

# Supervision Practice Standard for Apprentices in the Electrical Industry

December 2023 (republished with minor revisions July 2024)



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## Acknowledgement of Country

The NSW Department of Customer Service acknowledges the Traditional Custodians of the lands where we work and live. We celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of NSW.

We pay our respects to Elders past and present and acknowledge the Aboriginal and Torres Strait Islander people that contributed to the development of this Policy.

Supervision Practice Standard for Apprentices in the Electrical Industry

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# Contents

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>Introduction.....</b>                           | <b>4</b>  |
| 1.1      | Objectives.....                                    | 5         |
| 1.2      | Scope.....   | 5         |
| <b>2</b> | <b>Glossary of terms.....</b>                      | <b>7</b>  |
| <b>3</b> | <b>The Framework.....</b>                          | <b>9</b>  |
| 3.1      | Levels of supervision.....                         | 9         |
| 3.1.1    | Direct supervision.....                            | 9         |
| 3.1.2    | General supervision.....                           | 10        |
| 3.1.3    | Broad supervision.....                             | 11        |
| <b>4</b> | <b>Roles and responsibilities.....</b>             | <b>12</b> |
| 4.1      | The employer.....                                  | 12        |
| 4.2      | The supervisor.....                                | 12        |
| 4.3      | The apprentice.....                                | 13        |
| <b>5</b> | <b>Assessing capability.....</b>                   | <b>15</b> |
| 5.1      | Capability assessment.....                         | 15        |
| 5.2      | Assessment of hazards and risk.....                | 16        |
| <b>6</b> | <b>Tasks.....</b>                                  | <b>17</b> |
| <b>7</b> | <b>Supervision ratios.....</b>                     | <b>20</b> |
| 7.1      | Developing supervision skills for apprentices..... | 21        |

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# 1 Introduction

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This practice standard explains the roles and responsibilities of employers, supervisors and apprentices in the electrical industry. It has been developed by the NSW Government through consultation with industry stakeholders, members of the public and interested individuals. All licensed electricians conducting supervision must abide by these requirements and penalties can be imposed for breaches.

To obtain a licence to carry out electrical work in NSW a person will most commonly complete a Certificate III in Electrotechnology Electrician and have at least 12 months' experience. However, the *Home Building Act 1989 (HB Act)*, allows a person to carry out electrical work without a licence if they are supervised by a licensed person. The licensed person must be authorised to carry out electrical work, be present where the work is being done, be available to be consulted and to give directions relating to the work.

In addition to these requirements, the *Work Health and Safety Act 2011 (WHS Act)* prescribes a general duty of care on employers or a Person Conducting a Business or Undertaking (PCBU). A PCBU that employs, hosts, or directs the activities of electrical apprentices must ensure that apprentices are adequately supervised, and work to a safe system. A PCBU is also required to ensure that, so far as is reasonably practicable, workers are provided with:

- a safe system of work, and
- any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out.

Employees or workers (including licence holders or supervisors) have separate Work Health and Safety (WHS) duties to take reasonable care to ensure that their acts or omissions do not adversely affect the health and safety of other persons. All employees or workers also have the duty to comply or co-operate with any reasonable WHS related policies and instructions of the PCBU.

Apprenticeships and the supervision of apprentices and trainees in NSW are also governed by the *Apprenticeship and Traineeship Act 2001 (A&T Act)*. Apprenticeships combine technical education with work-based training in accordance with a training plan delivered by an approved Registered Training Organisation (RTO).

Group training organisations (GTOs) hire apprentices and place them with host employers. GTOs are responsible for ensuring the host employer has the capability to provide adequate supervision to the apprentice as required by these practice standards, and should remove apprentices from unsuitable hosts where the practice standards are not being adhered to.

Effective supervision is critical to ensure the safety and development of apprentices. It ensures that they are able to develop the knowledge and skills that they need to competently perform electrical work, and achieve this development in a safe working environment that manages their exposure to risks. Supervisors have a role to ensure that over the duration of an apprenticeship, an apprentice:

- is given sufficient experience to become competent at all the core and elective competencies of the trade,
- gains experience using a range of equipment (different types, brands, models), methods (different installation environments, structures, fixings, or techniques), and applications (different customer uses of the product or service), and
- starts by undertaking each task under direct supervision before safely progressing to general and eventually broad supervision as their demonstrated level of competency in each task develops.

Supervision requires more than just knowing how to do the work. Supervisors will often be doing work themselves, and therefore need to be able to manage this while providing adequate oversight and direction to other persons at the same time. It is an acquired skill and requires strong communication skills, patience, integrity and a detailed understanding of supervisory responsibilities. Supervisors also need to ensure that they support the PCBU in creating physically and mentally safe work environments and to know how to respond to things like complaints or reports of bullying. It is essential that the supervisor:

- helps the apprentice to minimise any negative outcomes, especially in the earlier stages of their apprenticeship or when they are unfamiliar with a task,
- helps the apprentice to interpret and respond to new information and work contexts,
- provides opportunities for the apprentice to demonstrate their capabilities in a safe and supportive manner, and
- helps the apprentice meet their requirements to record workplace experience by verifying their workplace records (e-profile or work log records).

Any supervisor must be appropriately qualified and competent in a task to provide effective supervision of an apprentice undertaking that task. They must:

- be the holder of a current licence to carry out electrical work,
- have appropriate technical knowledge, skills and experience in regard to the particular work to be performed,
- have strong communication skills that enable them to effectively explain, demonstrate and review an apprentice's work, and
- complete any supervision course required by the building regulator as a condition of holding an electrical licence.

Supervision levels have been detailed in this document to indicate the type of supervision required for a particular task. The knowledge, skill and experience level of the apprentice is an essential consideration in determining the level of supervision required for the task.

Compliance with this practice standard is a mandatory condition of all licensed electricians conducting supervision. Penalties can be imposed on a supervisor for failing to provide adequate supervision, or on an apprentice for failing to ensure they are being supervised by a person who holds a licence to carry out the work.

## 1.1 Objectives

This practice standard has been developed to clarify legislative requirements for the supervision of electrical apprentices. It details the mandatory requirements for the supervision of electrical apprentices under the HB Act to achieve compliant work in a safe manner. This practice standard does not replace the obligations imposed on a PCBU prescribed under the Work Health and Safety legislation or those provided for in the *Apprenticeship and Traineeship Act 2001* (the **A&T Act**).

## 1.2 Scope

This practice standard applies to a person, company or organisation in their role as an employer of electrical apprentices and licensed electricians in their role as a supervisor of apprentices when performing electrical work.

Until 1 September 2024, this practice standard may be read as best practice guidelines that licence holders should aim to integrate into their daily work practice. Licence holders and employers are recommended to adopt these practice standards as soon as practicable.

From 1 September 2024, this practice standard will be made mandatory and will be enforced as a condition of holding an electrical licence. This means that failure to comply with the

requirements under these practice standards may attract fines, penalties and/or disciplinary action such as suspension or cancelation of a licence.

## 2 Glossary of terms

The following is a list of terms and acronyms used in this document:

| Term                 | Description   |
|----------------------|---|
| Apprentice           | A person who is employed and is undertaking training under a <i>training contract</i> with a view to becoming eligible to hold a qualified supervisor certificate to carry out electrical wiring work.  |
| A&T Act              | <i>Apprenticeship and Traineeship Act 2001 (NSW)</i>  |
| Electrical work      | means the physical work of installing, repairing, altering, removing or adding to an <i>electrical installation</i> or the supervising of that work, and includes <i>electrical wiring work</i> as defined under the <i>Gas and Electricity (Consumer Safety) Act 2017</i> .  |
| GTO                  | means a <i>Group Training Organisation</i> who hire apprentices and trainees and place them with host employers. Registered GTOs are listed on the <a href="#">national register</a> .  |
| HB Act               | <i>Home Building Act 1989 (NSW)</i>   |
| Licensed electrician | A person who is appropriately qualified and holds the requisite licence type to carry out electrical work and to supervise the completion of electrical work by unlicensed persons in NSW.  |
| PCBU                 | means a <i>person conducting a business or undertaking</i> . A broad term used under the <i>Work Health and Safety Act 2011</i> to describe all forms of modern working arrangements, which we commonly refer to as businesses. PCBU includes a sole trader, i.e., a person who conducts the business or undertaking alone, or with others and whether or not it is conducted for profit or gain          |
| RTO                  | means a <i>Registered Training Organisation</i> that delivers nationally recognised vocational education and training qualifications.   |
| Skill                | Refers to a level of capability of the person to perform a task. The capability of the person to perform a task should inform the level of supervision required at any given time.  |
| Supervisor           | A supervisor is a qualified and experienced person that holds a current licence to carry out electrical work under the <i>HB Act</i> and has the relevant technical competency to undertake the work and supervise others in the conduct of electrical work. The Supervisor is responsible for the development of technical competency of the apprentice and applying this Supervision Practice Standard. |
| Task assessment      | The process of determining the appropriate level of supervision required for an apprentice undertaking a task. The assessment should consider the apprentices' relevant skills, knowledge and experience as well as the risk of harm relating to a particular task.   |

| Term              | Description   |
|-------------------|---|
| The Regulator     | Building Commission NSW   SafeWork NSW  |
| Training contract | <p>A Training Contract is a legally binding agreement entered into by an apprentice and an employer for an agreed period of time (typical nominal term is 48 months). It will be in a form recognised and registered by State, Territory and Commonwealth governments. The purpose of the contract is to set out the terms and obligations of the employer and for the apprentice to become a fully qualified and competent electrician.</p> <p>The Training Contract defines:</p> <ul style="list-style-type: none"> <li>• each party's responsibilities in the apprenticeship</li> <li>• what qualification the apprentice will get</li> <li>• which registered training organisation (RTO) is delivering the training</li> <li>• employment arrangements and industrial award</li> <li>• the duration of the apprenticeship period</li> <li>• the identity and license number of the nominated supervisor</li> <li>• a training plan prepared by the RTO in consultation with the apprentice, detailing the qualification the apprentice will undertake, the competency standard units needed to complete the qualification, and other supporting information</li> </ul> |
| WHS Act           | <i>Work Health and Safety Act 2011</i>  |
| WHS Regulation    | <i>Work Health Safety Regulation 2017</i>   |



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## 3 The Framework

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The supervisor is responsible for determining the appropriate level of supervision for the apprentice when carrying out particular tasks as specified in this practice standard. Supervision requirements must be considered at the time that work is allocated.

The supervisor is also responsible for ensuring that work is carried out safely and in accordance with the safe systems and procedures provided by the employer or PCBU responsible for the worksite. This practice standard does not replace the requirements under the Work Health and Safety legislation, and therefore, the employer or PCBU must ensure that obligations under the Work Health and Safety legislation are also followed and explained to the apprentice.

There are three levels of supervision that may be applied for a particular task to be carried out:

- direct
- general
- broad.

These levels reflect the need for an apprentice being supervised to be closely monitored and provided high levels of support when undertaking new or high-risk work, compared to an experienced person being supervised who is carrying out familiar tasks or low-risk work.

When determining the level of supervision required for a person being supervised to complete a particular task, a supervisor must assess the task and work environment and the ability of the person to competently perform the task.

Key factors that must be considered include the type of work to be performed, any associated risks, and the knowledge, skills and experience of the apprentice.

The practice standard sets out the approved ratio of supervisor to apprentices that should be applied in an environment where electrical installation work is carried out, commensurate with the apprentice being supervised depending on the level of supervision required for the task being performed.

Regardless of the supervision level, any electrical work undertaken by an apprentice under the supervision of a licensed electrician must be checked, rectified if necessary, and signed off (verified) by a licensed electrician.

### 3.1 Levels of supervision

The amount and type of supervision that an apprentice needs will vary as they acquire technical knowledge, skills and gain confidence in the workplace. In the early years of their apprenticeship they will require a higher level of supervision. The level of supervision should diminish gradually over the course of the apprenticeship, as competence is increasingly attained and demonstrated. The process for evaluating competence is outlined in section 5.

In most cases a supervisor should be to progressively reduce the level of supervision from direct supervision in the first year of the apprenticeship to broad supervision in the fourth and final year of the apprenticeship. However, there are some high-risk tasks that will require a certain level of supervision at all times, regardless of the deemed competency level of the apprentice. For example, live work for testing to confirm isolation and fault finding must only ever be carried out by an apprentice under direct supervision and must only be carried out in the final year of their apprenticeship.

#### 3.1.1 Direct supervision

Direct supervision is one-on-one constant supervision where the apprentice requires continual guidance and monitoring to ensure a task is carried out correctly and safely. Direct supervision is required where:

- the task is new or unfamiliar, or the task contains variations to basic work that are new to the apprentice,
- the apprentice's ability has not been assessed or they have not demonstrated a consistent ability to perform the task to a minimum standard,
- the formally assessed hazards and risks related to the task indicate direct supervision is appropriate,
- unplanned events are beyond the apprentice's current ability to manage.

The supervisor must be always physically present and with clear sight of the work being carried out by the person they are supervising. They must also be readily available to provide specific instructions and guidance, and ensure that they directly oversee and review the apprentice's work.

The supervisor must give directions that are adequate to enable the work to be undertaken correctly by the individual performing it and must personally ensure that the completed work is compliant and meets all regulatory requirements.

**An apprentice may isolate, test or energise circuits and equipment only under direct supervision and in accordance with the restrictions outlined in Section 6 'Tasks' of this standard.**

Direct supervision is essential for every task being carried out for the first time and must be maintained until the apprentice being supervised can demonstrate their competence in that skill. For example, a 4th year apprentice cannot be deemed sufficiently competent at completing a tag and lockout procedure on deenergised installations if they have never performed this task before and would require direct supervision until they have been assessed as being sufficiently competent at that task before they could do that work under general supervision.

### **3.1.2 General supervision**

General supervision means that the apprentice is provided with intermittent oversight, including general instruction and progressive monitoring to ensure the task is carried out safely and correctly.

General supervision is normally appropriate where hazards and risks related to the task have been assessed and indicate general supervision is appropriate, and where the apprentice has:

- previously demonstrated their ability to perform the task to a required standard and in a safe manner without need for constant intervention,
- demonstrated an understanding of any hazards and risks associated with the task and an ability to independently manage those risks appropriately, if necessary,
- clearly understood when and how to seek assistance and support, and to wait for support if the task cannot be safely and effectively completed without it,
- an appropriate level of knowledge and practical skill from both on-the-job training and theory-based learning, and
- previously demonstrated an ability to manage (or seek assistance with) reasonably predictable unplanned events.

Under general supervision the supervisor is not required to directly oversee the person as they carry-out a task but must always remain on site and be readily available for assistance or instruction as required. The supervisor must undertake regular in-person checks and give ongoing feedback on the quality of work performed by the apprentice. The supervisor must also check work and test circuits, apparatus and/or equipment prior to energisation.

For an apprentice, general supervision is a stage in their professional development where they have the technical knowledge and skills that allow them to function more independently. The apprentice will move from direct supervision to general supervision only in the skills where they have demonstrated a minimum level of capability.

The requirement for a supervisor to remain on site during general supervision means they should be physically present at all times. It **does not** include being available via phone or video call.

### **3.1.3 Broad supervision**

Broad supervision means that the apprentice can carry out work under instruction and direction from the supervisor but only needs occasional face-to-face contact with their supervisor to ensure the work complies with technical requirements. The supervisor nonetheless is required to be readily available to provide assistance or instruction as required.

Broad supervision may be appropriate where the formally assessed hazards and risks related to the task indicate broad supervision is appropriate and where the person:

- has demonstrated their ability to perform the task safely and to required standards without the need for any supervisor intervention,
- has demonstrated an understanding of any hazards and risks involved with the task and an ability to independently manage those risks appropriately,
- has demonstrated their ability to assess and monitor hazards and risks involved with the task,
- clearly understands when and how to seek assistance and support,
- has a significant level of knowledge and practical skill from both on-the-job and theory-based learning, and
- has demonstrated an ability to respond appropriately to (or seek appropriate assistance with) unplanned events that may occur.

The supervisor must do all the following:

- meet with the apprentice face-to-face at the start of each shift or before commencing a new work task to provide direction and instructions,
- isolate and prove de-energisation of any circuits or exposed equipment that the apprentice may work on or near,
- always be readily available either in person or by electronic communication to provide advice and guidance, and
- attend the site in person at the end of the shift or when the task is completed to test and verify the work completed, verify that the work is compliant, and to carry out any commissioning or livening (energisation) of the work.

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## 4 Roles and responsibilities

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### 4.1 The employer

The employer of an apprentice is the person, company or organisation that enters into a training contract with the apprentice.

Group Training Organisations (**GTOs**) hire apprentices and place them with host employers. It is the GTO's role to manage the quality and continuity of training for the apprentice both on and off the job. The GTO will have ongoing responsibility for ensuring that the host employer has the capability to provide the required level of supervision to the apprentice as required by these practice standards and WHS legislation.

The PCBU (the employer), either direct or hosting, has a duty in WHS legislation, to maintain a safe working environment for those they employ by providing information and training, safe work procedures, safety equipment, effective supervision, and appropriate risk and complaint management mechanisms.

Employers have an obligation to ensure that an apprentice has the necessary support and supervision by qualified, licensed and experienced electricians with relevant knowledge and skills who are committed to training them. Apprentices must not be supervised by other apprentices or persons on the job site, except as allowed under these practice standards.

An employer must take all reasonable steps to ensure an apprentice receives the work-based component of the required training, in particular by providing all necessary facilities and opportunities to acquire the skills and knowledge they need. As well, facilitating the apprentice's attendance at the RTO's facility for the theoretical component of technical knowledge and skills development.

An employer will be committing an offence if they instruct an apprentice to do a task without the appropriate level of supervision or where the supervisor has not assessed them as being competent to do the task.

### 4.2 The supervisor

A supervisor is a person that holds a current licence to carry out electrical work and provides oversight of electrical apprentices performing electrical work.

The key role of a supervisor is to ensure the work they do, or the work carried out by the apprentice they supervise, complies with relevant standards and laws, is done in a safe manner and complies with the rules and systems put in place by the employer.

It is the supervisor's responsibility to provide effective supervision to the apprentice. Effective supervision means being:

- present at the site of the electrical work to ensure that the work is carried out correctly and safely,
- aware of the details of the electrical work being performed and able to give instructions and direction to the apprentice,
- able to provide constructive feedback and instructions to the apprentice to correct any mistakes, and
- able to ensure the completed electrical work is compliant and free of defects.

The supervisor must be familiar with learning principles and have the capacity to guide and support an apprentice's learning and the development of their technical competency.

The supervisor is responsible for:

- instructing, training, mentoring and monitoring progress on a daily basis,

- isolating, testing and commissioning circuits and equipment,
- assessing the capability of the apprentice they are supervising to carry out varying tasks,
- deciding what level of supervision should apply to the task being undertaken (including assessing the risk or hazards where the decision varies from the level identified in these practice standards),
- providing the apprentice who they supervise with opportunities to learn and practice all on-the-job skills required to satisfy their competency development program as outlined in the training plan, especially where the supervisor is the nominated supervisor on the training contract.

The supervisor is responsible for ensuring that all electrical work is undertaken, checked and tested to confirm compliance with the appropriate Acts, Regulations and Australian Standards, including the AS/NZS 3000 Wiring Rules. Additionally, it is the responsibility of the licence holder to ensure that all electrical work is done using compliant products.

Breaching these standards may result in a supervisor being penalised, including possible licence suspension or cancellation.

### **Before commencing work**

Before an apprentice commences any electrical work, the supervisor must:

- be confident that the apprentice is in a fit state for work and has been assessed by the PCBU as not under the influence of any drugs or alcohol,
- ensure that electrical equipment is de-energised, there are no exposed live parts and is safe to be worked on or near,
- clearly instruct the apprentice as to which task they are expected to do and which tasks they must not do before they are instructed on how to do the tasks. The supervisor must confirm the apprentice understands the instructions,
- discuss with the apprentice which level of supervision applies to the particular task and confirm the apprentice understands any limitations to the work they can undertake,
- ensure the apprentice is equipped with the necessary personal protective equipment and tools and understands how to correctly select and use them, and
- where the equipment has been de-energised to allow work to be carried out on or near it, ensure that the apprentice:
  - has witnessed verification of the electrical test being undertaken by the supervisor to confirm the circuit or equipment is de-energised.
  - confirms the isolation is locked and danger tag applied at the isolation point(s) with the supervisor and apprentice placing their own individual lock/tag

## **4.3 The apprentice**

An apprentice is the person that enters into a training contract. They are not authorised to perform electrical work unsupervised or energise equipment independently. They have a duty under the WHS legislation to protect their own safety and to avoid any act or omission which might adversely impact the safety of others during the performance of their work. Apprentices must follow all lawful instructions of their employer/supervisor, safe work procedures and use protective equipment in the correct manner at all times.

An apprentice is required to be proactive with their own training. This includes:

- working safely and to the best of their ability,
- asking appropriate questions when unsure of facts or requirements,
- respecting the contributions being made by their employer and supervisors,

- diligently monitoring their own progress and documenting their work experience (e-profile or work log records in the form required by their RTO / the regulators), and
- not knowingly performing any work that is inconsistent with this standard.

At the completion of their apprenticeship, an apprentice must obtain the relevant trade licence prior to carrying out electrical work lawfully as a qualified electrician.

To account for any delays in obtaining a licence, an apprentice has a period of 12 months from completing their apprenticeship to obtain a licence. During this period, they may continue to carry out electrical work in accordance with these practice standards as if they were a fourth-year apprentice. A licensed electrician must continue to check and sign off work until the apprentice obtains their licence.

Apprentices must, after de-energisation of an installation, circuit or equipment by the supervisor and prior to commencing work, always:

- participate in the tag and lockout procedure by confirming that the isolation is locked and danger tag applied at the isolation point(s) with the supervisor and apprentice's names on the danger tag; and
- witness the verification of the electrical test being undertaken by the supervisor to confirm the circuit or equipment is de-energised.



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## 5 Assessing capability

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Apprentices should be provided a level of supervision that enables them to work safely and learn and achieve competency in varying tasks so that they are confident to work independently across a range of equipment and ensure the delivery of quality outcomes to the standards applicable in industry by the end of their apprenticeship. Their supervisor should regularly evaluate their ability by considering their progress in the apprenticeship and the experience and training they have received in a particular task.

Once an apprentice has demonstrated their competency, the minimum supervision level identified in the table in section 6 should apply.

### 5.1 Capability assessment

An apprentice should learn a new skill by first observing the task being completed and then being provided instructions and directly supervised while carrying out the task themselves.

Generally in the first year of their apprenticeship an apprentice should practice carrying out the task under direct supervision over the period of time indicated in the table at section 6. Once an apprentice can demonstrate they are capable of completing the task without error, they can be assessed by the supervisor. If the supervisor is confident the apprentice can competently carry out the task, they will be able to move to general supervision when undertaking that task (if permitted under the table at section 6). The decision to reduce the amount of supervision provided to an apprentice should be made in consultation with the apprentice. It is important they feel comfortable voicing their confidence, or any uncertainties, relating to their work. All apprentices must complete the minimum training stage indicated in the table in section 6 before progressing to assessment for different levels of supervision.

Prior to supervising a task, the supervisor must assess the technical knowledge and practical skills of the person to determine the level of supervision required. Personal knowledge and observation of a person's ability is one of the most important considerations when determining the appropriate level of supervision. This is particularly the case where a supervisor has worked with a person before and has a good understanding of the person's level of competence and their attitude or approach to work. This knowledge is valuable when determining the degree of supervision required.

The supervisor must make a conscious appraisal of the capability of the apprentice, giving consideration to:

- any prior assessments conducted by another supervisor of the apprentice relating to the particular task,
- the extent of the apprentice's experience doing the same and similar work,
- the quality of the apprentice's work and history of hazard and risk identification, and meeting safety and compliance standards on site,
- the level of support the apprentice has previously required while completing the task,
- progress in the apprentice's approved course of training or any previous training completed,
- the apprentice's ability to use any necessary tools, materials or equipment, and
- the supervisor's own observations and knowledge of the person performing the work.

When assessing the capability of an apprentice to complete a particular task, a supervisor must give consideration to the apprentice's:

- awareness of safety requirements to carry out the task in the context of their surroundings,

- ability to perform the job to an appropriate technical standard (including understanding the relevant laws and standards and how to achieve compliance),
- understanding of workplace policies and procedures,
- ability to deal with everyday problems and critical incidents that may occur,
- understanding as to why a task is performed in a certain way or sequence, and
- ability to apply skills consistently.

The assessment of an apprentice's capability to perform a task must be documented by the supervisor. Confirmation of competence as part of the formal training contract is considered sufficient. Access to these records must be made available to other supervisors to ensure they are informed of the apprentice's experience and competency relating to a particular task. Supervisors should use this information to make an informed decision when determining the relevant level of supervision required by the apprentice before allowing them to undertake that work.

The assessments will also assist the regulator when dealing with complaints, enquiries or workplace audits.

Employers of apprentices are responsible for taking all reasonable steps to ensure that the apprentice experiences a suitable range of work tasks to develop the competencies required by their training program.

## 5.2 Assessment of hazards and risk

Determining the appropriate level of supervision for an apprentice requires the supervisor to assess the hazards and risk related to a particular task and assess the apprentices' relevant skills, knowledge and experience to complete the task.

Variations in the work environment, whether related directly to electricity supply or not, present many different circumstances and potential risks. A supervisor must assess these risks when determining the appropriate level of supervision for an apprentice for a particular task. The risk assessment should consider both the technical and safety requirements of the task and the likelihood of any complications that could arise such as:

- work type (e.g., residential, commercial),
- work characteristics (e.g., working from heights, working in small spaces),
- new construction or alterations/additions to an existing installation,
- electrical or other work being carried out by other people on site, and
- proximity to energised electrical wiring, equipment or apparatus and the voltage and maximum fault current of that wiring, equipment or apparatus.

A supervisor must consider both the apprentice's experience and skills, and the relative risk associated with the work. The supervisor must engage the apprentice in the process for identifying any hazards or risks and collaboratively manage any risks they identify. Any hazards and risk that are identified and how they will be managed must be documented, discussed between the supervisor and apprentice and tracked against performance capabilities. Additionally, the supervisor must ensure that they work according to the safe system of work provided by their employer or PCBU, to abide with any requirements under the Work Health and Safety legislation and explain the same to the apprentice.



## 6 Tasks

The appropriate level of supervision should be considered in the context of the tasks to be performed, the environment in which the tasks are being performed and the capability of the apprentice performing the tasks.

The table below provides supervision levels that must be applied as a minimum level of supervision of an apprentice at different stages of competency development (training) and for different tasks. It is important for supervisors and apprentices to be aware that in regards to testing, fault finding, live work and electrical isolation, apprentices are not be permitted to perform (regardless of the degree of supervision) until they are in the later years of their apprenticeship.

| Type of electrical work  | Time served  | Minimum level of supervision |
|--|--|------------------------------|
| <b>Installation</b>  |  |                              |
| <b>New electrical installation work</b><br>including wiring of main and sub-main circuits and final sub-circuits, earthed cable tray installation, conduit installation, underground and overhead wiring installation - maximum cable size of 35mm <sup>2</sup><br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervision electrician)</i> | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|  | More than 1 year to 2 years                                | General                      |
|  | More than 2 years to 3 years                               | General                      |
|  | More than 3 years to 4 years                               | Broad                        |
| <b>Maintenance, alterations and additions to existing electrical installations</b><br>including sub-mains and main installation - maximum cable size of 35mm <sup>2</sup><br><br><i>(isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|  | More than 1 year to 2 years                                | General                      |
|  | More than 2 years to 3 years                               | General                      |
|  | More than 3 years to 4 years                               | Broad                        |
| <b>Installation of main, sub-main and final sub-circuit cables of 35mm<sup>2</sup> and greater</b><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|  | More than 1 year to 2 years                                | Direct                       |
|  | More than 2 years to 3 years                               | General                      |
|  | More than 3 years to 4 years                               | General                      |
| <b>Tag and lockout procedure on de-energised installations</b><br><br><i>(isolated and proven de-energised by supervising electrician)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|  | More than 1 year to 2 years                                | Direct                       |
|  | More than 2 years to 3 years                               | General                      |
|  | More than 3 years to 4 years                               | General                      |
| <b>Distribution and main switchboard installation with maximum switchboard capacity of 200 amps</b><br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|  | More than 1 year to 2 years                                | General                      |
|  | More than 2 years to 3 years                               | General                      |
|  | More than 3 years to 4 years                               | Broad                        |
| <b>Distribution and main switchboard installation with maximum switchboard capacity above 200 amps</b><br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|  | More than 1 year to 2 years                                | Direct                       |
|  | More than 2 years to 3 years                               | General                      |
|  | More than 3 years to 4 years                               | General                      |

| Type of electrical work   | Time served  | Minimum level of supervision |
|---|--|------------------------------|
|   |  |                              |
| <b>Testing</b><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i><br><br><i>Does not include safety and compliance test as required by the Gas and Electricity (Consumer Safety) Regulation</i> | Up to completion of 1 <sup>st</sup> year in apprenticeship | <b>Not permitted</b>         |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | Direct                       |
|   | More than 3 years to 4 years                               | General                      |
| <b>Fault finding</b><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | <b>Not permitted</b>         |
|   | More than 1 year to 2 years                                | <b>Not permitted</b>         |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | Broad                        |
| <b>Live work when permitted by WHS Law (testing to confirm isolation and fault finding)</b>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | <b>Not permitted</b>         |
|   | More than 1 year to 2 years                                | <b>Not permitted</b>         |
|   | More than 2 years to 3 years                               | <b>Not permitted</b>         |
|   | More than 3 years to 4 years                               | Direct                       |
| <b>Installation of renewable energy systems</b><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | General                      |
| <b>High voltage installation</b><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | Direct                       |
|   | More than 3 years to 4 years                               | General                      |
| <b>Electrical Equipment</b>   |  |                              |
| <b>Installation of electrical equipment and accessories</b><br><i>(not connected to electricity supply)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | Broad                        |
| <b>Installation of metering provider metering equipment as per requirements or authorisation of the metering provider<sup>1</sup></b><br><i>(not connected to electricity supply)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | General                      |
| <b>Fault-finding, repairs and maintenance of electrical equipment</b><br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | Broad                        |
| <b>Electrical isolation of installation and equipment</b>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | <b>Not permitted</b>         |
|   | More than 1 year to 2 years                                | <b>Not permitted</b>         |
|   | More than 2 years to 3 years                               | Direct                       |

<sup>1</sup> Any work on metering provider metering equipment must be done in accordance with the requirements or authorisation by the metering provider. This standard does not supplement the requirements or authorisations specified by a metering provider.

| Type of electrical work   | Time served  | Minimum level of supervision |
|---|--|------------------------------|
|   | More than 3 years to 4 years                               | Direct                       |
| <b>Tag and lockout procedure on de-energised equipment</b><br><br><i>(isolated and proven de-energised by supervising electrician)</i>  | Less than 1 year   | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | General                      |
| <b>Terminations</b>   |  |                              |
| <b>Termination of cables in electrical equipment and accessories</b> (outlets, lights, switches, etc.)<br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | General                      |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | Broad                        |
| <b>Termination of cables</b> (35mm <sup>2</sup> and greater)<br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>   | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | General                      |
| <b>Termination of cables at a switchboard rated at 100 amps or less</b><br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | General                      |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | Broad                        |
| <b>Termination of cables at a switchboard rated</b> (more than 100 amps but less than 400 amps)<br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | Broad                        |
| <b>Termination of cables at a switchboard rated more than 400amps</b><br><br><i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>  | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | General                      |
|   | More than 3 years to 4 years                               | General                      |
| <b>Special electrical installations</b>   |  |                              |
| Special electrical installations including:<br><ul style="list-style-type: none"> <li>• Safety Services including emergency lifts</li> <li>• Emergency back-up generation</li> <li>• Hospital areas (Patient treatment areas)</li> <li>• Hazardous locations (explosive atmospheres)</li> <li>• Swimming pools</li> <li>• Fire Control Systems</li> </ul> <i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i> | Up to completion of 1 <sup>st</sup> year in apprenticeship | Direct                       |
|   | More than 1 year to 2 years                                | Direct                       |
|   | More than 2 years to 3 years                               | Direct                       |
|   | More than 3 years to 4 years                               | General                      |

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# 7 Supervision ratios

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The number of persons that a supervisor should supervise at any one time is determined by the competency of the apprentice and the specific task being performed.

The employer and supervisor are both responsible for ensuring that the ratio of supervisors to apprentice being supervised is 1:1 where the task requires **direct** supervision, 1:3 for tasks that require **general** supervision and 1:5 for tasks that require **broad** supervision. This means that:

- one supervisor can only supervise one person at any one time when the task they are performing requires direct supervision,
- a supervisor must not supervise more than three persons at any one time when the tasks they are performing require general supervision, and
- a supervisor is to supervise no more than five persons at any one time when the tasks they are performing require broad supervision.

**A supervisor must never supervise more than 5 persons at any given time.** If a supervisor is responsible for providing direct supervision to a person for a particular task, the same supervisor may also provide broad supervision for up to another four persons during the shift.

For example, the supervisor may instruct 4 fourth year apprentices to carry out conduit installation (broad supervision) and then directly supervise a first year apprentice in carrying out other tasks during the day. The first year apprentice must stop working if the supervisor is required to check on the fourth year apprentices at any time. While the first year apprentice must stop working on the task requiring direct supervision, the first year apprentice may go with the supervisor to observe the conduit installation carried out by the fourth year apprentices as the supervisor checks on them. In this way, the first year apprentice is given a learning opportunity and the supervisor can ensure the first year apprentice is not carrying out any work outside of direct supervision.

Similarly, if a supervisor is responsible for providing direct supervision to a person for a particular task, the same supervisor may also provide general supervision for up to another three persons during the shift. However, when the supervisor goes to check on the apprentices under general supervision, the apprentice under direct supervision must stop work and may observe the workers under general supervision while the supervisor checks their work.

The following table provides examples of how the ratios would apply.

| Level of supervision required | Possible ratios   |
|-------------------------------|---|
| Direct                        | One supervisor with: <ul style="list-style-type: none"><li>• one person requiring direct supervision; or</li><li>• a combination of one person requiring direct supervision and up to four persons requiring broad supervision where the supervisor has determined they can safely provide direct supervision under these conditions.</li><li>• a combination of one person requiring direct supervision and up to three persons requiring general supervision where the supervisor has determined they can safely provide direct</li></ul> |

| Level of supervision required | Possible ratios  |
|-------------------------------|--|
|                               | <p>supervision to the apprentices working under general supervision under these conditions.</p> <p>an apprentice under direct supervision must stop working if the supervisor is required to check on any other apprentice under broad or general supervision.</p>   |
| General                       | <p>One supervisor with:</p> <ul style="list-style-type: none"> <li>• up to three persons all requiring general supervision or</li> <li>• a combination of up to two persons requiring general and two persons requiring broad supervision where the supervisor has determined that they can safely provide supervision under these conditions</li> </ul> |
| Broad                         | <p>One supervisor with:</p> <ul style="list-style-type: none"> <li>• up to five persons all requiring broad supervision</li> </ul>   |

## 7.1 Developing supervision skills for apprentices

The apprenticeship competency development program is designed to provide both theory-based and on-the-job practical training to produce electrical tradespersons who possess the skills, knowledge and experience to work as competent electricians. It is expected that by the time a person holds the requisite licence to do electrical work, they should be competent to work autonomously, verify compliance of electrical installations, supervise electrical work and have a duty of care over others carrying out electrical work.

Before supervising others, apprentices must first be taught how to supervise effectively. Some of this education will develop in the way that they are supervised, and they will likely follow the style of their supervisor. Supervision will also be taught via formal education. However, until such time as an apprentice can develop the skills and be competent in supervision practices, they must continue to be supervised by a licenced electrician while they are developing this skill.

It is important that opportunities to learn about supervisory responsibilities are inbuilt to the practice standard so that new tradespersons are appropriately skilled in this area. Accordingly, this standard contemplates limited circumstances under which a fourth year apprentice may observe the supervisory process to learn how to supervise. However, under no circumstances shall an apprentice apply these practice standards as if they were the supervisor. The licensed supervising electrician remains ultimately accountable for all supervision responsibilities owed under the legislation and under these practice standards. This includes the ongoing obligation detailed in this standard for the supervisor to be on site and conducting the relevant level of supervision required for that task.

Fourth year apprentices may participate in the supervisory process on worksites in limited circumstances. A fourth year apprentice can, with oversight of a licensed supervising electrician, observe and learn to supervise the work of a third year apprentice who has been assessed as

competent to carry out a particular task under general or broad supervision. A fourth year must not participate in the supervisory process for a first year apprentice.

If the fourth year apprentice observes any issues with the work being carried out by the third year apprentice, they may raise their concerns with the supervising electrician. The fourth year apprentice can then, under supervision and guidance of the supervisor, correct the actions of the third year apprentice. This is intended to complement the supervision obligations of the supervising electrician and does not reduce or replace their obligation to supervise apprentices.

Where a fourth year apprentice is observing the supervisory process for a third year apprentice, the fourth year apprentice counts towards the ratio listed above.

For a fourth year apprentice to observe in the supervisory process, the following criteria must be met:

- the third year apprentice that will be supervised has been assessed by a licenced electrician and found to be sufficiently competent to carry out the particular task under general or broad supervision for tasks detailed in section 6 of this standard,
- the fourth year apprentice that will be observing the supervision has been assessed by a licenced electrician and found to be competent to carry out the particular task under broad supervision,
- the licensed electrician must meet their ongoing supervision obligations and sign off on all work completed by the third year apprentice; the fourth year apprentice must never be responsible for signing off on completed work.

The following conditions also apply:

- under no circumstances may any apprentice be supervised by another apprentice,
- under no circumstances may a fourth year apprentice provide supervisory guidance to another unlicensed person when carrying out electrical work.

It is essential that in circumstances where a fourth year apprentice participates in the supervisory process, a licensed electrician must simultaneously provide supervision. Under no circumstances may any apprentice be supervised by a fourth year apprentice. The licensed supervising electrician remains ultimately accountable for all supervision responsibilities owed under the legislation and under these practice standards.