



Customer
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Supervision practice standards for the electrical industry



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1. Introduction

In NSW, under the *Home Building Act 1989*, to carry out electrical work a person must have completed a Certificate III in Electrotechnology Electrician and have a least 12 months' experience. From 2023, all persons applying for a licence to be an electrician will be required to complete a mandatory supervision course on the Construct NSW portal before applying for the licence.

Supervision requires more than just knowing how to do the work. Supervisors will often be doing work themselves while monitoring and providing direction to other persons at the same time. It's an acquired skill and requires strong communication skills, empathy, integrity and a detailed understanding of supervisory responsibilities. Supervisors also need to create physically and mentally safe work environments and to know how to respond to things like complaints or reports of bullying.

Apprenticeships combine formal training with work-based training. Effective supervision allows apprentices to develop the knowledge and skills they need to competently perform electrical work in a safe working environment, free from electrical and safety risks. Supervisors are also responsible for managing the work program of apprentices to ensure they are exposed to the full scope of work needed to develop the confidence to step into their trade safely and effectively at the conclusion of the apprenticeship.

A supervisor may also oversee the work carried out by trade assistants. A *trade assistant* is a term used in these practice standards for a person who is not licenced or undertaking an apprenticeship. Trade assistants must be supervised at all times when assisting in electrical work.

These practice standards explain the roles and responsibilities of employers, supervisors, apprentices and trade assistants. Supervision levels have been detailed in the practice standards to indicate the type of supervision required for a particular task. The competency level of the apprentice or trade assistant is also considered in determining the level of supervision required for the task. The practice standards focus on supervision requirements for apprentices, but specific requirements relating to trade assistants are addressed separately at chapter 8.

Compliance with these practice standards is a mandatory condition of all licensed electricians.

1.1 Objectives

These practice standards detail the mandatory requirements for the supervision of electrical apprentices and trade assistants under the *Home Building Act 1989*.

These practice standards have been developed by the NSW Government through consultation with industry stakeholders and more broadly, members of the public and interested individuals.

1.2 Scope

These practice standards apply to a person, company or organisation in their role as an employer of electrical apprentices or trade assistants and licensed electricians in their role providing supervision to apprentices or trade assistants on the job site.

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 under a <i>training contract</i> with a view to becoming eligible to hold a qualified supervisor certificate to carry out electrical wiring work.
Electrical work	means the physical work of installing, repairing, altering, removing or adding to an electrical installation or the supervising of that work, and includes electrical wiring work as defined under the <i>Gas and Electricity (Consumer Safety) Act 2017</i> .
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.
RTO	An RTO is a Registered Training Organisation that is privately operated and provides vocational education and training qualifications that are nationally recognised.
Person	A person referred to in this practice standard means an apprentice or trade assistant that is being supervised and carrying out the task.
Supervisor	A supervisor is a person that holds a holder of 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 is responsible for the oversight of apprentices and trade assistants.
The Regulator	NSW Fair Trading/Office of the NSW Building Commissioner
Trade assistant	A trade assistant supports and assists a supervisor in the performance of their work. They are not licenced and are therefore not able to undertake electrical work unless appropriately supervised.
Training contract	A training contract is an agreement entered into by an apprentice and an employer for an agreed period of time (typically 48 months). It will be in a form recognised by State, Territory and Commonwealth governments. The purpose of the contract is to develop the apprentice to become a fully qualified and competent electrician.

3. The framework

The supervisory framework within these practice standards provides the definition and scope of three levels of supervision. The supervision levels are determined based on the types of tasks to be undertaken and the level of experience of the person carrying out the task. In determining the competency of a person being supervised, the supervisor is required to conduct a risk assessment and competency assessment. The framework also provides the ratio of supervisor to persons being supervised depended on the level of supervision required for the task being carried out.

The framework applies to both apprentices and trade assistants. Further details have been provided in separate sections of this practice standard for apprentices (section 7) and trades assistants (section 8).

3.1 Supervision levels

The supervisor is responsible for determining the appropriate level of supervision for a person they supervise when carrying out a particular task as specified in these practice standards. Supervision requirements must be considered at the time that work is allocated.

There are three levels of supervision that may be required for a particular task to be carried out: direct, general and broad. These levels recognise the need for a person 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 undertaking simple or low-risk work.

When determining the level of supervision required for a person being supervised to complete a particular task, a supervisor must complete a risk assessment of the task and work environment, and a competency assessment of the person who will do the work.

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

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

3.1.1 Direct supervision

Direct supervision is one-on-one *constant* supervision where the person being supervised requires continual guidance and monitoring to ensure the task is carried out safely and correctly.

The supervisor must be readily available at all times (with clear sight of the work being carried out by the person they are supervising) to provide specific and constant guidance and to continually review the work practices and standards of the person'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.

Direct supervision is required where:

- the task is new or unfamiliar, or the task contains variations to basic work that are new to the supervised person,
- the supervised person'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, and
- unplanned events are beyond the apprentice or trade assistant's ability to manage.

The supervisor must always remain physically present. Direct supervision is essential for every task being carried out for the first time and must be maintained until the person being supervised can demonstrate their competence in that skill. This is determined by the supervisor who must carry out a formal risk assessment for that person undertaking the specific task and is responsible for ensuring the work is done correctly and complies with required standards.

3.1.2 General supervision

General supervision applies when the person being supervised requires *intermittent* supervision to provide progressive guidance and monitoring to ensure the task is carried out safely and correctly. The supervisor is not required to directly oversee the person as they carry-out a task but must remain on site at all times and be readily available for assistance or instruction as required.

The requirement for a supervisor to remain on site at all times does not include being available over the phone or via video calling/conferencing.

The supervisor must provide instructions and directions before tasks are performed and must carry out progressive checks while the work is being undertaken. The supervisor must also test circuits, apparatus and/or equipment prior to energisation.

General supervision is normally appropriate where the formally assessed hazards and risks related to the task indicate general supervision is appropriate, and where the supervised person:

- has previously demonstrated their ability to perform the task safely and to required standards without need for constant intervention,
- has demonstrated an understanding of any hazards and risks involved with the task and an ability to independently manage those risks appropriately, if necessary,

- clearly understands when and how to seek assistance and support, and to wait for support if the task cannot be safely and effectively completed without it,
- has an appropriate level of knowledge and practical skill from both on-the-job training and theory-based learning, and
- has previously demonstrated an ability to manage (or seek assistance with) reasonably predictable unplanned events.

3.1.3 Broad supervision

Broad supervision applies when the person being supervised requires *minimal* supervision and does not require ongoing guidance and monitoring while performing familiar tasks. The supervisor only needs to make occasional face-to-face contact with the person to ensure the work complies with technical and safety requirements. The supervisor nonetheless is required to be readily available (but not necessarily on site at all times) to provide assistance or instruction as required.

The supervisor must:

- meet with the person face-to-face at the start of the day or before commencing a new work task to provide direction and instructions,
- isolate and prove de-energisation of any circuits or equipment,
- be readily available at all times either in person or by electronic communication to provide advice and guidance, and
- attend the site in person at the end of the day or when the task is completed to test and verify the work completed and to carry out any commissioning or livening of the work.

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 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 manage (or seek appropriate assistance with) unplanned events that may occur.

4. Assessing competency

Determining the appropriate level of supervision for a person under supervision requires the responsible supervisor to conduct both a risk assessment relating to the particular task, and a competency assessment relating to the person's relevant skills, knowledge and experience.

4.1 Risk assessment

Variations in the work environment, whether related directly to electricity supply or not, present many different circumstances and risks. A supervisor must assess these risks when determining safety requirements and the appropriate level of supervision for a person 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. These include, but are not limited to:

- 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 undertake a risk assessment, giving consideration to both the person's experience and skills, and the relative risk associated with the work. The supervisor should engage the person in the risk assessment process and collaboratively manage any risks they identify.

The supervisor must maintain records of the risk assessment they have conducted.

4.2 Competency assessment

A supervisor must be appropriately qualified and competent in a task to provide effective supervision of a person 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 or trade assistant's work, and
- completed supervision courses required by the Regulator.

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 competence of the person, giving consideration to:

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

For a task that requires direct supervision, the assessment must be undertaken on the supervisor's direct knowledge of the skill level of the person. A supervisor must assume that a person requires direct supervision unless the person can demonstrate otherwise. For a task that requires general or broad supervision, the supervisor should take into consideration previous assessments conducted by another supervisor of the person's ability to complete the task.

If the person has never completed a task before it should be assumed that they:

- have no or minimal competence required to technically perform the work,
- have no or limited awareness of the risks associated with performing the work, and
- require direct supervision at all times and the undivided attention of the supervisor.

Direct supervision is essential for every task being carried out for the first time and must be maintained until the person being supervised can demonstrate their competence in that skill.

When supervising a person for the first time, a supervisor should talk to other tradespeople they have worked with and the person themselves. This will assist in determining the appropriate degree of supervision. However, unless the person has never completed the task before, the supervisor should still conduct a risk and competency assessment to determine the appropriate level of supervision required for each task.

When conducting an assessment of a person's competency in a particular task, a supervisor must give consideration to the person'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,
- ability to apply skills consistently.

The supervisor must have access to any competency assessments completed by other supervisors to ensure they are informed of the person's experience and competency relating to a particular task. This will ensure the supervisor can make an informed assessment when determining the relevant level of supervision required by the person before allowing them to undertake that work.

The formal competency assessments will also assist the regulator when dealing with complaints, enquiries or workplace audits. For this reason, the supervisor must maintain records of the competency assessment that are conducted.

A workflow summarises the steps to carry out a competency assessment can be found in **Appendix 1**.

5. 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 current competence of the person being supervised who is performing the tasks.

The appropriate level of supervision should be applied at any time based on the supervisor's assessment of the person's competence to perform each task.

The table at 7.4 provides supervision levels that must be applied as a *minimum* level of supervision of an apprentice at different stages of training and for different tasks.

The table at 8.4 prescribes the relevant supervision levels that must be applied for trade assistants.

6. Supervisor ratios

The number of persons that a supervisor should supervise at any one time must be relevant to the skill level of the persons being supervised and the task being undertaken. These ratio levels apply to any persons requiring supervision.

The employer and supervisor are both responsible for ensuring that the ratio of supervisors to persons 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. However, a supervisor may never provide both direct and general supervision concurrently, as it is impossible for a supervisor to meet their obligations to provide 1:1 supervision while also meeting their obligations under general supervision.

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 should stop working if the supervisor is required to check on the fourth year apprentices at any time.

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">• one person requiring direct supervision; or• 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.

General	One supervisor with: <ul style="list-style-type: none"> • up to three persons all requiring general supervision or • a combination of general and broad supervision to a maximum of 3 persons
Broad	One supervisor with: <ul style="list-style-type: none"> • up to five persons all requiring broad supervision

An inspector may allow an exemption to these ratios in exceptional circumstances if it can be proven that it was temporarily impracticable for the employer or supervisor to adhere to the prescribed ratios. The decision to allow an exemption remains at the discretion of the inspector, who will consider the relative risk of the tasks being undertaken, the reasonableness of the ratio numbers, and any available evidence relating to the circumstances, including evidence that the non-compliant ratios were only a temporary and short-term arrangement.

7. Apprentices

7.1 Roles and responsibilities

7.1.1 The employer

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

The employer has a duty of care 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 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 competencies they need.

An employer may 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 using an appropriate risk assessment to do the task.

7.1.2 The supervisor

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

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

It is the supervisor's responsibility to provide effective supervision to the person they are supervising. Effective supervision means being:

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

The supervisor must understand 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:

- training, mentoring and monitoring progress on a daily basis,
- ensuring the workplace is a safe working environment for the apprentice,
- 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 undertaking a formal risk assessment 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 framework.

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

Breaching these practice 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 fit for work,
- ensure there are no exposed live parts and that electrical equipment is de-energised and safe to be worked on or near before an apprentice commences work,
- 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 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:

- confirms 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
- has witnessed verification of the electrical test being undertaken by the supervisor to confirm the circuit or equipment is de-energised.

7.1.3 The apprentice

An *apprentice* is the person that enters into a training contract. They have a duty 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 the instructions of their 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, and
- 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).

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

Apprentices must, after de-energisation of a 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.

7.2 Levels of supervision

The amount and type of supervision an apprentice needs will vary as they acquire skills and gain confidence in the workplace. In the early years of their apprenticeship, an apprentice 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 by the apprentice.

The goal should be to progressively reduce supervision from direct supervision in the first year to broad supervision in the fourth year of the apprenticeship. However, there are

some high-risk tasks that 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.

7.2.1 Direct supervision

A minimum level of “direct” supervision must be in place until an apprentice has been assessed as being competent and demonstrated their skills by a licensed electrician in that particular task. For an apprentice, where there is a risk of contact with live electrical apparatus, the supervisor must remain beside the apprentice at all times while the work is being carried out. **An apprentice may only isolate, test or energise circuits and equipment while under direct supervision.**

Every task being carried out for the first time should be performed under direct supervision regardless of the year of an apprentice. 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 formally assessed as being sufficiently competent at that task before they could do that work under general supervision.

7.2.2 General supervision

For an apprentice, general supervision is a stage where they gain 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 competence. However, at this stage of proficiency an apprentice still requires a high level of instruction, and their work (including the safety of the worksite) must be reviewed regularly.

7.2.3 Broad supervision

At this level of supervision, the apprentice must be able to demonstrate a high level of electrical knowledge and skills relevant to the task. When an apprentice completes their training and is eligible to be licensed as an electrician, they must be able to work unsupervised. It is important that the apprentice develops the competency to perform the work without intervention by the supervisor before the end of the apprenticeship for them to be a safe and reliable tradesperson.

7.3 Competency assessment

Apprentices should be provided a level of supervision that enables them to learn and achieve competency in varying tasks so that they are confident working independently by the end of their apprenticeship. Their supervisor should regularly reassess 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 7.4 should apply.

For example, a first-year apprentice must be directly supervised when carrying out conduit installation. If they can demonstrate their competency in conduit installations by the second year of their apprenticeship, and the risk has been appropriately assessed, then they may be eligible to carry out that task under general supervision. If they have not demonstrated their competency in that skill, despite being a second-year apprentice, they will still require direct supervision while carrying out conduit installation until they are able to demonstrate competency.

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. The apprentice should practice carrying out the task under direct supervision over the period of time indicated in the table at section 7.4. Once they can demonstrate competency at the task, they can be assessed by the supervisor and then be able to move to general supervision when undertaking that task. The decision to reduce the supervision level of an apprentice should be made in consultation with the apprentice, and it is important they feel comfortable voicing their confidence, or any uncertainties, relating to their work.

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.

It is important that, over the duration of their apprenticeship, an apprentice:

- is given sufficient experience to become competent at all the core 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),
- 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.

A supervisor plays a critical role in an apprentice's training outcomes. It is essential that the supervisor must:

- help the apprentice to minimise any negative outcomes, especially in the earlier stages of their apprenticeship or when they are unfamiliar with a task,
- help the apprentice to interpret and respond to new information and work contexts,
- provide opportunities for the apprentice to demonstrate their capabilities in a safe and supportive manner, and

- help the apprentice meet their requirement to record workplace experience by verifying their workplace records (e-profile or work log records).

7.4 Tasks for apprentices

Type of electrical work	Typical time served	Minimum level of supervision
Installation		
New electrical installation work 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 ² <i>(not connected to electricity supply)</i>	Less than 1 year	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
Maintenance, alterations and additions to existing electrical installations including sub-mains and main installation - maximum cable size of 35mm ² <i>(isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	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
Installation of main, sub-main and final sub-circuit cables of 50mm² and greater	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
Tag and lockout procedure on de-energised installations <i>(isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	General
	More than 3 years to 4 years	General
Distribution and main switchboard installation with maximum switchboard capacity of 200 amps <i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	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
Distribution and main switchboard installation with maximum switchboard capacity above 200 amps <i>(not connected to electricity supply or 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
Testing <i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Not permitted
	More than 1 year to 2 years	Direct
	More than 2 years to 3 years	Direct
	More than 3 years to 4 years	General
Fault finding <i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Not permitted
	More than 1 year to 2 years	Not permitted
	More than 2 years to 3 years	General
	More than 3 years to 4 years	Broad
Live work (testing to confirm isolation and fault finding)	Less than 1 year	Not permitted
	More than 1 year to 2 years	Not permitted

	More than 2 years to 3 years	Not permitted
	More than 3 years to 4 years	Direct
Installation of renewable energy systems	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
High voltage installation <i>(not connected to electricity supply or 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	Direct
	More than 3 years to 4 years	General
Electrical Equipment		
Installation of electrical equipment and accessories <i>(not connected to electricity supply)</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	Broad
Installation of metering provider metering equipment <i>(not connected to electricity supply)</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
Fault-finding, repairs and maintenance of electrical equipment <i>(not connected to electricity supply or 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	Broad
Electrical isolation of installation and equipment	Less than 1 year	Not permitted
	More than 1 year to 2 years	Not permitted
	More than 2 years to 3 years	Direct
	More than 3 years to 4 years	Direct
Tag and lockout procedure on de-energised equipment <i>(isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	General
	More than 3 years to 4 years	General
Terminations		
Termination of cables in electrical equipment and accessories (outlets, lights, switches, etc.)	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	Broad
	More than 3 years to 4 years	Broad
Termination of cables (50mm ² and greater)	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
Termination of cables at a switchboard rated at 100 amps or less	Less than 1 year	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
Termination of cables at a switchboard rated (more than 100 amps but less than 400 amps)	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	Broad
Termination of cables at a switchboard rated more than 400amps	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

Special electrical installations		
Special electrical installations including: • Safety Services • Emergency back-up generation • Hospital areas • Patient treatment areas • Hazardous locations (explosive atmospheres) • Emergency Systems • Lifts • Swimming pools • Fire Control Systems	Less than 1 year	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

7.5 Supervision skills for apprentices

The apprenticeship program is designed to provide both theory-based and on-the-job practical training to produce electrical graduates 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 are competent to supervise, and have a duty of care over, apprentices and trade assistants carrying out electrical work.

Qualified supervisors will always be ultimately responsible for ensuring apprentices and trade assistants are appropriately supervised, work in a safe environment, and that any work done is compliant with Australian laws and standards. However, it is important that opportunities to practice and learn about supervisory responsibilities are inbuilt into the apprenticeship program so that new graduates are appropriately skilled in this area.

Fourth year apprentices may participate in the supervisory process on worksites in certain circumstances. A fourth year apprentice can only provide supervision to a second or third year apprentice who has been assessed as competent to carry out a particular task under general or broad supervision. The following criteria must be met:

- a risk assessment and competency assessment must have already been carried out by a licensed electrician, determining that the second or third year apprentice is sufficiently competent to carry out the particular task under **general** or **broad** supervision,
- a risk assessment and competency assessment must have already been carried out by a licensed electrician, determining that the fourth year apprentice is competent to carry out the particular task under **broad** supervision,
- where the second or third year apprentice has been assessed as competent to complete the task under *general* supervision, the fourth year apprentice must provide **direct** supervision to the second or third year apprentice, and the qualified supervisor must simultaneously provide **broad** supervision,

- where the second or third year apprentice has been assessed as competent to complete the task under *broad* supervision, the fourth year apprentice must provide **general** supervision to the second or third year apprentice, and the qualified supervisor must simultaneously provide **broad** supervision,
- the qualified supervisor must sign off on all work completed by the second or third year apprentice; the fourth year apprentice must never be responsible for signing off on completed work, and
- if a major incident occurs while the fourth year apprentice is providing supervisory guidance, or if the fourth year apprentice is not considered to have provided adequate supervision to ensure the work is carried out in a safe and compliant manner, the fourth year apprentice should not be allowed to provide any further supervisory guidance until a subsequent risk assessment and competency assessment has determined it would be appropriate for them to do so.

The following conditions also apply:

- under no circumstances may a first year apprentice be supervised by another apprentice,
- under no circumstances may a second or third year apprentice be supervised by another apprentice if they have been assessed to require **direct** supervision to carry out the task,
- under no circumstances may a fourth year apprentice provide supervisory guidance to a trade assistant, regardless of any risk assessment or competency assessment that has been undertaken,
- it is essential that in circumstances whereby a fourth year apprentice provides supervisory guidance to a second or third year apprentice, a licensed electrician must simultaneously provide supervision. **Under no circumstances may a second or third year apprentice be supervised by a fourth year apprentice alone.** The licensed supervising electrician remains ultimately accountable for all supervision responsibilities owed under the legislation and under these practice standards.

8. Trade assistants

8.1 Roles and responsibilities

8.1.1 The employer

The *employer* of a trade assistant is the person, company or organisation that enters into an agreement or contract to employ the trade assistant. This includes a labour hire company that enters into a contract with a worker and on-hires them under a labour hire agreement. An industrial instrument, award or agreement must describe the classification and work scope they are employed to perform, which may not be limited to electrical work.

Employers have an obligation to ensure that trade assistants have the necessary support and supervision by qualified, licensed and experienced electricians with relevant skills who are committed to training them. Trade assistants must only be supervised by licensed electricians on the worksite.

An employer may be committing an offence if they instruct a trade assistant to do a task without the appropriate level of supervision or where the supervisor has not conducted a risk assessment and competency assessment to determine the appropriate level of supervision for the task. An employer must also ensure a trade assistant does not undertake electrical work that they are not allowed to do under these practice standards or other relevant legislation.

8.1.2 The supervisor

A *supervisor* is a person that holds a current licence to carry out electrical work, and provides oversight of electrical work undertaken by trade assistants.

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

A supervisor must consider the potential variations in skills and experience of a trade assistant. They may range from someone with overseas qualifications and vast experience to a person who has never assisted in electrical work before.

It is the supervisor's responsibility to provide effective supervision to the person they are supervising. Effective supervision means being:

- present at the site of the electrical work to the extent necessary to ensure that the work is being carried out safely and correctly,
- aware of the details of the electrical work being performed, and able to give instruction and direction to the supervised person, and
- able to ensure the completed electrical work is compliant and free of defects.

The supervisor is responsible for:

- ensuring the workplace is a safe working environment for the trade assistant,
- isolating, testing and commissioning circuits and equipment,
- assessing the capability of the trade assistant they are supervising to carry out varying tasks,
- deciding what level of supervision should apply to the task being undertaken (including undertaking a formal risk assessment where the decision varies from the level identified in these practice standards),

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.

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

8.1.3 The trade assistant

A trade assistant is employed to assist in carrying out workplace tasks on a job site. They may also do certain electrical work under supervision.

Trade assistants have a duty 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. Trade assistants must follow instructions provided by their supervisor, adhere to safe work procedures and use protective equipment in the correct manner at all times.

8.2 Levels of supervision

There are two levels of supervision under which a trade assistant may carry out electrical work: direct and general. A trade assistant must not carry out any electrical work under the level of broad supervision.

These levels recognise the need for a trade assistant to be closely monitored and provided with high levels of support and must be considered by the supervisor at the time that work is being allocated to the trade assistant.

A supervisor must be physically on site at all times when a trade assistant is undertaking any form of electrical work.

Under no circumstances may a trade assistant carry out any form of electrical work without supervision by a licensed electrician or should they be supervised by another person on site or an apprentice.

When determining the appropriate level of supervision required for a trade assistant to undertake a particular task, a supervisor must complete a risk assessment of the task and work environment, and a competency assessment of the person who will do the work.

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

The section 3 of this practice standard provides more information on how to conduct these assessments and explains what constitutes direct and general supervision.

8.3 Competency assessment

The level of supervision that is appropriate should be considered in the context of the tasks to be performed, the environment in which the tasks are being performed and the current competence of the person who is performing the tasks.

A trade assistant must have their competency assessed before they can perform a task. Any change to the level of supervision required for a trade assistant to perform a particular task must only occur after a supervisor has undertaken both a risk assessment and a competency assessment (as outlined in section 3 of these practice standards).

A trade assistant 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. The trade assistant should practice carrying out the task under direct supervision over the period of time indicated in the table contained at section 8.4.

Once they have demonstrated their competency at the task, they may be assessed by the supervisor to only require general supervision when undertaking that task. The decision to reduce the supervision level of a trade assistant should be made in consultation with the trade assistant, and it is important they feel comfortable voicing their confidence, or any uncertainties, relating to their work.

Regardless of the experience of a trade assistant, any task being performed for the first time must require direct supervision. Under no circumstances may a trade assistant carry out electrical work under broad or no supervision.

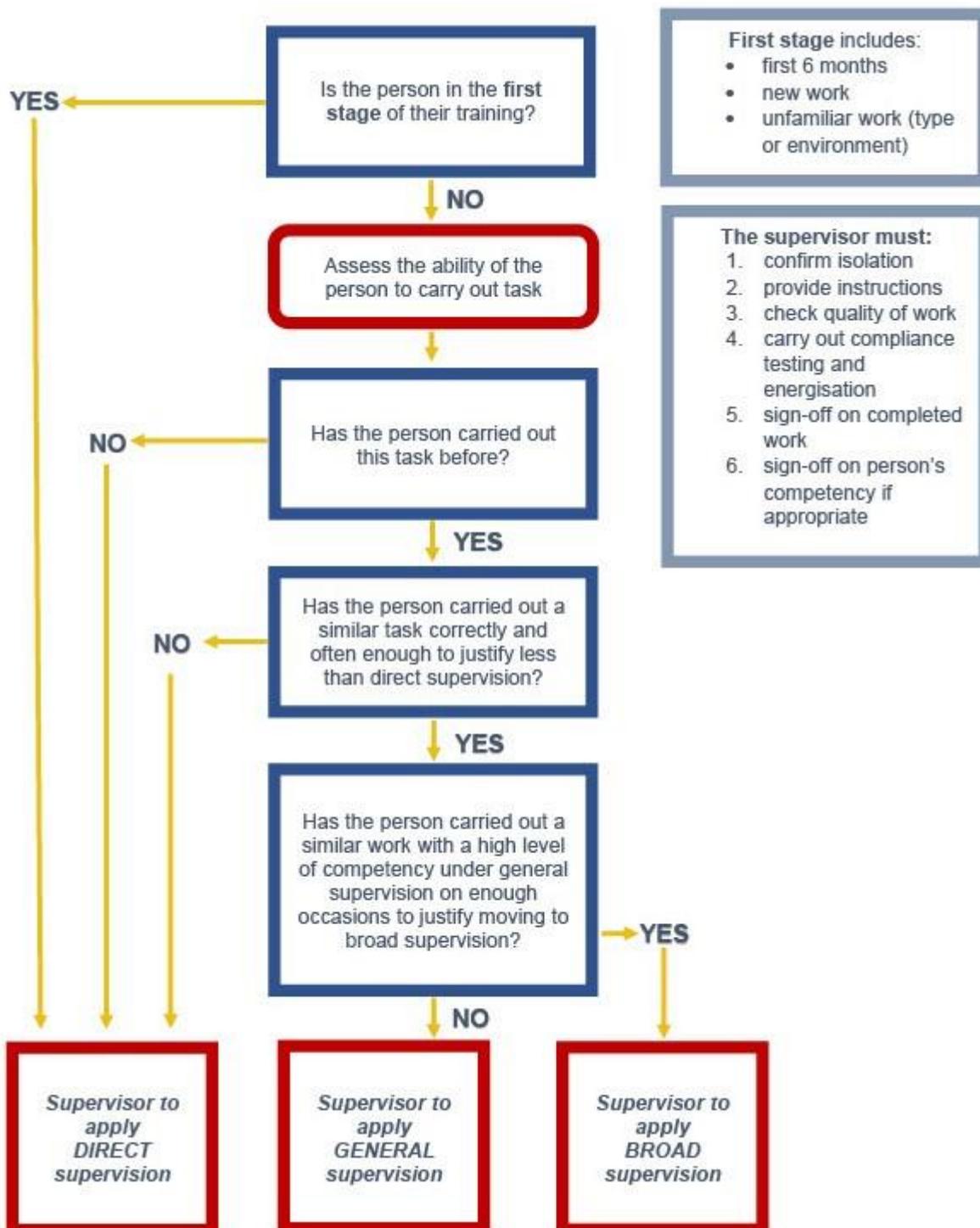
8.4 Tasks for trade assistants

The tasks that a trade assistant can undertake for electrical work are limited to those identified in the table below.

Type of electrical work	Typical time served	Minimum level of supervision
Installation		
New electrical installation work 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 ²	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	General
	More than 3 years	General

<i>(not connected to electricity supply)</i>		
Maintenance, alterations and additions to existing electrical installations including sub-mains and main installation - maximum cable size of 35mm ² <i>(isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	General
	More than 3 years	General
Installation of main, sub-main and final sub-circuit cables of 50mm² and greater	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	General
Tag and lockout procedure on de-energised installations <i>(isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	General
	More than 3 years	General
Distribution and main switchboard installation with maximum switchboard capacity of 200 amps <i>(not connected to electricity supply or isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	General
	More than 3 years	General
Distribution and main switchboard installation with maximum switchboard capacity above 200 amps <i>(not connected to electricity supply or 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	General
Electrical Equipment		
Installation of electrical equipment and accessories <i>(not connected to electricity supply)</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	General
Tag and lockout procedure on de-energised equipment <i>(isolated and proven de-energised by supervising electrician)</i>	Less than 1 year	Direct
	More than 1 year to 2 years	General
	More than 2 years to 3 years	General
	More than 3 years	General

9. Appendix 1 – Competency workflow



Text version: Competency workflow

- 1) Is the person in the **first stage** of their training? (If no, go to 2. If yes, *Supervisor to apply DIRECT supervision*)
- 2) Assess the ability of the person to carry out task, go to 3

- 3) Has the person carried out this task before? (If yes, got to 4, if no, *Supervisor to apply DIRECT supervision*)
- 4) Has the person carried out a similar task correctly and often enough to justify less than direct supervision? (If yes, go to 5, if no, *Supervisor to apply DIRECT supervision*)
- 5) Has the person carried out a similar work with a high level of competency under general supervision on enough occasions to justify moving to broad supervision? (If yes, *Supervisor to apply BROAD supervision, if no Supervisor to apply GENERAL supervision*)

Note:

First stage includes:

- first 6 months
- new work
- unfamiliar work (type or environment)

The supervisor must:

1. confirm isolation
2. provide instructions
3. check quality of work
4. carry out compliance testing and energisation
5. sign-off on completed work
6. sign-off on person's competency if appropriate