

Electrical contractor self assessment audit package Part 2



Electrical contractor self assessment audit package ‘Part 2’

This package is the second of two voluntary electrical contractor self-assessment audits. The assessment is designed to help you understand and meet your key electrical safety obligations. It measures how effective your knowledge, documentation and work systems are to help you meet your legal responsibilities.

The Electrical Safety Office (ESO) is the electrical safety regulator in Queensland which administers the electrical safety legislation. Electrical contractors have obligations for electrical safety in a number of roles: a self-employed person, an employer, an installer, a repairer, a designer, or in other roles specified in the *Electrical Safety Act 2002*.

The *Electrical Safety Act 2002* does not always give prescriptive ways to meet your obligations, but encourages obligation holders to seek out and address potential electrical safety issues and risks in a proactive way. Where the legislation is not prescriptive, you should take measures to ensure you meet your obligations in a suitable way.

After you complete this audit, if you identify any electrical safety issues, or if you answered “No” to any of the questions, then you should take steps now and review your current procedures.

The ESO employs a variety of strategies to encourage compliance, this includes: education, community engagement, advice, audits and enforcement. Our enforcement activities range from an inspector giving verbal directions or an improvement notice, to on-the-spot fines.

For serious breaches of the legislation, the ESO can prosecute; this carries maximum fines of up to \$1,000,000 or 3 years imprisonment. When the Electrical Licensing Committee takes disciplinary action for breaches of the legislation by a licensed electrical contractor, these details will be recorded on the Electrical Safety website.

Reference material

The reference material that will assist you to comply with the obligations of your licence are available at www.electricalsafety.qld.gov.au.

Electrical safety legislation

- The *Electrical Safety Act 2002* (the Act)
- The *Electrical Safety Regulation 2002* (the Regulation)

Electrical Safety Codes of Practice 2010

- *Electrical Equipment Rural Industry*
- *Electrical Work*
- *Working Near Exposed Live Parts*
- *Works*
- *Risk Management*

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Australian standards

- *AS/NZS 3000:2007 Electrical installations* (the Wiring Rules)
- *AS/NZS 3012 Electrical Installations - Construction and demolition sites*
- *AS/NZS 3017 Electrical installations – Verification*
- *AS/NZS 3760 In-service safety inspection and testing of electrical equipment*
- *AS/NZS 4836 Safe working on low-voltage electrical installations*

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1. My Licence

YES NO

Legislation and publications

1.1 I have current versions of the following documents available to me:

(Refer to the Electrical Safety Office website for free electrical safety documents. All Standards are available to purchase from SAI Global.)

Electrical Safety Act 2002 (the Act).

Electrical Safety Regulation 2002 (the Regulation).

Electrical Safety Codes of Practice 2010.

the Wiring Rules AS/NZS 3000 (including amendments and other relevant standards).

My obligations

1.2 I understand my electrical safety obligations under the Act.

(Refer to Part 2 Division 2 of the Act - *Electrical safety obligations*)

1.3 As an employer or self-employed person, I am subject to more than one obligation under the Act.

(Refer to Section 26 of the Act - *Obligations for electrical safety*)

1.4 If I changed the status of my business (partnership, company or individual), I am required to notify the Electrical Safety Office of this change.

(Refer to Part 3 Licensing Division 3 of the regulation - *Electrical contractor licence Requirements*)

Insurance requirements

1.5 I keep my public liability insurance current to maintain my electrical contractor licence.

(Refer to Section 43 of the Regulation - *Financial and insurance requirements for applicant for electrical contractor licence*)

Qualified technical person

1.6 The Qualified Technical Person who is listed on my electrical contractor licence holds a current electrical work licence.

(Refer to Section 7 of the Regulation - *Meaning of qualified business person and qualified technical person*)

Qualified business person

1.7 The Qualified Business Person who is listed on my electrical contractor licence is competent to perform the business aspects of electrical work.

(Refer to Section 7 of the Regulation - *Meaning of qualified business person and qualified technical person*)

2. My Business

	YES	NO
Register of licensed workers		
2.1 If an electrical safety inspector asks me to provide a copy of the register that contains my electrical workers licence details, do I have to provide it? <small>(Refer to section 57AB of the Act - <i>Employers and self-employed persons must keep register of licensed workers</i>)</small>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 My register of licensed electrical workers contains the following details: <small>(Refer to section 57A of the Regulation - <i>Details to be included in register of workers</i>)</small>		
The licence holder's name.	<input type="checkbox"/>	<input type="checkbox"/>
The number of the licence.	<input type="checkbox"/>	<input type="checkbox"/>
The class of the licence.	<input type="checkbox"/>	<input type="checkbox"/>
If the licence is a restricted electrical work licence and the type.	<input type="checkbox"/>	<input type="checkbox"/>
The conditions or restrictions included on the licence.	<input type="checkbox"/>	<input type="checkbox"/>
The day the licence expires.	<input type="checkbox"/>	<input type="checkbox"/>
The jurisdiction where the licence was issued.	<input type="checkbox"/>	<input type="checkbox"/>
2.3 The people I employ to supervise my electrical workers need to hold an electrical work licence that is suitable for the supervision of the electrical work being performed by my workers. <small>(Refer to section 55 of the Act - <i>Requirement for electrical work licence</i>)</small>	<input type="checkbox"/>	<input type="checkbox"/>

Advertising your business

2.4 When I publish an advertisement, I include my licence number: <small>(Refer to Section 56 of the Regulation - <i>Advertising by licensed electrical contractor</i>)</small>		
In a magazine.	<input type="checkbox"/>	<input type="checkbox"/>
When I post information to customers.	<input type="checkbox"/>	<input type="checkbox"/>
On television or radio.	<input type="checkbox"/>	<input type="checkbox"/>
When I advertise electronically (e.g. on a website or by email).	<input type="checkbox"/>	<input type="checkbox"/>

Incident notification

2.5 If a serious electrical incident (SEI) or dangerous electrical event (DEE) takes place (e.g. where a person receives a shock or injury from electricity; where electrical work has been performed by an unlicensed worker): <small>(Refer to Section 196 of the Regulation - <i>Employer or self-employed person to advise chief executive of serious electrical incident or dangerous electrical event</i>)</small>		
I must provide written notification of the incident to the Electrical Safety Office. <small>(Refer to the approved format, available from the Electrical Safety Office website)</small>	<input type="checkbox"/>	<input type="checkbox"/>

	YES	NO
I make sure the written notification is received by the Electrical Safety Office within 24 hours after I become aware of the incident.	<input type="checkbox"/>	<input type="checkbox"/>
2.6 I am aware that if the incident is notified as a fatality due to an electrocution (Serious Electrical Incident), then I must notify the Electrical Safety Office immediately. (Refer to Section 196 of the Regulation)	<input type="checkbox"/>	<input type="checkbox"/>
2.7 I am aware of my responsibilities to ensure that the scene of a serious electrical incident is not to be interfered with. (Refer to Section 201 of the Regulation – <i>Scene not to be interfered with</i>)	<input type="checkbox"/>	<input type="checkbox"/>
2.8 I can only move electrical equipment at the scene of a serious electrical incident if it is to:		
Save a life or relieve suffering.	<input type="checkbox"/>	<input type="checkbox"/>
Prevent injury to a person or prevent property damage. (Refer to Section 201 of the Regulation)	<input type="checkbox"/>	<input type="checkbox"/>
2.9 I have a system in place to make sure that any SEI and DEE reports are kept for three years.	<input type="checkbox"/>	<input type="checkbox"/>

3. Risk Management

To manage electrical safety risk, you must identify risks in the workplace and then carry out a risk assessment to determine the severity of a risk, before deciding on its priority.

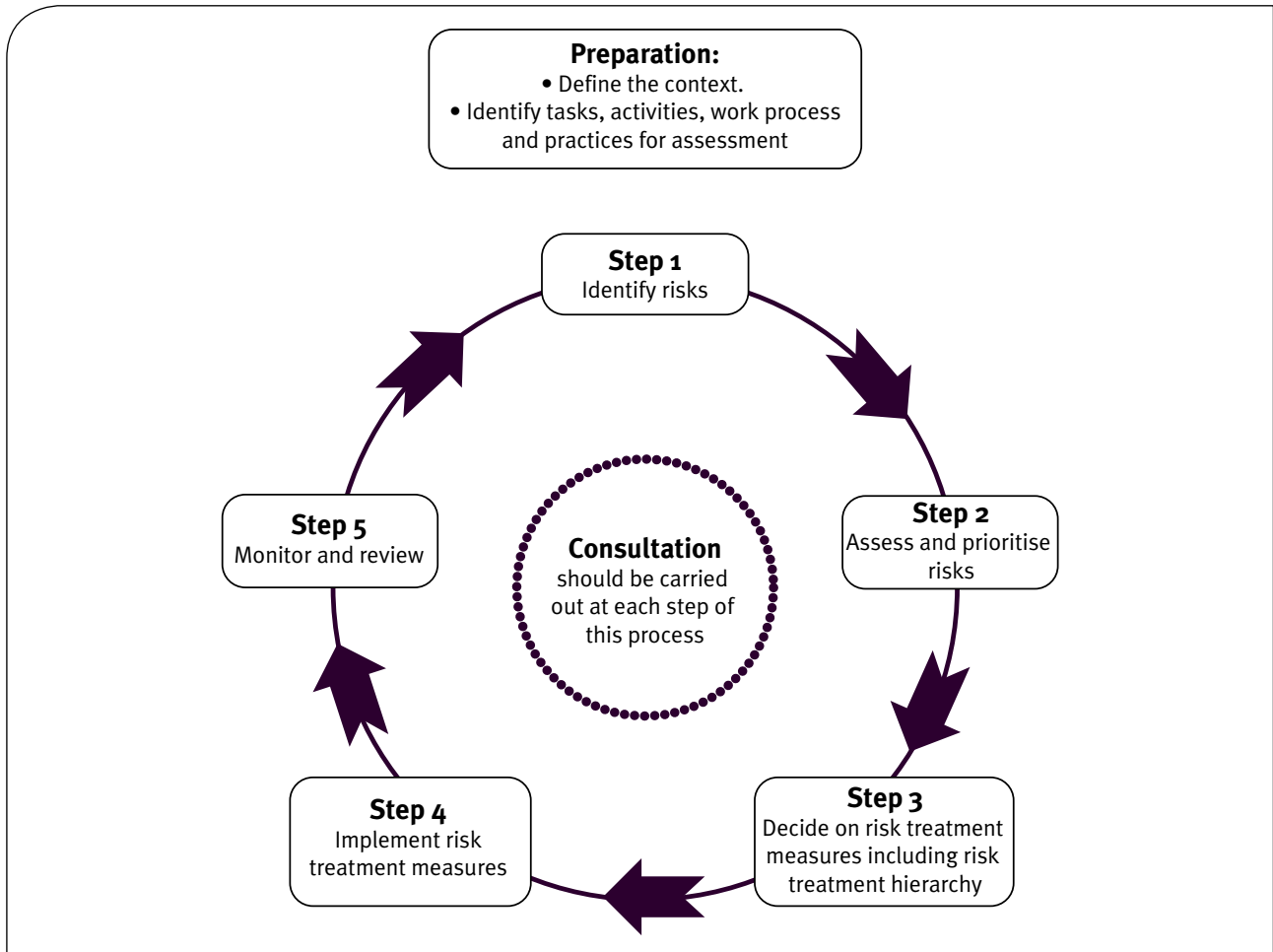
When you carry out a risk assessment, determine the risks that have the greatest potential to cause harm and that have a greater chance to occur. These risks are treated first, followed by the less serious risks.

Common electrical risks can be broken in to three broad categories:

- **Electric shock causing injury or death.** The electric shock may be received by direct contact, tracking through or across a medium, or by arcing;
- **Arcing, explosion or fire causing burns.** The injuries are often suffered because arcing or explosion or both occur when high fault currents are present; and
- **Toxic gases causing illness or death.** Burning and arcing associated with electrical equipment causes a range of gases and contaminants to be present.

The Risk Management process is illustrated in the diagram below; this process is used to identify risks and reduce their occurrences. Further guidance can be found in the *Electrical Safety Code of Practice 2010 – Electrical Work and the Electrical Safety Code Of Practice 2010 - Risk Management*.

The five step risk management process



YES NO

Determining risk

3.1 When I determine the level of risk prior to undertaking electrical work, I:

Assess the risk of injury or property damage that may result from undertaking the work.

YES NO

Establish a priority list of risk treatment measures.

YES NO

Risk treatment measures

3.2 If I am unable to eliminate the risk of injury or property damage; I should undertake these treatment measures to remove or reduce the risk:

Substitute the risk with a less risky material, process or equipment.

YES NO

Isolate the risk, e.g. remove or separate people from the risk.

YES NO

Redesign or engineer equipment or work processes.

YES NO

Introduce administrative risk treatment measures, such as signs or training.

YES NO

Use appropriate personal protective equipment designed to protect the worker.

YES NO

Monitoring risk

3.3 I monitor these risk treatment measures to make sure they have been implemented as intended and are adequate?

YES NO

3.4 I review the risk treatment measures to confirm that they are still adequate and effective.

YES NO

4. General requirements for electrical work

Please note: Live work is not permitted unless certain circumstances apply (Sections 11 and 12 of the Regulation)

	YES	NO
Live work		
4.1 I have a live work policy.	<input type="checkbox"/>	<input type="checkbox"/>
4.2 My safe system of work for working around a low voltage electrical installation ensures the safety of my workers whilst they perform live work. <small>(Refer to Section 12 of the Regulation - Requirements for performance of live work and AS/NZS 4836 'Safe working on low-voltage electrical installations')</small>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 I provide my employees with awareness training about the live work provisions in the electrical safety legislation. <small>(Refer to Section 12 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>
4.4 I make sure that my employees have enough technical knowledge and experience in relation to a safe system for working around electrical parts. <small>(Refer to Part 4 of the Regulation - Working around electrical parts)</small>	<input type="checkbox"/>	<input type="checkbox"/>
4.5 Before any electrical work is carried out, I or my employees ensure that the isolation points are identified and cleared of obstructions. <small>(Refer to Section 12 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>
Switches and disconnection points		
4.6 My employees who are electrical workers clearly understand the method or systems used to isolate and maintain isolation. <small>(Refer to Section 20 of the regulation - Signs on switches and disconnection points)</small>	<input type="checkbox"/>	<input type="checkbox"/>
4.7 Before any electrical work is carried out, I or my employees ensure that there are safety tag and lockout devices available when isolating electrical equipment. <small>(Refer to Section 20 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>
4.8 I or my employees ensure that the isolation device for the de-energised electrical equipment (when in the open position) is locked or prevented from accidentally closing. <small>(Refer to Section 20 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>
4.9 Before any electrical work is carried out, I or my employees ensure that it is proven de-energised and that the electricity supply is effectively isolated. <small>(Refer to Section 20 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>
4.10 To make certain that the isolation method is not compromised; I or my employees attach a warning sign to the points that have been isolated. <small>(Refer to Section 20 of the Regulation and AS 1319 - Safety signs for the occupational environment)</small>	<input type="checkbox"/>	<input type="checkbox"/>

Electrical equipment and installations

4.11 When I install electrical equipment or an electrical installation, I ensure that:

(Refer to Section 36 of the Act - *Obligation of installer of electrical equipment or electrical installation*)

- | | | |
|--|--------------------------|--------------------------|
| The way it is installed is electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |
| The process followed ensures that when installed it will be electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |
| The person who tests it, ensures it is electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |

4.12 When I repair electrical equipment or an electrical installation I ensure that, after it is repaired:

(Refer to Section 37 of the Act - *Obligation of repairer of electrical equipment or electrical installation*)

- | | | |
|--|--------------------------|--------------------------|
| The way it is repaired is electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |
| It will be electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |

Accredited auditors

4.13 Before I connect or reconnect electricity to a high voltage electrical installation, or an electrical installation located in a hazardous area that I have performed work on, I ensure that:

- | | | |
|---|--------------------------|--------------------------|
| The electrical work has been checked by an accredited auditor. | <input type="checkbox"/> | <input type="checkbox"/> |
| The accredited auditor has confirmed that the electrical installation is electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |

(Refer to Section 153 of the Regulation - *High voltage or hazardous area electrical installation not to be connected to electricity source without inspection*)

Safety switches

4.14 After an approved safety switch has been installed for the general purpose socket-outlets in a residence, I can perform electrical work on that residence?

(Refer to Section 81 of the Regulation - *Performing electrical installation work for domestic residences*)

<input type="checkbox"/>	<input type="checkbox"/>
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Rescue and resuscitation

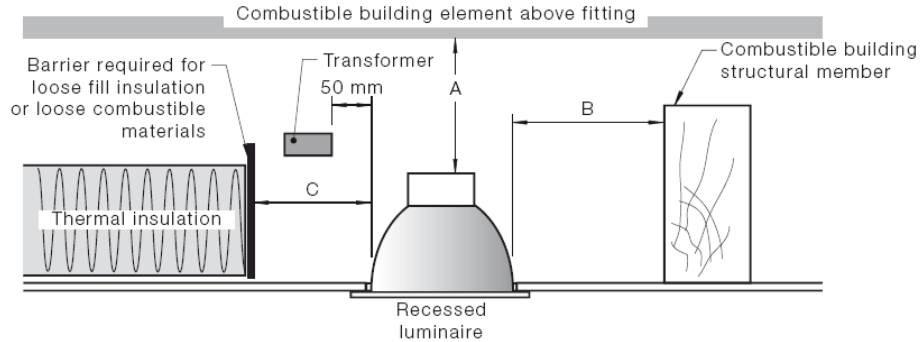
4.15 The workers I employ who perform electrical work are competent in rescue and resuscitation?

(Refer to Section 21 of the Regulation - *Rescue and resuscitation training*)

<input type="checkbox"/>	<input type="checkbox"/>
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Recessed luminaires and insulation material

The Wiring Rules AS/NZS 3000:2007 Clause 4.5.2.3 - *Recessed luminaires* require that electrical contractors take special precautions in relation to insulation material and recessed luminaires such as down lights to minimise temperature rise and prevent the risk of fire.



Dimension	Incandescent lamp	Halogen lamp
A – clearance above luminaire	50 mm	200 mm
B - side clearance to structural member	100 mm	200 mm
C – clearance to thermal insulation	50 mm	200 mm
D – clearance to supply transformer	50 mm	

FIGURE 4.7 DEFAULT MINIMUM CLEARANCES FOR RECESSED LUMINAIRES

This extract of the Wiring Rules (AS/NZS 3000:2007) is reproduced with permission from SAI Global under licence 1111-c042.

	YES	NO
4.16 If the manufacturer's 'installation instructions' for down lights do not specify the clearance distances required, I maintain distances between the down lights and:		
Transformers.	<input type="checkbox"/>	<input type="checkbox"/>
Thermal insulation.	<input type="checkbox"/>	<input type="checkbox"/>
Combustible material (such as building structural members).	<input type="checkbox"/>	<input type="checkbox"/>
4.17 After I have installed some down lights I test and examine this equipment to ensure it is electrically safe. (Refer to Section 36 of the Act - <i>Obligation of installer of electrical equipment or electrical installation</i>)	<input type="checkbox"/>	<input type="checkbox"/>
4.18 I am familiar with the various ways to prevent damage from down lights to adjacent material. (e.g. temperature rise and prevent risk of fire)	<input type="checkbox"/>	<input type="checkbox"/>

Equipotential pool bonding for swimming and spa pools

Equipotential bonding is intended to minimise the risks associated with the occurrence of voltage differences between exposed conductive parts of electrical equipment and extraneous conductive parts.

4.19 I am aware of the requirements for pool bonding for swimming pools and spa pools. YES NO

4.20 The installation of an equipotential bonding conductor for pool bonding is considered “electrical work”; I am familiar with the associated requirements under the Act. YES NO

(Refer to Section 18 of the Act - Meaning of electrical work)

4.21 Under the Wiring Rules, certain items in the pool zone need to be equipotentially bonded. YES NO

(refer to Clause 5.6.2.6 Swimming and spa pools of AS/NZS 3000:2007 ‘Electrical installations’)

5. Testing requirements

	YES	NO
Certificate of test (electrical equipment)		
5.1 After I have performed electrical work on electrical equipment and connected it to a source of electricity, I test it. <small>(Refer to Section 14 of the Regulation - <i>Testing of electrical equipment after electrical work</i>)</small>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 I give a certificate of testing and safety to the person I did this electrical work for. <small>(Refer to Section 15 of the Regulation - <i>Certificate of testing and safety</i>)</small>	<input type="checkbox"/>	<input type="checkbox"/>
5.3 When I issue a certificate of testing and safety under Section 15 of the Regulation, I include the following:		
The name and address of the person for whom the work was performed.	<input type="checkbox"/>	<input type="checkbox"/>
That the electrical equipment has been tested.	<input type="checkbox"/>	<input type="checkbox"/>
The day the electrical equipment was tested to the extent it was affected by the electrical work.	<input type="checkbox"/>	<input type="checkbox"/>
My electrical contractor licence number under which the electrical equipment was tested.	<input type="checkbox"/>	<input type="checkbox"/>
Certification that electrical equipment to the extent that it is affected by the electrical work, is electrically safe.	<input type="checkbox"/>	<input type="checkbox"/>
5.4 I keep a copy of the <i>certificate of testing and safety</i> for five years. <small>(Refer to Section 15 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>
Certificate of test (electrical installations)		
5.5 After I have performed electrical work on an electrical installation and connected it to a source of electricity, I test it. <small>(Refer to Section 159 of the Regulation - <i>Certificate of testing and compliance</i>)</small>	<input type="checkbox"/>	<input type="checkbox"/>
5.6 I give a <i>certificate of testing and compliance</i> to the person I performed this electrical work for. <small>(Refer to Section 159 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>
5.7 When I issue a <i>certificate of testing and compliance</i> under Section 159 of the Regulation, I include the following:		
The name and address of the person for whom the work was performed.	<input type="checkbox"/>	<input type="checkbox"/>
The electrical installation tested.	<input type="checkbox"/>	<input type="checkbox"/>
The day the electrical installation was tested to the extent it was affected by the electrical work.	<input type="checkbox"/>	<input type="checkbox"/>
My electrical contractor licence number under which the electrical installation was tested.	<input type="checkbox"/>	<input type="checkbox"/>
Certification that the electrical installation to the extent it is affected by the electrical work is electrically safe.	<input type="checkbox"/>	<input type="checkbox"/>
5.8 I keep a copy of the <i>certificate of testing and compliance</i> for five years. <small>(Refer to Section 159 of the Regulation)</small>	<input type="checkbox"/>	<input type="checkbox"/>

Testing of safety equipment

5.9 I make sure that any safety equipment being used is:

(Refer to Section 17 of the Regulation - *Testing and maintenance of safety equipment*)

- | | | |
|---|--------------------------|--------------------------|
| Suitable for the electrical work being performed. | <input type="checkbox"/> | <input type="checkbox"/> |
| Maintained for use in relation to the electrical work being performed. | <input type="checkbox"/> | <input type="checkbox"/> |
| Tested at least every six months to ensure it provides the protection it is intended to provide. (Only if it can not be visually confirmed as being correctly functioning and safe) | <input type="checkbox"/> | <input type="checkbox"/> |
| Labelled to indicate the day it is due for testing. | <input type="checkbox"/> | <input type="checkbox"/> |
| In good repair and condition. | <input type="checkbox"/> | <input type="checkbox"/> |

5.10 I test and tag certain types of specified electrical equipment in my workplace.

(Refer to Sections 82 - 94 of the Regulation - *Workplace electrical installations*)

<input type="checkbox"/>	<input type="checkbox"/>
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6. Apprentices and training persons

YES NO

Obligations of employers and supervision

6.1 An apprentice who is in the first six months of their apprenticeship cannot:

Work in the immediate vicinity of a live high voltage exposed part.

Work where there is a risk they could come in to contact with a live low voltage exposed part.

(Refer to Section 209 of the Regulation - Obligations of employer about supervising training person)

6.2 I ensure that any electrical apprentices I employ are appropriately supervised by a licensed electrical worker.

(Refer to Section 209 of the Regulation)

6.3 I make sure that any worker who performs testing on electrical equipment is not an apprentice.

(Refer to Section 14(2A) of the Regulation - Testing of electrical equipment after electrical work)

7. What to do next

If you identify any electrical safety issues or if you answered “No” to any question, then you should act now and review your procedures and implement a safety management plan.

Comments or questions

- Did you find this self-assessment valuable to you and your business?
- Do you have any suggestions, comments or questions?
- Would you like the Electrical Safety Office to contact you and assist you with any of the questions found in this paper?

Record of audit:

Name: _____
Licence No.: _____
Address: _____

Date: _____

- You can contact your local contractors’ association or safety management consultant for further guidance on the contents of this package.

For more information visit www.electricalsafety.qld.gov.au.

Telephone 1300 650 662

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