

Electrical Safety in Construction Inspection Checklist

This checklist is designed to be used by PCBU's, principal contractors or site supervisors to conduct a basic inspection to identify common electrical deficiencies and hazards.

PCBU's/Principal Contractors/site supervisors have a duty to provide and maintain a working environment that is safe and without risks to health and safety, so far as is reasonably practicable. This includes the provision of safe systems of work and plant that is adequately maintained. On-the-spot fines of up to \$3,600 for businesses and \$720 for individuals may be issued to those placing workers lives at risk by not adequately protecting them from electrical risks at the workplace.

The following guidance can help you prepare and plan for safe, effective and compliant electrical equipment and electrical installations on site.

Administration

Name:	Date:	Time:
Site address:		
Principal contractor / Site Supervisor / Electrician:		

Safely manage electrical work onsite by ensuring:

- only licenced electricians are able to conduct or supervise energised electrical work. You can check a licence is valid by visiting verify.licence.nsw.gov.au
- site inductions and ongoing toolbox talks should clearly state that unlicenced electrical work is prohibited (with the exception of an apprentice or labourer under direct supervision of a licenced electrician)
- workers, including contractors, need to be consulted about site rules, including the safety around electricity including overhead and underground powerlines
- work is undertaken in accordance with a site specific [Safe Work Method Statement \(SWMS\)](#)
- the project is planned and sequenced to minimise risk to other trades working in the same area.

Inspecting Electrical Components

The Electrical Safety in Construction Inspection Checklist is designed to help identify potential issues or risks with electrical installations on site. It is NOT intended to be exhaustive, and reference should be made to appropriate legislation, standards, Codes and Guides.

Overhead/Underground powerlines

Is any work activity, person, item of plant, or thing associated with the construction site at risk of coming within an unsafe distance of:

- a. Nearby/adjacent overhead lines – (safe distance is greater than 3m, or greater than 4m for scaffold work or work on a scaffold) and checking the [Look Up and Live website](#)
- b. Underground cables – as specified in the plans supplied by the asset owner in the [Before You Dig Australia](#) (BYDA) response

Have you consulted with and implemented any specific control measures identified by the relevant electricity supply authority(s) acknowledging notification for the activities that may come near the powerlines?

Has a SWMS been developed for the tasks that could involve working near live powerlines?

Are insulating materials in place on powerlines where required?

Are tiger tails in place on overhead powerlines where required?

Has hoarding been installed in co-ordination with the supply authority(s) for any scaffold adjacent (inside 4 m's) to overhead powerlines?

Have plant operators and spotters undertaken accredited training “Working safely near live electrical apparatus as a non-electrical worker” and been advised of the electrical hazards and site-specific controls?

Are current and relevant Before You Dig Australia plans available prior to excavations, and provided to workers undertaking excavation?

Temporary site power

Is incoming supply correctly installed and protected from damage?

Is site cabling run in accordance with AS/NZS 3012?

Are temporary supplies and distribution cabling adequately labelled?

Are all distribution board's constructed in accordance with AS/NZS 3012:

- a. in good order and constructed of robust material capable of withstanding damage?
- b. doors not removable (unless with a tool) and fitted with a locking facility to prevent electrical equipment being inadvertently energised while undertaking work on electrical installations?
- c. fitted with a means for retaining the door in the open position?

- d. have a bushed cut-out in the bottom plate to allow safe entry of electrical leads with door closed, with a label fixed to the switchboard stating 'KEEP CLOSED – RUN ALL LEADS THROUGH BOTTOM'?
- e. adequately and legibly labelled, including distribution board number (if more than one on site) point of origin of supply and signage warning of live equipment within switchboard?
- f. have energised (live) parts effectively protected at all times against contact by workers? E.g. pole fillers
- g. have insulated or covered tie bars for anchorage of flexible cords (extension leads) to prevent strain on the plugs and socket outlets?
- h. each have a marked isolating switch which will isolate supply to all sub-circuits and sub-mains originating from the switchboard, including socket outlets on the switchboard?
- i. located so that extension leads do not need to run between floors?
- j. mounted on a pole, post, wall, floor or other structure of stable and free-standing design that takes in to account any external forces that may be exerted on the switchboard?

Are all final sub-circuits of construction wiring protected at the switchboard by an RCD with a maximum rated residual current of 30mA?

Are all appliances, luminaires and other low voltage electrical equipment supplied from an RCD protected circuit at the switchboard or incorporated into a GPO or portable GPO assembly?

Are all GPO's rated at 10A or greater, and individually controlled by a double-pole switch?

Temporary lighting

Has sufficient lighting been provided in locations including stairways, passageways and next to switchboards to allow safe access and exit?

If more than one lighting circuit is installed, have the lighting circuits been distributed between RCDs?

Are lamps in luminaires protected against damage?

Are portable lights (e.g. flood light tripods) protected from dust and moisture and have adequate stability?

Leads and power tools

Are all extension leads and power tools in use:

- a. in good order, with no visible damage to cables, plug and socket ends or casing of tool?
- b. in date test tags or test results available on site? as per AS/NZS 3760 In service safety inspection and testing of electrical equipment outlining inspection testing and tagging methods and AS/NZS 3012, outlines regular inspection and testing requirements.
- c. rated for commercial use (e.g. no domestic type power boards, piggyback or double adaptors) as per AS/NZS 3012?
- d. protected from damage (e.g. by the use of lead hooks and/or lead stands) where required?

Transportable buildings, lift shafts

Are any transportable buildings (e.g. site/amenities sheds) supplied from a sub-main or final sub-circuit originating at a circuit breaker on a switchboard and installed as construction wiring?

Are transportable buildings supplied by a flex cord less than 15m, plug with socket outlet, individually protected by a circuit breaker of rating equal or less than socket outlet and RCD protected?

Are all socket outlets (inside/outside) RCD protected and only used for equipment and lighting within the transportable structure or immediately adjacent the exterior?

If the building has a lift shaft, is construction wiring dedicated to the installation of lift shaft equipment fed from a separate final sub-circuit at the switchboard and protected by 30mA RCD?

Are circuit breakers locked and tagged in the on position to prevent the inadvertent isolation of supply to the lift shaft by others onsite?

Inspection, testing, record keeping

Is construction wiring, switchboards and transportable structures inspected and tested by a licensed electrician on installation and, periodically as specified in AS/NZS 3012?

Is all other electrical equipment (i.e., power tools, extension leads, portable socket outlet assemblies, portable RCDs) tested and inspected by a competent person in a period not exceeding 3 months?

Are records of any testing kept available until the equipment is next tested, permanently removed from site or disposed of?

Does the Principal Contractor have the electrical contractor's details available?

Are electrical workers aware of AS/NZS 3012, WHS Regulations and Act and Home Building Act requirements?

Resources

[SafeWork: Electrical and power](#)

[NSW Legislation: WHS Regs Part 4.7](#)

[Code of practice: Managing electrical risks in the workplace.](#)

[WHS Act](#)

[Code of Practice - Work Near Overhead Powerlines](#)

[AS/NZS 3012 Electrical installation – construction and demolition sites NSW.](#)

[Legislation: Home Building Act 1989 No 147](#)

[Before You Dig Australia](#)

[Look Up and Live](#)

[Master Electrician Australia](#)

[National Electrical and Communications Association](#)

Disclaimer

This publication may contain information about the regulation and enforcement of work health and safety in NSW. It may include some of your obligations under some of the legislation that SafeWork NSW administers. To ensure you comply with your legal obligations you must refer to the appropriate legislation. Information on the latest laws can be checked by visiting the NSW legislation website www.legislation.nsw.gov.au

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