (noise)**

- Wear the appropriate hearing protection when working around noisy equipment.
- Place warning signs in areas of excessive noise (above 85 decibels).
- Check noisy tools to ensure they are well maintained.
- Where possible other workers on a site should be separated from noisy activities.
- If you cannot hear a person talking to you without shouting, you need to wear hearing protection.
- If you are regularly exposed to a noisy workplace, you need to be having regular health monitoring which would include checks for any loss of hearing.

**Manual and power tools**

- Operate all tools (hand and power) in accordance with instructions.
- Use eye protection when cutting or grinding to avoid eye injuries from flying particles.
- Keep cutting equipment sharp so it will work properly. Cut away from your face and body to avoid cuts and punctures.
- Keep tools and equipment, and their safety features, in good working order. Repair or replace damaged equipment immediately.
- Do not clean tools with flammable or toxic solvents.
- When using any type of power tool, remember to wear hearing and eye protection.
• Ensure power tools are properly grounded or double-insulated.

• Do not operate power tools by connecting and disconnecting the power cord. Switch all power tools off before connecting / disconnecting them to / from a power supply to avoid potential sparks.

• Disconnect and lockout the power supply before completing any maintenance work on power tools or before making adjustments.

• Do not operate power tools in an area containing explosive vapours or gases, unless they are intrinsically safe and only if you follow the manufacturer’s guidelines.

• Only use power tools that are safe for a wet environment with a residual-current device (RCD) / residual-current circuit breaker (RCCB).

• Be cautious when working on metal pipes – if you feel tingling when touching a metal pipe, stop work immediately.

• Use extension cords or equipment rated for the level of amperage or wattage that you are using.

• Always tape extension cords to walls or floors when necessary. Nails and staples can damage extension cords causing fire and shock hazards.

• Always use the correct size fuse. Replacing a fuse with one of a larger size can cause excessive currents in the wiring and possibly start a fire.

• Be aware that unusually warm or hot outlets may be a sign of unsafe wiring. Unplug any cords or extension cords to these outlets and do not use until a qualified electrician has checked the wiring.

• Ensure that all extension cords and equipment being used are inspected for any damage to the installation and plug. Ensure all equipment is tested and has a current safety tag. Do not use damaged equipment.

• Do not use outlets or cords that have exposed wiring.

• Do not use portable cord-and-plug connected power tools with the guards removed.

• Do not block access to panels and circuit breakers or fuse boxes.

• Do not touch a person or electrical apparatus in the event of an electrical accident. Always disconnect the power source first.
Hazardous substances

- Hazardous substances that we may come into contact with in our industry include lead, sulphur dioxide, asbestos, adhesives, solvents, solder, and other toxic or carcinogenic substances.

- Make sure you are familiar with any hazardous substances that are present at a site you are working at, and always follow company health and safety policies and instructions.

- Material safety data sheets (MSDSs) can be used to confirm the chemical properties, health hazards, and required personal protective equipment (PPE) that are needed when dealing with different hazardous substances.

- Ensure that hazard reporting protocols are followed.

- **Note:** Buildings constructed before 1990 are likely to contain asbestos-containing materials (ACM).

For more information on where asbestos can be found and good practices to follow when drilling into board that contains asbestos (ACM board) read the following links:

Biohazards

- Biohazards that we may come into contact with in our industry include raw sewage (when working on sewage pipes or septic tank outlets), contaminated soil (when laying new pipes in soil), mould, and potential infection from bird or rodent droppings.

- Make sure you are familiar with any biohazards that are present at a site you are working at and always follow company health and safety policies and instructions.

- Human pathogens from soil and raw sewage can enter the body through the nose or mouth, particularly by touching contamination and then touching your mouth or nose. Exposure can also occur through open wounds or by inhalation.

- Keep vaccinations up to date.

- Never eat or drink while working in a potentially contaminated area. Always wash your hands before meals.

- Avoid exposure to biohazards by wearing appropriate PPE. For example, gloves, overalls, rubber boots, eye protection.

- When you finish work, wash immediately with antibacterial soap and water. Avoid using solvents to wash your hands as the solvents can cause irritation that may lead to skin infections.

- Always decontaminate your equipment after use if working at a site where biohazards are present.

- Change out of work clothes before leaving the work site. If any sewage gets on your clothes, change them right away. Soiled work clothes should be sealed in a plastic bag and laundered separately from other clothing. Wash your hands thoroughly after handling the clothing.

Burns

- Risk of burns may occur due to contact with hot equipment parts, exposure to steam lines, and/or unexpected release of hot water or steam.

- If working on hot pipes, use heat-insulating gloves and eye/face shields.

- Make sure all pipes are drained before you open them.
**Working at heights**

- Workers in this environment should complete an accredited working at heights course.

- When working at height, always follow company health and safety policies and instructions.

- Use of appropriate scaffolding or falls protection and other precautions helps to prevent falls.

- Make sure you have the correct type of ladder for the job. Make sure you can get on and off the ladder safely. Make sure it is secure, stable, extends 1.0m beyond the landing point.

- Always use ladders made with non-conductive side rails (e.g., fibreglass) when working with or near electricity.

For more safety information visit:


Controlling the risk when working at heights

Best practice guidelines for working at height in New Zealand are available on the Worksafe New Zealand website. They summarise the following control measures:

- Can the hazard of working at height be eliminated?
  - Could long-handled tools be used from ground level?
  - Could structures be built at ground level and lifted into position on completion?

- Can the hazard of working at height be isolated?
  - Could edge protection be used?
  - Could a guard-railed work platform be used, for example, scaffold or elevating work platforms?
  - Could a total restraint system be used to prevent a fall occurring?

- Can the distance and impact of the fall be minimised?
  
  **Note:** Only take this step when elimination and isolation options have been exhausted.
  - Could a fall arrest system be used?
  - Could nets or air bags be used to minimise the impact of a fall?

- Where unguarded trestles or platforms are used, or the work will be done from a ladder or stilts, the risk of harm shall be minimised through management controls and the provision of appropriate training.

- Management controls include effective housekeeping protocols and clear procedures for safe use of the equipment.

More information is available from:


Working in confined spaces

The Australian Standard AS 2865:2009 Confined Spaces is accepted as the current state of knowledge on confined space entry work in New Zealand.

Hazards in confined spaces can include the following:

- Insufficient amount of oxygen to breathe which can cause brain damage and death.
- Toxic atmospheres that have a poisonous effect and could cause illness or even unconsciousness.
» Explosive / flammable atmosphere risks due to flammable liquids and gases and combustible dusts.

» Process-related hazards such as residual chemicals, release of contents of a supply line / barrier failure.

» Physical safety hazards such as engulfment, proximity to moving parts of equipment, structural hazards (shift / collapse), entanglement, slips, falls.

» Uncontrolled surges – steam, water, gas, liquid, electricity.

» Radiation.

» Noise.

» Extremes in atmospheric and surface temperatures.

» Poor visibility.

• Workers in this environment should complete an accredited working in confined spaces course.

• When working in confined spaces, always follow company health and safety policies and instructions.

Controlling the risk when working in confined spaces

The factsheet ‘Confined Spaces: Planning Entry and Working Safely in a confined space’ summarises the following control measures:

• If work can be done without entry to the confined space (i.e. with equipment from outside), use that method instead of entering.

• Isolate contaminants and moving parts.

• Clean and purge the confined space if necessary.

• Test the atmosphere for oxygen.

• Test the atmosphere for toxic and combustible contaminants.

• Ventilate the confined space if necessary.

• Select appropriate breathing apparatus if necessary.

• Select appropriate PPE (when all other control measures fail to control the risk, or in an emergency response).

• The employer or person responsible for the work should issue a written authority (confined space entry permit). This acts as a safety checklist to ensure all issues have been considered.
• Where necessary have a trained stand-by person outside the confined space to monitor safety and take action if emergency arises.

• Monitor and maintain control measures (air testing for changes).

• If conditions change, evacuate the confined space.

More information is available from:

Questions

Read the following scenarios and answer the questions

5. ABC Ltd. has the contract to run, from the house pipework, a new pipe in a short shallow trench and connect to an old large concrete tank that is onsite. This is to be a second water storage supply to the domestic dwelling.

This dwelling is on a small lifestyle block 45 minutes out of town. The owner has stated that it was an old water tank. The job will require a person to get inside the tank to inspect it. Two team members Tim and John are to carry out this work.

What actions can be taken to reduce the health and safety risk when carrying out this work?
6. A third team member, Brett, has been asked to help Tim and John. The tank requires disinfecting and will also need a new 50mm diameter outlet hole.

What health and safety risks are associated with this work and how can they be minimised?
7. ABC Ltd. is carrying out the installation of a new ablution block in an old factory. The corrugated iron roof on this building is 10m high at the lowest point. The last part of the job is to install the top section of a vent pipe that is to pass through the roof which is set back 5m from the bottom edge, and to set in place and connect two 45kg LPG cylinders.

What actions can be taken to reduce the health and safety risk when carrying out this work?
8. Tim has been called to an old farm house that has water just dribbling out the taps – the flow of water has been getting worse over the course of the year. The customer needs someone there as soon as possible.

John had been to this house earlier in the year and advised the owners the main pipe under the house is an old galvanised pipe with copper feeder pipes coming off it to the bath and sink etc. He had advised them that the galvanised pipe needed to be replaced. Tim is taking a coil of plastic pipe along to the job to replace the main run under the house.

What actions can be taken to reduce the health and safety risk when carrying out this work?
9. Tim and Brett are to install the above slab plumbing and gasfitting pre-line pipework in a 4-bedroom house in town. Although Tim has done this type of work numerous times, this is the first time working on this kind of job for Brett.

Tim has instructed Brett to cut a number of nogs / dwangs while Tim preps the Oxy / Acetylene gas set to braze copper pipes. Tim is expecting Brett to be involved in all aspects of this work including using hand held power tools and brazing equipment.

What actions can be taken to reduce the health and safety risk when carrying out this work?
10. Tim, John and Brett are to install a new drain at a property in town. This property is adjacent to an old timber mill that has not been in use for several decades. The old septic tank is to be disconnected and a new drain is to be connected to a new town sewer main.

The septic tank is at the rear of the section and the sewer main is at the front of the section. This is a large property with the section slopping from the rear to the front. There will be approximately 50m of 100mm PVC pipe and the trench is required to be run alongside the adjacent timber yard boundary. The trench is expected to be approximately 1.9m deep where it connects to the sewer riser pipe. The owners have instructed that the old concrete septic tank is to be removed as they intend to place a swimming pool in that area.

What health and safety risks are associated with this work and how can they be minimised?
PGDB & Mico 2016
CPD Training Roadshow

Topic 3: Product selection
**Topic 3: Product selection**

Topic 3 of PGDB & Mico CPD Training Roadshow 2016 for plumbers, gasfitters and drainlayers focuses on product selection and the associated responsibilities of installers and other relevant parties in the industry.

This topic covers the following:

- Introduction.
- The Building Code.
- How to comply.
- The Building Act and Regulations.
- Product technical information.
- Product substitution.
- ‘Exempt work’ under Schedule 1 of the Building Act.
- Further guidance with regard to people providing their own products for installation and responsibilities under the Consumers Guarantees Act.
- Conclusions.
- Gas appliances and fittings.
  - Additional obligations.
  - Meanings of safe and unsafe.
  - Important considerations for gasfitters in terms of gas safety compliance.
  - Certification regime.
  - Supplier declaration of compliance.
  - Gas label and mark.
  - Endorsement regime.
  - The essential safety requirements for all gas appliances in New Zealand not subject to a recognised certification regime.
  - Second-hand gas appliances.
  - Imported gas appliances.
Introduction

Making sure buildings are safe, durable and fit for purpose is essential to the wellbeing of New Zealanders.

Using appropriate building products (including plumbing, gasfitting and drainlaying products) is central to achieving this.

A range of mechanisms are in place to make sure manufacturers, importers and suppliers of building products only provide products that are appropriate for use in New Zealand.

The legal obligations under the Building Act are a key component; as are the Gas Act and associated regulations for gasfitting work.

The gasfitting regulatory system includes a product certification regime which is managed by Energy Safety (part of Worksafe NZ) which will be covered in more detail in the ‘Gas appliances and fittings’ section of this topic.

There are also obligations under other legislation including: the Fair Trading Act, the Sales of Goods Act, the Consumer Guarantees Act, the Commerce Act, and the Hazardous Substances and New Organisms Act.

These consumer and trading laws aim to ensure that anyone selling building products must make sure they are safe, fit for purpose, and that product performance claims, whether implied or stated, are reasonable.

When plumbers, gasfitters and drainlayers source and supply the products they install, they are subject to all the relevant requirements of these consumer and trading laws. The fact that the party they have sourced the products from also has legal obligations does not change plumbers’, gasfitters’ and drainlayers’ own obligations and potential liabilities.

The Building Act (Section 14G) requires building product manufacturers and suppliers to make sure that a product will comply with relevant Building Code clauses, provided it is installed in accordance with the information they provide.
The following diagram demonstrates how different parties in the industry use this information and their responsibilities.

Who relies on your product information?

![Diagram showing relationships between product suppliers and manufacturers, designers, building consent authorities, builders & owner builders, and building owners.]

Note: Sections 14B – 14G are references to sections of the Building Act 2004, and describe the responsibilities of each group.

The Building Code

All building work, which includes plumbing, gasfitting and drainlaying work, must comply with the Building Code. The Code is performance based. This means it states in general terms how a building must perform, rather than describing how it must be designed and built – or what products can be used.

The Building Code clauses contain performance requirements that cover areas such as structural strength and durability, as well as more specific requirements, such as clauses G12 Water Supplies and G13 Foul Water. Gasfitting generally relies on the joint standard AS/NZS 5601.1 for dwellings (AS/NZS 5601.2 for caravans, boats etc.)

For work requiring a building consent, plans and specifications are assessed by Building Consent Authorities (BCAs), which are usually the local council.

The BCA decides whether the building consent application contains enough evidence for them to be satisfied the proposed building work will comply with the relevant Building Code clauses.
How to comply

For each Building Code clause, the Ministry of Business, Innovation and Employment (MBIE) has produced at least one way of complying.

Acceptable solutions and verification methods

These methods of compliance are known as ‘acceptable solutions’ (AS) or ‘verification methods’ (VM). Acceptable solutions provide specific construction details, while verification methods provide methods of testing or calculation. For example, for foul water, G13/AS1 is an acceptable solution that provides a means of compliance for sanitary plumbing.

Buildings built in accordance with an acceptable solution or a verification method must be accepted by BCAs (i.e. are ‘deemed to comply’).

Alternative solutions

However, if a building material, component or construction method differs, even partially, from those described in acceptable solutions or verification methods, it is considered an ‘alternative solution’. Building consent authorities assess alternative solutions on a case by case basis. Before issuing a building consent, the BCA needs to be satisfied on reasonable grounds that the building work will comply with the Building Code.

A plumber, gasfitter or drainlayer who is carrying out building work that does not require a building consent and uses a product that does not comply with the relevant acceptable solution or verification method will need to satisfy themselves that there is sufficient evidence the product complies with the performance requirements of the Building Code as an alternative solution. More information about responsibilities and liabilities around product substitution will be touched on later.

Complying with standards

Often acceptable solutions and verification methods cite standards that must be complied with. These are most often NZ Standards or Joint Australian/New Zealand Standards (AS/NZS). Where these are listed it will state whether all or just part of the cited standard is accepted and where it applies.

For example, G12 references AS/NZS 3500 Part 1 Water services in the following instances:

This applies to:

- G12/VM1 1.0.1a) refers to AS/NZS 3500.1 Section 2, Section 3 & Appendix C; and
- G12/AS1 3.5.2 includes a comment referring to AS/NZS 3500.1.2 Appendix F.
Compliance examples

The following table lists the standards for pipe materials that must be complied with when using G12/AS1 as a means of compliance for water supply systems.

<table>
<thead>
<tr>
<th>Material</th>
<th>Relevant Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot and Cold</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>NZS 3501</td>
</tr>
<tr>
<td>Galvanised steel</td>
<td>NZS/BS 1387</td>
</tr>
<tr>
<td>Polybutylene</td>
<td>AS/NZS 2642: Parts 1, 2 and 3</td>
</tr>
<tr>
<td>Cold Only</td>
<td></td>
</tr>
<tr>
<td>PVC-U</td>
<td>AS/NZS 1477</td>
</tr>
<tr>
<td>Polyethylene</td>
<td>NZS 7601 for pressures up to 0.9 MPa (Type 3)</td>
</tr>
<tr>
<td></td>
<td>NZS 7602 for pressures up to 1.2 MPa (Type 5)</td>
</tr>
<tr>
<td></td>
<td>NZS 7610 for pressures up to 1.2 MPa</td>
</tr>
<tr>
<td></td>
<td>AS/NZS 4129 for fittings</td>
</tr>
<tr>
<td></td>
<td>AS/NZS 4130 for pressures up to 2.5 MPa</td>
</tr>
</tbody>
</table>

An example of a verification method is G12/VM1 for water supply systems. This VM provides a means of compliance through meeting the requirements of specific parts of AS/NZS 3500.1 and AS/NZS 3500.4. These standards include requirements for pipe materials, including some that are not covered in the table above, such as polypropylene pipes.

For sanitary plumbing work G13/AS1 provides a means of compliance. The following table lists the Standards for pipe materials that must be complied with when using G13/AS1 as a means of compliance.

<table>
<thead>
<tr>
<th>Material</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipes and fittings</td>
<td></td>
</tr>
<tr>
<td>Air admittance valves</td>
<td>ASSE 1050 or ASSE 1051, EN 12380, AS/NZS 4936</td>
</tr>
<tr>
<td>Copper pipe</td>
<td>NZS 3501</td>
</tr>
<tr>
<td>Copper fittings</td>
<td>AS 1589</td>
</tr>
<tr>
<td>PVC pipe and fittings</td>
<td>AS/NZS 1260</td>
</tr>
<tr>
<td>Plastic fittings</td>
<td>AS 2887</td>
</tr>
<tr>
<td>PE pipe and fittings</td>
<td>AS/NZS 4401</td>
</tr>
<tr>
<td>Elastomeric rings</td>
<td>AS/NZS 4130 or AS 1646</td>
</tr>
<tr>
<td>Traps</td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td>AS 2887</td>
</tr>
<tr>
<td>Copper</td>
<td>AS 1589</td>
</tr>
</tbody>
</table>
G13/AS2 provides a means of compliance for drainage work and includes requirements for drainage pipes as specified in the following table.

<table>
<thead>
<tr>
<th>Material</th>
<th>Manufacturing Standard</th>
<th>Installation Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast iron</td>
<td>BS 437</td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td>AS/NZS 4058</td>
<td></td>
</tr>
<tr>
<td>Steel</td>
<td>NZS 4442 or AS 1579</td>
<td></td>
</tr>
<tr>
<td>PVC-U</td>
<td>AS/NZS 1260</td>
<td>AS/NZS 2032</td>
</tr>
<tr>
<td>Polyethylene</td>
<td>AS/NZS 4130, AS/NZS 2065</td>
<td>AS/NZS 2033</td>
</tr>
<tr>
<td>Polypropylene</td>
<td>AS/NZS 2065</td>
<td>AS/NZS 2566</td>
</tr>
<tr>
<td>Ductile iron</td>
<td>AS/NZS 2065</td>
<td></td>
</tr>
<tr>
<td>ABS</td>
<td>AS/NZS 3518</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>NZS 3501</td>
<td></td>
</tr>
<tr>
<td>GRP</td>
<td>AS 3571</td>
<td></td>
</tr>
<tr>
<td>FRC</td>
<td>AS 4139</td>
<td></td>
</tr>
<tr>
<td>Elastomeric rings</td>
<td>NZS/BS 2494 or AS 1646</td>
<td></td>
</tr>
</tbody>
</table>

Acceptable Solution G13/AS3 provides a further means of compliance for plumbing and drainage through compliance with AS/NZS 2032 for PVC – U pipe and fittings and AS/NZS 3500.2. However, some modifications to these standards are required, including compliance with G12/AS1 for pipe materials.

Obtaining a building consent for an alternative solution

To obtain a building consent for an alternative solution, the applicant must provide sufficient evidence that the proposed solution will comply with the performance criteria for all relevant Code clauses (as opposed to providing evidence it complies with the acceptable solutions or verification methods).

A building consent based on an alternative solution will include specifications for the products that are to be used. In many cases these specifications will require the products to comply with the same standards that are required by acceptable solutions and verification methods.
The Building Act and Regulations

Under the Building Act (Section 14G) building product manufacturers and suppliers must make sure that the product will, if installed in accordance with their technical data, plans, specifications, and advice provided by them, comply with the relevant requirements of the Building Code.

In most cases, it would be expected that the suppliers of these products understand these requirements when providing these materials for building work. However, not everything sold is meant to necessarily be used in building work and the relevant standards may not apply for these other uses. Accordingly, when purchasing materials for use in building work it is important to ensure that they are suitable for the intended use. Special attention should be given to these matters if materials are going to be imported.

Section 14D of the Building Act requires designers to make sure that their plans and specifications will result in the building work complying with the Building Code, provided the building work is properly completed in accordance with those plans and specifications. Designers are reliant on the information provided to them by product suppliers in order to meet this obligation.

Section 14E requires builders (which includes plumbers, gasfitters and drainlayers) to complete building work in accordance with consented plans and specifications. This means that products that have been specified must be used; unless a substitution has been approved by the appropriate people (see the ‘product substitution’ section that follows).

Using the previous example, if consented plans or specifications require compliance with G12/AS1 for water supply, then only products that comply with the standards approved in G12/AS1 can be used.

Plumbers, gasfitters and drainlayers also have an obligation under Section 9 of the Building (Residential Consumer Rights and Remedies) Regulations 2014, to provide guarantee, warranty and maintenance information to the owner of completion of building work. Any relevant guarantee, warranty and maintenance information must be provided for products used.

The New Zealand Building Code clause B2 Durability requires both the product and the way the product is installed to last specific time periods (i.e. 5, 15 or 50 years), subject to the relevant maintenance being carried out. Tradespeople can’t disregard those durability requirements by simply offering a lesser guarantee.
Product technical information

To meet their legal obligations, manufacturers and suppliers of plumbing, gasfitting and drainlaying products need to show how their products comply with the Building Code. They need to provide reliable evidence for merchants, designers, BCAs, plumbers, gasfitters, drainlayers, and consumers.

MBIE has developed a building product assurance approach to assist product manufacturers and suppliers.

The basis of product assurance is the ‘product technical statement’ (PTS). This is the recommended format to be followed for communicating key product information (developed by MBIE with industry support). The PTS provides a cost effective, simple and consistent format for product manufacturers and suppliers to summarise need-to-know information about their product (thereby helping to meet their obligations under section 14G of the Building Act).

The content of a PTS, and the type of supporting evidence that will be referenced in it, can vary significantly from product to product.

Evidence may include, for example: expert technical opinions, independent assessments, laboratory testing, and proof of in-service history. This evidence is necessary for a merchant deciding on whether to stock the product, a designer wanting to specify the product, a BCA deciding on Code compliance, and a plumber, gasfitter or drainlayer purchasing and installing the product.

A relatively quick review of a product PTS should mean plumbers, gasfitters and drainlayers can decide if the product is suitable, or if they need to seek further information from the supplier.

A PTS that simply claims the product complies with the relevant Code clauses (or standards referenced in those clauses) is not adequate evidence. If a supplier is not able to provide a PTS (or equivalent information in another form) that should immediately raise concerns. If a plumber, gasfitter or drainlayer accepts a supplier’s claim of compliance without adequate supporting evidence or sufficient grounds for relying on the claim they risk being held liable if the product fails.

In Australia there is a mandatory national certification scheme called WaterMark. Although this scheme has no official status in New Zealand, WaterMark certified products have been independently verified as meeting required standards for Australia. In many cases the standards will be the joint AS/NZS Standards cited in acceptable solutions or verification methods. In these cases, WaterMark certification provides evidence that can be relied upon by the various parties including plumbers and drainlayers.
Product substitution

For consented building work, BCA approval is needed before a specified product can be substituted. It is up to the BCA to decide whether a proposed product substitution is a minor variation, or whether it is more significant and requires a formal amendment to the building consent.

If a product is substituted without BCA approval, it is likely the BCA will not issue a Code Compliance Certificate when the building work is completed and may issue a notice to remedy the work.

When a product has been specified by brand name, BCA approval will be required if an alternative brand is proposed to be used, even if the supplier of the alternative brand claims to comply with the standards approved in the acceptable solution or verification method.

Note that if a designer or owner has been involved in specifying products, their approval is also needed before using an alternative product.

Section 362I of the Building Act imposes a warranty that the builder (including plumbers, gasfitters and drainlayers) will build in accordance with the plans and specifications. If a builder substitutes a product without the owners’ approval they could face legal or liability issues.

In the context of ‘exempt work’ (see next section), as any instruction from the owner about a product they want used could be interpreted as a ‘specification’, it’s always advisable to ask for these change requests or specifications in writing.

There is also potential liability under the Fair Trading Act if a substitution is made without owner approval. In practice, most owners will agree to a substitution to be made, as long as they are satisfied the product being used is as good as the one that was specified.

More information about product substitution is available from MBIE at:
'Exempt work’ under Schedule 1 of the Building Act

Some building work is defined as ‘exempt work’ under Schedule 1 of the Building Act and does not require uplifting a building consent.

Part 2 of this schedule provides details of the work that can be done by plumbers and drainlayers currently authorised by the Board to carry out that restricted work without a building consent.

The areas where some limited work is allowed without a building consent include the following:

Plumbing and drainage

- Repair, maintenance, and replacement.
- Drainage access points.
- Minor alteration to drains.
- Alteration to existing sanitary plumbing (excluding water heaters).

Water heaters

- Repair and maintenance of existing water heater.
- Replacement of open-vented water storage heater connected to supplementary heat exchanger.
- Replacement or repositioning of water heater that is connected to, or incorporates, controlled heat source.

Repair and maintenance of existing plumbing and drainage systems is a common example of exempt work. The exemption allows replacement of any component provided that a comparable component is used; and the replacement is in the same position. However, a consent is required if it is a complete or substantial replacement of the whole system.

Of course exempt work must still comply with the Building Code, therefore products used in ‘exempt work’ must still meet the performance requirements of relevant Code clauses.

More information about the work that can be done by a currently authorised plumber or drainlayer without a building consent is available at the following link:
http://www.building.govt.nz/bc-no-consent
Further guidance with regard to people providing their own products for installation and responsibilities under the Consumers Guarantees Act

Any service that is normally bought for personal or household use is covered by the Consumer Guarantees Act. Examples of services covered include work done by the following parties:

- Tradespeople – e.g. plumbing, gasfitting, drainlaying, painting, car servicing, building work because it is normally done for household use.
- Professional people such as doctors, lawyers and dentists.
- Other service providers. For example, appliance repairers, insurance companies, banks, dry-cleaners, hairdressers, movie theatres.
- Utility providers supplying electricity, gas, telecommunications, water, or removing wastewater.

Under the Consumer Guarantees Act, any consumer service provided must meet guarantees that the service will be:

- carried out with reasonable care and skill;
- fit for any particular purpose that the consumer advises about;
- carried out within a reasonable time, if the time for completing the work has not been agreed; and,
- charged for at a reasonable price, if the price for the work has not been agreed.
- If the services fail to meet any of these 4 guarantees, consumers can seek a remedy from the person providing the service.

Some consumers may wish to supply parts or materials for work to be done. In doing this they may, for example, buy second-hand products or choose parts that will meet their cost expectations in terms of their available budget for a job. However, the result may be less ‘fit for purpose’ than if the customer had been prepared to pay extra money for different parts or had chosen a different brand of product.

Keeping the customer’s agreement in writing that they have chosen a particular part or type of product might be advisable in those situations, as well as a statement about the expectations regarding the durability of the work, especially if it is a repair.

The quality of the work done must still be guaranteed but the expectations about the work can be better explained and agreed to, and further options (such as replacements or alterations) could be left for the consumer to consider.

For more information on consumer protection for both tradespeople and customers visit www.consumeraffairs.govt.nz
Conclusions

- As long as suppliers and manufacturers, designers, BCAs, plumbers and drainlayers all comply with their responsibilities under section 14 of the Building Act and consumer legislation, the risk of substandard products being used in consented building work is very low.

- MBIE does have the ability under the Building Act to issue product warnings or bans, but has not yet needed to do this, in part due to the effectiveness of the building consenting process in reducing product related risk. MBIE’s ability to take action also encourages voluntary product withdrawal or change. MBIE monitors the market and undertakes investigations where potential problems are identified.

- If a plumber, gasfitter or drainlayer is considering using a product from a supplier that does not have an established track record in New Zealand, it is essential that they satisfy themselves that the product complies with relevant Code clauses.

- The fact that a reference to a standard is printed on a pipe (e.g. AS/NZS 1477) does not provide any evidence that the product actually complies. As a minimum, some independent verification of compliance with the relevant standards by a reputable body should be required.

- The cost of some alternative products may be very attractive, but the risk of using them without ensuring they comply is simply not worth it.
### Questions

Are the following statements TRUE or FALSE?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Importers, wholesalers and retailers are liable under consumer law. Plumbers, gasfitters and drainlayers are not liable.</td>
<td>True False</td>
</tr>
<tr>
<td>2. The Building Code is performance based, which means it states in general terms how a building must perform, rather than describing how it must be designed and built – or what products can be used.</td>
<td>True False</td>
</tr>
<tr>
<td>3. In relation to compliance with the Building Code, if a building material, component or construction method differs, even partially, from those described in ‘acceptable solutions’ or ‘verification methods’, it is considered an ‘alternative solution’.</td>
<td>True False</td>
</tr>
<tr>
<td>4. A building consent based on an alternative solution will include specifications for the products that are to be used. In many cases these specifications will require the products to comply with the same standards that are required by acceptable solutions and verification methods.</td>
<td>True False</td>
</tr>
<tr>
<td>5. Section 14E of the Building Act requires plumbers and drainlayers to complete work in accordance with consented plans and specifications. This means that products that have been specified must be used, unless a substitution has been approved by the appropriate people. Section 362L of the Building Act imposes a warranty that plumbers, gasfitters and drainlayers carry out work in accordance with the plans and specifications. If a builder substitutes a product without the owners’ approval they could face legal or liability issues.</td>
<td>True False</td>
</tr>
</tbody>
</table>
6. Under Schedule 1 Part 2 of the Building Act, no work can be carried out by authorised plumbers or drainlayers without a building consent.

[ ] True  [ ] False

7. As long as suppliers and manufacturers, designers, BCAs, plumbers, gasfitters and drainlayers all comply with their responsibilities under section 14 of the Building Act, the risk of substandard products being used in consented building work is very low.

[ ] True  [ ] False

8. The fact that a reference to a standard is printed on a pipe (e.g. AS/NZS 1477) is enough evidence that the product actually complies. No further verification of compliance with the relevant standards is needed.

[ ] True  [ ] False
Gas appliances and fittings

All gas appliances and fittings, whether they are manufactured in New Zealand or are imported, must comply with New Zealand’s regulatory framework.

A general requirement of the legislation and regulations is ‘essential safety’.

The government agency responsible for gas appliance certification and safety-related matters is Energy Safety.

The Gas Act 1992 and the Gas (Safety and Measurement) Regulations 2010

The Gas Act 1992 and the Gas (Safety and Measurement) Regulations 2010 require all gas appliances and all gas fittings regardless of their origin to be safe.

All persons must ‘take all practicable steps’ to prevent serious harm. See: Gas (Safety and Measurement) Regulations 2010, regulation 53.

It is important for gasfitters to know that all products used in installation work they carry out are safe, and it is important to be aware that when they certify an installation, it includes the appliance(s) installed. Certifying gasfitters effectively state that all aspects of the installation they are certifying are safe and compliant.

These safety responsibilities also include second-hand appliances and fittings.
Additional obligations

People providing and / or installing appliances, and / or equipment also have obligations under consumer law (as discussed in the Introduction section of this topic) and the Building Act’s durability clause B2.

Suppliers of appliances supplied by both electricity and gas will also have obligations under both the electricity and gas regulations. For example, a gas water heater that needs an electrical supply is both a gas appliance and an electrical appliance.

There may also be Electromagnetic Compatibility (EMC) and energy efficiency obligations in relation to some appliances.

Details on EMC and energy efficiency requirements are found at the following websites: www.rsm.govt.nz www.eeca.govt.nz

Some obligations for the supply and use of gas and associated equipment fall under the Hazardous Substances and New Organisms Act 1996.

Details can be found on the Environmental Protection Authority (EPA) website: www.epa.govt.nz

Meanings of safe and unsafe

Meanings of safe and unsafe are defined in regulation 4 of the Gas (Safety and Measurement) Regulations 2010:

In these regulations, unless the context otherwise requires,—

safe, in respect of any distribution system, gas installation, fittings, gas appliance, or associated equipment, means that there is no significant risk that a person or property will be injured or damaged by dangers arising, directly or indirectly, from the use of, or passage of gas through, the distribution system, gas installation, fittings, gas appliance, or associated equipment;

unsafe, in respect of any distribution system, gas installation, fittings, gas appliance, or associated equipment, means that there is a significant risk that a person may suffer serious harm, or that property may suffer significant damage, as a result of dangers arising, directly or indirectly, from the use of, or passage of gas through, the distribution system, gas installation, fittings, gas appliance, or associated equipment.

The regulations identify certain features or circumstances that cause products to be unsafe. These regulations apply to everyone who manufactures, imports, supplies, retails and trades gas appliances and fittings.
‘Suppliers’ must take all reasonable steps to ensure that the product they are supplying is safe. Not taking adequate steps to ensure safety may be considered reckless in the event of an accident caused by an unsafe gas product that they have supplied.

**Note:**

- A supplier is anyone who imports, manufactures, trades, retails or otherwise supplies gas products in New Zealand. Supply is defined in the regulations as ‘supply (or resupply) by way of gift, sale, exchange, lease, hire, or hire purchase’.

The regulations provide for prohibition of specific product that does not meet essential safety requirements.

**Important considerations for gasfitters in terms of gas safety compliance**

The following bullet-point checklist outlines what gasfitters should do when working with installations involving products requiring certification. These issues and requirements are then discussed in further detail in the following sections in this topic.

- When preparing to install a product that requires certification, the first course of action is for the gasfitter to check whether it has an authentic gas safety compliance label.

- As part of the obligation to ‘take all practicable steps’ to prevent serious harm, a vigilant installer will then also check on the Gas Appliance Supplier Declaration database on the Energy Safety website to make sure the product is also listed there. [www.energysafety.govt.nz/gasd-search-declarations](http://www.energysafety.govt.nz/gasd-search-declarations)

- If the product holds a label, but is not listed on the database, this should signal alarm bells as it is likely that the label is not-authentic.

- Gasfitter may need to go back to the manufacturer / importer / supplier to request evidence of validation of the product.

- Gasfitter may decide to use NZS 5266 to assess the safety of the appliance.

- Gasfitter may need to use an authorised practitioner to get the product endorsed.

- Key areas of concern for gasfitters are when consumers provide their own products for installation / working with products from overseas requiring certification / second-hand products. Helpful information about these issues also follows.
Certification regime

Regulation 54 from the Gas (Safety and Measurement) Regulations 2010 requires gas appliances and specified fittings to be certified (in accordance with Regulation 55) before being offered for sale.

Schedule 2A of the regulations identifies recognised certification bodies, relevant standards and conditions for certification.

The regulations recognise equivalent certification by the following bodies:

- Canadian Standards Association or Underwriters Laboratories to a specified Canadian or ANSI Standard, under specified conditions.
- SAI Global, IAPMO, Australian Gas Association or Global-Mark to a specified Australian Standard, under specified conditions.
- A body accredited by the Joint Accreditation System of Australia (JAS-ANZ) and with a scope that includes NZS/AS 3645:2010 Part 2.

Gas products in use must meet the requirements of operational safety.


Important note – LPG appliances

It is very important to note that some of the certification bodies have limitations regarding LPG appliances. New Zealand LPG has specific variances that may not have been accounted for by that certification body. A gasfitter should be careful when dealing with uncertified imported LPG appliances.

In addition to essential safety requirements there are special regulatory controls relating to the supply of gas products listed as being ‘declared articles’.

Visit this link for more information and a list of any currently declared articles: [www.energysafety.govt.nz/appliances-fittings/gas-appliances-fittings/declared-articles](http://www.energysafety.govt.nz/appliances-fittings/gas-appliances-fittings/declared-articles)

Visit this link for more information and a list of any currently specified fittings: [www.energysafety.govt.nz/appliances-fittings/gas-appliances-fittings/specified-fittings](http://www.energysafety.govt.nz/appliances-fittings/gas-appliances-fittings/specified-fittings)

NZS/AS 3645 gives essential safety requirements that apply to the gas appliance certification regime in New Zealand.
Study Notes
Supplier declaration of compliance

The importer or New Zealand manufacturer of a type of product covered under the certification regime must make a supplier declaration of compliance (SDoC) before they supply the product. Specified fittings and declared articles may also require an SDoC.

Gas appliances requiring certification need to have an SDoC published on the gas appliance database on the Energy Safety website. The importer or New Zealand manufacturer is responsible for lodging the SDoC.

The declaration search form is found at:
www.energysafety.govt.nz/gasd-search-declarations

Gas products that have been declared to be ‘specified fittings’ or ‘declared articles’ may also be required to have an SDoC.

The installer of a gas appliance that is required to have an SDoC must make sure that appliance is labelled in accordance with Regulation 72 of the Gas (Safety and Measurement) Regulations 2010, or has an SDoC before they install the appliance.
Gas label and mark

When used for gas product, this label / mark is called the ‘gas safety compliance label’, and when used for gas installation work it is called the ‘gas authentication mark’.

Gas safety compliance label

Under the regulations, gas appliances requiring certification must be labelled with the gas safety compliance label.

- The label must be in the prescribed form and be no smaller than 15mm in height.
- It must be permanently affixed to the appliance so that it is clearly visible to the installer, as near as possible to the model identification of the product.
- The label may be applied to the permanent data plate or marking for the product.
- If it is not possible to place the label on the product due to the size of the product, then the label may be applied to the packaging, warranty or instructions. The label may also be placed on promotional material associated with the product.

The responsibility to ensure appliances are correctly labelled applies to anyone who supplies or installs the appliance. This includes appliance importers, manufacturers and retailers, as well as the certifying gasfitter responsible for installing them.

A check of the gas safety compliance label, followed by a check on the Gas Appliance Supplier Declaration database on the Energy Safety website to make sure the product is also listed there would demonstrate adequate care take by an installer working with a gas appliance requiring certification.

Gas authentication mark

The gas authentication mark must appear on both the Certificate of Compliance (CoC) and the Gas Safety Certificate (GSC) to show that these are legitimate documents. If the CoC and GSC are combined, the mark only needs to appear once.
**Endorsement regime**

Regulation 57 of the Gas (Safety and Measurement) Regulations 2010 applies to small production appliances, of which there are 21 or fewer in New Zealand, and to any gas appliances that form part of an imported new or used gas installation.

Under regulation 57, the importer or manufacturer of a small production appliance may have the product endorsed by an approved practitioner prior to sale, or offer for sale, instead of complying with the certification requirements. As we saw earlier, in certain circumstances a gasfitter may also need to use an authorised practitioner to get a product endorsed prior to installation.

An endorsement must include the following information:

- The full name and New Zealand address of the New Zealand manufacturer or importer.
- Information that identifies the product and the approved practitioner.
- A statement that the approved practitioner considers the product meets regulation 57 and NZS 5266.
- The address of the installation (where endorsed as part of a gas installation).
- The type of gas the appliance may safely use.

A list of approved practitioners can be found at this link: [www.energysafety.govt.nz/appliances-fittings/gas-appliances-fittings/endorsement-regime/approved-practitioner/list-of-approved-practitioners](http://www.energysafety.govt.nz/appliances-fittings/gas-appliances-fittings/endorsement-regime/approved-practitioner/list-of-approved-practitioners)
The essential safety requirements for all gas appliances in New Zealand not subject to a recognised certification regime

The essential safety requirements for all gas appliances in New Zealand that are not subject to a recognised certification regime are set out in NZS 5266:2014 Safety of gas appliances.

Remember that if an appliance is imported or manufactured for sale in New Zealand and comes under the 21 or less appliances then an Approved Practitioner must endorse the appliance(s).

If, however, the person imports or manufactures appliance(s) for their own use the gasfitter is responsible for ensuring the appliance is safe for use. The gasfitter may choose to use NZS 5266 or an Approved Practitioner. If the Gasfitter uses 5266 where applicable they should be competent in carrying out combustion product analysis tests as well as other safety related checks, temperature rise in and around the appliance, failsafe checks etc.

Examples of some of the criteria set out in the standard to ensure safety follow:

- Free from mechanical hazards.

- Adequate means of support and shall be stable or remain safe when subjected to external forces.

- Any gas leakage shall not give rise to a hazardous situation.

- Parts shall not reach temperatures which create a hazard.

- Remain safe under New Zealand climatic conditions.

- Operate safely at all specified gas supply pressures.

- Not cause a dangerous situation to develop when subjected to an overpressure.

- Suitable for the gas type specified.

- Products of combustion shall be of a composition, and be discharged in such a manner, as to present no health or fire hazard.

- Burners shall allow reliable and complete ignition, reignition and cross-lighting.

- Shall have no flame abnormality (flame lift, lightback, yellow tipping or sooting).

- Have instructions for the safe installation, commissioning, operation and maintenance.

- Have appropriate data marking.

- Be electrically safe for use in New Zealand. A gasfitter may need to have an electrician check for electrical safety especially if the appliance comes from overseas.
Second-hand gas appliances

Second-hand appliances are a concern for gasfitters as they can be placed in a difficult position where a customer has purchased the product and is insisting it is to be installed. The gasfitter should know their responsibilities and what actually can and cannot be done.

It can be a default to say ‘can’t do it’; however, that may not be very helpful to the customer, so it is important to understand what actually can be done.

A cost benefit payoff always needs to be considered because it may be more expensive making sure that a second-hand appliance is safe than getting a new one. Whatever the cost, at the end of it, they still have an old appliance rather than a new one.

• A gasfitter must never install any appliance they consider unsafe.

• The legal requirements applicable in New Zealand relating to the safety of second-hand appliances that are offered for sale are contained in the Gas (Safety and Measurement) Regulations 2010. Among other things, a second-hand gas appliance cannot be sold, offered for sale, used or allowed to be used unless it is safe. The seller (or user) must take all practicable steps to ensure that the appliance is safe under all reasonably foreseeable circumstances.

• However, all persons should still take considerable care if considering buying a second-hand gas appliance. Customers should be advised that only appliances which have been tested for safety should be bought, and that only second-hand appliances where the seller will give a written guarantee and a copy of the installation and use instructions should be considered.
• If the appliance was first supplied (by the importer or New Zealand manufacturer) after November 2002 there is a legal requirement that the installer determines whether there is a Supplier Declaration for it before they install the appliance. Apart from ‘one off’ appliances most of these declarations may be found on the Gas Appliance Supplier Declaration database.

• In many instances the service history of the appliance is non-existent and it is not clear that the safety features have been maintained. It is important to note that the presence of a supplier declaration is no guarantee of safety in this situation.

• The original sale requirements for the appliance’s data plate have changed over the years, but on resale for fixed appliances, the appliance should be marked with the make, model, gas type, minimum and maximum supply pressure, burner pressure and input rating.

• Key information for gasfitters is what information must be included on an appliance data plate as detailed above.

• Where instructions are required to safely install and/or use gas products, these must be in English and provided by the supplier.

• Gas products that met the regulatory requirements at the time of manufacture or import are not considered to be unsafe just because of changes in regulatory safety requirements.

• If an appliance type or model becomes unsafe or is subsequently considered to be unsafe, that specific type or model would be formally prohibited.

Imported gas appliances

Where a person imports a gas appliance or fitting, the installer ‘must take all practicable steps to ensure that the gas appliance or fittings are safe’.

As we have seen, this may include identifying an existing recognised certification body’s certification, using an approved practitioner to certify the item or using NZS 5266 to assess the appliance. Whatever is done, the gasfitter should be able to provide evidence of the recorded and documented practicable steps they took.
### Questions

Are the following statements TRUE or FALSE?

<p>| | |</p>
<table>
<thead>
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<tr>
<td>9. The fundamental requirement of the Gas Act 1992 and the Gas (Safety and Measurement) Regulations 2010 is essential safety.</td>
<td><strong>True</strong></td>
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<tr>
<td>10. Second hand appliances and fittings are not covered by the Gas (Safety and Measurement) Regulations 2010.</td>
<td><strong>True</strong></td>
</tr>
<tr>
<td>11. NZS/AS 3645 gives essential safety requirements that apply to the gas appliance certification regime in New Zealand.</td>
<td><strong>True</strong></td>
</tr>
<tr>
<td>12. Information about establishing the safety of products that are repaired or modified, or are subject to the gas appliance endorsement regime, is found in NZS 5266.</td>
<td><strong>True</strong></td>
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<tr>
<td>13. Gas appliances requiring certification need to have an SDoC published on the gas appliance database on the Energy Safety website. The importer or New Zealand manufacturer is responsible for lodging the SDoC.</td>
<td><strong>True</strong></td>
</tr>
<tr>
<td>14. The responsibility to make sure appliances are correctly labelled applies to importers, manufacturers and retailers only.</td>
<td><strong>True</strong></td>
</tr>
<tr>
<td>15. A cost benefit payoff always needs to be considered and explained to customers wanting installations involving second-hand appliances because it may be more expensive making sure that a second-hand appliance is safe that getting a new one.</td>
<td><strong>True</strong></td>
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PGDB & Mico 2016
CPD Training Roadshow
Topic 4: Disciplinary processes
**Topic 4: Disciplinary processes**

Topic 4 of PGDB & Mico CPD Training Roadshow 2016 for plumbers, gasfitters and drainlayers focuses on the Plumbers, Gasfitters and Drainlayers Board’s complaints and discipline process.

This topic covers the following:

- Complaints to the Board.
- The Board’s process for dealing with inquiries and complaints.
- Resolving inquiries.
- Investigating complaints.
- The investigation report.
- Disciplinary hearings.
- Board initiatives around unauthorised work.
  
  » The R.A.C app (report-a-cowboy).
  
  » Customers encouraged to check a tradesperson’s authorisation card.
Complaints to the Plumbers, Gasfitters and Drainlayers Board

Why deal with complaints?
The Plumbers, Gasfitters and Drainlayers Board is responsible for protecting the health and safety of the public by ensuring the people who do sanitary plumbing, gasfitting and drainlaying are competent. The Board takes inquiries and complaints from people who think a tradesperson may have done incompetent sanitary plumbing, gasfitting or drainlaying work for them; or about someone who may have unlawfully carried out restricted work.

The complaints process
The process for dealing with complaints is set out in the Plumbers, Gasfitters and Drainlayers Act 2006 (the Act). Because the process is set down in the Act, the Board has to follow that process. While the process may seem long, overly legal or heavy-handed at times, the Board has no option. It must deal with a complaint following the process in the Act.

The Board's approach to complaints
When dealing with a complaint, the Board's approach is guided by the following factors:

- The need to act in accordance with the law.
- Being as fair and reasonable as possible to all the parties involved in a complaint.
- Dealing with complaints as quickly and efficiently as possible.
- Avoiding any unnecessary cost or delay.
- Trying to resolve complaints as early as possible and in the most appropriate way in the circumstances of any case.
- Acting in a way that is appropriate in terms of the seriousness of a complaint.

The Board’s policies
The Board has a policy that sets out its approach to dealing with complaints and discipline, (relating to registered tradespeople); and another policy on prosecutions (which relates to complaints about work carried out by unauthorised people).

Copies of those policies can be found on the Board’s website. The main points about the complaints and discipline processes are covered in this topic document.

www.pgdb.co.nz/legislation-policies/policies.html
The Board’s process for dealing with inquiries and complaints

All complaints received by the Board are first treated as inquiries. An inquiry will only become a complaint if it meets all of the requirements in the Act.

They are that the complaint:

• is about a person who is a registered person or provisional licence holder (or was at the time the work was done), or a person who is subject to a disciplinary order of the Board

• involves work that comes within the definitions of sanitary plumbing, gasfitting or drainlaying work in the Act; and

• involves conduct that could amount to a disciplinary offence as defined in the Act (s.89).

For the Board to accept a complaint, it must also be made in writing and addressed to the Registrar. The Registrar will not accept anonymous complaints, or complaints where the person making the complaint wishes to have their identity withheld.

If an inquiry does not satisfy all of these requirements, the person making the inquiry will be told that the Board does not have the authority to deal with their matter and the inquiry will not be accepted as a complaint.

The Registrar can also dismiss an inquiry that he considers to be frivolous or vexatious.
Resolving inquiries

Where appropriate, the Board will try to resolve inquiries informally. In deciding if it appropriate to try to resolve an inquiry, the Board considers the following factors:

- Whether there are any significant health, safety or property damage issues.
- What the harm or disadvantage is to the person making the inquiry.
- Whether the harm or damage can be fixed.
- Whether the tradesperson has a disciplinary history with the Board.
- Whether the conduct is a type that is identified as a priority for the Board.
- Whether there are any wider public interest considerations.
- What the attitudes of the person making the inquiry and the tradesperson are.

If it is appropriate, the Board may take any of the following action to try to resolve an inquiry informally:

- See if the tradesperson will go back and fix any issues.
- Help the parties work together to resolve the matter between themselves.
- Issue a warning letter to the tradesperson.

If an inquiry can be resolved in a way that satisfies the person making the inquiry, the tradesperson and the Board, the inquiry will be closed. If it cannot be resolved, it becomes a complaint.
Investigating complaints

When the Board accepts a complaint about a tradesperson an investigator is appointed to investigate the complaint.

The Board’s investigators are trained in conducting investigations. The investigators are issued with a warrant of authority for each investigation by the Registrar of the Board and the warrant gives them lawful authority to carry out their investigation.

The warrants also give the investigators certain powers such as the power to enter property and the power to require people to provide them with particular information and documents. It is a criminal offence for any person to fail to provide the investigator with information they request as part of their investigation, or to provide false or misleading information.

The investigator begins their investigation by contacting the person who has made the complaint and talking to them about their complaint. They will also collect any information from them that may be relevant to the complaint such as photographs, videos or reports.

Next, the investigator will talk to the tradesperson involved to hear their side of the story. They will collect any information the tradesperson may have that is relevant to the complaint as well.

The investigator will also talk to any other person they think may have information that is relevant and which will help them with their investigation. This may include people like a product supplier or another tradesperson who may have been brought in to fix the work.

The investigator will also seek technical advice about the work in question from a certifier in the relevant trade, or other people as necessary. The certifier and other associated people will provide expert evidence about the work and any faults or issues with the work such as whether or not it complies with all applicable legal requirements.

In some cases, a technical advisor may be appointed to assist the investigator. The technical advisor may talk directly to people involved in the complaint, and may go and visit the property where the work was carried out to conduct a physical inspection of the work.

If an investigator thinks that a complaint raises serious health or safety concerns for the public, they may make an urgent application to the Board to have the tradesperson’s licence suspended or have them disqualified from carrying out work while they complete their investigation.

Where any health or safety risk is serious and / or imminent, the Registrar of the Board may also take any other action that he considers reasonably necessary to protect the public such as notifying agencies like WorkSafe NZ or the Ministry of Health.
The investigation report

After they have completed their investigation, the investigator prepares a written investigation report in which they set out the findings from their investigation. The report also includes their determination of whether or not they consider the complaint should be considered by the Board. At this stage, the investigator's report is just a preliminary report.

A copy of the preliminary investigation report it is sent to both the person who made the complaint and the tradesperson and they are given an opportunity to read it and make any comments they wish to make. Their comments are then provided to the investigator, who will consider them before finalising the report.

Usually the investigator will then produce a final investigation report and state whether the complaint should be considered by the Board.

Sometimes the comments provided by the tradesperson or the person who made the complaint may raise significant new information. If this happens, rather than finalising the report, the investigator may produce an amended preliminary report. The amended preliminary report will then be provided to the parties again and they will be given another opportunity to comment on it before the investigator produces a final investigation report.

The investigator only makes the decision that the Board should hear a complaint where it appears that:

- there is enough evidence to prove that a tradesperson has committed a disciplinary offence,
- the tradesperson’s conduct is sufficiently serious to warrant a disciplinary hearing; and,
- it is in the public interest for the complaint to be considered by the Board.
Disciplinary hearings

A disciplinary hearing is like a trial in court. The investigator presents evidence of why they think the tradesperson has committed a disciplinary offence and the tradesperson presents evidence to show that they haven’t committed the offence.

The Board must then decide whether it accepts the investigator’s case or the tradesperson’s. If the Board accepts the investigator’s case and finds the tradesperson has committed a disciplinary offence, it must then decide what penalty to impose on them.

A tradesperson does not have to defend disciplinary charges brought against him by the investigator. If they accept that they have committed a disciplinary offence in the circumstances, they can choose to plead guilty to the charges and the hearing is then just to decide what penalty will be imposed.

Disciplinary hearings are usually held at the Board’s offices in Wellington. The tradesperson can apply to have the hearing held in another location. However, it is more expensive to hold a hearing outside of Wellington and the tradesperson may have to pay a greater contribution towards costs if they are found guilty and the hearing has been held outside Wellington.

Disciplinary hearings are held before 5 Board members. For some hearings the Board will also appoint a legal advisor. The legal advisor is an independent lawyer who provides advice to the Board about how the hearing should be conducted. They do not provide advice to the Board about what their decision should be.

Other people present at a hearing include the following parties:

- The lawyer for the investigator.
- The investigator.
- Any people giving evidence for the investigator.
- The tradesperson and / or their lawyer.
- Any people giving evidence for the tradesperson.
- The stenographer (who records the hearing).
- The executive officer (one of the Board’s lawyers who is responsible for running the hearing).
All disciplinary hearings are held in public. However, where the tradesperson believes they have good reasons for wanting their hearing to be held in private, they can apply to the Board for an order that the hearing is private. Board deliberations (where the Board considers whether or not the tradesperson is guilty and what penalty to impose if they are) are always carried out in private.

A tradesperson can be represented by a lawyer at their hearing or can represent themselves. They can only be represented by someone else such as an employer, colleague or their spouse if they have applied to the Board and the Board has given them permission to have that person represent them.

As with a court, a person may be summoned to give evidence at the hearing before the Board and it is a criminal offence to fail to comply with such a summons.

Where a tradesperson is found guilty of committing a disciplinary offence, the Board can impose a penalty on them. The penalties the Board can impose are set out in the Act (section 106) and include the following:

- Cancelling a person’s registration, licence, or both.
- Suspending a person’s registration, licence, or both.
- Placing restrictions on a person’s registration, licence, or both.
- Disqualifying a person from doing work they would otherwise be allowed to do.
- Requiring a person to do training of some kind.
- Imposing a fine.
- Censuring a person.

In addition to a penalty, the Board can order a tradesperson to pay a contribution to the costs and expenses of the investigation, the cost of bringing charges against them, and the hearing.

The Board will usually make a decision about whether or not a person is guilty of a disciplinary offence on the day of the hearing (unless the hearing cannot be finished in 1 day).
It will also tell the tradesperson what penalty they will impose as soon as they have decided on the penalty (usually on the same day as the hearing).

However, the Board always prepares a written decision for every disciplinary hearing and this is the official decision of the Board. This may not be available until some weeks after the hearing, and a copy will be sent to the tradesperson as soon as it is ready. A copy is also sent to the person who made the complaint.

A tradesperson who is unhappy with a disciplinary decision by the Board (or a particular part of a decision), can appeal against it. They have 20 working days from receipt of the formal written decision to bring an appeal, and this must be done in the District Court.

Disciplinary decisions of the Board are usually made available to any person who requests it unless the Board has made suppression orders in relation to a decision (or for some other reason it cannot release the decision). Suppression orders mean that certain information cannot be made public and it is a criminal offence for any person to breach a suppression order made by the Board. A tradesperson can apply to have their name suppressed as part of a hearing, but they have to provide the Board with good reasons for why it should make such an order.

The Board is required by law to enter information about any disciplinary charges a tradesperson has committed in the past 3 years on the public register. However, that information is not put on the register if the person has been given name suppression.
In addition to putting information on the public register, the Board can order that certain information about a disciplinary decision be published. This could include the effect of the decision, the reasons for the decision, and the name of the person the decision is about. The Board would consider doing this in cases where the offences are particularly serious, there may be some public interest in the matter, or where the decision is significant for the industry in some way.
Other Board initiatives

The Board has launched a public awareness campaign to help consumers protect their health, safety and their insurance policies.

Two key parts of this campaign are the R.A.C. app (report-a-cowboy), and encouraging customers to check authorisation cards.

The R.A.C app (report-a-cowboy)

The Board has released a free-to-download mobile app R.A.C (report-a-cowboy). It is designed to quickly deal with illegal work within the construction sector. Tradespeople and consumers alike who want to make a complaint about work carried out are being encouraged to use it.

The app allows users to send photo or video evidence of, for example, illegal work sites and false advertising on vans. It can also log GPS coordinates and allows people reporting through the app to ask for confidentiality.

Note: The Board only has authority to deal with defective work done by a registered person through the complaints and discipline process described in this document; or with work done unlawfully for which prosecutions could be instigated through the district court.

The Board has no authority to deal with complaints about the quality of work done unlawfully or by a non-registered tradesperson.

To download the app, follow these simple instructions:

1. Go to the Board’s homepage and click or tap on the app’s picture.
2. Select the Apple Store icon (iPhone users) or the Google Play icon (Android users), and log in if necessary.
3. Click on the Install button.

Alternatively, scan this QR Code:
Customers encouraged to check a tradesperson's authorisation card

When at work, all authorised tradespeople must carry their authorisation card issued by the Board.

Customers are being actively encouraged to ask to see, and to check this card. The following customer advice is given on the Plumbers, Gasfitters and Drainlayers Board’s website (for more information visit: www.pgdb.co.nz).

- Shop around and obtain a range of written quotes before making a decision.
- Ask to see a tradesperson's authorisation card and check the expiry date to see that it is current.
- Check the icons on the front of the tradesperson’s authorisation card to ensure that the type of work to be carried out is permitted by the licence.
- If the work is being undertaken by anyone other than a certifying tradesperson, check the back of the card for the name of the registered certifying tradesperson who is responsible for certifying / verifying that the work is compliant and safe to be used.
- Alternatively, to phone 0800 743 262 to check to see if a person is authorised, or to search the online public register on the Board website.
Questions

Are the following statements TRUE or FALSE?

1. The Board deals with complaints about registered people through their disciplinary process and may instigate prosecutions through the district court when the complaints are about unauthorised work.
   - True [ ] False [ ]

2. There is no opportunity to try and resolve matters informally once a person has made a written inquiry to the Board.
   - True [ ] False [ ]

3. Where a complaint about a tradesperson is frivolous or vexatious, it will not be investigated.
   - True [ ] False [ ]

4. All complaints investigated by an investigator will go before the Board for a disciplinary hearing.
   - True [ ] False [ ]

5. A 30-day appeal period applies for decisions made in disciplinary hearings.
   - True [ ] False [ ]

6. R.A.C (report-a-cowboy) is a free-to-download mobile app designed for the industry to make a complaint about unauthorised people.
   - True [ ] False [ ]

7. Customers are being actively encouraged to ask to see, and to check the authorisation card of tradespeople before taking them on to carry out work.
   - True [ ] False [ ]