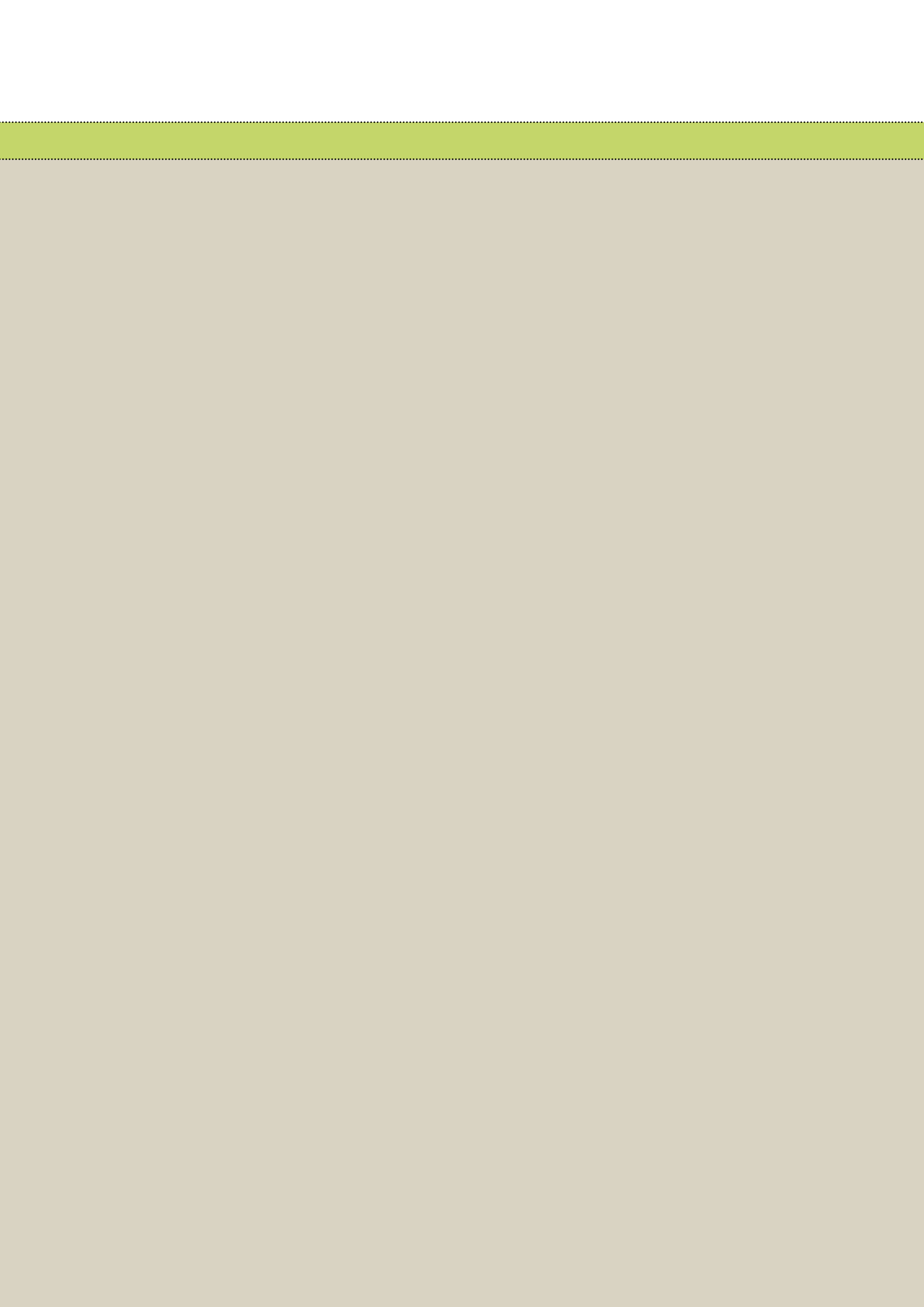




Electrical contractor self assessment audit package



Electrical Contractor Self Assessment Audit

This self assessment audit aims to help you to meet your obligations under the Electrical Safety legislation.

This audit does not assess all your obligations under the legislation, but focuses on key provisions that electrical contractors must be compliant with.

Queensland's electrical safety framework underwent significant changes in October 2002, with the commencement of the *Electrical Safety Act 2002* (the Act) and the *Electrical Safety Regulation 2002* (the Regulation). Additionally, the Act and Regulation are now supported by five Codes of Practice. In Queensland the Electrical Safety Office (ESO) administers the electrical safety legislation. You may have obligations for electrical safety as a self-employed person, an employer, an installer, a repairer, a designer, or in other roles specified in the Act.

The legislation does not always give prescriptive ways to meet obligations, but encourages obligation holders to seek out and address potential electrical safety issues and hazards in a pro-active way. Where the legislation is not prescriptive, you should take measures to ensure you meet your obligations in a satisfactory way.

This voluntary self-audit aims to help you to better understand some of your key electrical safety obligations and measure how effectively your knowledge, documentation and work systems help you to meet your legal responsibilities.

Electrical safety legislation and codes of practice can be accessed at the Electrical Safety website at www.deir.qld.gov.au.

As the electrical safety regulator in Queensland, the ESO employs a variety of compliance strategies including education, community engagement, advice, audits and enforcement. Enforcement activities can range from an inspector giving verbal directions or improvement notices, to on-the-spot fines, or even prosecution. For serious breaches of the legislation causing multiple deaths, maximum fines of up to \$1000,000 or 3 years imprisonment are possible.

Where disciplinary action is taken by the Electrical Licensing Committee for breaches of the legislation by a licensed electrical contractor, these details may be recorded on the Electrical Safety website.

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1. My Licence

Your Obligations

As a licensed electrical contractor, you have obligations under the Act.

You may have obligations under this legislation in more than one capacity as per Section 28 of the Act 'Person may owe obligations in more than 1 capacity', depending on what work your business undertakes.

For a complete list of obligation holders and their obligations, please consult Sections 29-40 of the Act.

Legislation and Publications

Both the Act and the Regulation reference other documents and publications that assist you in complying with the obligations of your licence.

These texts are available at:

www.legislation.qld.gov.au
www.publications.qld.gov.au

Please refer to Section 6 of the Regulation 'References to standards and other documents' which will assist you in interpreting the legislation.

Qualified Technical Person and Qualified Business Person

Under Sections 40–42 of the Regulation 'Eligibility requirements for electrical contractor licence', it states:

- (1) To be issued an electrical contractor licence, an individual, partnership or corporation must –
 - (a) have at least 1 qualified business person and 1 qualified technical person.

Please refer to the Regulation for further eligibility requirements for a contractor licence. Section 7 of the Regulation 'meaning of a qualified business person and qualified technical person' details the specific requirements for both endorsees on your licence.

1. My Licence cont.

1. As a licensed electrical contractor, I have obligations in the following capacity/ies:

Electricity entity

Employer

Self-employed person

Designer of electrical equipment and electrical installations

Manufacturer of electrical equipment

Importer of electrical equipment

Supplier of electrical equipment

Installer of electrical equipment

Repairer of electrical equipment

Person in control of electrical equipment

2. I have, or have access to, the following legislative information (if required):

The *Electrical Safety Act 2002* (the Act)

The *Electrical Safety Regulation 2002* (the Regulation)

Standards Australia – AS/NZS3000 The Wiring Rules

Standards Australia – AS/NZS3012 Electrical Installations - Construction and demolition sites

Standards Australia – AS/NZS 3017 Electrical installations - Verification

Standards Australia - AS/NZS3760 In-service safety inspection and testing of electrical equipment

Standards Australia – AS/NZS 4836 Safe working on low-voltage electrical installations

Code of Practice – Electrical Work

Code of Practice – Working Near Exposed Live Parts

Code of Practice – Electrical Equipment - Rural

Code of Practice – Risk Management

Code of Practice – Works (Protective earthing, underground cable systems and maintenance of supporting structures for powerlines)

Yes No

3. I have at least one Qualified Business Person (QBP) associated with and endorsed on my electrical contractor licence.

4. I have at least one Qualified Technical Person (QTP) associated with and endorsed on my electrical contractor licence.

5. The QTP associated with my electrical contractor licence is the holder of a current electrical work licence.

6. The QTP and QBP for my company are an executive officer, or member or employee of the company.

2. My Business

Advertisements

Section 56 of the Regulation 'Advertising by licensed electrical contractor', states:

The holder of an electrical contractor licence who publishes an advertisement about the holder's business must ensure the advertisement

- a) states-
 - i) the name under which the holder is licensed; or
 - ii) if the holder carries on business under a registered business name, the holder's registered business name; and
- b) states that the holder is licensed under the Act and the identifying number of the holder's electrical contractor licence.

Maximum penalty – 40 penalty units

Requirements for Electrical Licences

Section 55 of the Act 'Requirement for electrical work licence' states:

- (1) A person must not perform or supervise electrical work unless
 - a) the person is the holder of an electrical work licence in force under this Act; and
 - b) the licence authorises the person to perform the work.

Maximum penalty – 400 penalty units

Serious Electrical Incident (SEI) and Dangerous Electrical Event (DEE)

Please refer to Sections 11 and 12 of the Act for definitions of SEI and DEE.

Section 197 of the Regulation states that records of an incident must be made within 3 days after the employer or self-employed person becomes aware of the incident and a record must be kept for 3 years.

Trade contractor's licence

Section 55A of the Regulation 'Operation of trade contractor's licence' states:

- (1) For the conduct of a business or undertaking that includes the performance of electrical work, a person is taken to be the holder of an electrical contractor licence to the extent that performance of the electrical work is a necessary part of, or is incidental to, the performance of work under a trade contractor's licence.

- (2) In this section—

electrical work does not include electrical installation work.

trade contractor's licence means a trade contractor's licence under the *Queensland Building Services Authority Regulation 2003*.

2. My Business cont.

- | | Yes | No |
|---|--------------------------|--------------------------|
| 7. Any published advertisement (e.g. radio, television, newspaper or telephone directory) for my business clearly states my business name, my contractor licence number and that I am licensed under the Act. | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. I have a system in place so that, if notified of a serious electrical incident (SEI) or a dangerous electrical event (DEE), I will notify the chief executive within 24 hours of the incident, or event or in the case of a death – immediately. | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. I have a filing system in place so that SEI and DEE reports made to the chief executive are made and kept for three (3) years. | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. All licensed workers employed in my business to perform electrical work and those required to assist are competent in rescue and resuscitation. (Refer to Section 21 of the Regulation) | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. I maintain a register of required licence details for all workers employed to perform or supervise electrical work and the register is available for inspection. (Refer to Section 57AB of the Act and Section 57A of the Regulation) | <input type="checkbox"/> | <input type="checkbox"/> |

Note: Generic Certificates can be downloaded from the Electrical Safety Website

3. Basic requirements for electrical work

Requirements for electrical work

Section 11 (1) of the Regulation states:

An employer or self-employed person must ensure that, unless the circumstances required under this division for the performance of live work apply, live work is not performed.

Maximum penalty—40 penalty units.

Requirements for performance of live work

Section 12 (1) (a) of the Regulation, states:

(1) The following circumstances are required for the performance of live work—

(a) it is not practicable to perform the electrical work other than by live work because of 1 or more of the following—

(i) it is necessary in the interests of safety, whether or not electrical safety, for the work to be performed while the electrical equipment the subject of the electrical work is energised;

Example for subparagraph (i) —

It may be necessary in the interests of road safety for a set of traffic lights to remain operating while electrical work is performed on the lights.

(ii) a supply of electricity is necessary for the proper performance of the electrical work;

(iii) there is no reasonable alternative to performing the electrical work by live work;

Example for subparagraph (iii) —

It may be necessary, to avoid widespread outages, to perform electrical work on works of an electricity entity by live work.

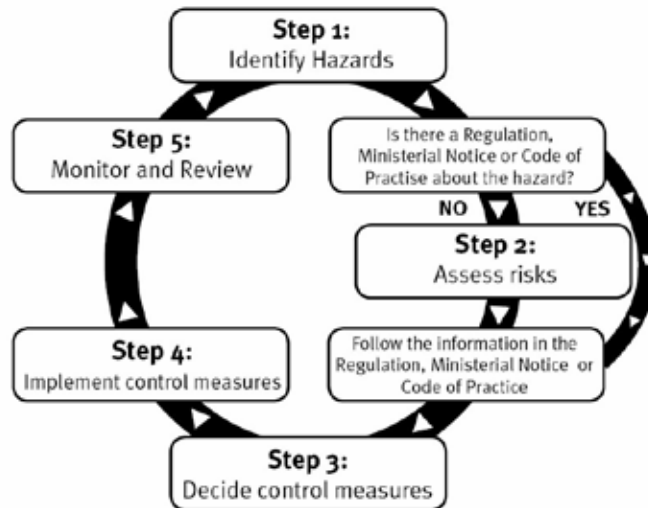
Performance of live work

You must meet all the requirements set out in Section 12 of the Regulation in order to perform live work. In the instance that I, or a worker under my contractor licence must perform live work, I have a system or process in place to ensure that;

- It is not practicable to perform the electrical work other than by live work;
- I have prepared, in a document, a risk assessment for the performance of live work;
- The performance of the work is in accordance with a safe system of work;
- I have authorisation from the person in control of the electrical equipment;
- The person performing the live work has appropriate training;
- Testing equipment appropriate to the performance of live work has been given to the person performing the work, the testing equipment has been properly maintained, and the person performing the work makes proper use of the testing equipment;
- Personal protective equipment and clothing appropriate to the performance of the live work has been provided to the person performing the live work and the person makes proper use of the equipment;

3. Basic requirements for electrical work cont.

- The isolation point of the electricity supply has been identified, and is able to be reached quickly;
- The area where the live work is to be performed is clear of obstructions; and
- There is a safety observer observing the performance of the live electrical work unless the work involves testing electrical equipment and the risk assessment prepared does not show there is a high risk to electrical safety in performing the testing of the electrical equipment.



EXAMPLE of a Risk Assessment

Electrical equipment	Hazard	Risk	Risk level	Control measures
Main switchboard	If removed fuses have exposed live parts	Electric shock and explosion	Low	Regular visual check Replace fuses by suitably trained person
Workshop lighting is within arm's reach	If internal parts of light fittings are accessed	Electric shock	Low	Regular visual check Have safety switch installed for lights Electrical maintenance work only by licensed electrical persons
Poles, cross arms and overhead lines	If damaged by vehicle or other incident	Electric shock	Medium	Protect poles from vehicular damage by barricading or by administrative controls
Refrigeration equipment	May have moisture ingress	Corrosion, electric shock risk	Medium	Regular inspection and maintenance Electrical maintenance work only by licensed electrical persons
Socket outlets in workplace	May have unsafe equipment plugged in, or outlets or wiring damaged	Electric shock	Medium	Regular visual check Maintenance plan for plug in equipment and safety switch protection

3. Basic requirements for electrical work cont.

Yes No

- | | | | |
|-----|---|--------------------------|--------------------------|
| 12. | I have a system or process in place that ensures live work is not performed unless the circumstances under Section 12 (1) (a) of the Regulation apply. | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. | As an employer I understand, and have instructed my employees in the requirements that exposed parts are treated as energised unless it can be proved that they are no longer energised, including earthing high voltage exposed parts as per Section 11 of the Regulation. | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. | In relation to live work, I have a system or process in place to ensure that I meet all the requirements to perform live work under Section 12 of the Regulation. | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. | I have prepared, in a document, a risk assessment that I, or my employees, use when undertaking the performance of live work under Section 12 of the Regulation. | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. | As an employer I understand, and have instructed my employees in, the requirements for a safe system of work when performing live work as outlined in Section 12 of the Regulation. | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. | I have a safe system of work in place when performing live work, and I am aware that this includes but is not limited to a system of work that complies with the provisions of AS/NZS 4836. | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. | I ensure that my workers are provided with the correct signage and lockout devices when isolating electrical equipment. | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. | With regard to signage and lockout devices my workers have received the relevant training to ensure they are used correctly when isolating electrical equipment. | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. | The safety observer employed under my electrical contractor licence, and who observes electrical work being performed, is sufficiently trained to observe electrical work being performed. | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. | The safety observer employed under my electrical contractor licence, and who observes electrical work being performed, has been assessed in the last six (6) months and found to be competent to rescue a person performing electrical work, and provide resuscitation. | <input type="checkbox"/> | <input type="checkbox"/> |

4. Apprentices and Workers

Supervising an apprentice

Section 209 of the Regulation ‘Obligations of employer about supervising training person’ states:

- (1) The employer of a training person who has not finished 6 months of the person’s apprenticeship or training program must ensure the training person does not work—
 - a) in the immediate vicinity of a live high voltage exposed part; or
 - b) where there is a risk the training person could come into contact with a live low voltage exposed part.

Maximum penalty – 40 penalty units

- (1A) However, subsection (1) does not apply to a training person performing duties as a safety observer if—
 - a) the training person is a safety observer and has been capable of being a safety observer for at least 1 year immediately before the start of the training person’s apprenticeship or training program; and
 - b) the employer keeps a written record of the assessment mentioned in section 12, definition *safety observer*, paragraph (c) in relation to the training person.
- (2) An employer must ensure that a training person who performs electrical work is supervised at all times by a licensed electrical worker licensed to perform the work.

Maximum penalty – 40 penalty units

- (3) The level of supervision required under subsection (2) must be appropriate, having regard to—
 - a) the type of electrical work performed; and
 - b) the adequacy of the training person’s training; and
 - c) the competency of the training person.

Personal Protective Equipment (PPE)

Section 12 (1) (g) of the Regulation states:

Clothing and personal protective equipment appropriate to the performance of the live work has been given to the person performing the electrical work and the person performing the electrical work makes proper use of the clothing and equipment in performing the work.

- | | Yes | No |
|---|--------------------------|--------------------------|
| 22. All apprentices associated with my business have an appropriate level of supervision by a qualified person at all times when performing electrical work. | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. I have a mechanism in place that determines the level of supervision required for a training person, and this mechanism takes into account the following: <ol style="list-style-type: none">d) the type of electrical work performed; ande) the adequacy of the training person’s training; andf) the competency of the training person. | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. When performing electrical work, I ensure that the person performing the electrical work has personal protective equipment (PPE), and I have a process in place to monitor that it is used correctly. | <input type="checkbox"/> | <input type="checkbox"/> |

5. Equipment

Testing and Maintenance of safety equipment

Section 17 of the Regulation states:

- (1) (b) (iii) if it is safety equipment that can not be visually confirmed as being correctly functioning and safe – be tested at least every 6 months to ensure it provides the protection it is intended to provide; and

Maximum penalty – 40 penalty units

- (2) the employer or self-employed person must keep records of the tests performed under subsection (1) (b) (iii) for at least 5 years.

Maximum penalty for subsection (2) – 20 penalty units

Specified Electrical Equipment

Section 90 of the Regulation stipulates the requirements for inspecting and testing specified electrical equipment (SEE) for the performance of “manufacturing work”. For “construction work” inspecting and testing requirements see AS/NZS 3012.

Accredited Auditors

Section 153 of the Regulation states:

- (1) A person must not connect or reconnect a high voltage electrical installation, or an electrical installation located in a hazardous area, to a source of electricity after electrical installation or electric line work (the electrical work) has been performed on the electrical installation unless-
- a) the electrical work has been inspected by an accredited auditor; and
 - b) the accredited auditor has confirmed that the electrical installation, to the extent it is affected by the electrical work, has been tested to ensure it is electrically safe and is in accordance with the requirements of the wiring rules and any other standard applying under this regulation to the electrical installation

Maximum penalty – 40 penalty units

	Yes	No
25. I ensure that safety equipment that can not be visually confirmed as being safe and functioning correctly is tested at least every six (6) months.	<input type="checkbox"/>	<input type="checkbox"/>
26. I ensure records of tests performed on test equipment and safety equipment are stored and kept for five (5) years.	<input type="checkbox"/>	<input type="checkbox"/>
27. Specified electrical equipment (SEE) has been tested in accordance with the Regulation, at the intervals stated for the specified electrical equipment.	<input type="checkbox"/>	<input type="checkbox"/>
28. When performing electrical installation or electric line work on an electrical installation located in a hazardous or on a high voltage electrical installation, I engage the services of an Accredited Auditor.	<input type="checkbox"/>	<input type="checkbox"/>

6. Repairers

Repairing electrical equipment or installation

Section 37 of the Act states:

- (1) A person who repairs electrical equipment or an electrical installation has an obligation to ensure that—
 - a) the way the electrical equipment or installation is repaired is electrically safe; and
 - b) the processes followed for repairing the electrical equipment or installation ensure that, when repaired, it will be electrically safe; and
 - c) the electrical equipment or installation, when repaired, is electrically safe.
- (2) Without limiting subsection (1), the obligation includes ensuring that the electrical equipment or installation, when repaired, is tested and examined to ensure it is electrically safe.

Testing electrical equipment or installation after repairs

AS/NZS 3000 – the Wiring Rules

Refer to the Standard for detailed test methods for continuity of the earthing system, insulation resistance, polarity, correct circuit connections, fault-loop impedance, and verification of operation of residual current devices.

AS/NZS 3017 – Electrical installations – Verification

Refer to the Standard for some inspection and test methods required to check that a low voltage electrical installation complies with the safety requirements for the prevention of fire or a person sustaining an electric shock.

- | | Yes | No |
|--|--------------------------|--------------------------|
| 29. I ensure that, when repairing electrical equipment or an electrical installation, the person repairing the equipment or installation does so in a way that is electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. I ensure that, the processes followed when repairing electrical equipment or an electrical installation ensure that, when repaired, it will be electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. I ensure that after repairs are performed on electrical equipment or an electrical installation, the electrical equipment or installation is tested to ensure it is electrically safe. | <input type="checkbox"/> | <input type="checkbox"/> |

7. Testing Requirements

Certificate of testing and compliance for an electrical installation

Section 159 (1) of the Regulation, states:

A licensed electrical contractor who connects an electrical installation on which electrical work has been performed to a source of electricity must, as soon as practicable after the connection, give the person for whom the work was performed a certificate, complying with this section, about the testing of the electrical installation under this part.

Maximum penalty – 40 penalty units

Certificate of testing and safety for electrical equipment

Section 15 (2) of the Regulation, states:

The contractor must, as soon as practicable after the testing, ensure that the person for whom the electrical work was performed is given a certificate complying with this section.

Maximum penalty – 40 penalty units

Code of Practice – Electrical Work

Examples of when tests of correct connections (including polarity) are required include when:

- Electrical installation or repair work is connected to supply;
- Items of electrical equipment, such as stoves and hot water systems, are connected to supply;
- Consumer mains or sub mains have been repaired or replaced;
- New consumers mains or sub mains are installed;
- Low voltage bridges are connected or reconnected on low voltage mains;
- Connections to transformers or generators are made or remade;
- Service connections to street light standards are made, remade or altered;
- A new low voltage service is installed;
- An existing service is disconnected or reconnected; or
- A distribution system is initially energised or when any addition or alteration to the system could affect electrical safety.

7. Testing Requirements cont.

Yes No

- | | | | |
|-----|--|--------------------------|--------------------------|
| 32. | I ensure testing is performed for correct connections (including polarity) when an electrical installation or repair work is connected to supply. | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. | I ensure testing is performed for correct connections (including polarity) when a new low voltage service is installed. | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. | I ensure testing is performed for correct connections (including polarity) when an existing service is disconnected or reconnected. | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. | I ensure testing is performed for correct connections (including polarity) when items of electrical equipment, such as stoves and hot water systems, are connected to supply. | <input type="checkbox"/> | <input type="checkbox"/> |
| 36. | I ensure training is provided to my employees for testing for correct connections/polarity. | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. | I ensure procedures are available to my employees which align with the visual and mandatory tests required in the Wiring Rules AS/NZS 3000. | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. | When testing for fault loop impedance, I ensure the maximum value does not exceed those values shown in the Wiring Rules AS/NZS 3000. | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. | I ensure that test instruments used for testing fault loop impedance are designed for, and capable of correctly performing, the required tests. | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. | I provide a certificate of testing and compliance on all electrical installation work performed and connected to a source of electricity. | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. | I provide a certificate of testing and safety on all electrical work of connecting electrical equipment to a source of electricity. | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. | Testing and compliance certificates and testing and safety certificates provided by my business regarding electrical installations and electrical equipment state all the information required by Sections 159 and 15 of the Regulation. | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. | I hold records of certificates of testing and compliance and testing and safety provided by my business for the required period of five (5) years. | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. | My process to conduct testing and visual inspection is in accordance with the Wiring Rules AS/NZS 3000. | <input type="checkbox"/> | <input type="checkbox"/> |

8. What to do next

If this audit has identified any electrical safety issues or if you answered “No” to any question then you should act now by reviewing your current procedures and implement a safety management plan.

Comments or questions

- Have you found this self-assessment to be valuable to you and your business?
- Do you have any suggestions? Comments? 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 also contact your local contractors’ association or safety management consultant for further guidance on the contents of this package.

For more information visit

www.deir.qld.gov.au; or

Telephone 1300 650 662

Postal Address:

Electrical Safety Office

GPO Box 69

BRISBANE QLD 4000

