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## **NOTE TO USERS**

Each Distribution Network desires expressly to bring to the attention of users of this publication that the following important matters are applicable to its use.

## **DISCLAIMER**

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## **PREFACE**

The Code of Practice on Electrical Safety for Work on or Near HV Electrical Apparatus (the Blue Book) covers the basic safety principles to be observed by all personnel working on or in the vicinity of HV electrical apparatus in Victoria.

The Green Book is the Electrical Safety Rules (the Rules) for the VESI Distribution Networks and incorporates the relevant Distribution related principles of the Blue Book.

Electricity Safety Management Schemes (ESMS's), submitted by Distribution Businesses as Major Electricity Companies (MEC's), are required under the Electricity Safety (Management) Regulations 2009 to comply with "published technical standards" or, where there are departures, show that the level of safety is at least equal to, or greater than, those standards.

The Green Book, by incorporating the relevant Distribution components of the Blue Book, provides the means by which the MEC's comply with the published technical standards.

Each Distribution Network is responsible for elaborating on and supplementing these Green Book Rules to meet their own individual requirements.

The importance of understanding and adherence at all levels to these mandatory requirements continues to be emphasised by the circumstances of electrical incidents.

These Rules are regularly reviewed by the Green Book Committee to ensure that they reflect current work requirements and evolving technologies.

Suggestions or comments regarding possible amendments should be addressed to the Committee via [www.vesi.com.au](http://www.vesi.com.au).

## PURPOSE

The purpose of these Rules is to:

- Provide practical guidance in maintaining safe systems of work in relation to **the** control of risks associated with work on, near or in the vicinity of VESI Distribution Networks.
- Provide the means by which the MECs **use to** comply with the Blue Book as a published technical standard

The Code of Practice on Electrical Safety for Work on or Near HV Electrical Apparatus (the Blue Book) covers the basic safety principles to be observed by all personnel working on or in the vicinity of HV electrical apparatus in Victoria.

The Green Book is the Electrical Safety Rules (the Rules) for the VESI Distribution Networks and incorporates the relevant Distribution related

## SCOPE

These Rules define:

- Principles; and
- Electrical Safety Requirements

These Rules apply to all employees, contractors and sub-contractors of the Distribution Networks, working on, near or in the vicinity of electrical apparatus controlled by the Distribution Networks.

These Rules are also applicable to electrical apparatus that is not electrically connected and where the required level of isolation cannot be confirmed prior to work commencing, for example on abandoned underground cables.

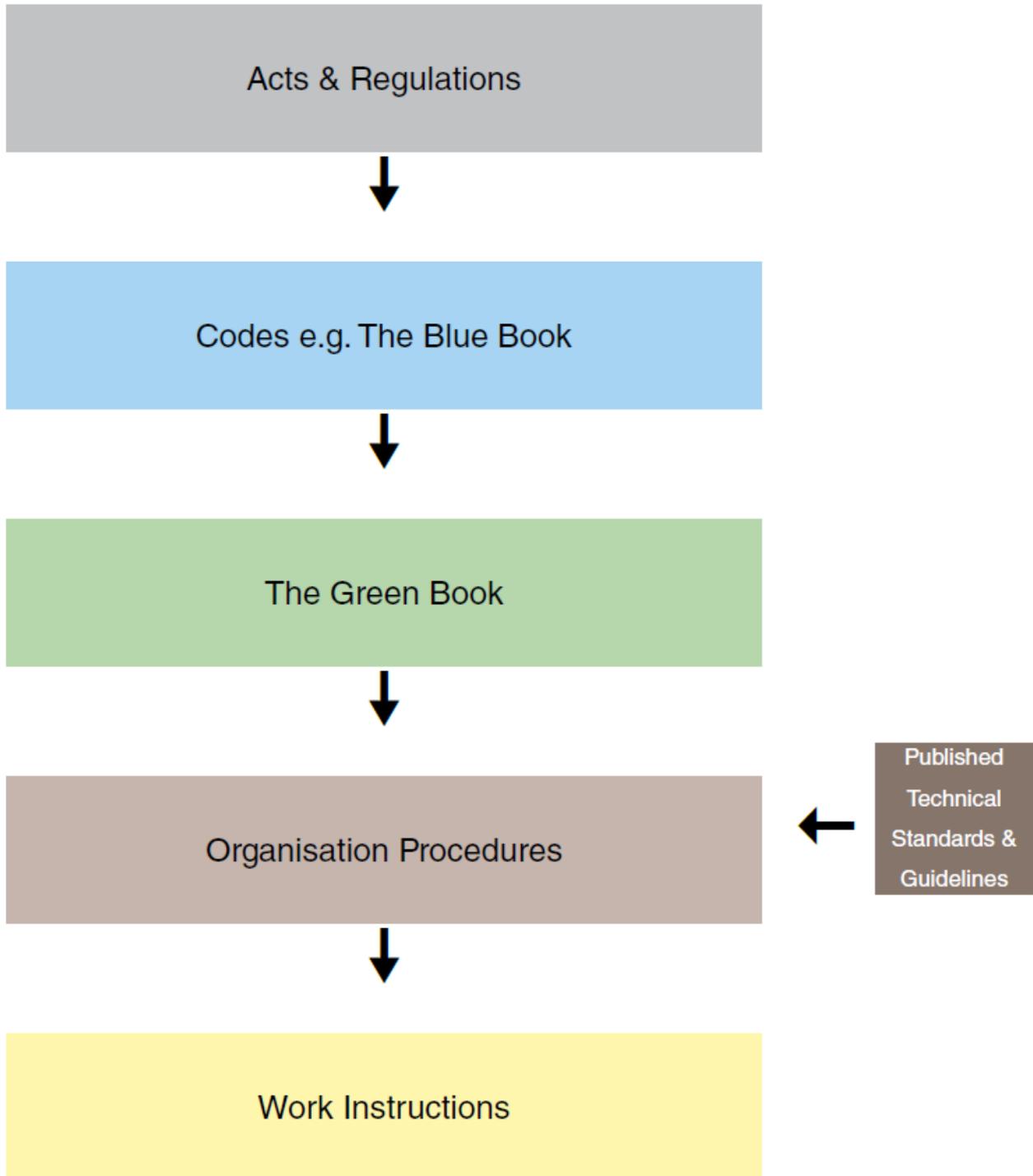
These Rules set a minimum standard and may be enhanced by organisational procedures which may utilise other industry standards.

In order to comply with these Rules, a Distribution Network shall either:

- a) Apply the requirements contained within these Rules; or
- b) Vary the requirements by:
  - Completing a hazard identification and risk assessment to ensure that persons are not exposed to any increase in risk and that community standards and expectations of managing risk are met.
  - Documenting the process.
  - Ensuring any variations are endorsed by a responsible officer, that the Green Book Committee is informed and that Energy Safe Victoria is advised of the outcomes and reasons for variation(s) prior to implementing the variation(s).

# HIERARCHY OF DOCUMENTATION FOR ELECTRICAL SAFETY

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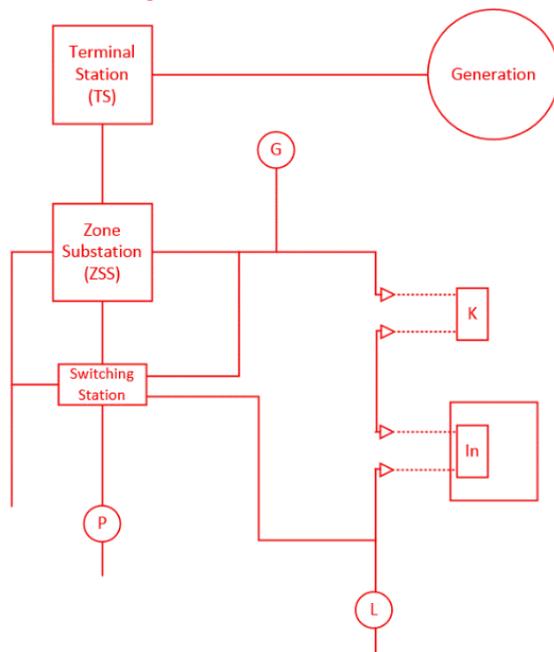


## DEFINITIONS

1. **Access Authority** means any form of authorisation which allows access to, work on or near, or testing of electrical apparatus.
2. Examples used in these Rules are:
3. **Electrical Access Permit** means a form of authorisation which allows access to, and work upon, electrical apparatus.
4. **Sanction for Testing** means a form of authorisation to allow energisation of electrical apparatus for testing purposes.
5. **Permit to Work Adjacent to Network Assets** means a document providing written permission to persons, other than employees or contractors of the Distribution Network, to work near or in the vicinity of the Distribution Network's electrical apparatus.
6. **Adjacent** means an area that is within Safe Approach Distances or near or in the vicinity of the Distribution Network's electrical apparatus.
7. **Alive** see Live.
8. **Appliance** means any instrument or device designed for the use near or in direct contact with HV live conductors.
9. **Approved** means having appropriate organisation endorsement in writing for a specific function.
10. **Authorised Person** means a person with technical knowledge or sufficient experience who has been approved, or has the delegated authority to act on behalf of the organisation, to perform the duty concerned.
11. Authorities in these Rules are:
12. **Authorised Applicant** means an approved person who has been assessed as competent against an approved training standard to make application for specified types of Access Authorities.
13. **Authorised Electrical Operator (Electrical Operator)** means an approved person who has been assessed as competent against an approved training standard to carry out switching operations on HV electrical apparatus.
14. **Authorised to Enter** means an approved person who has been assessed as competent against an approved training standard to enter enclosures.
15. **Authorised Recipient** means an approved person who has been assessed as competent against an approved training standard to receive an Electrical Access Permit.
16. **Authorised Tester** means an Authorised Recipient who has been assessed as competent against an approved training standard, and is approved to receive Sanction for Testing.
17. **Authority to Receive Electrical Access Permits** means a form of authorisation held by an Authorised Recipient.
18. **Authority to Receive Sanctions for Testing** means a form of authorisation held by an Authorised Tester.
19. **Authority to Work in the Vicinity of Electrical Apparatus** is a form used for VESI employees where applicable to allow work in the vicinity of electrical apparatus.
20. **Beyond Reach** means the distance beyond the reach of any part of the person's body or any conducting or unapproved object touching any part of the person's body.
21. **Bonded** means connected together in such a manner as to ensure that all connected parts are maintained at the same potential.
22. **Cable** means an insulated conductor or two or more such conductors laid together, whether with or without fillings, reinforcements or protective coverings.
23. **Circuit Breaker** means a device capable of making, carrying and breaking currents under normal and abnormal circuit conditions, such as short circuit.
24. **Competent** means having the skills, knowledge and attributes a person needs to complete a task.
25. **Conductor** means a wire, cable or form of metal designed for carrying electrical current.
26. **Connected** means joined together by a conductor capable of carrying electrical current for its required function or purpose by either physically clamping or bolting conductors together or closing a circuit breaker, switch or similar device.
27. **Dead** means isolated and at earth potential.
28. **De-energised** means not connected to any source of electrical supply but not necessarily isolated.
29. **Discharged** means having been connected to the general mass of earth in such a manner as to remove any residual electrical energy in a conductor.
30. **Distribution Network (Distribution Business)** means the owner, controller or operator of a VESI electricity Distribution Network.
31. **Earthed** means directly electrically connected to the general mass of earth so as to ensure and maintain the effective dissipation of electrical energy.
32. **Earthing Device** means an approved device used for the earthing of conductors.
33. **Electrical Apparatus** means any HV or LV electrical equipment, including overhead lines and underground cables, the conductors of which are live or can be made live.
34. **Emergency** means a sudden urgent unplanned occurrence or occasion requiring immediate action where life or property is at risk
35. **Enclosure** means any secured area containing exposed electrical apparatus.
36. **Energised** means connected to a source of electrical supply.

37. **ESI** means Electricity Supply Industry.
38. **Exclusion Zone** means an area around the electrical apparatus into which no part of the person, mobile plant or object (other than approved insulated objects) may encroach.
39. **Exposed Conductor** means an electrical conductor which is live or can be made live, approach to which is not prevented by a barrier of rigid material or by insulation that is adequate under a relevant Australian Standard specification for the voltage concerned.
40. **High Voltage or 'HV'** means a nominal voltage exceeding 1000 volts a.c. or exceeding 1500 volts d.c.
41. **High Voltage Customer** means any user of electricity (excluding the VESI) directly connected at high voltage to the Transmission or Distribution Networks.
42. **Instructed Person** means a person adequately advised or supervised by an Authorised Person to enable them to avoid the dangers which electricity may create.
43. **Insulated Mobile Plant** means mobile plant approved and tested for carrying out work on or near electrical apparatus.
44. **Insulated** means separated from adjoining conducting material by a non conducting substance which provides resistance to the passage of current, or to disruptive discharges through or over the surface of the substance at the operating voltage, and to mitigate the danger of shock or injurious leakage of current.
45. **Insulating Stick** means a stick approved and tested for carrying out operating and live work on live electrical apparatus.
46. **Isolated** means not connected to any possible sources of electricity supply by means which will prevent unintentional re-energisation of the electrical apparatus and which is assessed as a suitable step in the process of making safe for access purposes. INTRODUCTION
47. **Isolator** means a device which, for reasons of safety, provides in the open position, breaks of a length appropriate to the voltage and the insulating medium.
48. **Job Safety Analysis or JSA** means a site specific assessment by the work party of hazards associated with performing a task which includes documenting the controls for the identified hazards. 38. Live means energised or subject to hazardous induced or capacitive voltages.
49. **Live Work** means all work performed on components of electrical apparatus not isolated, proved de-energised and earthed.
50. **Low Voltage or 'LV'** means nominal voltage exceeding 50 volts a.c./120 volts d.c. but not exceeding 1000 volts a.c./1500 volts d.c.
51. **Low Voltage Isolation and Bonding Statement or LVIBS** means a form of authorisation which allows access to, and work upon, low voltage electrical apparatus.
52. **Major Electricity Company (MEC)** means a distribution company or a transmission company, but does not include a distribution company or a transmission company, or a class of distribution company or transmission company, declared under section 3A of the Electricity Safety Act not to be a major electricity company.
53. **Metal Clad Switchgear** means an integrated switching assembly where all live parts are enclosed within an earthed metal compartment.
54. **Mobile Plant** means cranes, elevating work platforms, tip trucks or similar plant, any equipment fitted with a jib or boom and any device capable of raising or lowering a load. Mobile plant can only be considered as a vehicle when in the normal travelling mode and not in the working mode when determining Safe Approach Distances.
55. **Helicopters** used for bare hand live work are excluded from this definition of mobile plant.
56. **Near** means a situation where there is a reasonable possibility of a person either directly or through any conducting medium (e.g. via mobile plant) coming within the relevant Safe Approach Distances.
57. **Network Asset** means any asset that is owned or operated by a Distribution Network for the purposes of generating, transmitting, distributing or supplying electricity.
58. **Nominal Voltage** means the AC (phase to phase RMS) or DC voltage by which a system of supply is designated.
59. **Not Electrically Connected** means disconnected from all sources of supply by the removal or absence of conductors, appropriate to the voltage and insulating medium and not able to be made live by normal operating means and identified in accordance with approved procedures.
60. **Operating Authority** means an appropriate representative of an organisation, who is responsible for the control of electrical apparatus concerned.
61. **Operating Stick** see insulating stick.
62. **Ordinary Person** means a person working for a Distribution Network without sufficient training or experience to enable them to avoid the dangers which electrical apparatus may create.
63. **Organisation** means a business, enterprise, company, or corporation.
64. **Out of Commission** means the condition of electrical apparatus which is not electrically connected and declared to be so in writing to the Operating Authority responsible for the electrical apparatus.
65. **Personal Protective Equipment (PPE)** means clothing, equipment and/or substances, which when worn or correctly used, protect parts or all of the body from foreseeable risk of injury or disease at work or in the workplace.
66. **Practicable** see Reasonably Practicable.
67. **Procedure** means the documentation of a systematic series of actions (or activities) directed to achieve a desired result.
68. **Recipient** means a person who has signed on an Access Authority.

69. **Recipient in Charge** means an Authorised Recipient to whom an Access Authority has been issued and who is in charge of all Recipients signed on that Access Authority.
70. **Reasonably Practicable** means having regard to:
- the likelihood of the hazard or risk concerned eventuating; and
  - the degree of harm that would result if the hazard or risk eventuated; and
  - what the person concerned knows, or ought reasonably know, about the hazard or risk and any ways of eliminating or reducing the hazard or risk; and
  - the availability and suitability of ways to eliminate or reduce the hazard or risk; and
  - the cost of eliminating or reducing the hazard or risk.
71. **Risk Assessment** means an organisation's documented formal analysis of hazards associated with work on, near or in the vicinity of electrical apparatus are identified, assessed and controlled.
72. **Rules** means these Electrical Safety Rules also known as the Green Book.
73. **Safe Approach Distance (SAD)** means the minimum distance in air from exposed conductors that shall be maintained by a person, vehicle or mobile plant (including its load, controlling ropes and any other accessories) when approaching electrical apparatus other than for work in accordance with an EAP or HV live work.
74. **Safety Observer** means a person with sufficient knowledge of the task being performed and competent for the duty of observing and warning against unsafe approach to electrical apparatus.
75. **Shall** is to be interpreted as "mandatory" .
76. **Should** is to be interpreted as "advisory or discretionary" .
77. ~~**Station** means any enclosed or fenced location in which HV supply is generated, converted, controlled or transformed.~~  
**Station** means Terminal Station, Zone Substation or Switching Station.
78. **Substation means** a distribution transformer arrangement (other than a Zone Substation) where the secondary voltage is low voltage



- P – pole type substation (is **not** an enclosure)
- G – ground type substation (is an enclosure)
- K – kiosk type substation (is an enclosure)
- In – indoor substation (is an enclosure)
- L – line voltage regulator (is an enclosure)

79. **Switch** means a device capable of making, carrying and breaking currents under normal circuit conditions. It is also capable, in the open position, of satisfying the isolating requirement for an isolator.
80. **Tester in Charge** means an Authorised Tester to whom a Sanction for Testing has been issued and who is in charge of all members of the work party signed on that Sanction for Testing.
81. **Unplanned** means an unexpected occurrence or occasion (fault) where life or property is not at immediate risk
82. **Vehicle** means a truck (non-tipping), car, utility, or other general purpose conveyance used for the carriage of persons or goods (see also mobile plant).
83. **Vicinity** means a situation where it is unlikely that a person will, either directly or through any conducting medium (e.g. via mobile plant), come within the relevant Safe Approach Distances.
84. **Victorian Electricity Supply Industry (VESI)** means the industry body whose members are the organisations which are licensed under the Electricity Industry Act 2000 to participate in the transmission, distribution, and supply of electricity in Victoria.
85. **Written (in Writing)** means recorded on paper or in electronic form.

## **ABBREVIATIONS**

<b>ARPANSA</b>	Australian Radiation Protection and Nuclear Safety Agency
<b>CES</b>	Certificate of Electrical Safety
<b>CMEN</b>	Common Multiple Earthed Neutral
<b>EAP</b>	Electrical Access Permit
<b>ENA</b>	Energy Networks Association
<b>ESI</b>	Electricity Supply Industry
<b>EWP</b>	Elevating Work Platform
<b>HV</b>	High Voltage
<b>JSA</b>	Job Safety Analysis
<b>LVIBS</b>	Low Voltage Isolation and Bonding Statement
<b>LV</b>	Low Voltage
<b>MEN</b>	Multiple Earthed Neutral
<b>NENS</b>	National Electricity Network Safety
<b>NHMRC</b>	National Health and Medical Research Council
<b>PPE</b>	Personal Protective Equipment
<b>RIC</b>	Recipient in Charge
<b>SAD</b>	Safe Approach Distance
<b>SCAP</b>	Statement of Condition of Apparatus
<b>SFT</b>	Sanction for Testing
<b>SILV</b>	Statement of Isolation LV
<b>SWER</b>	Single Wire Earth Return
<b>VESI</b>	Victorian Electricity Supply Industry
<b>VSCAP</b>	Verbal Statement of Condition of Apparatus

2013	2019	Comment
1.1 GENERAL SAFETY	1.1 GENERAL SAFETY	
1.1.1 Hazard Identification, Risk Assessment and Control	1.1.1 Hazard Identification, Risk Assessment and Control	
1.1.1.1 Organisational Risk Assessment	1.1.1.1 Organisational Risk Assessment	
An organisation's safe system of work shall include appropriate risk management processes to ensure hazards associated with work near electrical apparatus are identified, assessed and controlled.	An organisation's safe system of work shall include appropriate risk management processes to ensure hazards associated with work near electrical apparatus are identified, assessed and controlled.	No change, BB aligned with GB in its most recent change by including GB 1.1.1.2
1.1.1.2 Field Based Risk Assessment	1.1.1.2 Field Based Risk Assessment	
Prior to working on or adjacent to any electrical apparatus, the persons performing the work shall identify, assess and control the associated hazards and risks using Job Safety Analysis (JSA) methodology. The JSA shall be regularly reviewed to ensure workplace compliance.	Prior to working on or adjacent to any electrical apparatus, the persons performing the work shall identify, assess and control the associated hazards and risks using Job Safety Analysis (JSA) methodology. The JSA shall be regularly reviewed to ensure workplace compliance.	No change, see above
1.1.2 First Aid	1.1.2 First Aid	
Persons who are required to work where there is a risk of inadvertent contact with live electrical conductors shall be given appropriate first aid training on commencement, and thereafter subject to annual competency assessment in accordance with National Competency Standard Units.	Persons who are required to work where there is a risk of inadvertent contact with live electrical conductors shall be given appropriate first aid training on commencement, and thereafter subject to annual competency assessment in accordance with <b>relevant</b> National Competency Standard Units.	Add 'relevant' to align with BB
1.1.3 Victim Rescue	1.1.3 Victim Rescue	
Persons shall be trained in victim rescue techniques appropriate to the job function being performed. Before performing victim rescue on or near live exposed conductors, the rescuer shall consider all hazards and methods to control the hazards to ensure the rescue can be performed safely. Such controls may include de-energisation of the circuit, the use of insulated sticks and maintaining SAD during the rescue. Victim rescue assessment and/or instruction shall be undertaken by relevant personnel in accordance with Electricity Supply Industry (ESI) National Competency Standard Units. For details on victim rescue training requirements, refer to the VESI Skills and Training Guideline at <a href="http://www.vesi.com.au">www.vesi.com.au</a> .	Persons shall be trained in victim rescue techniques appropriate to the job function being performed. Before performing victim rescue on or near live exposed conductors, the rescuer shall consider all hazards and methods to control the hazards to ensure the rescue can be performed safely. Such controls may include de-energisation of the circuit, the use of insulated sticks and maintaining SAD during the rescue. Victim rescue assessment and/or instruction shall be undertaken by relevant personnel in accordance with Electricity Supply Industry (ESI) National Competency Standard Units. For details on victim rescue training requirements, refer to the VESI Skills and Training Guideline at <a href="http://www.vesi.com.au">www.vesi.com.au</a> .	No change
1.1.4 Communications	1.1.4 Communications	

2013	2019	Comment
<p>All communications relating to the operation of, or access to, electrical apparatus shall be clear and definite. Electrical apparatus shall be referred to by name and sufficient detail to give positive identification. Verbal instructions and statements shall be confirmed by repeating back to avoid misunderstanding, refer to Clause 3.1.3</p>	<p>All communications relating to the operation of, or access to, electrical apparatus shall be clear and definite. Electrical apparatus shall be referred to by name and sufficient detail to give positive identification. Verbal instructions and statements shall be confirmed by repeating back to avoid misunderstanding, refer to Clause 3.1.3</p>	<p>No change</p>
<p>1.1.5 Forms</p>	<p>1.1.5 Forms</p>	
<p>Guidance for minimum requirements on forms is published at <a href="http://www.vesi.com.au">www.vesi.com.au</a>.</p>	<p>Guidance for minimum requirements on forms is published at <a href="http://www.vesi.com.au">www.vesi.com.au</a>.</p>	<p>No change</p>
<p>1.1.6 Use and Testing of operating and High Voltage Live Equipment</p>	<p>1.1.6 Use and Testing of operating and High Voltage Live Equipment</p>	
<p>All sticks, gloves, sleeves, mats, protective barriers or covers, earthing trucks, portable earthing devices, insulating platforms, insulated elevating work platforms (EWP) or other equipment used for operating HV electrical apparatus or performing HV live work shall meet a defined specification or be specifically approved for the particular application. Visual inspection shall be made for physical damage or contamination immediately prior to use.</p> <p>All equipment, including protective equipment used on HV electrical apparatus and which requires regular testing to prove the effectiveness of its insulation shall be tested in accordance with the organisational procedures.</p> <p>HV live work equipment test intervals shall align with the VESI Minimum Rules for Carrying Out High Voltage Live Work in Victoria.</p> <p>Operating equipment shall be tested at specific intervals as per approved procedures. More frequent testing may be required depending on usage and the work environment. Equipment shall be marked to show the date of the next routine test.</p> <p>Gloves, sleeves, mats and protective barriers or covers used for operating HV electrical apparatus or for performing HV live work shall not be relied upon as the sole means of protection.</p> <p>Equipment shall not be used after the marked test date until re-test. for EWPs test intervals refer Clause 2.1.4.1.</p>	<p>All sticks, gloves, sleeves, mats, protective barriers or covers, earthing trucks, portable earthing devices, insulating platforms, insulated elevating work platforms (EWP) or other equipment used for operating HV electrical apparatus or performing HV live work shall meet a defined specification or be approved for the particular application.</p> <p><b>Visual</b> inspection shall be made for physical damage or contamination immediately prior to use.</p> <p>All equipment, including protective equipment used on HV electrical apparatus and which requires regular testing to prove the effectiveness of its insulation shall be tested in accordance with the organisational procedures.</p> <p>HV live work equipment test intervals shall align with the VESI Minimum Rules for Carrying Out High Voltage Live Work in Victoria.</p> <p>Operating equipment shall be tested at specific intervals as per approved procedures. More frequent testing may be required depending on usage and the work environment. Equipment shall be marked to show the date of the next routine test.</p> <p><b>Equipment shall not be used after the marked test date until it has been re-tested and passed. For EWPs test intervals refer Clause 2.1.4.1</b></p> <p>Gloves, sleeves, mats and protective barriers or covers used for operating HV electrical apparatus or for performing HV live work shall not be relied upon as the sole means of protection.</p>	<p>Changes to align with BB. Comments below from BB review committee: <i>Removed "specifically" for the reason that "approved" implies that an organisation has made decisions based upon Industry standard</i></p> <p><i>Inserted and re-wrote "Equipment shall not be used after the marked test date" after "... the date of the next routine test " for clarity rather than at the end of the clause</i></p> <p><i>Start new paragraph "Visual inspection shall be made for physical damage .. "</i></p>

2013	2019	Comment
1.1.7 Insulating Sticks	1.1.7 Insulating Sticks	
<p>Insulating sticks shall have a length which provides appropriate insulation from live parts and enables a person using the stick to maintain the applicable SAD, refer Section 2.3.</p> <p>When an insulating stick is to be used in wet conditions consideration shall be given to the potential for hazardous surface leakage currents. Only Authorised Persons or persons trained in the use of insulating sticks shall use insulating sticks on live electrical apparatus.</p>	<p>Insulating sticks shall have a length which provides appropriate insulation from live parts and enables a person using the stick to maintain the applicable SAD, refer Section 2.3.</p> <p>When an insulating stick is to be used in wet conditions consideration shall be given to the potential for hazardous surface leakage currents.</p> <p>Only Authorised Persons or persons trained in the use of insulating sticks shall use insulating sticks on live electrical apparatus.</p>	No change
1.1.8 Labelling of Electrical Apparatus	1.1.8 Labelling of Electrical Apparatus	
<p>For the purposes of identification and description, electrical apparatus shall, wherever practicable, be clearly labelled.</p>	<p>For the purposes of identification and description, electrical apparatus shall, wherever practicable, be clearly labelled.</p>	No change
1.1.9 Ladders	1.1.9 Ladders	
<p>Conductive ladders (including wire reinforced) shall not be used on, near or in the vicinity of, exposed live electrical apparatus.</p>	<p>Conductive ladders (including wire reinforced) shall not be used on, near or in the vicinity of, exposed live electrical apparatus.</p>	No change
1.1.10 Personal Protective Equipment (PPE)	1.1.10 Personal Protective Equipment (PPE)	
1.1.10.1 General	1.1.10.1 General	
<p>All persons performing work who may be exposed to possible electric shock, arc flash or other injury from electrical apparatus shall use approved PPE.</p> <p>All protective equipment and apparel shall comply with relevant Australian Standards and guidelines.</p> <p>Additional PPE shall be used in accordance with the type of work and the risks involved.</p> <p>Persons conducting field visits, where no work is being performed, shall comply with organisational procedures.</p> <p>For Operator protection, refer to Table 6 on page 35</p>	<p>All persons performing work who may be exposed to possible electric shock, arc flash or other injury from electrical apparatus shall use approved PPE.</p> <p>All protective equipment and apparel shall comply with relevant Australian Standards and guidelines.</p> <p>Additional PPE shall be used in accordance with the type of work and the risks involved.</p> <p>Persons conducting field visits, where no work is being performed, shall comply with organisational procedures.</p> <p>For Operator protection, refer to Table 6 on page 35</p>	No change
1.1.10.2 Persons Performing Work on or Near Electrical Apparatus	1.1.10.2 Persons Performing Work on or Near Electrical Apparatus	
<p>Persons performing work on, near or in the vicinity of electrical apparatus shall utilise the following approved PPE:</p> <ul style="list-style-type: none"> <li>• Safety headwear</li> <li>• Safety footwear</li> <li>• Ankle to wrist natural fibre or arc flash protective clothing</li> <li>• Insulated gloves for live work</li> <li>• Face/eye protection for live work</li> </ul>	<p>Persons performing work on, near or in the vicinity of electrical apparatus shall utilise the following approved PPE:</p> <ul style="list-style-type: none"> <li>• Safety headwear</li> <li>• Safety footwear</li> <li>• Ankle to wrist natural fibre or arc flash protective clothing</li> <li>• Insulated gloves for live work</li> <li>• Face/eye protection for live work</li> </ul>	No change
1.1.10.3 Persons Visiting Station Environments	1.1.10.3 Persons Visiting Station Environments	

2013	2019	Comment
<p>Persons visiting station environments that have no direct involvement in any work at that site and where required their movements are confined to normal access ways, e.g. roads, paths, and stairs shall utilise the following approved PPE:</p> <ul style="list-style-type: none"> <li>• Safety headwear</li> <li>• Fully enclosed footwear</li> <li>• Ankle to wrist cover</li> </ul>	<p>Persons visiting station environments that have no direct involvement in any work at that site and where required their movements are confined to normal access ways, e.g. roads, paths, and stairs shall utilise the following approved PPE:</p> <ul style="list-style-type: none"> <li>• Safety headwear</li> <li>• Fully enclosed footwear</li> <li>• Ankle to wrist cover</li> </ul>	No change
1.1.11 Tapes and other Measuring Devices	1.1.11 Tapes and other Measuring Devices	
<p>Only approved non-conducting tapes, rulers and other measuring devices shall be used in the vicinity of live electrical apparatus. Conductive tapes, rulers and other measuring devices shall not be used near exposed live electrical apparatus unless approved for use in accordance with organisational procedures.</p>	<p>Only approved non-conducting tapes, rulers and other measuring devices shall be used in the vicinity of live electrical apparatus. Conductive tapes, rulers and other measuring devices shall not be used near exposed live electrical apparatus unless approved for use in accordance with organisational procedures.</p>	No change
1.1.12 Use Of Safety Observers	1.1.12 Use Of Safety Observers	
<p>Unless working in accordance with Section 4.2.1 or undertaking an HV operating task, a Safety Observer shall be appointed where it is prescribed by organisational procedures or it is considered after a JSA that a person, equipment or mobile plant might inadvertently infringe the SAD.</p> <p>Under no circumstances shall the Safety Observer be diverted to other work while the possibility of infringing the SAD exists.</p> <p>Before any person can act as a Safety Observer of plant and equipment, in proximity of electrical apparatus, they shall:</p> <ul style="list-style-type: none"> <li>• Understand the task, work process and sequence of work.</li> <li>• Have the authority to temporarily suspend the relevant work at any time.</li> <li>• Be specifically instructed in the duties and workplace hazards applicable.</li> <li>• Be positioned to effectively observe and immediately communicate with persons performing the work.</li> <li>• Monitor the work and warn against potential infringement of SAD.</li> </ul>	<p>Unless working in accordance with Section 4.2.1 or undertaking a HV operating task, a Safety Observer shall be appointed where it is prescribed by organisational procedures or it is considered after a JSA that a person, equipment or mobile plant might inadvertently infringe the SAD.</p> <p>Under no circumstances shall the Safety Observer be diverted to other work while the possibility of infringing the SAD exists.</p> <p>Before any person can act as a Safety Observer of plant and equipment, in proximity of electrical apparatus, they shall:</p> <ul style="list-style-type: none"> <li>• Understand the task, work process and sequence of work.</li> <li>• Have the authority to temporarily suspend the relevant work at any time.</li> <li>• Be specifically instructed in the duties and workplace hazards applicable.</li> <li>• Be positioned to effectively observe and immediately communicate with persons performing the work.</li> <li>• Monitor the work and warn against potential infringement of SAD.</li> </ul>	Change 'an' to 'a' in first para
1.1.13 Fit State For Work	1.1.13 Fit State For Work	
<p>Personnel shall be in a fit and safe condition to commence work. Alcohol, drugs, prescription medication, fatigue, mental alertness and physical condition of a person may impede their ability to work safely in an electrical environment.</p> <p>Individuals and work colleagues are jointly responsible to be in a fit state to work safely.</p> <p>Persons who are required to work on, near or in the vicinity of electrical apparatus shall not consume or be under the influence of alcohol or</p>	<p>Personnel shall be in a fit and safe condition to commence work. Alcohol, drugs, prescription medication, fatigue, mental alertness and physical condition of a person may impede their ability to work safely in an electrical environment.</p> <p>Individuals and work colleagues are jointly responsible to be in a fit state to work safely.</p> <p>Persons who are required to work on, near or in the vicinity of electrical apparatus shall not consume or be under the influence</p>	No change

2013	2019	Comment
<p>drugs that diminish work skills during work hours. This shall be taken to include meal or rest breaks. Appropriate policies shall be implemented by organisations.</p>	<p>of alcohol or drugs that diminish work skills during work hours. This shall be taken to include meal or rest breaks. Appropriate policies shall be implemented by organisations.</p>	
1.1.14 Portable Electric Tools and Equipment	1.1.14 Portable Electric Tools and Equipment	
<p>Portable electric tools and equipment, and extension leads should be approved, used, repaired and tested as detailed in organisational procedures. Electric power tools with trailing leads, shall be treated as being at earth potential. Precautions shall be taken to ensure that the trailing lead is secured and does not make contact with exposed live conductors.</p>	<p>Portable electric tools and equipment, and extension leads should be approved, used, repaired and tested as detailed in organisational procedures. Electric power tools with trailing leads, shall be treated as being at earth potential. Precautions shall be taken to ensure that the trailing lead is secured and does not make contact with exposed live conductors.</p>	No change
1.1.15 Design, Construction and Commissioning	1.1.15 Design, Construction and Commissioning	
<p>Organisational procedures for design, construction and commissioning of electrical assets shall ensure that the safe access procedures in these Rules can be achieved.</p>	<p>Organisational procedures for design, construction and commissioning of electrical assets shall ensure that the safe access procedures in these Rules can be achieved.</p>	No change
1.2 WORK WITHIN ELECTRIC AND MAGNETIC FIELDS	1.2 WORK WITHIN ELECTRIC AND MAGNETIC FIELDS	
1.2.1 General	1.2.1 General	
<p>Persons working within electric and magnetic fields shall be appropriately protected from the annoyance, such as static and minor tingles, due to electric discharge effects of strong electric fields and the possible biological effects associated with extremely strong electric and magnetic fields. Persons using medical implantable devices including cardiac pacemakers should consult their doctors and the relevant organisation's health and safety officer for information on possible electromagnetic interferences with the medical devices prior to entering areas of strong electric and magnetic fields.</p> <p>The electric and magnetic field exposure limits are based upon National health and Medical Research Council (NhMRC) interim guidelines. The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) administer the electric and magnetic fields issue in Australia. Organisations should apply the appropriate exposure limits as per these NhMRC guidelines until new ARPANSA guidelines are available. Refer <a href="http://www.arpansa.gov.au">www.arpansa.gov.au</a></p>	<p>Persons working within electric and magnetic fields shall be appropriately protected from the annoyance, such as static and minor tingles, due to electric discharge effects of strong electric fields and the possible biological effects associated with extremely strong electric and magnetic fields. Persons using medical implantable devices including cardiac pacemakers should consult their doctors and the relevant organisation's health and safety officer for information on possible electromagnetic interferences with the medical devices prior to entering areas of strong electric and magnetic fields.</p> <p>The electric and magnetic field exposure limits are based upon National health and Medical Research Council (NhMRC) guidelines. <b>An ongoing review of these guidelines is presently being carried out by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), and information on the activity is available from ARPANSA.</b></p> <p><b>Organisations should consider appropriate exposure limits as per Energy Network Australia EMF Management Handbook,</b></p>	<p>Changes to align with BB. Comments below from BB review committee:</p> <p><i>Withdrawal of the word 'interim'</i></p> <p><i>It was advised that Radiation Health Series No. 30, Interim guidelines on limits of exposure to 50/60 Hz electric and magnetic fields (RHS No. 30) has been withdrawn and industry has been advised by ARPANSA to refer to ICINRP guidelines 2010. (International Commission on Non-Ionising Radiation Protection Group). 8 June 2016</i></p> <p><i>DM- Further guidance on application of INCIRP 2010 is found in EU Directive 2013/35/EU and Guide For Implementing Directive 2013/35/EU - On Electromagnetic Fields by European Transmission System Operators (ENTSO-E) members</i></p>
1.2.2 50Hz Electric Fields	1.2.2 50Hz Electric Fields	

2013	2019	Comment
The Nhmrc's interim guidelines for occupational exposure limits for electric fields are as follows:	Advisory occupational exposure limits for electric fields based on the National Health and Medical Research Council (NHMRC) interim are as follows:	Changes to align with BB. Comments below from BB review committee:
WHOLE WORKING DAY - 10kV/m	Unrestricted Less than 10kV/m	Options:
SHORT TERM - 30kV/m	Short term 10kV/m to 30kV/m	ICNIRP – (1) basic exposure limits – cellular level
	Alternative Controls Greater than 30kV/m	(2) Reference levels (advisory)– 10kV/m
<p>Short term exposure to fields between 10 kV/m and 30 kV/m is permitted provided the field strength (in kV/m) times the duration of exposure (in hours) does not exceed 80 for the whole day. For example, exposure to an electric field of 20 kV/m would be permitted for four hours under Nhmrc guidelines.</p> <p>For work situations of greater than 30 kV/m appropriate measures shall be taken. Such measures include wearing of appropriately earthed and/ or bonded conducting suits, the screening and earthing of vehicles, the screening of work platforms and access ways, and de-energising adjacent electrical apparatus.</p> <p>The person responsible for planning the work shall include in the work instructions details of any appropriate measures to be taken</p>	<ul style="list-style-type: none"> <li>No time limits apply for exposures below 10kV/m</li> <li>Short-term exposure to fields from 10 kV/m to 30 kV/m is permitted provided the field strength (in kV/m) multiplied by the duration of exposure (in hours) does not exceed 80 for the whole day. For example, exposure to an electric field of 20 kV/m would be permitted for four hours.</li> <li>For work situations with field strengths greater than 30 kV/m, alternative controls shall be used. Such controls may include wearing appropriately earthed or bonded conducting suits, the screening and earthing of vehicles, the screening of work platforms and access ways, and de-energising adjacent electrical apparatus.</li> </ul> <p>The person responsible for planning the work shall include in the work instructions details of any appropriate measures to be taken.</p>	<p>EU directive- Occupational Limits – 20kV/m Higher limits available but subject to the basic limits</p> <p>Changes were made to improve clarity of the clause</p> <p>8-3-17 – comment only The ENTSO-E guide different limits subject to orientation: Ground level up to 20kV/m, Aloft up to 30kV/m</p>
1.2.3 Magnetic Fields	1.2.3 Magnetic Fields	
The Nhmrc's interim guidelines for limits of occupational exposure to magnetic fields are as follows:	The Nhmrc's interim guidelines for limits of occupational exposure to magnetic fields are as follows:	No change
50hz MAGNETIC FIELDS	50hz MAGNETIC FIELDS	
Whole working day - 0.5 milliTesla (5000 milliGauss)	Whole working day - 0.5 milliTesla (5000 milliGauss)	
Short term – (2 hours per day) - 5 milliTesla (50,000 milliGauss)	Short term – (2 hours per day) - 5 milliTesla (50,000 milliGauss)	
Limit for limbs (e.g. extended arm) 25 milliTesla (250,000 milliGauss)	Limit for limbs (e.g. extended arm) 25 milliTesla (250,000 milliGauss)	
STATIC OR DIRECT CURRENT (DC) MAGNETIC Fields	STATIC OR DIRECT CURRENT (DC) MAGNETIC Fields	
The 2009 International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for limits (see Caution) of occupational exposure to static or magnetic fields are as follows:	The 2009 International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for limits (see Caution) of occupational exposure to static or magnetic fields are as follows:	
Head and Trunk - 2000 milliTesla	Head and Trunk - 2000 milliTesla	
Limbs - 8000 milliTesla	Limbs - 8000 milliTesla	

2013	2019	Comment
<p>CAUTION</p> <ul style="list-style-type: none"> <li>• Because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of persons with implanted electronic medical devices and implants containing ferromagnetic material. This requirement may lead to much lower restriction levels such as 0.5 milliTesla.</li> <li>• For specific work applications, exposure up to 8000 milliTesla can be justified, if the environment is controlled and appropriate work practices are implemented to control movement-induced effects.</li> <li>• When magnetic flux densities exceed 5 milliTesla (static or DC magnetic fields) precautions should be taken to prevent hazards from flying metallic objects.</li> </ul>	<p>CAUTION</p> <ul style="list-style-type: none"> <li>• Because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of persons with implanted electronic medical devices and implants containing ferromagnetic material. This requirement may lead to much lower restriction levels such as 0.5 milliTesla.</li> <li>• For specific work applications, exposure up to 8000 milliTesla can be justified, if the environment is controlled and appropriate work practices are implemented to control movement-induced effects.</li> <li>• When magnetic flux densities exceed 5 milliTesla (static or DC magnetic fields) precautions should be taken to prevent hazards from flying metallic objects.</li> </ul>	
<p>Areas in which higher levels of exposure can occur outside SAD, see Clauses 2.2.1 and 2.3, shall be fenced off to exclude access whilst electrical apparatus is energised.</p>	<p>Areas in which higher levels of exposure can occur outside SAD, see Clauses 2.2.1 and 2.3, shall be fenced off to exclude access whilst electrical apparatus is energised.</p>	
<p>1.3 TRAINING</p>	<p>1.3 TRAINING</p>	
<p>1.3.1 General</p>	<p>1.3.1 General</p>	
<p>An organisation's safe system of work shall include reference to appropriate training, competency and authorisations for all persons working on or near electrical apparatus. A person's competency and/or authorisation shall be current for the task being performed. Persons holding authorisations shall be competency assessed at a nominal three-yearly interval and where appropriate training given to restore competency. Training will consist of identified learning outcomes which will be knowledge, skill (task), and attitude based and where appropriate, reflect National Competency Standards. A person may perform a task that normally requires authorisation or approval, (e.g. HV live work, HV operating) when that task is performed under a training program and the person is suitably supervised</p>	<p>An organisation's safe system of work shall include reference to appropriate training, competency and authorisations for all persons working on or near electrical apparatus. A person's competency and/or authorisation shall be current for the task being performed. Persons holding authorisations shall be competency assessed at a nominal three-yearly interval and where appropriate training given to restore competency. Training will consist of identified learning outcomes which will be knowledge, skill (task), and attitude based and where appropriate, reflect National Competency Standards. <b>Where a national or state competency standard does not exist, an organisation may develop a training and assessment standard in consultation with a Registered Training Organisation</b> A person may perform a task that normally requires authorisation or approval, (e.g. HV live work, HV operating) when that task is performed under a training program and the person is suitably supervised</p>	<p>New para to reflect normal industry practice. E.g. earth testing</p>
<p>1.3.2 Learning Outcomes</p>	<p>1.3.2 Learning Outcomes</p>	
<p>Learning outcomes shall meet those described in VESI, State and National Training Standards. Refer to training standards published in the VESI Skills and Training Guideline at <a href="http://www.vesi.com.au">www.vesi.com.au</a>.</p>	<p>Learning outcomes shall meet those described in VESI, State and National Training Standards. Refer to training standards published in the VESI Skills and Training Guideline at</p>	<p>No change</p>

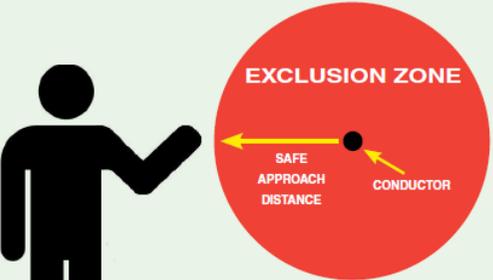
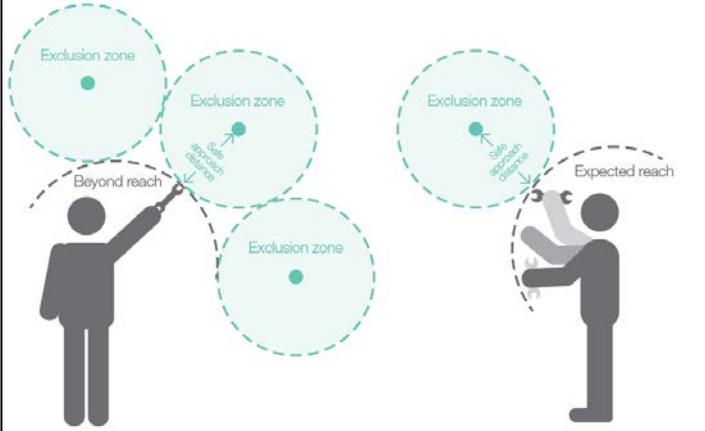
2013	2019	Comment
Where learning outcomes are established at the VESI level, the course descriptors shall include learning outcomes and assessment criteria	www.vesi.com.au. Where learning outcomes are established at the VESI level, the course descriptors shall include learning outcomes and assessment criteria	
1.3.3 Approved Training Providers	1.3.3 Approved Training Providers	
Organisations shall approve training providers as meeting the requirements published in the VESI Skills and Training Guideline at www.vesi.com.au. Training providers shall document: <ul style="list-style-type: none"> <li>• Assessment methods.</li> <li>• Process for recognition of prior learning.</li> </ul>	Organisations shall approve training providers as meeting the requirements published in the VESI Skills and Training Guideline at www.vesi.com.au. Training providers shall document: <ul style="list-style-type: none"> <li>• Assessment methods.</li> <li>• Process for recognition of prior learning.</li> </ul>	No change
1.3.4 Mobile Plant Operators	1.3.4 Mobile Plant Operators	
Operators of mobile plant shall be provided with information, instruction or training to operate the plant in the electrical environment. The information, instruction or training shall include a description of the hazards of movement of mobile plant in proximity to live overhead conductors and detail precautionary measures which may be taken to ensure safe operation.	Operators of mobile plant shall be provided with information, instruction or training to operate the plant in the electrical environment. The information, instruction or training shall include a description of the hazards of movement of mobile plant in proximity to live overhead conductors and detail precautionary measures which may be taken to ensure safe operation.	No change
1.3.5 Training Records	1.3.5 Training Records	
Organisations shall maintain systems for recording of all training and authorisations.	Organisations shall maintain systems for recording of all training and authorisations.	No change
<b>1.4 NETWORK AUTHORITIES</b>	<b>1.4 NETWORK AUTHORITIES</b>	
1.4.1 Network Authority Types	1.4.1 Network Authority Types	
Authority types covered by these Rules are: <ul style="list-style-type: none"> <li>• Receive Access Permits</li> <li>• High Voltage Switching</li> <li>• Enter Enclosures</li> <li>• Make Application for</li> <li>• Receive Sanction for Test</li> </ul>	Authority types covered by these Rules are: <ul style="list-style-type: none"> <li>• Receive Access Permits</li> <li>• High Voltage Switching</li> <li>• Enter Enclosures</li> <li>• Make Application for</li> <li>• Receive Sanction for Test</li> </ul>	No change
1.4.2 Withdrawal or Suspension of a Network Authority	1.4.2 Withdrawal or Suspension of a Network Authority	
An authority may be withdrawn, suspended, altered or reviewed when it is apparent the person concerned: <ul style="list-style-type: none"> <li>• Has an expired authority.</li> <li>• Requires additional training or are assessed as not competent.</li> <li>• Is unable to perform activities within the scope of the authority due to any circumstance.</li> <li>• Is subject to investigation.</li> </ul>	An authority may be withdrawn, suspended, altered or reviewed when it is apparent the person concerned: <ul style="list-style-type: none"> <li>• Has an expired authority.</li> <li>• Requires additional training or are assessed as not competent.</li> <li>• Is unable to perform activities within the scope of the authority due to any circumstance.</li> <li>• Is subject to investigation.</li> </ul>	No change
1.4.3 Work on Live High Voltage overhead Lines	1.4.3 Work on Live High Voltage overhead Lines	

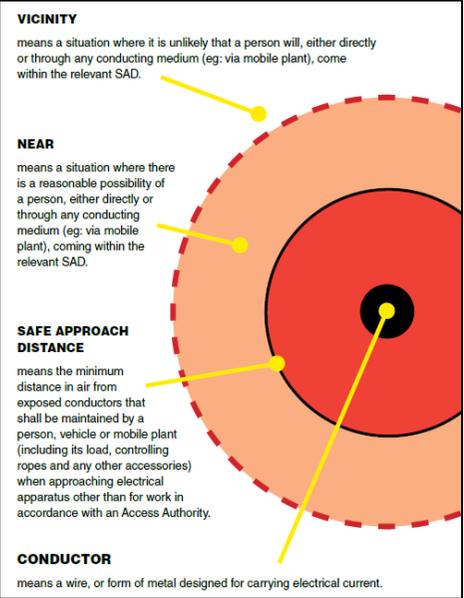
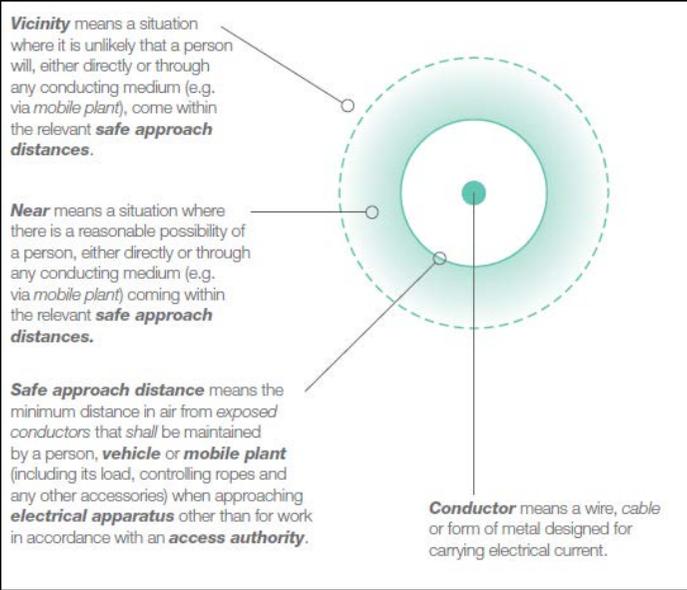
2013	2019	Comment
HV live work shall be performed only by Lineworkers who have been assessed as competent to the National Competency Standards	HV live work shall be performed only by Lineworkers who have been assessed as competent to the National Competency Standards unless in accordance with 1.3.1	Added '...unless in accordance with 1.3.1' for consistency
1.4.4 Work on Live Low Voltage Electrical Apparatus	1.4.4 Work on Live Low Voltage Electrical Apparatus	
<p>Work on live LV electrical apparatus shall be performed only by workers who have been assessed as competent to the National Competency Standard or an electrical apprentice/trainee working under a training program and suitably supervised.</p> <p>A trained person may be approved to undertake a restricted electrical measurement, test and adjustment activity.</p> <p>Electrically trained persons who, having previously been Authorised to work on live LV electrical apparatus, have been away from live LV work for one year or more shall be assessed in accordance with VESI training standards.</p>	<p>Work on live LV electrical apparatus shall be performed only by workers who have been assessed as competent to the National Competency Standard or an electrical apprentice/trainee working under a training program and suitably supervised.</p> <p><b>A person may be trained and authorised</b> to undertake a restricted electrical measurement, test and adjustment activity.</p> <p>Electrically trained persons who, <b>have previously held a delegated authority</b> to work on live LV electrical apparatus <b>and</b> have been away from live LV work for one year or more shall be assessed in accordance with VESI training standards.</p>	<p>Added second sentence of first paragraph to cover circumstances where an electrical task is not specifically addressed by an established standard.</p> <p>Redrafted third paragraph for readability</p>
1.4.5 Work on Customer's Installations	1.4.5 Work on Customer's Installations	
Work on customer's electrical installations shall be performed only by persons licensed by Energy Safe Victoria unless an Order in Council is given by Energy Safe Victoria to allow the activity.	<b>AS/NZS 3000</b> work on customer's electrical installations shall be performed only by persons licensed by Energy Safe Victoria unless an Order in Council is given by Energy Safe Victoria to allow the activity.	Added Aus Standard to differentiate between installation and network activities at a customer's premises
<b>PART 2</b>		
<b>2.1 WORK IN THE VICINITY OF ELECTRICAL APPARATUS</b>		
2.1.1 General		
<p>For all works by VESI workers in the vicinity of electrical apparatus, either specific written work instructions shall be used or alternatively, organisational procedures shall apply in conjunction with the use of Instructed or Authorised Persons.</p> <p>For all work by persons not under the control of the Distribution Network, refer to Part 5.</p> <p>Organisational procedures shall include risk assessment processes which document and record control measures.</p> <p>The control measures implemented shall minimise the risks involved and may include:</p> <ul style="list-style-type: none"> <li>• Defining the work area.</li> <li>• Isolating and earthing the electrical apparatus.</li> <li>• De-energising live electrical apparatus adjacent to the work area.</li> <li>• The use of barriers and signs.</li> <li>• The use of approved covering.</li> <li>• The use of Safety Observers.</li> </ul>	<p>For all works by VESI workers in the vicinity of electrical apparatus, either specific written work instructions shall be used or alternatively, organisational procedures <b>and/or established work practices</b> shall apply in conjunction with the use of Instructed or Authorised Persons.</p> <p>For all work by persons not under the control of the Distribution Network, refer to Part 5.</p> <p>Organisational procedures shall include risk assessment processes which document and record control measures.</p> <p>The control measures implemented shall minimise the risks involved and may include:</p> <ul style="list-style-type: none"> <li>• Defining the work area.</li> <li>• <b>Defining access routes.</b></li> <li>• Isolating and earthing the electrical apparatus.</li> <li>• De-energising live electrical apparatus adjacent to the work area.</li> </ul>	<p>Added "and/or established work practices" to cover basic work practices that are not documented</p> <p>Small re-arrangement of potential controls to align with BB</p>

2013	2019	Comment
<ul style="list-style-type: none"> <li>• The issue of the appropriate Authority to Work in the Vicinity of Electrical Apparatus.</li> <li>• Defining access routes.</li> </ul>	<ul style="list-style-type: none"> <li>• The use of barriers and signs.</li> <li>• The use of approved covering.</li> <li>• The use of Safety Observers.</li> <li>• The issue of the appropriate Authority to Work in the Vicinity of Electrical Apparatus.</li> </ul>	
2.1.2 Handling Objects and Loads	2.1.2 Handling Objects and Loads	
<p>When objects are being handled manually or by mechanical equipment, care shall be exercised to prevent the objects or the mechanical equipment infringing SAD.</p> <p>For manual handling, appropriate work methods and an appropriate number of persons shall be used to maintain SAD.</p> <p>For mechanical handling where there is a risk of infringing the SAD to electrical apparatus, refer Section 2.6, the movement of loads shall be controlled by means of approved non-conducting ropes or other approved means. No person, other than the mobile plant operator, shall contact the load, mobile plant or any attached conducting objects. Refer to Clause 2.1.4 for protection of the mobile plant operator.</p> <p>Approved lifting devices used as pole mounted lifting equipment, e.g. rope tackles and handlines, may be attached to pole structures by a suitably trained person maintaining at least the clearances in Table 1 between exposed live conductors and any part of the lifting device, gear and load at all times.</p>	<p>When objects are being handled manually or by mechanical equipment, care shall be exercised to prevent the objects or the mechanical equipment infringing SAD.</p> <p>For manual handling, appropriate work methods and an appropriate number of persons shall be used to maintain SAD.</p> <p>For mechanical handling where there is a risk of infringing the SAD to electrical apparatus, refer Section 2.6, the movement of loads shall be controlled by means of approved non-conducting ropes or other approved means.</p> <p><b>No person, other than the mobile plant operator, shall contact the load, mobile plant or any attached conducting objects. Refer to Clause 2.1.4 for protection of the mobile plant operator.</b></p> <p>Approved lifting devices used as pole mounted lifting equipment, e.g. rope tackles and handlines, may be attached to pole structures by a suitably trained person maintaining at least the clearances in Table 1 between exposed live conductors and any part of the lifting device, gear and load at all times.</p>	Start new para from "No person, other than..." for readability
2.1.3 Erection or Dismantling of Overhead Conductors	2.1.3 Erection or Dismantling of Overhead Conductors	
<p>When overhead lines (other than insulated or covered conductors), are being erected, dismantled or replaced, and there is any possibility of contact with, or induction from, adjacent live conductors of any description, such conductors being moved shall be earthed by an approved device before work is commenced and shall remain earthed until the work is completed. A conductor being so erected shall be earthed before it is lifted from the ground.</p> <p>Consideration shall be given to the use of appropriate restraining devices to control such conductors when they are being moved.</p> <p>At over or undercrossing positions, examples of appropriate measures are:</p> <ul style="list-style-type: none"> <li>• The application of an approved earthing device to bare conductors.</li> <li>• Construction of temporary physical barriers, such as timber structures and non-conductive nets.</li> <li>• Catenary runs with conductor retaining loops.</li> </ul>	<p>When overhead lines (other than insulated or covered conductors), are being erected, dismantled or replaced, and there is any possibility of contact with, or induction from, adjacent live conductors of any description, such conductors being moved shall be earthed by an approved device before work is commenced and shall remain earthed until the work is completed. A conductor being so erected shall be earthed before it is lifted from the ground.</p> <p>Consideration shall be given to the use of appropriate restraining devices to control such conductors when they are being moved.</p> <p>At over or undercrossing positions, examples of appropriate measures are:</p> <ul style="list-style-type: none"> <li>• The application of an approved earthing device to bare conductors.</li> <li>• Construction of temporary physical barriers, such as timber structures and non-conductive nets.</li> <li>• Catenary runs with conductor retaining loops.</li> </ul>	No change

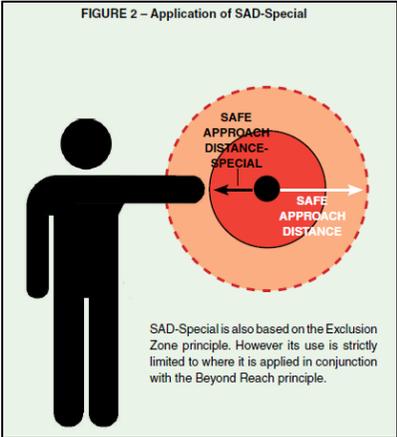
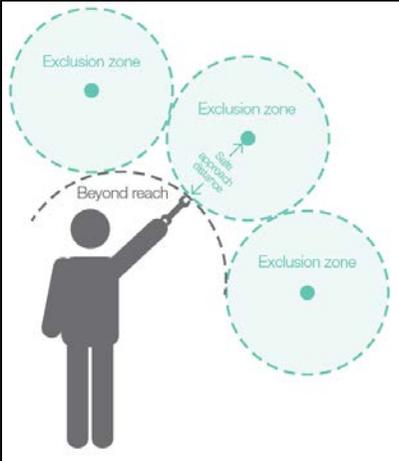
2013	2019	Comment
<p>2.1.4 Use of Mobile Plant</p> <p>Mobile plant shall only be used in the vicinity of live conductors and/ or electrical apparatus after precautions appropriate to the particular circumstances have been considered and action taken to control the associated hazards and risks.</p> <p>The control measures to be considered within a risk assessment and a JSA should include:</p> <ul style="list-style-type: none"> <li>• Isolating and earthing electrical apparatus.</li> <li>• Positioning the mobile plant such that the SAD can be maintained in all circumstances.</li> <li>• The use of Safety Observers and barriers and signs.</li> <li>• The use of other precautions such as physical restrictions or control devices in conjunction with barriers.</li> <li>• The suppression of auto-reclose.</li> <li>• The alteration of protection and control settings.</li> <li>• De-energising the electrical apparatus.</li> </ul> <p>Mobile plant, and where appropriate, vehicles, shall be fitted with a trailing earthing conductor to protect against the hazards presented by induced voltages.</p> <p>When mobile plant may come near live electrical apparatus, the mobile plant shall be earthed. This shall be achieved by an approved earthing conductor directly connected to a station earth or other approved earthing system.</p> <p>When mobile plant is operated from outside the mobile plant, precautions shall be taken to protect the Operator from hazardous step and touch potentials.</p> <p>No person other than the mobile plant operator shall touch the mobile plant whilst in operation.</p> <p>Where mobile plant, e.g. EWP is not fully insulated, the following permanent sign shall be fixed at each Operator's station:</p>	<p>2.1.4 Use of Mobile Plant</p> <p>Mobile plant shall only be used in the vicinity of live conductors and/ or electrical apparatus after precautions appropriate to the particular circumstances have been considered and action taken to control the associated hazards and risks.</p> <p>The control measures to be considered within a risk assessment and a JSA should include:</p> <ul style="list-style-type: none"> <li>• Isolating and earthing electrical apparatus.</li> <li>• Positioning the mobile plant such that the SAD can be maintained in all circumstances.</li> <li>• The use of Safety Observers and barriers and signs.</li> <li>• The use of other precautions such as physical restrictions or control devices in conjunction with barriers.</li> <li>• The suppression of auto-reclose.</li> <li>• The alteration of protection and control settings.</li> <li>• De-energising the electrical apparatus.</li> <li>• <b>Mechanical limitation devices options on mobile plant</b></li> </ul> <p>Mobile plant, and where appropriate, vehicles, shall be fitted with a trailing earthing conductor to protect against the hazards presented by induced voltages.</p> <p>When mobile plant may come near live electrical apparatus, the mobile plant shall be earthed. This shall be achieved by an approved earthing conductor directly connected to a station earth or other approved earthing system.</p> <p>When mobile plant is operated from outside the mobile plant, precautions shall be taken to protect the Operator from hazardous step and touch potentials.</p> <p>No person other than the mobile plant operator shall touch the mobile plant whilst in operation.</p> <p>Where mobile plant (e.g. EWP) is not fully insulated, <b>the insulation level of each part shall be labelled in accordance with the appropriate standard (e.g AS1418.10) and the following permanent sign shall be fixed at all plant operator's control:</b></p>	<p>Added new dot point to align with BB</p> <p>This paragraph was rewritten to align with BB and include Australian standard requirements and change "operator's station" to "operator's control"</p>
<p style="text-align: center;"><b>DANGER – BEWARE OF POWER LINES</b></p> <p style="text-align: center;">This appliance is not fully insulated. Do not permit any uninsulated part of this appliance to be in close proximity to live conductors.</p>	<p style="text-align: center;"><b>DANGER – BEWARE OF POWER LINES</b></p> <p style="text-align: center;">This appliance is not fully insulated. Do not permit any uninsulated part of this appliance to be in close proximity to live conductors.</p>	
<p>2.1.4.1 Testing of Mobile Plant</p> <p>Insulated mobile plant used in the vicinity of overhead lines shall be subject to HV electrical test on its insulated boom section/s in accordance with AS 1418.10.</p> <p>Testing shall be conducted at six monthly intervals and marked to show the date of the next routine test. Variations in accordance with AS</p>	<p>2.1.4.1 Testing of Mobile Plant</p> <p>Insulated mobile plant used in the vicinity of overhead lines shall be subject to HV electrical test on its insulated boom section/s in accordance with AS 1418.10.</p> <p>Testing shall be conducted at six monthly intervals and marked to show the date of the next routine test. Variations in</p>	<p>Check manufacturer's instructions for test in accordance with</p>

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<p>1418.10 are acceptable to provide for orderly test programming. Periodic tests are intended to monitor the adequacy of the particular maintenance regime used and to confirm that no physical damage has occurred to insulated components. The period between tests may depend on the usage, adequacy of the maintenance regime and the environment in which the equipment has been operating. The vehicle shall not be accepted as suitable for use in the vicinity of live overhead conductors unless it is within test date or in accordance with AS 1418.10.</p>	<p>accordance with AS 1418.10 are acceptable to provide for orderly test programming <b>and/or mobile plant built to a previous standard.</b> Periodic tests are intended to monitor the adequacy of the particular maintenance regime used and to confirm that no physical damage has occurred to insulated components. The period between tests may depend on the usage, adequacy of the maintenance regime and the environment in which the equipment has been operating. The vehicle shall not be accepted as suitable for use in the vicinity of live overhead conductors unless it is within test date or in accordance with AS 1418.10.</p>	<p>Added "and/or mobile plant built to a previous standard" to allow for re-built EWP's not subject to wet testing</p>
<p><b>2.1.5 Work by Ordinary Persons</b> Where ordinary persons are required to work in the vicinity of electrical apparatus, the Ordinary Person performing the work, the person in charge of the work and the person in charge of the electrical apparatus shall all co-operate to ensure that the work is performed safely, and that specific precautions are taken.</p>	<p><b>2.1.5 Work by Ordinary Persons</b> Where ordinary persons are required to work in the vicinity of electrical apparatus, the Ordinary Person performing the work, the person in charge of the work and the person in charge of the electrical apparatus shall all co-operate to ensure that the work is performed safely, and that specific precautions are taken.</p>	<p>No change</p>
<p><b>2.1.6 Work within Stations or on Multi-Circuit Overhead Lines with Multiple Asset Ownership</b> For work within stations or on multi-circuit overhead lines where electrical apparatus is owned by more than one organisation and work is adjacent to another organisation's exposed electrical apparatus, there shall be joint consideration and agreement reached to carry out the work in a safe manner. Examples of other asset owners are:  <ul style="list-style-type: none"> <li>• Traction companies</li> <li>• HV customers</li> <li>• Other VESI companies.</li> </ul> </p>	<p><b>2.1.6 Work within Stations or on Multi-Circuit Overhead Lines with Multiple Asset Ownership</b> For work within stations or on multi-circuit overhead lines where electrical apparatus is owned by more than one organisation and work is adjacent to another organisation's exposed electrical apparatus, there shall be joint consideration and agreement reached to carry out the work in a safe manner. Examples of other asset owners are:  <ul style="list-style-type: none"> <li>• Traction companies</li> <li>• HV customers</li> <li>• Other VESI companies.</li> </ul> </p>	<p>No change</p>
<p><b>2.2 SAFE APPROACH TO ELECTRICAL APPARATUS</b></p>	<p><b>2.2 SAFE APPROACH TO ELECTRICAL APPARATUS</b></p>	
<p><b>2.2.1 General</b></p>	<p><b>2.2.1 General</b></p>	
<p>Safe Approach Distance (SAD) is based on an Exclusion Zone principle. This principle defines an area around a conductor as shown in Figure 1, into which no part of the person, mobile plant or object (other than approved insulated objects) may encroach unless in accordance with Parts 3 and 4. Work practices shall be established to ensure persons, mobile plant and unapproved objects do not encroach on the SAD. These work practices should include consideration of:  <ul style="list-style-type: none"> <li>• Working with the Exclusion Zone Beyond Reach of the worker; and</li> <li>• The use of controlled movements.</li> </ul> Unnecessary approach to electrical apparatus or unnecessary contact</p>	<p>Safe Approach Distance (SAD) is based on an Exclusion Zone principle. This principle defines an area around a conductor as shown in Figure 1, into which no part of the person, mobile plant or object (other than approved insulated objects) <b>shall</b> encroach unless in accordance with Parts 3 and 4.   <b>Unnecessary approach to electrical apparatus or unnecessary contact with parts not regarded as live shall be avoided.</b>  <b>Necessary approach to electrical apparatus shall be kept to a</b></p>	<p>Change 'may' to 'shall' to align with BB   Moved to beginning as general reminder</p>

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<p>with parts not regarded as live shall be avoided. Necessary approach to electrical apparatus shall be kept to a minimum and shall be restricted to the period required to perform the work.</p>	<p>minimum and shall be restricted to the period required to perform the work.</p> <p>Work practices shall be established to ensure persons, mobile plant and unapproved objects do not encroach on the SAD. These work practices shall include consideration of:</p> <ul style="list-style-type: none"> <li>• Working Beyond Reach of the exclusion zone wherever practicable; and</li> <li>• precautions to be applied when use of controlled movement is necessary,</li> <li>• the work space required including the expected reach of persons performing the work and</li> <li>• The movement of mobile plant used for the work.</li> </ul> <p>Expected reach shall include all intentional and expected movements such as adopting a work position, adjusting a hard hat, manoeuvring tools, and reaching for items being passed to the employee</p>	<p>Change 'should' to 'shall' to align with BB</p> <p>First two dot points re-written for clarity and to align with BB</p> <p>Third and fourth dot points added to align with BB</p> <p>New paragraph to clarify expected reach concept,</p>
<p><b>FIGURE 1 – Exclusion Zone Principle</b></p>  <p>SAD is based on the Exclusion Zone principle and measured out from the energised conductor. Proper application includes the use of controlled movements to always stay outside the SAD.</p>		<p>Recommend adopting new images from BB to clarify 'Expected Reach' vs 'Beyond Reach'</p>

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<p>Differences between Safe Approach Distance , Near and Vicinity</p>  <p><b>VICINITY</b> means a situation where it is unlikely that a person will, either directly or through any conducting medium (eg: via mobile plant), come within the relevant SAD.</p> <p><b>NEAR</b> means a situation where there is a reasonable possibility of a person, either directly or through any conducting medium (eg: via mobile plant), coming within the relevant SAD.</p> <p><b>SAFE APPROACH DISTANCE</b> means the minimum distance in air from exposed conductors that shall be maintained by a person, vehicle or mobile plant (including its load, controlling ropes and any other accessories) when approaching electrical apparatus other than for work in accordance with an Access Authority.</p> <p><b>CONDUCTOR</b> means a wire, or form of metal designed for carrying electrical current.</p>	 <p><b>Vicinity</b> means a situation where it is unlikely that a person will, either directly or through any conducting medium (e.g. via <i>mobile plant</i>), come within the relevant <b>safe approach distances</b>.</p> <p><b>Near</b> means a situation where there is a reasonable possibility of a person, either directly or through any conducting medium (e.g. via <i>mobile plant</i>) coming within the relevant <b>safe approach distances</b>.</p> <p><b>Safe approach distance</b> means the minimum distance in air from <i>exposed conductors</i> that shall be maintained by a person, <b>vehicle or mobile plant</b> (including its load, controlling ropes and any other accessories) when approaching <b>electrical apparatus</b> other than for work in accordance with an <b>access authority</b>.</p> <p><b>Conductor</b> means a wire, cable or form of metal designed for carrying electrical current.</p>	<p>Recommend adopting image format from BB for alignment</p>
<p>2.3 SAFE APPROACH DISTANCE - PERSONS</p>	<p>2.3 SAFE APPROACH DISTANCE - PERSONS</p>	
<p>2.3.1 General</p>	<p>2.3.1 General</p>	
<p>The SAD specified in these Rules are based on work from a stable surface. Persons shall apply controlled movements or Beyond Reach principles to avoid infringing SAD. Personal clearances when performing HV live work up to and including 66kV, refer to the VESI Minimum Rules for Carrying out HV Live Work in Victoria. Persons undertaking works other than for or on behalf of VESI shall comply with the No Go Zone Guidelines as appropriate.</p>	<p>The SAD specified in these Rules are based on work from a stable surface. Persons shall apply controlled movements or Beyond Reach principles to avoid infringing SAD. Personal clearances when performing HV live work up to and including 66kV, refer to the VESI Minimum Rules for Carrying out HV Live Work in Victoria. Persons undertaking works other than for or on behalf of VESI shall comply with the No Go Zone Guidelines as appropriate.</p>	<p>No change</p>
<p>2.3.2 Safe Approach Distances - Ordinary Persons</p>	<p>2.3.2 Safe Approach Distances - Ordinary Persons</p>	
<p>An Ordinary Person is a person working for a Distribution Network without sufficient training or experience to enable them to avoid the dangers which electrical apparatus may create. The SAD for an Ordinary Person approaching insulated, covered or exposed conductors are shown in Table 1, column 2.</p>	<p>An Ordinary Person is a person working for a Distribution Network without sufficient training or experience to enable them to avoid the dangers which electrical apparatus may create. The SAD for an Ordinary Person approaching insulated, covered or exposed conductors are shown in Table 1, column 2.</p>	<p>No change</p>
<p>2.3.3 Safe Approach Distances - Instructed and Authorised Persons</p>	<p>2.3.3 Safe Approach Distances - Instructed and Authorised Persons</p>	

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<p>An Instructed Person is a person adequately advised or supervised by an Authorised Person to enable them to avoid the dangers which electricity may create. Instructed Person's SAD apply whilst undertaking duties under supervision or as instructed by an Authorised Person. Where continuous supervision is not provided to Instructed Persons, consideration shall be given to applying greater SAD than those given in Table 1, column 3. An Authorised Person is a person with technical knowledge or sufficient experience who has been approved, or has the delegated authority to act on behalf of the organisation, to perform the duty concerned. The SAD for an Authorised Person approaching insulated covered or exposed conductors are shown in Table 1, column 3.</p>	<p>An Instructed Person is a person adequately advised or supervised by an Authorised Person to enable them to avoid the dangers which electricity may create. Instructed Person's SAD apply whilst undertaking duties under supervision or as instructed by an Authorised Person. Where continuous supervision is not provided to Instructed Persons, consideration shall be given to applying greater SAD than those given in Table 1, column 3. An Authorised Person is a person with technical knowledge or sufficient experience who has been approved, or has the delegated authority to act on behalf of the organisation, to perform the duty concerned. The SAD for an Authorised Person approaching insulated covered or exposed conductors are shown in Table 1, column 3.</p>	No change																		
2.3.4 Safe Approach Distances - Authorised Entry to Enclosures	2.3.4 Safe Approach Distances - Authorised Entry to Enclosures																			
<p>A person authorised to enter enclosures is a person who has been assessed as competent against an approved training standard to enter electrical enclosures unsupervised. Persons who hold an Authority to Enter Enclosures usually hold no other authority type. This means their usual role when entering enclosures is limited to inspection and/or audit or work in the vicinity of electrical apparatus. Therefore, despite being classified as Authorised Persons, the SADs in Table 1 do not apply and persons Authorised to Enter Enclosures shall maintain the following SADs.</p>	<p>A person authorised to enter enclosures is a person who has been assessed as competent against an approved training standard to enter electrical enclosures unsupervised. Persons who hold an Authority to Enter Enclosures usually hold no other authority type. This means their usual role when entering enclosures is limited to <b>visual</b> inspection and/or audit or work in the vicinity of electrical apparatus. Therefore, despite being classified as Authorised Persons, the SADs in Table 1 do not apply and persons Authorised to Enter Enclosures shall maintain the following SADs. <b>Safe Approach Distances in this instance do not apply to equipment that is enclosed and has a dead front, e.g. RMU switch gear at an indoor substation.</b></p>	<p>Comments from Issues Register Review wording Investigate undertaking a variation to this clause for asset inspectors and pole testers for works inside enclosures  Note below added to address pole testers however issues raised by VPN designers by email in October 2018 to be addressed for final version.  <b>GBC to consider:</b> Delete additional clearance to align with BB and remove the ambiguity?</p>																		
<table border="1" data-bbox="143 1102 828 1251"> <tr> <td data-bbox="143 1102 369 1157">&lt; 1kV AC</td> <td data-bbox="376 1102 602 1157">&gt;1kV but ≤ 22kV</td> <td data-bbox="609 1102 828 1157">&gt; 22kV but ≤ 66kV</td> </tr> <tr> <td data-bbox="143 1161 369 1200">=</td> <td data-bbox="376 1161 602 1200">=</td> <td data-bbox="609 1161 828 1200">=</td> </tr> <tr> <td data-bbox="143 1204 369 1251">300mm</td> <td data-bbox="376 1204 602 1251">1000mm</td> <td data-bbox="609 1204 828 1251">2000mm</td> </tr> </table>	< 1kV AC	>1kV but ≤ 22kV	> 22kV but ≤ 66kV	=	=	=	300mm	1000mm	2000mm	<table border="1" data-bbox="936 1102 1621 1251"> <tr> <td data-bbox="936 1102 1162 1157">&lt; 1kV AC</td> <td data-bbox="1169 1102 1395 1157">&gt;1kV but ≤ 22kV</td> <td data-bbox="1402 1102 1621 1157">&gt; 22kV but ≤ 66kV</td> </tr> <tr> <td data-bbox="936 1161 1162 1200">=</td> <td data-bbox="1169 1161 1395 1200">=</td> <td data-bbox="1402 1161 1621 1200">=</td> </tr> <tr> <td data-bbox="936 1204 1162 1251">300mm</td> <td data-bbox="1169 1204 1395 1251">1000mm</td> <td data-bbox="1402 1204 1621 1251">2000mm</td> </tr> </table>	< 1kV AC	>1kV but ≤ 22kV	> 22kV but ≤ 66kV	=	=	=	300mm	1000mm	2000mm	
< 1kV AC	>1kV but ≤ 22kV	> 22kV but ≤ 66kV																		
=	=	=																		
300mm	1000mm	2000mm																		
< 1kV AC	>1kV but ≤ 22kV	> 22kV but ≤ 66kV																		
=	=	=																		
300mm	1000mm	2000mm																		
	<p><b>Note; the SAD's described in Table 1 do not apply to pole testers / asset inspectors who shall work in accordance with Table 1.</b></p>	This note added to exclude pole testers from the extended SAD requirements																		
2.3.5 Safe Approach Distance - Special	2.3.5 Safe Approach Distance - Special																			
<p>SAD-Special is the minimum SAD beyond the reach of any part of the person's body or any conducting or unapproved object touching any part of the person's body. SAD-Special shall only be considered where either SAD normal, EAP or live work techniques are deemed impracticable and shall be used only by Authorised Persons performing approved tasks.</p>	<p>SAD-Special is the <b>minimum distance to an exposed conductor</b> beyond the reach of any part of the person's body or any conducting or unapproved object touching any part of the person's body. SAD-Special shall only be considered where either SAD normal, EAP or live work techniques are deemed impracticable and shall</p>	... minimum distance to an exposed conductor' added to align with BB																		

2013	2019	Comment
<p>Prior to applying SAD-Special, pre-planning assessments (including work crew onsite JSA) shall be conducted and documented.</p> <p>The SAD-Special for Authorised Persons are detailed in Table 1, column 4.</p> <p>Tasks requiring the use of SAD-Special shall only be undertaken by a person who holds an authority to receive EAPs or SFT or an Authorised HV Operator in conjunction with the following control measures:</p> <ul style="list-style-type: none"> <li>• Positioning of the worker, see Figure 2, to effectively control the risk of the specified distance being infringed by the use of the Beyond Reach principle. This includes any unapproved object or tool being held by the worker.</li> <li>• Safety Observers shall be used to monitor the work activities.</li> <li>• Minimise the exposure at the SAD-Special.</li> <li>• Addressing adverse impact of external influences on plant and equipment e.g. traffic, boom movement, footing.</li> <li>• Addressing adverse impact of weather and environmental conditions (e.g. rain, lightning, wind, light, sag or sway of conductors).</li> <li>• The work party shall consider the suppression of the auto-reclose function as part of the pre-work planning.</li> </ul>	<p>be used only by Authorised Persons performing approved tasks.</p> <p>Prior to applying SAD-Special, pre-planning assessments (including work crew onsite JSA) shall be conducted and documented.</p> <p>The SAD-Special for Authorised Persons are detailed in Table 1, column 4.</p> <p>Tasks requiring the use of SAD-Special shall only be undertaken by a person who holds an authority to receive EAPs or SFT or an Authorised HV Operator in conjunction with the following control measures:</p> <ul style="list-style-type: none"> <li>• Positioning of the worker, see Figure 2, to effectively control the risk of the specified distance being infringed by the use of the Beyond Reach principle. This includes any unapproved object or tool being held by the worker.</li> <li>• Safety Observers shall be used to monitor the work activities.</li> <li>• Minimise the exposure at the SAD-Special.</li> <li>• Addressing adverse impact of external influences on plant and equipment e.g. traffic, boom movement, footing.</li> <li>• Addressing adverse impact of weather and environmental conditions (e.g. rain, lightning, wind, light, sag or sway of conductors).</li> <li>• The work party shall consider the suppression of the auto-reclose function as part of the pre-work planning.</li> </ul>	
 <p><b>FIGURE 2 – Application of SAD-Special</b></p> <p>SAD-Special is also based on the Exclusion Zone principle. However its use is strictly limited to where it is applied in conjunction with the Beyond Reach principle.</p>		<p>Recommend adopting image format from BB for alignment</p>

2013	2019	Comment
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TABLE 1 – PERSONAL CLEARANCES			
Safe Approach Distance for Ordinary, Instructed or Authorised Persons			
All Safe Approach Distances apply to Uninsulated Mobile Plant unless otherwise indicated	Ordinary Persons	Safe Approach Distance for Instructed Persons & Authorised Persons	Safe Approach Distance for Authorised Persons Only <small>Note: Clause 2.3.3</small>
Nominal Phase to Phase AC Voltage	Safe Approach Distance	Safe Approach Distance	Safe Approach Distance
LV	mm	mm	mm
LV including communications cabling connected to LV network	1000	Instructed Persons – No contact Authorised Persons – Insulated conduct only	
Insulated LV	100		
Earthed metallic screened LV	100	Earthed metallic screened conductor – Contact only	
Unscreened insulated LV connected to HV up to and including 22	2000	Unscreened conductor treat as exposed conductor	
50	2000	700	400
66	2000	700	500
75	2000	700	700
86	2000	900	700
110	3000	1000	
132	3000	1200	
175	4000	1700	
275	5000	2300	
360	6000	2700	
400	6000	3000	
500	6000	3600	
Nominal pole to earth (DC voltage kV)			
1.5 or less	1500	Instructed Persons – No contact Authorised Persons – Insulated conduct only	
<= 25	2000	700	
<= 65	3000	1000	
<= 150	3000	1200	
<= 270	4000	1800	
<= 360	5000	2300	
<= 400	6000	2700	

TABLE 1 – PERSONAL CLEARANCES			
Safe Approach Distance for Ordinary, Instructed or Authorised Persons			
All Safe Approach Distances apply to Uninsulated Mobile Plant unless otherwise indicated	Ordinary Persons	Safe Approach Distance for Instructed Persons & Authorised Persons	Safe Approach Distance for Authorised Persons Only <small>Note: Clause 2.3.3</small>
Nominal Phase to Phase AC Voltage	Safe Approach Distance	Safe Approach Distance	Safe Approach Distance
LV	mm	mm	mm
LV including communications cabling connected to LV network	1000	Instructed Persons – No contact Authorised Persons – Insulated conduct only	
Insulated LV	100		
Earthed metallic screened LV	100	Earthed metallic screened conductor – Contact only	
Unscreened insulated LV connected to HV up to and including 22	2000	Unscreened conductor treat as exposed conductor	
50	2000	700	400
66	2000	700	500
75	2000	700	700
86	2000	900	700
110	3000	1000	
132	3000	1200	
175	4000	1700	
275	5000	2300	
360	6000	2700	
400	6000	3000	
500	6000	3600	
Nominal pole to earth (DC voltage kV)			
1.5 or less	1500	Instructed Persons – No contact Authorised Persons – Insulated conduct only	
<= 25	2000	700	
<= 65	3000	1000	
<= 150	3000	1200	
<= 270	4000	1800	
<= 360	5000	2300	
<= 400	6000	2700	

Add 500kV

<b>2.4 SAFE APPROACH DISTANCE - VEGETATION WORKS</b>	<b>2.4 SAFE APPROACH DISTANCE - VEGETATION WORKS</b>	
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This section applies to persons under the control of the Distribution Networks.

This section applies to persons under the control of the Distribution Networks.

No change

TABLE 2 – CLEARANCES FOR MOBILE PLANT – VEGETATION			
Safe Approach Distances and Vegetation Clearances for Instructed and Authorised Persons utilising insulated EWP, tools, plant and equipment			
Nominal Phase to Phase AC Voltage	Insulated Mobile Plant	Instructed & Authorised Persons	Vegetation Clearance Below and Beside (not including overhanging HV)
LV	mm	mm	mm
LV	Contact Allowable	Physical Clearance	No Clearance required
11	700	700	100
22	700	700	150
33	700	700	200
50	750	750	300
66	1000	1000	400

Note: The clearances in Table 2 are derived from Table 5 of the ENA Guidelines for Safe Vegetation Work Near Live Overhead Lines.

TABLE 2 – CLEARANCES FOR MOBILE PLANT – VEGETATION			
Safe Approach Distances and Vegetation Clearances for Instructed and Authorised Persons utilising insulated EWP, tools, plant and equipment			
Nominal Phase to Phase AC Voltage	Insulated Mobile Plant	Instructed & Authorised Persons	Vegetation Clearance Below and Beside (not including overhanging HV)
LV	mm	mm	mm
LV	Contact Allowable	Physical Clearance	No Clearance required
11	700	700	100
22	700	700	150
33	700	700	200
50	750	750	300
66	1000	1000	400

Note: The clearances in Table 2 are derived from Table 5 of the ENA Guidelines for Safe Vegetation Work Near Live Overhead Lines.

Below comments from GB issues register

Add to note: all other easements under AusNet / Powercor refer to their procedures

5-4-18: voltages up to 500kV to be included, will need to reference ENA guideline for applicable clearances.

2.4.1 Vegetation Works - from an insulated Elevating Work Platform	2.4.1 Vegetation Works - from an insulated Elevating Work Platform	
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Only Instructed or Authorised Persons utilising an insulated EWP, tools, plant and equipment are permitted to cut vegetation adjacent to live conductors while maintaining the SAD shown in Table 2. Works from uninsulated EWP shall refer to Clause 2.6 – Safe Approach Distance of Uninsulated Mobile Plant in the Working Mode. Where these clearance requirements cannot be met, or where vegetation is overhanging live HV, either of the following shall be applied:

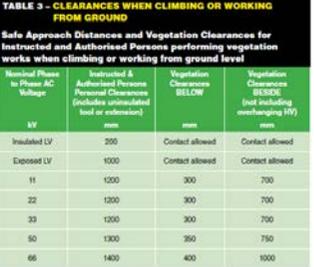
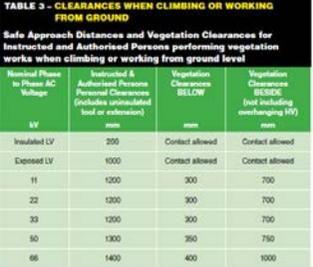
- Undertake the works under de-energised conditions and following approved procedures; or
- Undertake the works with the conductors live using persons assessed as competent to be HV Live Workers and utilising HV live work techniques, refer to section 2.4.2.

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- Undertake the works under de-energised conditions and following approved procedures; or
- Undertake the works with the conductors live using persons assessed as competent to be HV Live Workers and utilising HV

No change

2013	2019	Comment
<p>Before undertaking vegetation clearing activities, a JSA shall be conducted to assist in the identification and control of hazards to ensure that the work can be performed safely.</p> <p>Considerations prior to commencing work shall include:</p> <ul style="list-style-type: none"> <li>• Under certain conditions tree limbs can become conductive objects.</li> <li>• The suppression of auto-reclose.</li> <li>• Positioning of the mobile plant such that the appropriate SAD can be maintained in all circumstances.</li> <li>• The use of Safety Observers, barriers and signs.</li> <li>• Consideration of weather and environmental conditions (e.g. rain wind, light, sag or sway of conductors).</li> <li>• Movement of the tree when cut. For vegetation below, but not contacting exposed conductors, it can be assumed that tree limbs will not normally move upward.</li> <li>• The use of insulated barriers, protective covers and insulated equipment.</li> <li>• Performing the work under EAP conditions.</li> </ul> <p>Additional means of controlling the movement of limbs being cut shall be assessed and action taken as appropriate. At no time shall personal SAD be infringed.</p> <p>Vegetation overhanging or adjacent to LV conductors can be cut with the conductors live provided the movement of limbs being cut can be controlled.</p> <p>Appropriate precautions shall be implemented when cutting tree limbs that are contacting live LV conductors.</p>	<p>live</p> <p>work techniques, refer to section 2.4.2.</p> <p>Before undertaking vegetation clearing activities, a JSA shall be conducted to assist in the identification and control of hazards to ensure that the work can be performed safely.</p> <p>Considerations prior to commencing work shall include:</p> <ul style="list-style-type: none"> <li>• Under certain conditions tree limbs can become conductive objects.</li> <li>• The suppression of auto-reclose.</li> <li>• Positioning of the mobile plant such that the appropriate SAD can be maintained in all circumstances.</li> <li>• The use of Safety Observers, barriers and signs.</li> <li>• Consideration of weather and environmental conditions (e.g. rain wind, light, sag or sway of conductors).</li> <li>• Movement of the tree when cut. For vegetation below, but not contacting exposed conductors, it can be assumed that tree limbs will not normally move upward.</li> <li>• The use of insulated barriers, protective covers and insulated equipment.</li> <li>• Performing the work under EAP conditions.</li> </ul> <p>Additional means of controlling the movement of limbs being cut shall be assessed and action taken as appropriate. At no time shall personal SAD be infringed.</p> <p>Vegetation overhanging or adjacent to LV conductors can be cut with the conductors live provided the movement of limbs being cut can be controlled.</p> <p>Appropriate precautions shall be implemented when cutting tree limbs that are contacting live LV conductors.</p>	
<p>2.4.2 Vegetation Activities Over Live High Voltage</p>	<p>2.4.2 Vegetation Activities Over Live High Voltage</p>	
<p>Only persons assessed as competent HV Live Workers and utilising HV live techniques are permitted to clear tree limbs overhanging live HV conductors.</p>	<p>Only persons assessed as competent HV Live Workers and utilising HV live techniques are permitted to clear tree limbs overhanging live HV conductors.</p>	<p>No change</p>
<div data-bbox="91 1278 882 1422" style="border: 1px solid black; padding: 5px;"> <p><b>NOTE:</b> Those same persons when contracted in vegetation cutting activities for other than VESI Distribution Networks are to refer to Part 5 for guidance.</p> </div>	<p>NOTE: <b>Unless in accordance with organisational procedures,</b> those same persons when contracted in vegetation cutting activities for other than VESI Distribution Networks are to refer to Part 5 for guidance</p>	<p>Added new text in consideration that some networks are establishing arrangements where a council can contract directly with a VESI approved tree clearing contractor to work outside NGZ rules, e.g. apply for suppression and work without a PTW, or to issue a blanket PTW</p>
<p>2.4.3 Vegetation Works - When Climbing</p>	<p>2.4.3 Vegetation Works - When Climbing</p>	

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<p>Vegetation management workers performing work from within a tree near live overhead conductors shall be Instructed or Authorised Persons and maintain the SAD for personal and vegetation clearances as listed in Table 3.</p> <p>For vegetation below, but not contacting exposed conductors, it can be assumed that tree limbs will not normally move upward.</p> <p>Climbers shall not climb any vegetation where any part of it is within or may move within the vegetation clearance distances in Table 3 during the work activity.</p> <p>Climbers shall not be positioned so that they could fall or swing into the conductors or in any way breach the distances listed in Table 3.</p> <p>A Safety Observer shall be used in accordance with the requirements Clause 1.1.12.</p>	<p>Vegetation management workers performing work from within a tree near live overhead conductors shall be Instructed or Authorised Persons and maintain the SAD for personal and vegetation clearances as listed in Table 3.</p> <p>For vegetation below, but not contacting exposed conductors, it can be assumed that tree limbs will not normally move upward.</p> <p>Climbers shall not climb any vegetation where any part of it is within or may move within the vegetation clearance distances in Table 3 during the work activity.</p> <p>Climbers shall not be positioned so that they could fall or swing into the conductors or in any way breach the distances listed in Table 3.</p> <p>A Safety Observer shall be used in accordance with the requirements Clause 1.1.12.</p>	No change																																																																								
2.4.4 Vegetation Works - When Working from Ground	2.4.4 Vegetation Works - When Working from Ground																																																																									
<p>Vegetation management workers performing work from the ground where the tree is near live overhead power lines shall be Instructed or Authorised Persons and shall maintain the SAD for personal and vegetation clearance as listed in Table 3. This will include any tool or extension being used by the ground worker.</p> <p>For vegetation below, but not contacting exposed conductors, it can be assumed that tree limbs will not normally move upward.</p> <p>Clearing vegetation from the ground that is beside live conductors shall only be carried out using controlled felling techniques, and after undertaking a JSA.</p> <p>Vegetation management workers using controlled felling techniques beside live conductors must be Instructed or Authorised Persons who are suitably trained to use these techniques.</p>	<p>Vegetation management workers performing work from the ground where the tree is near live overhead power lines shall be Instructed or Authorised Persons and shall maintain the SAD for personal and vegetation clearance as listed in Table 3. This will include any tool or extension being used by the ground worker.</p> <p>For vegetation below, but not contacting exposed conductors, it can be assumed that tree limbs will not normally move upward.</p> <p>Clearing vegetation from the ground that is beside live conductors shall only be carried out using controlled felling techniques, and after undertaking a JSA.</p> <p>Vegetation management workers using controlled felling techniques beside live conductors must be Instructed or Authorised Persons who are suitably trained to use these techniques.</p>	No change																																																																								
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2.6.4 Safe Approach Distance - Task Specific for Uninsulated Mobile Plant	2.6.4 Safe Approach Distance - Task Specific for Uninsulated Mobile Plant	
<p>When a task requires a closer approach by uninsulated mobile plant to live conductors or cables than the normal SAD given in Table 5, alternative task specific SAD for mobile plant may be developed and applied with consideration of the requirements set out below.</p> <ul style="list-style-type: none"> <li>• Be determined in accordance with ENA National Guidelines for SAD to Electrical Apparatus (ENA NENS 04) and related standards and guidelines as may be appropriate.</li> <li>• Be applied only to a specific task or process which has been subject to a formal risk assessment carried out in advance of the work using a consultative process with subject matter experts.</li> <li>• Be documented as an organisational procedure specific to the task or process.</li> <li>• Endorsed by the relevant Distribution Network.</li> </ul> <p>If clearances cannot be maintained, work shall be carried out:</p> <ul style="list-style-type: none"> <li>• With conductors under an Access Authority, or</li> <li>• Conductors fitted with approved insulating covers.</li> </ul>	<p>When a task requires a closer approach by uninsulated mobile plant to live conductors or cables than the normal SAD given in Table 5, alternative task specific SAD for mobile plant may be developed and applied with consideration of the requirements set out below.</p> <ul style="list-style-type: none"> <li>• Be determined in accordance with ENA National Guidelines for SAD to Electrical Apparatus (ENA NENS 04) and related standards and guidelines as may be appropriate.</li> <li>• Be applied only to a specific task or process which has been subject to a formal risk assessment carried out in advance of the work using a consultative process with subject matter experts.</li> <li>• Be documented as an organisational procedure specific to the task or process.</li> <li>• Endorsed by the relevant Distribution Network.</li> </ul> <p>If clearances cannot be maintained, work shall be carried out:</p> <ul style="list-style-type: none"> <li>• With conductors under an Access Authority, or</li> <li>• Conductors fitted with approved insulating covers.</li> </ul>	No change
2.7 SAFE APPROACH DISTANCE - INSULATED MOBILE PLANT	2.7 SAFE APPROACH DISTANCE - INSULATED MOBILE PLANT	
<p>Insulated mobile plant shall only be operated by an Instructed or Authorised Person when working on or near live electrical apparatus. An Instructed or Authorised Person operating mobile plant shall ensure that the mobile plant, its equipment and load do not approach closer than distances in Table 5 unless in accordance with an Access Authority.</p> <p>When working under HV live work procedures, refer to the VESI Minimum Rules for Carrying Out HV Live Work in Victoria.</p> <p>The use of helicopters for barehand live line work is excluded from the requirements of this Clause.</p>	<p>Insulated mobile plant shall only be operated by an Instructed or Authorised Person when working on or near live electrical apparatus.</p> <p>An Instructed or Authorised Person operating mobile plant shall ensure that the mobile plant, its equipment and load do not approach closer than <b>the</b> distances in Table 5 unless in accordance with an Access Authority.</p> <p><b>The insulated portion of mobile plant may be allowed to contact or encroach the safe approach distances of a live conductor as specified in Table 5, provided it is rated for that use.</b></p> <p>When working under HV live work procedures, refer to the VESI Minimum Rules for Carrying Out HV Live Work in Victoria.</p> <p>The use of helicopters for barehand live line work is excluded from the requirements of this Clause.</p>	<p>Added 'the' for readability</p> <p>Inserted this para from BB to reflect common practice in VESI. Discuss with GB committee</p>
2.8 EMERGENCY RESPONSE	2.8 EMERGENCY RESPONSE	
<p>In emergency situations where there is a likely risk of electric shock to persons from electrical conductors or electrical apparatus, e.g. fallen conductor:</p> <ul style="list-style-type: none"> <li>• Prompt action shall be taken to ensure people are kept well clear of the hazard at greater than the SAD in accordance with organisational procedures.</li> </ul> <p>For fallen or exposed electrical conductors, and to allow for step potential, a minimum safety clearance of six metres for HV or two</p>	<p>In emergency situations where there is a likely risk of electric shock to persons from electrical conductors or electrical apparatus, e.g. fallen conductor:</p> <ul style="list-style-type: none"> <li>• Prompt action shall be taken to ensure people are kept well clear of the hazard at greater than the SAD in accordance with organisational procedures.</li> </ul> <p>For fallen or exposed electrical conductors, and to allow for step potential, a minimum safety clearance of six metres for HV or</p>	<p>Comments from GB issues register</p> <p>5-4-18 Consider additional text where feeder has been confirm to be deenergised by network control.</p> <p>7/5/18 - Reviewed and considered suitable in current form.</p>

2013	2019	Comment
<p>metres for LV shall be applied.</p> <ul style="list-style-type: none"> <li>All electrical apparatus shall be treated as live until proven de energised by approved means and normal SAD as a minimum shall apply after confirmation that the conductors will remain de energised.</li> </ul> <p>No approach within SAD shall be made to electrical apparatus until it is isolated and earthed/bonded by approved means as appropriate. Where practicable an Instructed or Authorised Person is to remain on site to issue verbal warnings to any person making unsafe approach to fallen or exposed electrical conductors or access is controlled by the use of barriers or signs, e.g. rope, ribbon, portable flashing lamps, witches hats.</p>	<p>two metres for LV shall be applied.</p> <ul style="list-style-type: none"> <li>All electrical apparatus shall be treated as live until proven de energised by approved means and normal SAD as a minimum shall apply after confirmation that the conductors will remain de energised.</li> </ul> <p><b>Unplanned/fault work is not considered to be an emergency situation.</b></p> <p>No approach within SAD shall be made to electrical apparatus until it is isolated and earthed/bonded by approved means as appropriate. Where practicable an Instructed or Authorised Person is to remain on site to issue verbal warnings to any person making unsafe approach to fallen or exposed electrical conductors or access is controlled by the use of barriers or signs, e.g. rope, ribbon, portable flashing lamps, witches hats.</p>	<p>7-5-18 include sentence to include "Unplanned/fault work is not considered to be an emergency situation".</p> <p>Investigate new clauses and definitions relating to emergencies vs unplanned work</p> <p>Emergency means a sudden urgent unplanned occurrence or occasion requiring immediate action where life or property is at risk.</p> <p>Unplanned means an unexpected occurrence or occasion (fault) where life or property is not at immediate risk.</p>
<p><b>2.9 CONTACT WITH LIVE HIGH VOLTAGE COUNDUCTORS BY MEANS OF APPLIANCES</b></p>	<p><b>2.9 CONTACT WITH LIVE HIGH VOLTAGE COUNDUCTORS BY MEANS OF APPLIANCES</b></p>	
<p>Only approved and tested insulated appliances shall be permitted to be brought within the SAD, or into direct contact with HV live conductors.</p>	<p>Only approved and tested insulated appliances shall be permitted to be brought within the SAD, or into direct contact with HV live conductors.</p>	<p>No change</p>
<p><b>2.10 APPROACH TO LIVE HIGH VOLTAGE INSULATED CABLES</b></p>	<p><b>2.10 APPROACH TO LIVE HIGH VOLTAGE INSULATED CABLES</b></p>	
<p><b>2.10.1 General</b></p>	<p><b>2.10.1 General</b></p>	
<p>When work is performed near HV live insulated cables, appropriate precautions shall be taken to ensure that the insulation of the cables is not damaged.</p> <p>Cables, which are specifically designed for movement whilst live, may be moved in accordance with organisational procedures.</p> <p>Slight movement of other types of live cables may be permitted, but only after detailed consideration of all related circumstances by a person with a detailed knowledge of the cables concerned, who shall fully detail all precautions to be taken.</p>	<p>When work is performed near HV live insulated cables, appropriate precautions shall be taken to ensure that the insulation of the cables is not damaged.</p> <p>Cables, which are specifically designed for movement whilst live, may be moved in accordance with organisational procedures.</p> <p>Slight movement of other types of live cables may be permitted, but only after detailed consideration of all related circumstances by a person with a detailed knowledge of the cables concerned, who shall fully detail all precautions to be taken.</p>	<p>No change</p>
<p><b>2.10.2 Earthed Metallic Sheathed or Screened High Voltage Cables</b></p>	<p><b>2.10.2 Earthed Metallic Sheathed or Screened High Voltage Cables</b></p>	
<p>Contact by persons may be made to external non-conductive surfaces of HV live cables with earthed metallic sheaths or screens. Contact with exposed metallic sheath or screen shall only be undertaken after consideration of hazards including transferred earth potentials.</p>	<p>Contact by persons may be made to external non-conductive surfaces of HV live cables with earthed metallic sheaths or screens. Contact with exposed metallic sheath or screen shall only be undertaken after consideration of hazards including transferred earth potentials.</p>	<p>No change</p>

2013	2019	Comment
<p>2.10.3 Non-Metallic Screened High Voltage Aerial Bundled Cable</p> <p>No contact shall be made to external surfaces of live non-metallic screened HV aerial bundled cable or exposed support conductors. Suitable HV live work techniques only shall be used for this purpose. Access to de-energised but not earthed non-metallic screened HV aerial bundled cable may be permitted in accordance with organisational procedures.</p> <p>For the purposes of insulated mobile plant working in the vicinity of live non-metallic screened HV aerial bundled cable, the SAD shall be the same as exposed HV conductors, refer Table 5.</p>	<p>2.10.3 Non-Metallic Screened High Voltage Aerial Bundled Cable</p> <p>No contact shall be made to external surfaces of live non-metallic screened HV aerial bundled cable or exposed support conductors. Suitable HV live work techniques only shall be used for this purpose.</p> <p>Access to de-energised but not earthed non-metallic screened HV aerial bundled cable may be permitted in accordance with organisational procedures.</p> <p>For the purposes of insulated mobile plant working in the vicinity of live non-metallic screened HV aerial bundled cable, the SAD shall be the same as exposed HV conductors, refer Table 5.</p>	No change
<p>2.11 WORK IN STATIONS</p> <p>A person shall not perform work in any station or allow mobile plant to enter any station without first obtaining the permission of the person in charge of the station and accepting conditions imposed by that person.</p> <p>An Access Authority and/or Authority to Work in the Vicinity of Live Apparatus, refer Clause 2.1, shall be issued where:</p> <ul style="list-style-type: none"> <li>• Mobile plant or EWP or other large vehicles will be used; or</li> <li>• The work involves excavation or the use of explosives.</li> </ul>	<p>2.11 WORK IN STATIONS</p> <p>A person shall not perform work in any station or allow mobile plant to enter any station without first obtaining the permission of the person in charge of the station and accepting conditions imposed by that person.</p> <p>An Access Authority and/or Authority to Work in the Vicinity of Live Apparatus, refer Clause 2.1, shall be issued where:</p> <ul style="list-style-type: none"> <li>• Mobile plant or EWP or other large vehicles will be used; or</li> <li>• The work involves excavation or the use of explosives.</li> </ul>	No change
<p>2.12 WORK OUTSIDE STATIONS</p> <p>Work on or near electrical apparatus outside of stations shall be performed after obtaining the permission and direction of the person in charge of the electrical apparatus.</p>	<p>2.12 WORK OUTSIDE STATIONS</p> <p>Work on or near electrical apparatus outside of stations shall <b>only</b> be performed after obtaining the permission and direction of the person in charge of the electrical apparatus.</p>	Added 'only' for clarity as it only applies when work is being performed
<p>2.13 APPROACH TO SINGLE WIRE EARTH RETURN (SWER) TRANSFORMERS</p> <p>Any person who approaches an in-service SWER transformer (either isolating or distribution type) to carry out work on or in the vicinity of the pole shall determine that the HV earthing system is effective and is not producing dangerous ground voltages. This shall be done in accordance with the VESI Safe to Approach test procedures.</p>	<p>2.13 APPROACH TO SINGLE WIRE EARTH RETURN (SWER) TRANSFORMERS</p> <p>Any person who approaches an in-service SWER transformer (either isolating or distribution type) to carry out work on or in the vicinity of the pole shall determine that the HV earthing system is effective and is not producing dangerous ground voltages. This shall be done in accordance with the VESI Safe to Approach test procedures <b>and any additional requirements established by the organisation</b></p>	Added 'and any additional requirements established by the organisation' to address additional requirements recently established for some work types
<b>PART 3</b>		
<p>3.1 Operation of High Voltage electrical apparatus</p>	<p>3.1 Operation of High Voltage electrical apparatus</p>	
<p>3.1.1 Persons Authorised to Operate High Voltage Electrical Apparatus</p>	<p>3.1.1 Persons Authorised to Operate High Voltage Electrical Apparatus</p>	

2013	2019	Comment
<p>Switching and associated duties on HV electrical apparatus should be performed by Authorised Electrical Operators and Network Controllers whose training, duties and instructions cover the particular electrical apparatus.</p> <p>However, any person may perform operations in the following circumstances:</p> <ul style="list-style-type: none"> <li>• When specifically instructed by, or authorised by, the appropriate Operating Authority.</li> <li>• When specifically instructed by an Authorised Operator or Network Controller as part of training.</li> <li>• In an emergency involving serious risk to persons or property.</li> </ul>	<p>Switching and associated duties on HV electrical apparatus should be performed by Authorised Electrical Operators and Network Controllers whose training, duties and instructions cover the particular electrical apparatus.</p> <p>However, any person may perform operations in the following circumstances:</p> <ul style="list-style-type: none"> <li>• When specifically instructed by, or authorised by, the appropriate Operating Authority.</li> <li>• When specifically instructed by an Authorised Operator or Network Controller as part of training.</li> <li>• In an emergency involving serious risk to persons or property.</li> <li>• <b>When controlling HV electrical apparatus as part of a task for process control in accordance with approved organisational procedures</b></li> </ul>	<p>New dot point added to align with BB</p>
<p><b>3.1.2 High Voltage Operator Protection</b></p>	<p><b>3.1.2 High Voltage Operator Protection</b></p>	
<p>When HV electrical apparatus is operated, the person undertaking the task shall be protected from electric shock, flash and other hazards using approved methods, also refer Clause 1.1.10.2 and Table 6. Safety glasses with side protection or full face shields shall be in accordance with relevant Australian Standards. Shaded/tinted is preferred, but protection with clear lenses or shield is appropriate for use in poor light situations.</p>	<p>When HV electrical apparatus is operated, the person undertaking the task shall be protected from electric shock, flash and other hazards using approved methods, also refer Clause 1.1.10.2 and Table 6. Safety glasses with side protection or full face shields shall be in accordance with relevant Australian Standards. Shaded/tinted is preferred, but protection with clear lenses or shield is appropriate for use in poor light situations.</p>	
<p><b>3.1.3 High Voltage Switching</b></p>	<p><b>3.1.3 High Voltage Switching</b></p>	
<p>Prior to an HV switching operation, the available information regarding circuit conditions shall be taken into account and no electrical apparatus shall be operated if it is inappropriate for the duty to be performed. After switching, correct operation of the electrical apparatus should be confirmed whenever possible.</p> <p>All communications relating to the operation of, or access to, electrical apparatus shall be clear and definite. Electrical apparatus shall be referred to by name and sufficient detail to give positive identification. Verbal switching instructions including changes to operating instructions shall be written down and confirmed by repeating back to avoid misunderstanding.</p> <p>All other statements shall be confirmed by repeating back to avoid misunderstanding.</p> <p>When switching, an Operator shall avoid uninsulated contact with any earthed conductive equipment (e.g. conductive poles, earth conductors, etc.). The Operator shall be suitably protected as outlined in Clause 1.1.10.2 and Table 6.</p>	<p>Prior to <b>a</b> HV switching operation, the available information regarding circuit conditions shall be taken into account <b>and the electrical apparatus confirmed as fit for service. Any HV electrical apparatus found to be not fit for service shall be tagged in accordance with 3.1.4.</b></p> <p>After switching, correct operation of the electrical apparatus shall be confirmed whenever possible.</p> <p>All communications relating to the operation of, or access to, electrical apparatus shall be clear and definite. Electrical apparatus shall be referred to by name and sufficient detail to give positive identification.</p> <p>Verbal switching instructions including changes to operating instructions shall be written down and confirmed by repeating back to avoid misunderstanding.</p> <p>All other statements shall be confirmed by repeating back to avoid misunderstanding.</p> <p>When switching, an Operator shall avoid uninsulated contact with any earthed conductive equipment (e.g. conductive poles, earth conductors etc.). The Operator shall be suitably protected</p>	<p>Change 'an' to 'a'</p> <p>Re-written for clarify and to separate CRO issues in standalone new section 3.1.4</p> <p>GBC to consider if more CRO tag info is required</p> <p>GBC to consider of this text may be useful for definition purposes - "Tagged electrical apparatus shall not be operated without reference to the authority responsible for the electrical apparatus".</p>

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	as outlined in Clause 1.1.10.2 and Table 6.																																																											
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The isolated earth mat is connected to the Station earthing grid. ** Insulated medium e.g. an HV mat, two interlocked ICF mats, a wooden or fibreglass ladder.</small></p>	TABLE 6 – OPERATOR PROTECTION			APPARATUS	ACTION	OPERATOR PROTECTION	Circuit Breaker or other metal clad switchgear inside a Zone or Terminal Station operated manually by grasping a metal handle	Opening & Closing	Insulated gloves and dry base OR insulated medium **	Racking a Circuit Breaker or Voltage Transformer	Insulated gloves AND insulated medium ** Sleeve – where practicable	Fully enclosed, fault rated earth switch or truck for metal clad switchgear inside a Zone or Terminal Station	Opening & Closing	Insulated gloves and dry base OR insulated medium **	Metal clad switchgear inside a Zone or Terminal Station	Earthing via Earth Trucks or Earth Probes	Dry base OR insulated medium ** Safety glasses with side protection or full face shield and hand protection to protect against flash	Switches and isolators inside Zone or Terminal Station operated manually by grasping a metal handle*	Opening & Closing and Earthing	Insulated gloves OR sleeve Safety glasses with side protection or full face shield	Switches (outside Zone or Terminal Stations) where a sleeve CAN be fitted and operated manually by grasping a metal handle	Opening & Closing and Earthing	Insulated gloves + sleeve + insulated medium ** Safety glasses with side protection or full face shield	Switches (outside Zone or Terminal Stations) where a sleeve CANNOT be fitted and operated manually by grasping a metal handle	Opening & Closing and Earthing	Insulated gloves + insulated medium ** Safety glasses with side protection or full face shield	Insulating stick operation of HV fuses, isolators or portable earths	Opening & Closing or Applying	Operating stick and safety glasses with side protection or full face shield and hand protection to protect against flash	<table border="1"> <thead> <tr> <th colspan="3">TABLE 6 – OPERATOR PROTECTION</th> </tr> <tr> <th>APPARATUS</th> <th>ACTION</th> <th>OPERATOR PROTECTION</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Circuit Breaker or other metal clad switchgear inside a Zone or Terminal Station operated manually by grasping a metal handle</td> <td>Opening &amp; Closing</td> <td>Insulated gloves and dry base OR insulated medium **</td> </tr> <tr> <td>Racking a Circuit Breaker or Voltage Transformer</td> <td>Insulated gloves AND insulated medium ** Sleeve – where practicable</td> </tr> <tr> <td>Fully enclosed, fault rated earth switch or truck for metal clad switchgear inside a Zone or Terminal Station</td> <td>Opening &amp; Closing</td> <td>Insulated gloves and dry base OR insulated medium **</td> </tr> <tr> <td>Metal clad switchgear inside a Zone or Terminal Station</td> <td>Earthing via Earth Trucks or Earth Probes</td> <td>Dry base OR insulated medium ** Safety glasses with side protection or full face shield and hand protection to protect against flash</td> </tr> <tr> <td>Switches and isolators inside Zone or Terminal Station operated manually by grasping a metal handle*</td> <td>Opening &amp; Closing and Earthing</td> <td>Insulated gloves OR sleeve Safety glasses with side protection or full face shield</td> </tr> <tr> <td>Switches (outside Zone or Terminal Stations) where a sleeve CAN be fitted and operated manually by grasping a metal handle</td> <td>Opening &amp; Closing and Earthing</td> <td>Insulated gloves + sleeve + insulated medium ** Safety glasses with side protection or full face shield</td> </tr> <tr> <td>Switches (outside Zone or Terminal Stations) where a sleeve CANNOT be fitted and operated manually by grasping a metal handle</td> <td>Opening &amp; Closing and Earthing</td> <td>Insulated gloves + insulated medium ** Safety glasses with side protection or full face shield</td> </tr> <tr> <td>Insulating stick operation of HV fuses, isolators or portable earths</td> <td>Opening &amp; Closing or Applying</td> <td>Operating stick and safety glasses with side protection or full face shield and hand protection to protect against flash</td> </tr> </tbody> </table> <p><small>* All Switches and Isolators incorporating a metal handle installed within the boundary fence of a Zone Substation or Terminal Station are fitted with an isolated earth mat directly connected to the metal operating handle. 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	3.1.4 Defective and/or Quarantined Equipment	New Section																																																										
<p>Any in-service HV electrical apparatus found to be defective shall have a cautionary tag attached and/or be logged by Network Control. Tagged electrical apparatus shall not be operated without reference to the authority responsible for the electrical apparatus.</p>	<p>Any in-service HV electrical apparatus found to be defective shall have a cautionary tag attached and/or be logged by Network Control. Tagged electrical apparatus shall not be operated without reference to the authority responsible for the electrical apparatus.</p>	This para set up as stand alone section																																																										
3.2 Earthing of High Volt age electrical apparatus	3.2 Earthing of High Volt age electrical apparatus																																																											
3.2.1 General	3.2.1 General																																																											
<p>Earthing device types shall be approved. Only Authorised Persons shall apply them after the circuit or electrical apparatus is isolated and after confirmation by tests, visual inspection or enquiry that the conductors are de-energised.</p> <p>In applying an earthing device, it shall be connected to earth before it is applied to the conductors, and it shall be removed from the conductors before it is disconnected from earth.</p> <p>Wherever practicable, an earth shall be applied and removed by an approved device. When hand application or removal is unavoidable:</p> <ul style="list-style-type: none"> <li>• All phases shall be discharged, and</li> <li>• Another earth shall be held in contact with the conductor using an approved device while the hand applied earth is being attached or removed.</li> </ul>	<p>Earthing device types shall be <b>suitably rated and</b> approved. Only Authorised Persons shall apply them after the circuit or electrical apparatus is isolated and after confirmation by tests, visual inspection or enquiry that the conductors are de-energised.</p> <p><b>Confirmation of isolation shall be by:</b></p> <ul style="list-style-type: none"> <li>• <b>Visual inspection of isolation and testing of the conductors.</b></li> <li>• <b>Where visual inspection of isolation is not practicable, inquiry and testing shall be used.</b></li> <li>• <b>Where testing is not practicable, earthing may take place only in accordance with approved procedures.</b></li> </ul> <p>In applying an earthing device, it shall be connected to earth before it is applied to the conductors, and it shall be removed</p>	<p>Add rating to approved</p> <p>Add new para to confirm obligation to test where practicable</p>																																																										

2013	2019	Comment
<p>Earths shall be applied wherever practicable between the point of access and all sources of supply and at the worksite, and be so placed as to remain effective even if adjoining pieces of electrical apparatus are disconnected.</p> <p>When applying a portable earthing device that is not connected to a permanently installed station earthing system, it shall be regarded as being liable to become live until the circuit earthing is complete.</p> <p>There are some situations when applying earths to electrical apparatus during the preparation for access (e.g. discharging capacitor banks), that an Authorised Electrical Operator cannot comply with the clearances specified as the SAD. In these situations, organisational procedures may permit such approach only to that part of the electrical apparatus which already has local isolation and earthing.</p>	<p>from the conductors before it is disconnected from earth.</p> <p>Wherever practicable, an earth shall be applied and removed by an approved device. When hand application or removal is unavoidable:</p> <ul style="list-style-type: none"> <li>• All phases shall be discharged, and</li> <li>• Another earth shall be held in contact with the conductor using an approved device while the hand applied earth is being attached or removed.</li> </ul> <p>Earths shall be applied wherever practicable between the point of access and all sources of supply and at the worksite, and be so placed as to remain effective even if adjoining pieces of electrical apparatus are disconnected.</p> <p>When applying a portable earthing device that is not connected to a permanently installed station earthing system, it shall be regarded as being liable to become live until the circuit earthing is complete.</p> <p>There are some situations when applying earths to electrical apparatus during the preparation for access (e.g. discharging capacitor banks), that an Authorised Electrical Operator cannot comply with the clearances specified as the SAD. In these situations, organisational procedures may permit such approach only to that part of the electrical apparatus which already has local isolation and earthing.</p>	
<p>3.2.2 Operational Earths</p>	<p>3.2.2 Operational Earths</p>	
<p>Other than in accordance with Clause 3.2.5, when earthing electrical apparatus for access, the first earth applied shall be an operational earth. Additional operational earths may be applied under instruction from the Operating Authority.</p> <p>Operational earth/s shall be applied by an Authorised Electrical Operator or a suitably trained person under the direction of an Authorised Electrical Operator.</p> <p>Other than in accordance with Clause 3.2.5, operational earth/s shall be applied prior to the issue of an Access Authority and shall remain effective during the currency of the work.</p> <p>All operational earths shall be listed on the EAP and shall be under the control of the Operating Authority. Operational earths shall not be removed from electrical apparatus under EAP without permission from the Operating Authority.</p> <p>Any operational earth may also act as worksite earth if it is attached within sight of the work party.</p>	<p>Other than in accordance with Clause 3.2.5, when earthing electrical apparatus for access, the first earth applied shall be an operational earth. Additional operational earths may be applied under instruction from the Operating Authority.</p> <p>Operational earth/s shall be applied <b>and removed</b> by an Authorised Electrical Operator or a suitably trained person under the direction of an Authorised Electrical Operator.</p> <p>Other than in accordance with Clause 3.2.5, operational earth/s shall be applied prior to the issue of an Access Authority and shall remain effective during the currency of the work.</p> <p>All operational earths shall be listed on the EAP and shall be under the control of the Operating Authority. Operational earths shall not be removed from electrical apparatus under EAP without permission from the Operating Authority.</p> <p>Any operational earth may also act as worksite earth if it is attached within sight of the work party.</p>	<p>Added 'and removed' as part of GBC review from issues register</p>
<p>3.2.3 Worksite Earths</p>	<p>3.2.3 Worksite Earths</p>	

2013	2019	Comment
<p>After access has been given to HV electrical apparatus, worksite earths shall be applied as necessary to maintain the safety of the work party and to visually indicate the condition of the electrical apparatus. Worksite earths should be applied within the accessed area in the order of preference set out in Clause 3.2.6.1.</p> <p>Earths applied by the work party are defined as worksite earths under the control of the work party. They shall be attached and removed by appropriately trained persons.</p> <p>An operational earth, designated and/or used by a work party as a worksite earth, shall remain under the control of the Operating Authority.</p>	<p>After access has been given to HV electrical apparatus, worksite earths shall be applied as necessary to maintain the safety of the work party and to visually indicate the condition of the electrical apparatus. Worksite earths should be applied within the accessed area in the order of preference set out in Clause 3.2.6.1 <b>and shall be listed in the appropriate section of the EAP.</b></p> <p>Earths applied by the work party are defined as worksite earths under the control of the work party. They shall be attached and removed by appropriately trained persons.</p> <p>An operational earth, designated and/or used by a work party as a worksite earth, shall remain under the control of the Operating Authority.</p>	<p>Add the recording of work site earths</p>
<p>3.2.4 Absence of an Earth on High Voltage Electrical Apparatus Under an Electrical Access Permit</p>	<p>3.2.4 Absence of an Earth on High Voltage Electrical Apparatus Under an Electrical Access Permit</p>	
<p>Wherever practicable electrical apparatus shall be earthed before the issue of an EAP.</p> <p>Where an earth has not been applied to electrical apparatus prior to the issue of an EAP, the Recipient in Charge shall arrange for discharging of the electrical apparatus before any Recipient touches the HV conductors.</p>	<p>Wherever practicable electrical apparatus shall be earthed before the issue of an EAP.</p> <p>Where an earth has not been applied to electrical apparatus prior to the issue of an EAP, the Recipient in Charge shall arrange for discharging of the electrical apparatus before any Recipient touches the HV conductors.</p>	<p>No change</p>
<p>3.2.5 Removal of Operational Earth/s When Working Under an Electrical Access Permit</p>	<p>Removal of Operational Earth/s When Working Under an Electrical Access Permit</p>	
<p>During work under an Access Authority, the Recipient in Charge may request approval to remove an operational earth/s for meggering, reconductoring, or other purposes, only if such action is considered necessary and safe, and provided:</p> <ul style="list-style-type: none"> <li>• The Operating Authority is consulted and confirms that the removal of the earth will not affect any other Access Authorities on issue, and</li> <li>• All persons likely to be affected by the removal of the earth are notified, and</li> <li>• Consideration is given to induced voltages.</li> </ul> <p>The earth removed shall be replaced in the same, or other equally effective position, as soon as possible.</p>	<p>During work under an Access Authority, the Recipient in Charge may request approval to remove an operational earth/s for meggering, reconductoring, or other purposes, only if such action is considered necessary and safe, and provided:</p> <ul style="list-style-type: none"> <li>• The Operating Authority is consulted and confirms that the removal of the earth will not affect any other Access Authorities on issue, and</li> <li>• All persons likely to be affected by the removal of the earth are notified, and</li> <li>• Consideration is given to induced voltages.</li> </ul> <p>The earth removed shall be replaced in the same, or other equally effective position, as soon as possible.</p>	<p>No change</p>
<p>3.2.6 Earthing of Overhead Lines and the Priority Earthing System</p>	<p>3.2.6 Earthing of Overhead Lines and the Priority Earthing System</p>	
<p>Where an overhead line can only be earthed using temporarily driven earth spikes, the work planning shall consider protection from the hazards resulting from energisation and step and touch potentials, refer to Clause 3.2.6.1 for priority earthing.</p> <p>During the discharging and earthing of overhead lines, no person/s other than the one/s applying the earth shall approach within six metres of the earthing device, its connections or ladders, poles or</p>	<p>Where an overhead line can only be earthed using temporarily driven earth spikes, the work planning shall consider protection from the hazards resulting from energisation and step and touch potentials, refer to Clause 3.2.6.1 for priority earthing.</p> <p>During the discharging and earthing of overhead lines, no person/s other than the one/s applying the earth shall approach within six metres of the earthing device, its connections or</p>	<p>No change</p>

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<p>structures from which the earthing device is being applied.</p> <p>In situations where there is the risk of a worker becoming subject to different potentials across or between different earths, the hazard may be reduced by the application of equipotential work zone principles. Where work under an EAP involves the connection, cutting or disconnection of conductors, then where practicable, approved bridging leads shall be applied across the proposed conductor break. Alternatively, earths shall be applied to both sides of, and as close as practicable to, the proposed break and connected to a common earth.</p>	<p>ladders, poles or structures from which the earthing device is being applied.</p> <p>In situations where there is the risk of a worker becoming subject to different potentials across or between different earths, the hazard may be reduced by the application of equipotential work zone principles. Where work under an EAP involves the connection, cutting or disconnection of conductors, then where practicable, approved bridging leads shall be applied across the proposed conductor break. Alternatively, earths shall be applied to both sides of, and as close as practicable to, the proposed break and connected to a common earth.</p>	
<p><b>3.2.6.1 Priority Earthing Preferences</b></p>	<p><b>3.2.6.1 Priority Earthing Preferences</b></p>	
<p>The choice of connection for a portable earthing device should be made on the basis of the following order of preference and shall be applied as closely as reasonably practicable to the worksite:</p> <ol style="list-style-type: none"> <li>1. The neutral conductor of a Common Multiple Earthed Neutral (CMEN) System (not to be confused with a Multiple Earthed Neutral (MEN) System).</li> <li>2. Permanently installed earthing system.</li> <li>3. Earthing ferrule in a concrete pole.</li> <li>4. The ground rod of an installed pole stay or permanently driven pole stakes.</li> <li>5. A temporarily driven spike</li> </ol>	<p>The choice of connection for a portable earthing device should be made on the basis of the following order of preference and shall be applied as closely as reasonably practicable to the worksite:</p> <ol style="list-style-type: none"> <li>1. The neutral conductor of a Common Multiple Earthed Neutral (CMEN) System (not to be confused with a Multiple Earthed Neutral (MEN) System).</li> <li>2. Permanently installed earthing system.</li> <li>3. Earthing ferrule in a concrete pole.</li> <li>4. The ground rod of an installed pole stay or permanently driven pole stakes.</li> <li>5. A temporarily driven spike</li> </ol>	<p>No change</p>
<p><b>3.2.7 Hazard Management When Earthing</b></p>	<p><b>3.2.7 Hazard Management When Earthing</b></p>	
<p><b>3.2.7.1 Overhead Lines and Apparatus</b></p>	<p><b>3.2.7.1 Overhead Lines and Apparatus</b></p>	
<p>To manage the hazards of step and touch potential, when overhead lines or apparatus are being earthed, no person/s other than the one/s applying the earth/s shall approach within six metres of the earthing device, its connections or ladders, poles or structures from which the earthing device is being applied.</p>	<p>To manage the hazards of step and touch potential, when overhead lines or apparatus are being earthed, no person/s other than the one/s applying the earth/s shall approach within six metres of the earthing device, its connections or ladders, poles or structures from which the earthing device is being applied.</p>	<p>No change</p>
<p><b>3.2.7.2 High Voltage Metal Clad Switch Units</b></p>	<p><b>3.2.7.2 High Voltage Metal Clad Switch Units</b></p>	
<p>Earthing of metal clad switchgear and connected circuits by the use of probes or contact extension devices requiring manual application presents additional hazards.</p> <p>Organisational procedures shall define methods of operation and earthing to minimise the risk to the Operator. The procedure shall include a Safety Observer to be present during such earthing, unless specifically approved by organisational procedures for application by one person.</p>	<p>Earthing of metal clad switchgear and connected circuits by the use of probes or contact extension devices requiring manual application presents additional hazards.</p> <p>Organisational procedures shall define methods of operation and earthing to minimise the risk to the Operator. The procedure shall include a Safety Observer to be present during such earthing, unless specifically approved by organisational procedures for application by one person.</p>	<p>No change</p>
<p><b>3.2.7.3 High Voltage Capacitors</b></p>	<p><b>3.2.7.3 High Voltage Capacitors</b></p>	

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<p>When earthing HV capacitors, the actives and where available the neutrals shall be earthed and, in addition, each capacitor shall be discharged before it is touched.</p> <p>The same precautions shall be taken for work on electrical apparatus which incorporates HV capacitors (e.g. capacitor voltage transformers, carrier coupling capacitors).</p>	<p>When earthing HV capacitors, the actives and where available the neutrals shall be earthed and, in addition, each capacitor shall be discharged before it is touched.</p> <p>The same precautions shall be taken for work on electrical apparatus which incorporates HV capacitors (e.g. capacitor voltage transformers, carrier coupling capacitors).</p>	No change
<p><b>3.2.7.4 Aerial Supervisory Cables</b></p>	<p><b>3.2.7.4 Aerial Supervisory Cables</b></p>	
<p>Aerial supervisory cable shall be regarded as a screened and insulated live LV cable and all appropriate procedures and precautions for such cables shall be followed. Such precautions are required because of induction from parallel HV lines.</p> <p>When an aerial supervisory cable is being jointed or re-terminated, initially both the screen and catenary wires of both cables shall be bonded and earthed at the worksite. These shall then be insulated in an approved manner and the work on the cables shall proceed in an insulated situation.</p> <p>As a minimum the catenary wire of aerial supervisory cables is permanently earthed at alternative sectionalising points to provide safe working conditions.</p> <p>Any work involving the disconnection of the catenary wire from the permanent earth shall not proceed until the catenary wire is earthed by means of local temporary earths attached to both sides of the sectionalising point.</p>	<p>Aerial supervisory cable shall be regarded as a screened and insulated live LV cable and all appropriate procedures and precautions for such cables shall be followed. Such precautions are required because of induction from parallel HV lines.</p> <p>When an aerial supervisory cable is being jointed or re-terminated, initially both the screen and catenary wires of both cables shall be bonded and earthed at the worksite. These shall then be insulated in an approved manner and the work on the cables shall proceed in an insulated situation.</p> <p>As a minimum the catenary wire of aerial supervisory cables is permanently earthed at alternative sectionalising points to provide safe working conditions.</p> <p>Any work involving the disconnection of the catenary wire from the permanent earth shall not proceed until the catenary wire is earthed by means of local temporary earths attached to both sides of the sectionalising point.</p>	No change
<p><b>3.3 Access Procedures for High Voltage Electrical Apparatus</b></p>	<p><b>3.3 Access Procedures for High Voltage Electrical Apparatus</b></p>	
<p><b>3.3.1 General</b></p>	<p><b>3.3.1 General</b></p>	
<p>No person shall touch or work near the HV conductors of any electrical apparatus unless:</p> <ul style="list-style-type: none"> <li>• The person is a Recipient of an EAP covering that electrical apparatus and the HV conductors have been discharged and/or earthed at the worksite, and the EAP is available for reference at the worksite; or</li> <li>• The person is a Recipient of an EAP covering the conductors of a HV cable and the de-energised state of the cable at the worksite is confirmed in accordance with Clause 3.3.3.8 and the EAP is available for reference at the worksite; or</li> <li>• In the case of a rackable circuit breaker or rackable voltage transformer, the electrical apparatus is removed from its rack or cubicle position and placed in a designated maintenance position; or</li> <li>• The person is working under the terms of an SFT on that electrical apparatus; or</li> <li>• The electrical apparatus has been declared as out of commission in accordance with Clause 3.3.2.5; or</li> <li>• The person is performing live work in accordance with organisational</li> </ul>	<p>No person shall touch or work near the HV conductors of any electrical apparatus unless:</p> <ul style="list-style-type: none"> <li>• The person is a Recipient of an EAP covering that electrical apparatus and the HV conductors have been discharged and/or earthed at the worksite, and the EAP is available for reference at the worksite; or</li> <li>• The person is a Recipient of an EAP covering the conductors of a HV cable and the de-energised state of the cable at the worksite is confirmed in accordance with Clause 3.3.3.8 and the EAP is available for reference at the worksite; or</li> <li>• In the case of a rackable circuit breaker or rackable voltage transformer, the electrical apparatus is removed from its rack or cubicle position and placed in a designated maintenance position; or</li> <li>• The person is working under the terms of an SFT on that electrical apparatus; or</li> <li>• The electrical apparatus has been declared as out of commission in accordance with Clause 3.3.2.5; or</li> </ul>	No change

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<p>procedures; or</p> <ul style="list-style-type: none"> <li>The person is working in accordance with the requirements of an appropriate Permit to Work Adjacent to Network Assets, refer to Part 5, or</li> <li>The person is working in accordance with the SAD and work in the vicinity of electrical apparatus requirements of Part 2.</li> </ul>	<ul style="list-style-type: none"> <li>The person is performing live work in accordance with organisational procedures; or</li> <li>The person is working in accordance with the requirements of an appropriate Permit to Work Adjacent to Network Assets, refer to Part 5, or</li> <li>The person is working in accordance with the SAD and work in the vicinity of electrical apparatus requirements of Part 2.</li> </ul>	
3.3.2 Planning Considerations for Electrical Access	3.3.2 Planning Considerations for Electrical Access	
3.3.2.1 Application for Electrical Access	3.3.2.1 Application for Electrical Access	
<p>Before making an application for electrical access, the Authorised Applicant shall establish that the proposed work has been properly planned and can be carried out safely. Consideration shall be given to:</p> <ul style="list-style-type: none"> <li>Work method</li> <li>Work environment</li> <li>Skills and authorisations of the work party</li> </ul> <p>The electrical apparatus to be covered and its location shall be accurately defined and the work to be undertaken adequately described.</p> <p>The electrical apparatus to be covered and its location shall be accurately defined and the work to be undertaken adequately described.</p>	<p>Before making an application for electrical access, the Authorised Applicant shall establish that the proposed work has been properly planned and can be carried out safely. Consideration shall be given to:</p> <ul style="list-style-type: none"> <li>Work method</li> <li>Work environment</li> <li>Skills and authorisations of the work party</li> </ul> <p>The electrical apparatus to be covered and its location shall be accurately defined and the work to be undertaken adequately described.</p> <p>The electrical apparatus to be covered and its location shall be accurately defined and the work to be undertaken adequately described.</p>	
3.3.2.2 Multiple Access Authorities on the same Electrical Apparatus	3.3.2.2 Multiple Access Authorities on the same Electrical Apparatus	
<p>When an EAP is issued along with any other Access Authority (e.g. another EAP, Permit to Work) on the same electrical apparatus, there shall be co-ordination in planning and performing the work to ensure that the actions of one party shall not endanger the safety of others.</p>	<p>When an EAP is issued along with any other Access Authority (e.g. another EAP, Permit to Work) on the same electrical apparatus, there shall be co-ordination in planning and performing the work to ensure that the actions of one party shall not endanger the safety of others.</p>	No change
3.3.2.3 Multiple Working Parties on a Common Access Authority	3.3.2.3 Multiple Working Parties on a Common Access Authority	
<p>Work under a common EAP by separate parties shall be performed under the following terms:</p> <ul style="list-style-type: none"> <li>The work shall be co-ordinated by a person who has an overall appreciation of all aspects of the work to be performed.</li> <li>An application for EAP shall include: <ul style="list-style-type: none"> <li>— details of work to be done by each work party; and</li> <li>— any special requirements to establish and maintain the safety of all work parties throughout the duration of the Access Permit.</li> </ul> </li> <li>The Recipient in Charge: <ul style="list-style-type: none"> <li>— should be a representative of the group responsible for the major portion of the work;</li> <li>— shall be thoroughly instructed in the work to be done and procedures to be used by each party;</li> </ul> </li> </ul>	<p>Work under a common EAP by separate parties shall be performed under the following terms:</p> <ul style="list-style-type: none"> <li>The work shall be co-ordinated by a person who has an overall appreciation of all aspects of the work to be performed.</li> <li>An application for EAP shall include: <ul style="list-style-type: none"> <li>— details of work to be done by each work party; and</li> <li>— any special requirements to establish and maintain the safety of all work parties throughout the duration of the Access Permit.</li> </ul> </li> <li>The Recipient in Charge: <ul style="list-style-type: none"> <li>— should be a representative of the group responsible for the major portion of the work;</li> <li>— shall be thoroughly instructed in the work to be done and procedures to be used by each party;</li> </ul> </li> </ul>	No change

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<p>-- shall be consulted in any discussion of proposed change in precautions brought about by changes to the electrical apparatus during the work.</p>	<p>-- shall be consulted in any discussion of proposed change in precautions brought about by changes to the electrical apparatus during the work.</p>	
<p><b>3.3.2.4 Multiple Operational Control</b></p>	<p><b>3.3.2.4 Multiple Operational Control</b></p>	
<p>Where an EAP is to be issued on electrical infrastructure under the control of more than one organisation, a protocol shall be established between these organisations for processing the application and outage requirements.</p>	<p>Where an EAP is to be issued on electrical infrastructure under the control of more than one organisation, a protocol shall be established between these organisations for processing the application and outage requirements.</p>	<p>No change</p>
<p><b>3.3.2.5 Access to Out of Commission Electrical Apparatus</b></p>	<p><b>3.3.2.5 Access to Out of Commission Electrical Apparatus</b></p>	
<p>Electrical apparatus which is declared out of commission may be approached and worked upon without the issue of an Electrical Access Authority. Although the electrical apparatus is not electrically connected, due regard shall be given to the possibility of inadvertent energisation from adjacent electrical apparatus, induction, lightning, static charges, or other means.</p>	<p>Electrical apparatus which is declared out of commission may be approached and worked upon without the issue of an Electrical Access Authority. Although the electrical apparatus is not electrically connected, due regard shall be given to the possibility of inadvertent energisation from adjacent electrical apparatus, induction, lightning, static charges, or other means.</p>	<p>No change</p>
<p><b>3.3.3 Preparing High Voltage Electrical Apparatus for Access</b></p>	<p><b>3.3.3 Preparing High Voltage Electrical Apparatus for Access</b></p>	
<p><b>3.3.3.1 General</b></p>	<p><b>3.3.3.1 General</b></p>	
<p>High voltage electrical apparatus should not be regarded as being safe for the issue of an EAP until it has been isolated and earthed. Wherever practicable, isolation points shall be tagged. Consideration shall be given to the isolation of sources of supply from low voltage, secondary circuits or alternative energy sources such as motor generator sets, photo voltaic cells, lightning and induction. For remote controlled electrical apparatus, consideration shall be given to the disabling of the remote control function, or that the remote control has been made inoperative by other approved means, before starting work on the electrical apparatus. Isolation for access shall either be visible, or an approved means used to confirm that the electrical apparatus is de-energised.</p>	<p>High voltage electrical apparatus should not be regarded as being safe for the issue of an EAP until it has been isolated and earthed. Wherever practicable, isolation points shall be tagged. Consideration shall be given to the isolation of sources of supply from low voltage, secondary circuits or alternative energy sources such as motor generator sets, photo voltaic cells, lightning and induction. For remote controlled electrical apparatus, consideration shall be given to the disabling of the remote control function, or that the remote control has been made inoperative by other approved means, before starting work on the electrical apparatus. Isolation for access shall either be visible, or an approved means used to confirm that the electrical apparatus is de-energised.</p>	<p>No change</p>
<p><b>NOTE: Such isolation may not eliminate the effects of electric fields or magnetic induction.</b></p>	<p><b>NOTE: Such isolation may not eliminate the effects of electric fields or magnetic induction.</b></p>	
<p>Earths shall be applied as described in Clause 3.2.2. Operational Earths. Exposed overhead conductors shall be earthed prior to the issue of an EAP. If earthing is impracticable on other asset types (e.g. HV ABC), appropriate precautions shall be taken to ensure the electrical</p>	<p>Earths shall be applied as described in Clause 3.2.2. Operational Earths. Exposed overhead conductors <b>should</b> be earthed prior to the issue of an EAP. If earthing is impracticable on other asset types (e.g. HV ABC),</p>	<p>Change "shall" to "should" to avoid contradiction with 3.2.4</p>

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<p>condition of the apparatus and the remote ends of the cable shall be confirmed as isolated and earthed.</p> <p>Where access is required to both HV and LV electrical apparatus, the Operating Authority and Authorised Applicants shall arrange for either combined access to the HV and LV electrical apparatus under an EAP or separate access arrangements for the HV and LV electrical apparatus. Refer to Clause 4.3.3 Co-ordination of LV and HV Access Switching Activities.</p>	<p>appropriate precautions shall be taken to ensure the electrical condition of the apparatus and the remote ends of the cable shall be confirmed as isolated and earthed.</p> <p>Where access is required to both HV and LV electrical apparatus, the Operating Authority and Authorised Applicants shall arrange for either combined access to the HV and LV electrical apparatus under an EAP or separate access arrangements for the HV and LV electrical apparatus. Refer to Clause 4.3.3 Co-ordination of LV and HV Access Switching Activities.</p>	
<p>3.3.3.2 Isolation of High Voltage with Interconnected Low Voltage</p>	<p>3.3.3.2 Isolation of High Voltage with Interconnected Low Voltage</p>	
<p>Procedures for preparing access to HV electrical apparatus connected to substations with interconnected LV shall be based on the following concepts:</p> <ul style="list-style-type: none"> <li>• Where a substation is connected to HV electrical apparatus being made dead for access and the LV reticulation from that substation is capable of being made live by direct switching or bridge connections, that LV reticulation or substation transformer shall be considered as a 'source of supply'.</li> <li>• Isolation of such transformers and/or LV reticulation is part of the access procedure and each isolation shall be tagged and recorded on the Access Authority/s.</li> <li>• Two or more isolations in series do not remove the need for earthing or bonding.</li> </ul>	<p>Procedures for preparing access to HV electrical apparatus connected to substations with interconnected LV shall be based on the following concepts:</p> <ul style="list-style-type: none"> <li>• Where a substation is connected to HV electrical apparatus being made dead for access and the LV reticulation from that substation is capable of being made live by direct switching or bridge connections, that LV reticulation or substation transformer shall be considered as a 'source of supply'.</li> <li>• Isolation of such transformers and/or LV reticulation is part of the access procedure and each isolation shall be tagged and recorded on the Access Authority/s.</li> <li>• Two or more isolations in series do not remove the need for earthing or bonding.</li> </ul>	<p>No change</p>
<p>3.3.3.3 Isolation of High Voltage with Non-Interconnected Low Voltage</p>	<p>3.3.3.3 Isolation of High Voltage with Non-Interconnected Low Voltage</p>	
<p>Procedures for preparing access to HV electrical apparatus connected to substations with non-interconnected LV shall be based on the following concepts:</p> <ul style="list-style-type: none"> <li>• Where there is no possible interconnection of LV electrical apparatus with other HV/LV systems, the EAP shall include the notation 'LV is not interconnected'.</li> <li>• Where isolation of LV supplies on non-interconnectable LV networks is not practicable, appropriate earthing/bonding at the worksite shall apply.</li> </ul>	<p>Procedures for preparing access to HV electrical apparatus connected to substations with non-interconnected LV shall be based on the following concepts:</p> <ul style="list-style-type: none"> <li>• Where there is no possible interconnection of LV electrical apparatus with other HV/LV systems, the EAP shall include the notation 'LV is not interconnected'.</li> <li>• Where isolation of LV supplies on non-interconnectable LV networks is not practicable, appropriate earthing/bonding at the worksite shall apply.</li> </ul>	<p>No change</p>
<p>3.3.3.4 Earthing of High Voltage for Access</p>	<p>3.3.3.4 Earthing of High Voltage for Access</p>	
<p>An Authorised Electrical Operator shall apply, or supervise the application, of at least the first earth to isolated electrical apparatus prior to the issue of an EAP. Prior to access, earthing shall be confirmed by an approved indication such as:</p> <ul style="list-style-type: none"> <li>• Sighting of an earth applied to exposed electrical apparatus.</li> <li>• An approved position indicator (semaphore), and/or operating</li> </ul>	<p>An Authorised Electrical Operator shall apply, or supervise the application, of all operational earths to isolated electrical apparatus prior to the issue of an EAP. Prior to access, earthing shall be confirmed by an approved indication such as:</p> <ul style="list-style-type: none"> <li>• Sighting of an earth applied to exposed electrical apparatus.</li> <li>• An approved position indicator (semaphore), and/or</li> </ul>	<p>Change for clarity that all operational earths are the responsibility of the operator, not just the first one</p>

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<p>handle/lever, showing a device to be in the earthed position. Operational earths attached to conductors shall be recorded on the Access Authority prior to issue. Additional earths applied during the currency of the Access Authority should be recorded. Whilst making and breaking bridge connections, both sides of the bridge connection shall be maintained at the same potential. If earthing is impracticable other appropriate precautions shall be taken and the Authorised Electrical Operator shall advise the Recipient in Charge and record the absence of an earth on the EAP.</p>	<p>operating handle/lever, showing a device to be in the earthed position. Operational earths attached to conductors shall be recorded on the Access Authority prior to issue. Additional <b>work party</b> earths applied during the currency of the Access Authority should be recorded. Whilst making and breaking bridge connections, both sides of the bridge connection shall be maintained at the same potential. If earthing is impracticable other appropriate precautions shall be taken and the Authorised Electrical Operator shall advise the Recipient in Charge and record the absence of an earth on the EAP.</p>	<p>Added work party for clarity in regard to the term "during the currency..."</p>
<p>3.3.3.5 Use of a Statement of Condition of Apparatus (SCAP)</p>	<p>3.3.3.5 Use of a Statement of Condition of Apparatus (SCAP)</p>	
<p>A SCAP is a documented statement issued by one Operating Authority to another, stating the condition of the specified electrical apparatus controlled by the issuing authority. It is used in circumstances where the stated conditions are required as precautions for the issue of an Access Authority issued by the receiving Operating Authority. The stated conditions shall be maintained unless changed in accordance with the provisions referred to in this Clause or until the SCAP is relinquished by the receiving authority. The SCAP specifies the state of the electrical apparatus or plant covered and does not by itself authorise work on the electrical apparatus or plant. Any earths listed on the SCAP may be removed as requested by the Recipient in accordance with Clause 3.2.5. The SCAP shall where practicable detail all relevant precautions taken for the safety of the work party/ies. Where it is not practicable to detail all such precautions, a general statement of the condition of the electrical apparatus (e.g. isolated and earthed) is acceptable provided that:</p> <ul style="list-style-type: none"> <li>(a) It is acceptable to the Operating Authorities.</li> <li>(b) It is acceptable to all Recipients on the associated EAP or SFT.</li> </ul> <p>Where a general statement is used and any isolation point is to be changed (whilst still maintaining general condition of isolation), prior agreement shall be obtained from all affected Operating Authorities. The receiving Operating Authority shall consult with Recipients of affected Access Authorities before agreeing to any change.</p>	<p>A SCAP is a documented statement issued by one Operating Authority to another, stating the condition of the specified electrical apparatus controlled by the issuing authority. It is used in circumstances where the stated conditions are required as precautions for the issue of an Access Authority issued by the receiving Operating Authority. The stated conditions shall be maintained unless changed in accordance with the provisions referred to in this Clause or until the SCAP is relinquished by the receiving authority. The SCAP specifies the state of the electrical apparatus or plant covered and does not by itself authorise work on the electrical apparatus or plant. Any earths listed on the SCAP may be removed as requested by the Recipient in accordance with Clause 3.2.5. The SCAP shall where practicable detail all relevant precautions taken for the safety of the work party/ies. Where it is not practicable to detail all such precautions, a general statement of the condition of the electrical apparatus (e.g. isolated and earthed) is acceptable provided that:</p> <ul style="list-style-type: none"> <li>(a) It is acceptable to the Operating Authorities.</li> <li>(b) It is acceptable to all Recipients on the associated EAP or SFT.</li> </ul> <p>Where a general statement is used and any isolation point is to be changed (whilst still maintaining general condition of isolation), prior agreement shall be obtained from all affected Operating Authorities. The receiving Operating Authority shall consult with Recipients of affected Access Authorities before agreeing to any change.</p>	<p>No change</p>

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<p>3.3.3.6 Use of a Verbal Statement of Condition of Apparatus – Plant (VSCAP)</p> <p>VSCAPs shall only be used between Operating Authorities when:</p> <ul style="list-style-type: none"> <li>• There is mutual agreement to their use.</li> <li>• They have established procedures and systems for the centralised logging of information both given and received, regarding the condition of electrical apparatus.</li> <li>• The procedures and systems guard against the inadvertent operation or restoration of electrical apparatus.</li> </ul>	<p>3.3.3.6 Use of a Verbal Statement of Condition of Apparatus – Plant (VSCAP)</p> <p>VSCAPs shall only be used between electricity supply Operating Authorities when:</p> <ul style="list-style-type: none"> <li>- There is mutual agreement to their use</li> <li>- They have established procedures and systems for the centralised logging of information both given and received, regarding the condition of electrical apparatus</li> <li>- The procedures and systems guard against the inadvertent operation or restoration of electrical apparatus.</li> </ul> <p>The network representative receiving the VSCAP shall be responsible for the issue of relevant Access Authorities.</p> <p>Recipients of those Access Authorities need not be specifically authorised to work on the assets of the network operator who issued the VSCAP</p>	<p>Alternative wording agreed by GBC on 7/5/18</p>
<p>3.3.3.7 Barriers and Signs</p> <p>General</p> <p>Appropriate barriers shall be used where necessary to indicate areas containing live electrical apparatus and the degree of hazard. Barriers shall not be altered or crossed except by persons identified in organisational procedures.</p> <p>Appropriate signs shall be used where necessary:</p> <ul style="list-style-type: none"> <li>• To identify electrical apparatus covered by an Access Authority.</li> <li>• To identify adjacent live electrical apparatus and related hazards.</li> </ul> <p>Hazards which are likely to be life threatening</p> <p>Situations where there is an immediate and probable risk of contact with live electrical apparatus shall be defined by the use of danger barriers and/or signs. e.g.:</p> <ul style="list-style-type: none"> <li>• Areas where the SAD cannot be maintained.</li> <li>• Areas in which HV testing is in progress.</li> </ul> <p>Hazards which are not likely to be life threatening</p> <p>For the purpose of general identification of those areas where warning is necessary, warning barriers and/or signs, shall be used, e.g. between work areas and adjacent areas containing HV live electrical apparatus which does not present an electrical hazard to normal pedestrian movement.</p> <p>Descriptions of Barriers and Signs</p> <p>Live (Alive) Sign</p> <p>Approved danger sign having the word ALIVE.</p> <p>ALIVE printed in white upon a red background or otherwise conforming to AS1319.</p>	<p>3.3.3.7 Barriers and Signs</p> <p>General</p> <p>Appropriate barriers shall be used where necessary to indicate areas containing live electrical apparatus and the degree of hazard. Barriers shall not be altered or crossed except by persons identified in organisational procedures.</p> <p>Appropriate signs shall be used where necessary:</p> <ul style="list-style-type: none"> <li>• To identify electrical apparatus covered by an Access Authority.</li> <li>• To identify adjacent live electrical apparatus and related hazards.</li> </ul> <p>Hazards which are likely to be life threatening</p> <p>Situations where there is an immediate and probable risk of contact with live electrical apparatus shall be defined by the use of danger barriers and/or signs. e.g.:</p> <ul style="list-style-type: none"> <li>• Areas where the SAD cannot be maintained.</li> <li>• Areas in which HV testing is in progress.</li> </ul> <p>Hazards which are not likely to be life threatening</p> <p>For the purpose of general identification of those areas where warning is necessary, warning barriers and/or signs, shall be used, e.g. between work areas and adjacent areas containing HV live electrical apparatus which does not present an electrical hazard to normal pedestrian movement.</p> <p>Descriptions of Barriers and Signs</p> <p>Live (Alive) Sign</p>	<p>No change</p>

2013	2019	Comment
<p>Danger Barrier and/or Sign A barrier and/or sign of suitable material coloured red or alternatively red and white, to indicate the presence of danger, or otherwise conforming to AS1319.</p> <p>Under Access Permit Sign A sign of appropriate dimensions having the words UNDER ACCESS PERMIT or similar printed in white on a green background or otherwise conforming to AS1319.</p> <p>Under Sanction for Testing Sign A danger sign of appropriate dimensions having the words UNDER SANCTION FOR TESTING printed in red on a white background or otherwise conforming to AS1319.</p> <p>Warning Barrier and/or Sign A barrier and/or sign of suitable material, coloured yellow, or alternatively yellow and black, to indicate the need for a warning, or otherwise conforming to AS1319.</p>	<p>Approved danger sign having the word ALIVE. ALIVE printed in white upon a red background or otherwise conforming to AS1319.</p> <p>Danger Barrier and/or Sign A barrier and/or sign of suitable material coloured red or alternatively red and white, to indicate the presence of danger, or otherwise conforming to AS1319.</p> <p>Under Access Permit Sign A sign of appropriate dimensions having the words UNDER ACCESS PERMIT or similar printed in white on a green background or otherwise conforming to AS1319.</p> <p>Under Sanction for Testing Sign A danger sign of appropriate dimensions having the words UNDER SANCTION FOR TESTING printed in red on a white background or otherwise conforming to AS1319.</p> <p>Warning Barrier and/or Sign A barrier and/or sign of suitable material, coloured yellow, or alternatively yellow and black, to indicate the need for a warning, or otherwise conforming to AS1319.</p>	
<p>Barriers and Signs for EAP Prior to the issue of an EAP, barriers and signs shall be erected:</p> <ul style="list-style-type: none"> <li>• To make it clearly evident which electrical apparatus is under EAP and which is not.</li> <li>• To guard against mistaken or inadvertent contact with other electrical apparatus.</li> </ul> <p>The above shall be achieved with the use of appropriate signs and barriers including Alive signs and Under Access Permit signs. In positioning signs and barriers consideration shall be given to all approaches to the work area.</p> <p>Additional barriers and signs may be erected after the issue of the EAP by agreement between the Authorised Electrical Operator and the Recipient in Charge.</p> <p>In Distribution Networks the following applies:</p> <ul style="list-style-type: none"> <li>• In zone substations and terminal stations, barriers and signs shall be used.</li> <li>• In particular instances where identification is positive, such as on some high voltage overhead lines and underground cables, and providing appropriate safeguards have been taken, approved procedures may dispense with the use of barriers and/or signs.</li> </ul> <p>Barriers and Signs for Sanctions for Testing Prior to the issue of an SFT, barriers and signs shall be erected:</p> <ul style="list-style-type: none"> <li>• To make it clearly evident which electrical apparatus is under SFT and which is not.</li> </ul>	<p>Barriers and Signs for EAP Prior to the issue of an EAP, barriers and signs shall be erected:</p> <ul style="list-style-type: none"> <li>• To make it clearly evident which electrical apparatus is under EAP and which is not.</li> <li>• To guard against mistaken or inadvertent contact with other electrical apparatus.</li> </ul> <p>The above shall be achieved with the use of appropriate signs and barriers including Alive signs and Under Access Permit signs. In positioning signs and barriers consideration shall be given to all approaches to the work area.</p> <p>Additional barriers and signs may be erected after the issue of the EAP by agreement between the Authorised Electrical Operator and the Recipient in Charge.</p> <p>In Distribution Networks the following applies:</p> <ul style="list-style-type: none"> <li>• In zone substations and terminal stations, barriers and signs shall be used.</li> <li>• In particular instances where identification is positive, such as on some high voltage overhead lines and underground cables, and providing appropriate safeguards have been taken, approved procedures may dispense with the use of barriers and/or signs.</li> </ul> <p>Barriers and Signs for Sanctions for Testing Prior to the issue of an SFT, barriers and signs shall be erected:</p> <ul style="list-style-type: none"> <li>• To make it clearly evident which electrical apparatus is under</li> </ul>	No change

2013	2019	Comment
<ul style="list-style-type: none"> <li>To guard against mistaken or inadvertent contact with other electrical apparatus and/or equipment under test.</li> </ul> <p>The above shall be achieved with the use of appropriate barriers including Danger barriers and signs, Alive signs and Under Sanction for Testing signs. In positioning barriers and signs, consideration shall be given to all approaches to the work area.</p> <p>Additional barriers and signs may be erected after the issue of the SFT by the Tester in Charge.</p>	<p>SFT and which is not.</p> <ul style="list-style-type: none"> <li>To guard against mistaken or inadvertent contact with other electrical apparatus and/or equipment under test.</li> </ul> <p>The above shall be achieved with the use of appropriate barriers including Danger barriers and signs, Alive signs and Under Sanction for Testing signs. In positioning barriers and signs, consideration shall be given to all approaches to the work area.</p> <p>Additional barriers and signs may be erected after the issue of the SFT by the Tester in Charge.</p>	
<p>3.3.3.8 High Voltage Metal Clad Switchgear and Associated Electrical Apparatus</p>	<p>3.3.3.8 High Voltage Metal Clad Switchgear and Associated Electrical Apparatus</p>	
<p>For the purpose of issuing an EAP, a circuit breaker or a voltage transformer may be regarded as isolated and at earth potential when it is racked out, and appropriate precautions taken to prevent re-energisation, see also Clause 3.3.1.</p> <p>For work on busbar circuits, where the physical separation of circuits within a chamber is not visibly evident, additional precautions shall be taken for the safety of the working party.</p> <p>The proposed means of access within metal clad chambers shall be described at the time of the application to the Operating Authority by the Applicant and both shall agree on the extent of access and that such access is safe. The extent of access shall be confirmed between the Electrical Operator and the Recipient in Charge prior to issue of the EAP.</p> <p>When access is required within spout bushings the contacts shall be confirmed as de-energised by an approved test. The circuit shall also be earthed elsewhere or other precautions taken to ensure that the spout contacts cannot become live by induction or other means.</p> <p>When it is not practicable to earth metal clad circuits a risk assessment shall be conducted to determine the special precautions, including discharging, to ensure that the conductors can be regarded as being at earth potential.</p>	<p>For the purpose of issuing an EAP, a circuit breaker or a voltage transformer may be regarded as isolated and at earth potential when it is racked out, and appropriate precautions taken to prevent re-energisation, see also Clause 3.3.1.</p> <p>For work on busbar circuits, where the physical separation of circuits within a chamber is not visibly evident, additional precautions shall be taken for the safety of the working party.</p> <p>The proposed means of access within metal clad chambers shall be described at the time of the application to the Operating Authority by the Applicant and both shall agree on the extent of access and that such access is safe. The extent of access shall be confirmed between the Electrical Operator and the Recipient in Charge prior to issue of the EAP.</p> <p>When access is required within spout bushings the contacts shall be confirmed as de-energised by an approved test. The circuit shall also be earthed elsewhere or other precautions taken to ensure that the spout contacts cannot become live by induction or other means.</p> <p>When it is not practicable to earth metal clad circuits a risk assessment shall be conducted to determine the special precautions, including discharging, to ensure that the conductors can be regarded as being at earth potential.</p>	<p>No change</p>
<p>3.3.3.9 Working on Insulated Power or Supervisory Cables (including Out of Commission or Abandoned Cables)</p>	<p>3.3.3.9 Working on Insulated Power or Supervisory Cables (including Out of Commission or Abandoned Cables)</p>	
<p>Cables shall be identified at the worksite prior to undertaking work by either positive identification or visually tracing from one end.</p> <p>Spiking of Cables</p> <p>A cable's de-energised state shall be confirmed onsite by visually tracing it from one end or by use of a spiking device.</p> <p>When a cable is to be spiked by a power operated spiking device, the following measures shall be taken:</p> <ul style="list-style-type: none"> <li>Where practicable the electrical condition of the remote ends of the</li> </ul>	<p>Cables shall be identified at the worksite prior to undertaking work by either positive identification or visually tracing from one end.</p> <p>Spiking of Cables</p> <p>A cable's <b>isolated and/or</b> de-energised state shall be confirmed onsite by visually tracing it from one end or by use of a spiking device.</p> <p>When a cable is to be spiked by a power operated spiking</p>	<p>Change as agreed by GBC 7/5/18</p>

2013	2019	Comment
<p>cable shall be confirmed as isolated and earthed.</p> <ul style="list-style-type: none"> <li>The person in charge of the work shall personally select the cable to be spiked after careful reference to the appropriate records and use of cable tracers where necessary.</li> <li>An approved cable spiking device shall be used by a person trained in its use and in accordance with organisational procedures.</li> </ul> <p>Prior to spiking the Operating Authority shall be advised. The Operating Authority shall prevent the energising or re-energising of any cable in the vicinity of the proposed works until advised that spiking has been completed.</p>	<p>device, the following measures shall be taken:</p> <ul style="list-style-type: none"> <li>Where practicable the electrical condition of the remote ends of the cable shall be confirmed as isolated and earthed.</li> <li>The person in charge of the work shall personally select the cable to be spiked after careful reference to the appropriate records and use of cable tracers where necessary.</li> <li>An approved cable spiking device shall be used by a person trained in its use and in accordance with organisational procedures.</li> </ul> <p>Prior to spiking the Operating Authority shall be advised. The Operating Authority shall prevent the energising or re-energising of any cable in the vicinity of the proposed works until advised that spiking has been completed.</p>	
<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>Providing the earth screen of the HV cable is connected elsewhere to an established earth, the use of an approved cable spiking device satisfies the discharged and/or earthed requirement in the first dot point of Clause 3.3.1.</li> </ol> <p>If the earth screen of a cable is not already earthed, then the approved cable spiking device shall be connected to a temporarily driven earth-stake before cable spiking takes place.</p> <p>Before spiking a cable, consideration shall also be given to the possibility of an additional source of "step-potential" arising from the presence of a temporarily driven earth-stake.</p> <ol style="list-style-type: none"> <li>It is acceptable, except where excessive induced voltages are involved, to work without an earth on a cable at a worksite, as required in Clause 3.2.3, providing that the cable is earthed at the remote ends and that initially the HV conductors are identified and discharged.</li> </ol>	<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>Providing the earth screen of the HV cable is connected elsewhere to an established earth, the use of an approved cable spiking device satisfies the discharged and/or earthed requirement in the first dot point of Clause 3.3.1.</li> </ol> <p>If the earth screen of a cable is not already earthed, then the approved cable spiking device shall be connected to a temporarily driven earth-stake before cable spiking takes place.</p> <p>Before spiking a cable, consideration shall also be given to the possibility of an additional source of "step-potential" arising from the presence of a temporarily driven earth-stake.</p> <ol style="list-style-type: none"> <li>It is acceptable, except where excessive induced voltages are involved, to work without an earth on a cable at a worksite, as required in Clause 3.2.3, providing that the cable is earthed at the remote ends and that initially the HV conductors are identified and discharged.</li> </ol>	No change
<p><b>3.3.3.10 Working Under Induced Voltage Conditions</b></p>	<p><b>3.3.3.10 Working Under Induced Voltage Conditions</b></p>	
<p>Whenever work is to be carried out on a cable core, sheath, armouring, oil line, etc. of a fully insulated cable system, careful assessment shall first be given to the voltage that may appear on the conductor via induction or other means and appropriate earthing practices and organisational procedures adopted</p>	<p>Whenever work is to be carried out on a cable core, sheath, armouring, oil line, etc. of a fully insulated cable system, careful assessment shall first be given to the voltage that may appear on the conductor via induction or other means and appropriate earthing practices and organisational procedures adopted</p>	No change
<p><b>3.3.4 Issue, Receipt and Duration of Electrical Access Permits</b></p>	<p><b>3.3.4 Issue, Receipt and Duration of Electrical Access Permits</b></p>	
<p><b>3.3.4.1 General</b></p>	<p><b>3.3.4.1 General</b></p>	
<p>An EAP and an SFT shall not be on issue on the same electrical apparatus simultaneously.</p> <p>HV live work and Access Authority work shall not be performed concurrently on a structure.</p> <p>If it is necessary to change between glove and barrier work and Access Authority work, a clear transition point shall exist. All members of the work party shall be aware that the change process is occurring and act accordingly.</p> <p>At all times Access Authority isolations shall remain unchanged.</p> <p>No live work shall be carried out concurrently at over/under crossings of apparatus under Access Authority as the gap between the over/under crossing could be compromised.</p>	<p>An EAP and an SFT shall not be on issue on the same electrical apparatus simultaneously.</p> <p>HV live work and Access Authority work shall not be performed concurrently on a structure.</p> <p>If it is necessary to change between glove and barrier work and Access Authority work, a clear transition point shall exist. All members of the work party shall be aware that the change process is occurring and act accordingly.</p> <p>At all times Access Authority isolations shall remain unchanged.</p> <p>No live work shall be carried out concurrently at over/under crossings of apparatus under Access Authority as the gap between the over/under crossing could be compromised.</p>	No change

2013	2019	Comment
<p>EAPs shall be issued and cancelled only by an Authorised Electrical Operator or a person specifically instructed by an Authorised Electrical Operator, as part of training.</p> <p>EAPs may be issued by telephone or radio subject to the statements between the Authorised Electrical Operator and the Recipient in Charge being confirmed by an Authorised Recipient as a witness at each location.</p> <p>At the time of issue the Authorised Electrical Operator shall describe and, where practicable, show the electrical apparatus covered by the EAP and the precautions taken, to the Recipient in Charge and all the initial Recipients.</p> <p>The Authorised Electrical Operator shall also describe or point out the nearest points of supply and adjacent live electrical apparatus. In the case of an EAP issued by telephone or radio, the Recipient in Charge shall assume these responsibilities.</p> <p>Each EAP shall be issued to a Recipient in Charge. The Recipient in Charge shall ensure that all members of the work party who will approach the electrical apparatus sign on the EAP.</p> <p>The issuer and Authorised Recipients all have a responsibility to ensure that the isolations and earthing documented in the EAP, are such that access to the relevant apparatus shall remain safe for the proposed work to be undertaken.</p> <p>Any person involved in the issue or receipt of an EAP who is not satisfied with the conditions, may apply to have additional precautions taken, either before the EAP is issued or during the currency of the work.</p> <p>Subsequent to the issue of an EAP, additional Recipients may sign on the EAP, after appropriate instruction by the Recipient in Charge or by an Authorised Electrical Operator, acting with the knowledge of the Recipient in Charge.</p>	<p>EAPs shall be issued and cancelled only by an Authorised Electrical Operator or a person specifically instructed by an Authorised Electrical Operator, as part of training.</p> <p>EAPs may be issued by telephone or radio subject to the statements between the Authorised Electrical Operator and the Recipient in Charge being confirmed by an Authorised Recipient as a witness at each location.</p> <p>At the time of issue the Authorised Electrical Operator shall describe and, where practicable, show the electrical apparatus covered by the EAP and the precautions taken, to the Recipient in Charge and all the initial Recipients.</p> <p>The Authorised Electrical Operator shall also describe or point out the nearest points of supply and adjacent live electrical apparatus. In the case of an EAP issued by telephone or radio, the Recipient in Charge shall assume these responsibilities.</p> <p>Each EAP shall be issued to a Recipient in Charge. The Recipient in Charge shall ensure that all members of the work party who will approach the electrical apparatus sign on the EAP.</p> <p>The issuer and Authorised Recipients all have a responsibility to ensure that the isolations and earthing documented in the EAP, are such that access to the relevant apparatus shall remain safe for the proposed work to be undertaken.</p> <p>Any person involved in the issue or receipt of an EAP who is not satisfied with the conditions, may apply to have additional precautions taken, either before the EAP is issued or during the currency of the work.</p> <p>Subsequent to the issue of an EAP, additional Recipients may sign on the EAP, after appropriate instruction by the Recipient in Charge or by an Authorised Electrical Operator, acting with the knowledge of the Recipient in Charge.</p>	
<p>3.3.4.2 Persons Permitted to Sign onto Electrical Access Permits</p>	<p>3.3.4.2 Persons Permitted to Sign onto Electrical Access Permits</p>	
<p>Recipients of an EAP shall be Authorised Recipients or Instructed Persons approved to work under that specific EAP. In the latter case it shall be the responsibility of the Recipient in Charge to ensure that Instructed Persons are placed under the supervision of an Authorised Recipient.</p> <p>The conditions under which Authorised Recipients shall sign onto an EAP is that the Recipient:</p> <ul style="list-style-type: none"> <li>• Understands the electrical apparatus covered and the limits of the EAP.</li> <li>• Is satisfied with the precautions taken.</li> <li>• Is aware of the nearest adjacent live electrical apparatus.</li> </ul> <p>The conditions under which an Instructed Person shall sign onto an EAP</p>	<p>Recipients of an EAP shall be Authorised Recipients or Instructed Persons approved to work under that specific EAP. In the latter case it shall be the responsibility of the Recipient in Charge to ensure that Instructed Persons are placed under the supervision of an Authorised Recipient.</p> <p>The conditions under which Authorised Recipients shall sign onto an EAP is that the Recipient:</p> <ul style="list-style-type: none"> <li>• Understands the electrical apparatus covered and the limits of the EAP.</li> <li>• Is satisfied with the precautions taken.</li> <li>• Is aware of the nearest adjacent live electrical apparatus.</li> </ul> <p>The conditions under which an Instructed Person shall sign onto</p>	<p>No change</p>

2013	2019	Comment
<p>is that the person:</p> <ul style="list-style-type: none"> <li>• Understands instructions given on what approach is permitted to the electrical apparatus.</li> <li>• Understands instructions given on what activity is permitted to be taken in relation to the electrical apparatus.</li> <li>• Agrees to the continuous and close supervision by a nominated Authorised Recipient</li> </ul>	<p>an EAP is that the person:</p> <ul style="list-style-type: none"> <li>• Understands instructions given on what approach is permitted to the electrical apparatus.</li> <li>• Understands instructions given on what activity is permitted to be taken in relation to the electrical apparatus.</li> <li>• Agrees to the continuous and close supervision by a nominated Authorised Recipient</li> </ul>	
3.3.4.3 Responsibilities of an Authorised Electrical Operator	3.3.4.3 Responsibilities of an Authorised Electrical Operator	
<ul style="list-style-type: none"> <li>• Obtain approval from the Operating Authority prior to performing any switching on the electrical network.</li> <li>• Correctly identify the electrical switching apparatus before the apparatus is operated</li> <li>• Report any switching performed in error, or anomaly encountered, immediately to the Operating Authority.</li> <li>• Confirm that earthing is performed in accordance with these Rules.</li> <li>• Fully describe to all Recipients the limits of and the precautions taken for the Access Authority and confirming that the Recipients are satisfied with those conditions.</li> <li>• Ensure assets are fit for service prior to cancellation of Access Authorities and restoration of supply.</li> <li>• Notify the Operating Authority upon cancellation of the Access Authority and confirm that electrical apparatus is fit for service prior to restoration of supply.</li> </ul>	<ul style="list-style-type: none"> <li>• Obtain approval from the Operating Authority prior to performing any switching on the electrical network.</li> <li>• Correctly identify the electrical switching apparatus before the apparatus is operated</li> <li>• Report any switching performed in error, or anomaly encountered, immediately to the Operating Authority.</li> <li>• Confirm that earthing is performed in accordance with these Rules.</li> <li>• Fully describe to all Recipients the limits of and the precautions taken for the Access Authority and confirming that the Recipients are satisfied with those conditions.</li> <li>• Ensure assets are fit for service prior to cancellation of Access Authorities and restoration of supply.</li> <li>• Notify the Operating Authority upon cancellation of the Access Authority and confirm that electrical apparatus is fit for service prior to restoration of supply.</li> </ul>	
3.3.4.4 Responsibilities of Recipient in Charge	3.3.4.4 Responsibilities of Recipient in Charge	
<ul style="list-style-type: none"> <li>• Be informed of, and understand the limits of access to the apparatus and the control measures applicable.</li> <li>• Ensure placement and removal of worksite earths and record on the EAP.</li> <li>• Be conversant with the work to be undertaken, the appropriate electrical procedures and electrical work practices to be used by the work party.</li> <li>• Ensure that all members of the work party approaching electrical apparatus sign on the EAP, and sign off prior to relinquishment.</li> <li>• Advise the Operating Authority of any lost or damaged EAP.</li> <li>• Confirm electrical apparatus is fit for service prior to relinquishment of EAP.</li> </ul>	<ul style="list-style-type: none"> <li>• Be informed of, and understand the limits of access to the apparatus and the control measures applicable.</li> <li>• Ensure placement and removal of worksite earths and record on the EAP.</li> <li>• Be conversant with the work to be undertaken, the appropriate electrical procedures and electrical work practices to be used by the work party.</li> <li>• Ensure that all members of the work party approaching electrical apparatus sign on the EAP, and sign off prior to relinquishment.</li> <li>• Advise the Operating Authority of any lost or damaged EAP.</li> <li>• Confirm electrical apparatus is fit for service prior to relinquishment of EAP.</li> </ul>	No change
3.3.4.5 Responsibilities of Authorised Recipients	3.3.4.5 Responsibilities of Authorised Recipients	

2013	2019	Comment
<ul style="list-style-type: none"> <li>• Sign on the EAP to indicate they acknowledge the requirements of the EAP.</li> <li>• Be informed of, and understand, the limits of access to the apparatus and the control measures applicable.</li> <li>• Be informed of, understand and comply with the safety directions and warnings given.</li> <li>• Ensure placement and removal of worksite earths and where required recording on the EAP.</li> <li>• Ensure they are currently Authorised and competent to perform the task required.</li> <li>• Be conversant with the work to be done.</li> <li>• Prior to departure from the worksite, sign off the EAP or provide advice to the Recipient in Charge otherwise.</li> <li>• Seek approval for changes in precautions during the work.</li> <li>• Ensure assets are fit for service prior to cancellation of Access Authorities and restoration of supply.</li> </ul>	<ul style="list-style-type: none"> <li>• Sign on the EAP to indicate they acknowledge the requirements of the EAP.</li> <li>• Be informed of, and understand, the limits of access to the apparatus and the control measures applicable.</li> <li>• Be informed of, understand and comply with the safety directions and warnings given.</li> <li>• Ensure placement and removal of worksite earths and where required recording on the EAP.</li> <li>• Ensure they are currently Authorised and competent to perform the task required.</li> <li>• Be conversant with the work to be done.</li> <li>• Prior to departure from the worksite, sign off the EAP or provide advice to the Recipient in Charge otherwise.</li> <li>• Seek approval for changes in precautions during the work.</li> <li>• Ensure assets are fit for service prior to cancellation of Access Authorities and restoration of supply.</li> </ul>	No change
3.3.4.6 Responsibilities of Instructed Persons	3.3.4.6 Responsibilities of Instructed Persons	
<ul style="list-style-type: none"> <li>• Sign on the EAP under direct supervision of an Authorised Recipient.</li> <li>• To indicate they acknowledge the requirements of the EAP.</li> <li>• Be informed of, and understand, the limits of access to the apparatus and the control measures applicable.</li> <li>• Be informed of, understand and comply with the safety directions and warnings given.</li> <li>• Prior to departure from the worksite, sign off the EAP or provide advice to the Recipient in Charge otherwise.</li> </ul>	<ul style="list-style-type: none"> <li>• Sign on the EAP under direct supervision of an Authorised Recipient.</li> <li>• To indicate they acknowledge the requirements of the EAP.</li> <li>• Be informed of, and understand, the limits of access to the apparatus and the control measures applicable.</li> <li>• Be informed of, understand and comply with the safety directions and warnings given.</li> <li>• Prior to departure from the worksite, sign off the EAP or provide advice to the Recipient in Charge otherwise.</li> </ul>	No change
3.3.4.7 Rejection of a Recipient	3.3.4.7 Rejection of a Recipient	
A person shall recommend the exclusion from an EAP of any other person who at any time is considered unsafe as a Recipient. Such instances shall be reported promptly to the person in charge of the work.	A person shall recommend the exclusion from an EAP of any other person who at any time is considered unsafe as a Recipient. Such instances shall be reported promptly to the person in charge of the work.	No change
3.3.4.8 Recipient Working Alone	3.3.4.8 Recipient Working Alone	
<p>An EAP may be issued to one Authorised Recipient or a Recipient may work alone under the terms of an EAP in accordance with organisational procedures provided that:</p> <ul style="list-style-type: none"> <li>• There is no exposed live electrical apparatus near the Recipient; or</li> <li>• Warning notices are placed and suitable barriers are erected to prevent the Recipient inadvertently infringing the SAD to live electrical apparatus.</li> </ul>	<p>An EAP may be issued to one Authorised Recipient or a Recipient may work alone under the terms of an EAP in accordance with organisational procedures provided that:</p> <ul style="list-style-type: none"> <li>• There is no exposed live electrical apparatus near the Recipient; or</li> <li>• Warning notices are placed and suitable barriers are erected to prevent the Recipient inadvertently infringing the SAD to live electrical apparatus.</li> </ul>	No change
3.3.4.9 Issuer also a Recipient	3.3.4.9 Issuer also a Recipient	

2013	2019	Comment
<p>An issuer of an EAP shall not be the Initial Recipient in Charge, but may sign on the EAP as an Authorised Recipient. In accordance with approved procedures, the issuer may sign-on as a subsequent Recipient in Charge.</p>	<p>An issuer of an EAP shall not be the Initial Recipient in Charge, but may sign on the EAP as an Authorised Recipient. In accordance with approved procedures, the issuer may sign-on as a subsequent Recipient in Charge.</p>	No change
3.3.4.10 Temporary Cessation of Work or Absence of Recipients	3.3.4.10 Temporary Cessation of Work or Absence of Recipients	
<p>Following a temporary cessation of work or when Recipients have been temporarily absent from the worksite, upon return each Recipient shall report to the Recipient in Charge to re-confirm the conditions of the EAP.</p>	<p>Following a temporary cessation of work or when Recipients have been temporarily absent from the worksite, upon return each Recipient shall report to the Recipient in Charge to re-confirm the conditions of the EAP.</p>	No change
3.3.4.11 Work on Multi-circuit Overhead Lines	3.3.4.11 Work on Multi-circuit Overhead Lines	
<p>Where more than one HV circuit is carried on a pole or line structure and work is to be performed on circuits under an EAP whilst others remain live, each Recipient of the work party who approaches near any circuits shall correctly identify the circuit/s under EAP and all other circuits. For the movement of overhead conductors on multi-circuit lines, refer to Clause 2.1.3 Erection or Dismantling of Overhead Conductors.</p>	<p>Where more than one HV circuit is carried on a pole or line structure and work is to be performed on circuits under an EAP whilst others remain live, each Recipient of the work party who approaches near any circuits shall correctly identify the circuit/s under EAP and all other circuits. For the movement of overhead conductors on multi-circuit lines, refer to Clause 2.1.3 Erection or Dismantling of Overhead Conductors.</p>	No change
3.3.4.12 Change of Electrical Access Permit Conditions	3.3.4.12 Change of Electrical Access Permit Conditions	
<p>Where it is required to change the isolations specified on an EAP, the EAP shall be cancelled and a new permit issued. Other than changes to isolations, changes to the conditions specified and the precautions listed on the EAP shall only occur where mutually agreed upon by both the Operating Authority and the Recipient in Charge. In all instances where changes are made to the conditions specified and precautions listed on the EAP, the appropriate Operating Authority shall ensure a check has been made regarding the requirements of other Electrical Access Authorities and all Recipients working under the EAP have been notified of all changes.</p>	<p>Where it is required to change the isolations specified on an EAP, the EAP shall be cancelled and a new permit issued. Other than changes to isolations, changes to the conditions specified and the precautions listed on the EAP shall only occur where mutually agreed upon by both the Operating Authority and the Recipient in Charge. In all instances where changes are made to the conditions specified and precautions listed on the EAP, the appropriate Operating Authority shall ensure a check has been made regarding the requirements of other Electrical Access Authorities and all Recipients working under the EAP have been notified of all changes.</p>	No change
3.3.4.13 Suspension of an Access Authority	3.3.4.13 Suspension of an Access Authority	
<p>Distribution Networks have not adopted suspension of Access Authorities due to current work practices.</p>	<p>Distribution Networks have not adopted suspension of Access Authorities due to current work practices.</p>	No change
3.3.4.14 Testing Under an Electrical Access Permit	3.3.4.14 Testing Under an Electrical Access Permit	
<p>Testing under an EAP may be undertaken in accordance with organisational procedures that includes:</p> <ul style="list-style-type: none"> <li>• A JSA is undertaken and the associated controls are applied to mitigate the risk of hazardous voltages and currents generated by testing.</li> </ul>	<p>Testing under an EAP may be undertaken in accordance with organisational procedures that includes:</p> <ul style="list-style-type: none"> <li>• A JSA is undertaken and the associated controls are applied to mitigate the risk of hazardous voltages and currents generated by testing.</li> <li>• All other work shall cease for the duration of the testing and</li> </ul>	Change to align with BB

2013	2019	Comment
<ul style="list-style-type: none"> <li>That the provisions of Clause 3.2.5 (in regard to the removal of an earth) are met.</li> </ul>	<ul style="list-style-type: none"> <li>No hazardous voltages and currents will be accessible as a result of the testing; and</li> <li>Recipient/s conducting the testing have the appropriate competency; and</li> <li>Consideration shall be given to any stored charges; and</li> <li>Test voltages and current do not exceed the equipment rating or test equipment rating; and</li> <li>Consideration shall be given to maintain earth between the recipient/s and the sources of supply; and</li> <li>Consideration shall be given to the hazards of connecting and disconnecting test equipment; and</li> <li>Adequate precautions are taken for the safety of all persons during the performance of the test; and,</li> <li>That the provisions of Clause 3.2.5 (in regard to the removal of an earth) are met.</li> </ul>	
3.3.5 Cancellation of Electrical Access Permits	3.3.5 Cancellation of Electrical Access Permits	
3.3.5.1 Recipients signing off an Electrical Access Permit	3.3.5.1 Recipients signing off an Electrical Access Permit	
It shall be the duty of each Recipient of an EAP to sign off before the EAP is relinquished.	It shall be the duty of each Recipient of an EAP to sign off before the EAP is relinquished.	No change
3.3.5.2 Absence of a Recipient at Relinquishment	3.3.5.2 Absence of a Recipient at Relinquishment	
<p>Signing off an EAP on behalf of another person is undesirable and should be avoided.</p> <p>Appropriate organisational procedures should be implemented with instructions for signing off Recipients where the Recipients could not be located.</p>	<p>Signing off an EAP on behalf of another person is undesirable and should be avoided.</p> <p>Appropriate organisational procedures should be implemented with instructions for signing off Recipients where the Recipients could not be located.</p>	No change
3.3.6 Declaring Electrical Apparatus Out of Commission	3.3.6 Declaring Electrical Apparatus Out of Commission	
An out of commission written declaration shall include a statement of the condition of the electrical apparatus including all relevant auxiliary equipment (e.g. control circuits, compressed air supplies, etc.).	An out of commission written declaration shall include a statement of the condition of the electrical apparatus including all relevant auxiliary equipment (e.g. control circuits, compressed air supplies, etc.).	No change
3.4 High Voltage Live Work	3.4 High Voltage Live Work	
<p>This Section is not applicable to the operation, washing or testing of HV live electrical apparatus. Refer to organisational procedures.</p> <p>HV live work shall only be undertaken after first considering performing the work under isolated and earthed conditions.</p> <p>Before HV live work is commenced, a hazard identification and JSA shall be undertaken and the associated controls applied to confirm that the work can be performed safely.</p> <p>Work on or near exposed HV live conductors shall be performed by appropriately trained and competent HV Live Workers using approved methods as detailed in the VESI Minimum Rules for Carrying Out HV Live Work in Victoria and organisational procedures</p>	<p>This Section is not applicable to the operation, washing or testing of HV live electrical apparatus. Refer to organisational procedures.</p> <p>HV live work shall only be undertaken after first considering performing the work under isolated and earthed conditions.</p> <p>Before HV live work is commenced, a hazard identification and JSA shall be undertaken and the associated controls applied to confirm that the work can be performed safely.</p> <p>Work on or near exposed HV live conductors shall be performed by appropriately trained and competent HV Live Workers using approved methods as detailed in the VESI Minimum Rules for</p>	No change

2013	2019	Comment
	Carrying Out HV Live Work in Victoria and organisational procedures	
3.5 Sanction for Testing (SFT) Procedures	3.5 Sanction for Testing (SFT) Procedures	
3.5.1 General	3.5.1 General	
<p>An SFT shall be used if the testing of HV electrical apparatus, when energised from either normal or test sources, has the potential to produce currents hazardous to the human body.</p> <p>An SFT and an EAP shall not be on issue on the same electrical apparatus simultaneously.</p> <p>Only one SFT shall be on issue on the same electrical apparatus at any time.</p> <p>An SFT shall be issued and cancelled only by an Authorised Electrical Operator.</p> <p>Other appropriate provisions of Part 3 shall also apply to SFT procedures.</p> <p>An SFT may be issued or relinquished by telephone or radio, subject to the statements between the Authorised Electrical Operator and the Tester in Charge being confirmed by an Authorised Recipient as a witness at each location.</p>	<p>An SFT shall be used if the testing of HV electrical apparatus, when energised from either normal or test sources, has the potential to produce currents hazardous to the human body.</p> <p>An SFT and an EAP shall not be on issue on the same electrical apparatus simultaneously.</p> <p>Only one SFT shall be on issue on the same electrical apparatus at any time.</p> <p>An SFT shall be issued and cancelled only by an Authorised Electrical Operator.</p> <p>Other appropriate provisions of Part 3 shall also apply to SFT procedures.</p> <p>An SFT may be issued or relinquished by telephone or radio, subject to the statements between the Authorised Electrical Operator and the Tester in Charge being confirmed by an Authorised Recipient as a witness at each location.</p>	<p>LF This general point discussed in regards to a query from a stakeholder regarding testing of relay where the currents created are in the order of 100mA. Considered by review as not relevant due to the equipment such as relays not meeting the definition of HV electrical apparatus.</p>
3.5.2 Application for Sanction for Testing	3.5.2 Application for Sanction for Testing	
<p>Only an Authorised Applicant who can establish that the work is properly planned and can be done safely shall make an application for an SFT. The electrical apparatus and the condition in which it is required shall be accurately defined and the proposed tests adequately described.</p> <p>Where the test is to be undertaken on electrical apparatus having more than one control authority involved then protocols shall be established for processing the application and test requirements.</p>	<p>Only an Authorised Applicant who can establish that the work is properly planned and can be done safely shall make an application for an SFT. The electrical apparatus and the condition in which it is required shall be accurately defined and the proposed tests adequately described.</p> <p>Where the test is to be undertaken on electrical apparatus having more than one control authority involved then protocols shall be established for processing the application and test requirements.</p>	No change
3.5.3 Persons Permitted to Sign on to Sanction for Testing	3.5.3 Persons Permitted to Sign on to Sanction for Testing	
<p>Persons permitted to sign on sanctions for testing shall be Authorised Testers or Instructed Persons under the control of the Authorised Tester signed on to a specific SFT.</p> <p>In the latter case, it shall be the responsibility of the Tester in Charge to ensure that such persons are placed in the charge of an Authorised Tester.</p> <p>The conditions under which an Authorised Tester shall sign onto an SFT is that the Authorised Tester:</p> <ul style="list-style-type: none"> <li>Understands the electrical apparatus covered and the limits of the SFT.</li> </ul>	<p><i>Persons permitted to sign onto a sanction for testing shall be authorised testers, authorised electrical operators, authorised recipients or instructed persons approved to work under that specific sanction for testing.</i></p> <p><i>In the case of authorised electrical operators, authorised recipients or instructed persons, it shall be the responsibility of the tester in charge or the tester responsible at remote location to ensure that such persons are placed in the charge of an authorised tester, who may be the tester in charge.</i></p>	Changed to align to BB and GBC recommendations

2013	2019	Comment
<ul style="list-style-type: none"> <li>• Is satisfied with the precautions taken.</li> <li>• Is aware of the nearest adjacent live electrical apparatus.</li> </ul> <p>The conditions under which an Instructed Person shall sign onto an SFT is that the person:</p> <ul style="list-style-type: none"> <li>• Understands instructions given on what approach is permitted to the electrical apparatus.</li> <li>• Understands instructions given on what activity is permitted to be taken in relation to the electrical apparatus.</li> <li>• Agrees to the continuous and close supervision by a nominated Authorised Tester.</li> </ul>	<p>The conditions under which an <i>authorised tester shall sign on to a sanction for testing</i> are the <i>authorised tester</i>:</p> <ol style="list-style-type: none"> <li>understands the <i>electrical apparatus covered and the limits of the sanction for testing</i>; and</li> <li>is satisfied with the precautions taken; and</li> <li>is aware of the nearest adjacent <i>live electrical apparatus</i>.</li> </ol> <p>The conditions under which an <i>authorised electrical operator or authorised recipient shall sign on to a sanction for testing</i> are that the <i>authorised electrical operator or recipient</i>:</p> <ol style="list-style-type: none"> <li>understands instructions given on what approach is permitted to the <i>electrical apparatus</i>; and</li> <li>understands instructions given on what activity is permitted to be taken in relation to the <i>electrical apparatus</i>; and</li> <li>aware of the nearest adjacent <i>live electrical apparatus</i>; and</li> <li>agrees to the general supervision by a nominated <i>authorised tester</i>.</li> </ol> <p>The conditions under which an <i>instructed person shall sign-on to a sanction for testing</i> are that the person:</p> <ol style="list-style-type: none"> <li>understands instructions given on what approach is permitted to the <i>electrical apparatus</i>; and</li> <li>understands instructions given on what activity is permitted to be taken in relation to the <i>electrical apparatus</i>; and</li> <li>is made aware of the nearest adjacent <i>live electrical apparatus</i>; and</li> <li>agrees to the continuous and closes supervision by a nominated <i>authorised tester</i>.</li> </ol>	
3.5.4 Responsibilities of Tester in Charge	3.5.4 Responsibilities of Tester in Charge	
<p>The Tester in Charge shall ensure that those members of the work party, who will be making contact or approaching within the prescribed SAD of electrical apparatus under test (including any of the test connections) shall sign on the SFT.</p> <p>The Tester in Charge shall ensure that the members of the work party are suitably experienced and trained for the work required of them and that adequate precautions are taken for the safety of all persons. When an SFT is to be relinquished for cancellation, the Tester in Charge shall:</p> <ul style="list-style-type: none"> <li>• Ensure that all persons signed on the SFT have ceased work covered</li> </ul>	<p>The Tester in Charge shall ensure that those members of the work party, who will be making contact or approaching within the prescribed SAD of electrical apparatus under test (including any of the test connections) shall sign on the SFT.</p> <p>The Tester in Charge shall ensure that the members of the work party are suitably experienced and trained <b>or instructed</b> for the work required of them and that adequate precautions are taken for the safety of all persons.</p> <p>When an SFT is to be relinquished for cancellation, the Tester in Charge shall:</p>	<p>Added 'or instructed' for where a person only provides assistance to the Tester in Charge</p>

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<p>by the SFT, have signed off and are aware that they shall remain clear.</p> <ul style="list-style-type: none"> <li>• Ensure that all test equipment is clear and will remain clear of the electrical apparatus.</li> <li>• Sign off the SFT to indicate that the SFT can be cancelled.</li> <li>• Advise the Operating Authority of the condition of the electrical apparatus at all related locations</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that all persons signed on the SFT have ceased work covered by the SFT, have signed off and are aware that they shall remain clear.</li> <li>• Ensure that all test equipment is clear and will remain clear of the electrical apparatus.</li> <li>• Sign off the SFT to indicate that the SFT can be cancelled.</li> <li>• Advise the Operating Authority of the condition of the electrical apparatus at all related locations</li> </ul>	
<p>3.5.5 Authorised Tester Responsible at the Remote Location</p>	<p>3.5.5 Authorised Tester Responsible at the Remote Location</p>	
<p>Where testing works are to be undertaken at a remote end co-ordinated under a Sanction for Test, an Authorised Tester at the remote location shall:</p> <ul style="list-style-type: none"> <li>• Assume the same responsibilities as specified for the Tester in Charge.</li> <li>• Be under direction of the Tester in Charge.</li> <li>• Advise the Tester in Charge of changes to the condition of the electrical apparatus at the remote location.</li> </ul>	<p>Where testing works are to be undertaken at a remote end co-ordinated under a Sanction for Test, an Authorised Tester at the remote location shall:</p> <ul style="list-style-type: none"> <li>• Assume the same responsibilities as specified for the Tester in Charge.</li> <li>• Be under direction of the Tester in Charge.</li> <li>• Advise the Tester in Charge of changes to the condition of the electrical apparatus at the remote location.</li> </ul>	
<p>3.6 Placing High Voltage Electrical Apparatus in Service</p>	<p>3.6 Placing High Voltage Electrical Apparatus in Service</p>	
<p>3.6.1 Clearance for Service</p>	<p>3.6.1 Clearance for Service</p>	
<p><b>NOTE: This section does not apply to protection, control systems, auxiliary circuits and LV services.</b></p>	<p><b>NOTE: This section does not apply to protection, control systems, auxiliary circuits and LV services.</b></p>	
<p>3.6.1.1 Clearance for like Electrical Apparatus at the Same Location</p>	<p>3.6.1.1 Clearance for like Electrical Apparatus at the Same Location</p>	
<p>Unless otherwise required by the Operating Authority, when replacing like electrical apparatus at the same location, organisational procedures for handing over from the constructing or maintaining authority shall include verbal advice to the Operating Authority regarding the serviceability and completion of pre-activation tests.</p>	<p>Unless otherwise required by the Operating Authority, when replacing like electrical apparatus at the same location, organisational procedures for handing over from the constructing or maintaining authority shall include verbal advice to the Operating Authority regarding the serviceability and completion of pre-activation tests.</p>	
<p>3.6.1.2 Clearance for New or Out of Commission Electrical Apparatus</p>	<p>3.6.1.2 Clearance for New or Out of Commission Electrical Apparatus</p>	
<p>Before any electrical connection is made whereby new electrical apparatus or any electrical apparatus previously out of commission can be energised by direct switching or live work procedures:</p> <ul style="list-style-type: none"> <li>• All persons associated with the work, and any others likely to be affected shall be informed that no further work is permitted on the electrical apparatus unless: <ul style="list-style-type: none"> <li>— Live work procedures are used; or</li> <li>— They are Recipients of an Access Authority.</li> </ul> </li> <li>• The Operating Authority shall be notified of the intention to make HV connections.</li> </ul>	<p>Before any electrical connection is made whereby new electrical apparatus or any electrical apparatus previously out of commission can be energised by direct switching or live work procedures:</p> <ul style="list-style-type: none"> <li>• All persons associated with the work, and any others likely to be affected shall be informed that no further work is permitted on the electrical apparatus unless: <ul style="list-style-type: none"> <li>— Live work procedures are used; or</li> <li>— They are Recipients of an Access Authority.</li> </ul> </li> <li>• The Operating Authority shall be notified of the intention to</li> </ul>	

2013	2019	Comment
<ul style="list-style-type: none"> <li>An Operating Authority shall not consider electrical apparatus being available for service until it has been handed over from the constructing or maintaining authority by written notification or by organisational procedures.</li> <li>The appropriate notification to the Operating Authority for HV apparatus shall be by means of an Apparatus Personnel Safety and Service Clearance.</li> </ul> <p>To enable the connection to be made an appropriate operational instruction shall be used.</p>	<p>make HV connections.</p> <ul style="list-style-type: none"> <li>An Operating Authority shall not consider electrical apparatus being available for service until it has been handed over from the constructing or maintaining authority by written notification or by organisational procedures.</li> <li>The appropriate notification to the Operating Authority for HV apparatus shall be by means of an Apparatus Personnel Safety and Service Clearance.</li> </ul> <p>To enable the connection to be made an appropriate operational instruction shall be used.</p>	
3.6.2 Precautions Prior to Making Electrical Apparatus Live	3.6.2 Precautions Prior to Making Electrical Apparatus Live	
<p>Before making any HV electrical apparatus live, organisational procedures shall require that:</p> <ul style="list-style-type: none"> <li>In the case of new and previously out of commission apparatus, all the necessary Personnel Safety and Service Clearance forms are completed and in the possession of the Operating Authority.</li> <li>Any Access Authorities, or other documents, which have restricted the electrical apparatus to a de-energised state, have been cancelled.</li> <li>Any pre-activation tests on the electrical apparatus have been completed satisfactorily.</li> <li>All earths and/or bonders are removed.</li> <li>A visual inspection shows that to all appearance the electrical apparatus is fit for service.</li> </ul>	<p>Before making any HV electrical apparatus live, organisational procedures shall require that:</p> <ul style="list-style-type: none"> <li>In the case of new and previously out of commission apparatus, all the necessary Personnel Safety and Service Clearance forms are completed and in the possession of the Operating Authority.</li> <li>Any Access Authorities, or other documents, which have restricted the electrical apparatus to a de-energised state, have been cancelled.</li> <li>Any pre-activation tests on the electrical apparatus have been completed satisfactorily.</li> <li>All earths and/or bonders are removed.</li> <li>A visual inspection shows that to all appearance the electrical apparatus is fit for service.</li> </ul>	
<b>PART 4</b>		
4.1 Low Voltage Electrical Safety	4.1 Low Voltage Electrical Safety	
<p>Work on or near LV network assets, shall be performed by appropriately trained and Authorised Persons in accordance with organisational procedures including the undertaking of a JSA.</p> <p>Before commencing work on or near any LV network assets, the assets shall firstly be identified as the assets associated with the work to be undertaken.</p> <p>A person working on or near live or de-energised LV electrical apparatus shall wear suitable personal protective clothing and equipment as detailed in Clause 1.1.10.</p> <p>Unless working in accordance with 4.2.1, a Safety Observer shall be used as detailed in Clause 1.1.12.</p> <p>Safe connection or reconnection of an installation to a network shall be performed in accordance with the VESI Installation Supply Connection Tests &amp; Procedures and to organisational procedures.</p>	<p>Work on or near LV network assets, shall be performed by appropriately trained and Authorised Persons in accordance with organisational procedures including the undertaking of a JSA.</p> <p>Before commencing work on or near any LV network assets, the assets shall firstly be identified as the assets associated with the work to be undertaken.</p> <p>A person working on or near live or de-energised LV electrical apparatus shall wear suitable personal protective clothing and equipment as detailed in Clause 1.1.10.</p> <p>Unless working in accordance with 4.2.1, a Safety Observer shall be used as detailed in Clause 1.1.12.</p> <p>Safe connection or reconnection of an installation to a network shall be performed in accordance with the VESI Installation</p>	<p>Deleted second instance of 'to' in last para for readability</p>

2013	2019	Comment
	Supply Connection Tests & Procedures and organisational procedures.	
<b>4.2 Work on or Near Live Low Voltage Conductors</b>	<b>4.2 Work on or Near Live Low Voltage Conductors</b>	
<p>When work is to be carried out on or near live LV network assets, approved precautions shall be taken to prevent simultaneous contact with conductors or conductive objects at different potentials. Before working on or near live LV conductors, a JSA shall be conducted to assist in the identification and control of hazards to ensure that the work can be performed safely.</p> <p>The JSA shall consider as a minimum:</p> <ul style="list-style-type: none"> <li>• The condition of the electrical apparatus, e.g. the soundness of structures, conductors and insulators.</li> <li>• Proximity of other electrical conductors or objects at different potential, e.g. communication equipment, public lighting equipment and other electrical apparatus. That is, potential second points of contact.</li> <li>• Work environment (heat, light, weather conditions).</li> <li>• Use of appropriately rated apparel and equipment.</li> <li>• The use of insulated barriers mats and covers.</li> </ul> <p>Each member of the work party shall ensure that they are aware of:</p> <ul style="list-style-type: none"> <li>• The scope and requirements of the work instruction.</li> <li>• The correct identification of the apparatus to be worked on.</li> <li>• The work to be done by the party.</li> <li>• The work method/s to be used.</li> <li>• The work each individual is to perform.</li> <li>• The PPE, tools and equipment required.</li> <li>• Any controls recorded on the JSA and any precautions to be taken.</li> </ul>	<p>When work is to be carried out on or near live LV network assets, approved precautions shall be taken to prevent simultaneous contact with conductors or conductive objects at different potentials. Before working on or near live LV conductors, a JSA shall be conducted to assist in the identification and control of hazards to ensure that the work can be performed safely.</p> <p>The JSA shall consider as a minimum:</p> <ul style="list-style-type: none"> <li>• The condition of the electrical apparatus, e.g. the soundness of structures, conductors and insulators.</li> <li>• Proximity of other electrical conductors or objects at different potential, e.g. communication equipment, public lighting equipment and other electrical apparatus. That is, potential second points of contact.</li> <li>• Work environment (heat, light, weather conditions).</li> <li>• Use of appropriately rated apparel and equipment.</li> <li>• The use of insulated barriers mats and covers.</li> </ul> <p>Each member of the work party shall ensure that they are aware of:</p> <ul style="list-style-type: none"> <li>• The scope and requirements of the work instruction.</li> <li>• The correct identification of the apparatus to be worked on.</li> <li>• The work to be done by the party.</li> <li>• The work method/s to be used.</li> <li>• The work each individual is to perform.</li> <li>• The PPE, tools and equipment required.</li> <li>• Any controls recorded on the JSA and any precautions to be taken.</li> </ul>	No change
<b>4.2.1 Persons Working Alone</b>	<b>4.2.1 Persons Working Alone</b>	
<p>Situations in which a person may work alone on live LV network assets are those where a person is:</p> <ul style="list-style-type: none"> <li>• Testing and/or inspecting a customer's installation; or</li> <li>• Engaged in metering work; or</li> <li>• An Authorised Tester engaged in the testing of protection, alarm, control and metering circuits; or</li> <li>• Operating LV electrical apparatus; or</li> <li>• Performing a task where a Distribution Network has carried out a risk assessment and has documented procedures.</li> </ul>	<p>Situations in which a person may work alone on live LV network assets are those where a person is:</p> <ul style="list-style-type: none"> <li>• Testing and/or inspecting a customer's installation; or</li> <li>• Engaged in metering work; or</li> <li>• An Authorised Tester engaged in the testing of protection, alarm, control and metering circuits; or</li> <li>• Operating LV electrical apparatus; or</li> <li>• Performing a task where a Distribution Network has carried out a risk assessment and has documented procedures.</li> </ul>	No change
<b>4.3 Low Voltage Electrical Access Permit Procedures</b>	<b>4.3 Low Voltage Electrical Access Permit Procedures</b>	

2013	2019	Comment
<p>4.3.1 Application for Access to Low Voltage Electrical Apparatus</p> <p>Before making application for LV access, consideration shall be given to:</p> <ul style="list-style-type: none"> <li>Clearly identifying the electrical apparatus to be covered and its location.</li> <li>Understanding the work to be undertaken and methodology to be employed.</li> </ul> <p>For planned LV access the Authorised Applicant shall establish that the proposed work has been properly planned and can be carried out safely.</p>	<p>4.3.1 Application for Access to Low Voltage Electrical Apparatus</p> <p>Before making application for LV access, consideration shall be given to:</p> <ul style="list-style-type: none"> <li>Clearly identifying the electrical apparatus to be covered and its location.</li> <li>Understanding the work to be undertaken and methodology to be employed.</li> </ul> <p>For planned LV access the Authorised Applicant shall establish that the proposed work has been properly planned and can be carried out safely.</p>	No change
<p>4.3.2 Preparation of Low Voltage Apparatus for Access</p> <p>An EAP shall be issued for work on or near exposed LV conductors except for the following types of work:</p> <ul style="list-style-type: none"> <li>Work on protection and control systems.</li> <li>Work on station service supply auxiliary circuits.</li> <li>LV servicing and metering.</li> <li>Public lighting (other than overhead switch wire circuit works).</li> <li>When undertaking live work techniques.</li> </ul> <p>Where an EAP is to be used:</p> <ul style="list-style-type: none"> <li>Identify the apparatus to be worked on.</li> <li>Isolate from sources of supply where practicable.</li> <li>Tag the isolation points.</li> <li>Lock or restrain isolation points where required.</li> <li>Prove de-energised, by testing.</li> <li>Bond and/or earth as close as practicable to the worksite.</li> </ul> <p>Where conductors cannot be bonded, other appropriate precautions, as well as testing, shall be taken and the Authorised Person shall advise the Recipient in Charge and record the absence of bonds/earths on the Electrical Access Authority. For work under an EAP where bonders are not in place, organisational procedures shall apply.</p> <p>Control measures shall be implemented to prevent inadvertent contact with adjacent live exposed conductors or conductive objects at different potentials.</p> <p>Consideration shall be given to protection from other sources of supply such as motor generator sets, photo voltaic cells, lightning and induction.</p>	<p>4.3.2 Preparation of Low Voltage Apparatus for Access</p> <p>An EAP shall be issued for work on or near exposed LV conductors except for the following types of work:</p> <ul style="list-style-type: none"> <li>Work on protection and control systems.</li> <li>Work on station service supply auxiliary circuits.</li> <li>LV servicing and metering.</li> <li>Public lighting (other than overhead switch wire circuit works).</li> <li>When undertaking live work techniques.</li> </ul> <p>Where an EAP is to be used:</p> <ul style="list-style-type: none"> <li>Identify the apparatus to be worked on.</li> <li>Isolate from sources of supply where practicable.</li> <li>Tag the isolation points.</li> <li>Lock or restrain isolation points where required.</li> <li>Prove de-energised, by testing.</li> <li>Bond and/or earth as close as practicable to the worksite.</li> </ul> <p>Where conductors cannot be bonded, other appropriate precautions, as well as testing, shall be taken and the Authorised Person shall advise the Recipient in Charge and record the absence of bonds/earths on the Electrical Access Authority. For work under an EAP where bonders are not in place, organisational procedures shall apply.</p> <p>Control measures shall be implemented to prevent inadvertent contact with adjacent live exposed conductors or conductive objects at different potentials.</p> <p>Consideration shall be given to protection from other sources of supply such as motor generator sets, photo voltaic cells, lightning and induction.</p>	No change
<p>4.3.3 Co-ordination of Low Voltage and High Voltage Access Switching Activities</p> <p>Where an EAP is to be issued on HV electrical apparatus and separate switching parties are used for the HV and LV isolations, a written statement (e.g. LVEAP or LVIBS) shall be completed by the person responsible for the LV isolations and handed to the Authorised Electrical</p>	<p>4.3.3 Co-ordination of Low Voltage and High Voltage Access Switching Activities</p> <p>Where an EAP is to be issued on HV electrical apparatus and separate switching parties are used for the HV and LV isolations, a written statement (e.g. LVEAP or LVIBS) shall be completed by the person responsible for the LV isolations and handed to the</p>	No change

2013	2019	Comment
<p>Operator. The Authorised Electrical Operator shall either include these isolations on the EAP or state on the EAP that LV isolations are per written statement (e.g. LV EAP or LVIBS) attached. The written statement shall be attached to the HVEAP and the two documents shall be cross-referenced. Where the HV and LV isolations have been carried out by one person or persons belonging to the same work party, a separate written LV statement (e.g. LVEAP or LVIBS) need not be issued provided that the limit of LV access and, where applicable, the LV precautions taken are recorded on the HVEAP.</p>	<p>Authorised Electrical Operator. The Authorised Electrical Operator shall either include these isolations on the EAP or state on the EAP that LV isolations are per written statement (e.g. LV EAP or LVIBS) attached. The written statement shall be attached to the HVEAP and the two documents shall be cross-referenced. Where the HV and LV isolations have been carried out by one person or persons belonging to the same work party, a separate written LV statement (e.g. LVEAP or LVIBS) need not be issued provided that the limit of LV access and, where applicable, the LV precautions taken are recorded on the HVEAP.</p>	
<p>4.3.4 Issue, Receipt and Duration of Low Voltage Access Authorities</p>	<p>4.3.4 Issue, Receipt and Duration of Low Voltage Access Authorities</p>	
<p>Where access is required to both LV and HV electrical apparatus, the Operating Authority and Authorised Applicants shall arrange for either combined access to the LV and HV electrical apparatus under an EAP or separate access arrangements for the LV and HV electrical apparatus. Refer Clauses 3.3.3 and 4.3.2. Initial earths/bonds attached to conductors shall be recorded on the Electrical Access Authority prior to issue. Where initial earths/bonds have not been attached prior to the issue of the Access Authority, it shall be noted on the Electrical Access Authority that the work party shall follow organisational procedures. Electrical Access Authorities issued on LV apparatus shall be issued and cancelled only by a person deemed competent to perform LV switching. The person issuing the Access Authority shall:</p> <ul style="list-style-type: none"> <li>• Show the electrical apparatus covered by the Electrical Access Authority.</li> <li>• Describe the precautions taken.</li> <li>• Describe and where practicable point out the nearest points of supply and adjacent live apparatus to all the initial Recipients.</li> </ul> <p>All members of the work party who will work on or near the electrical apparatus shall sign on the Electrical Access Authority. All recipients have a responsibility to ensure that the condition of the apparatus, covered by the Electrical Access Authority, is such that it shall be safe for the proposed work to be undertaken. All Recipients shall be satisfied with the precautions taken, the location of the isolation points, and the vicinity of any adjacent live electrical apparatus.</p>	<p>Where access is required to both LV and HV electrical apparatus, the Operating Authority and Authorised Applicants shall arrange for either combined access to the LV and HV electrical apparatus under an EAP or separate access arrangements for the LV and HV electrical apparatus. Refer Clauses 3.3.3 and 4.3.2. Initial earths/bonds attached to conductors shall be recorded on the Electrical Access Authority prior to issue. Where initial earths/bonds have not been attached prior to the issue of the Access Authority, it shall be noted on the Electrical Access Authority that the work party shall follow organisational procedures. Electrical Access Authorities issued on LV apparatus shall be issued and cancelled only by a person deemed competent to perform LV switching. The person issuing the Access Authority shall:</p> <ul style="list-style-type: none"> <li>• Show the electrical apparatus covered by the Electrical Access Authority.</li> <li>• Describe the precautions taken.</li> <li>• Describe and where practicable point out the nearest points of supply and adjacent live apparatus to all the initial Recipients.</li> </ul> <p>All members of the work party who will work on or near the electrical apparatus shall sign on the Electrical Access Authority. All recipients have a responsibility to ensure that the condition of the apparatus, covered by the Electrical Access Authority, is such that it shall be safe for the proposed work to be undertaken. All Recipients shall be satisfied with the precautions taken, the location of the isolation points, and the vicinity of any adjacent</p>	<p>No change</p>

2013	2019	Comment
	live electrical apparatus.	
<p>Any person involved in the issue or receipt of an Electrical Access Authority who is not satisfied with the conditions, may request to have additional precautions taken, either before the Electrical Access Authority is issued or during the currency of the work.</p> <p>After the issue of an Access Authority covering LV electrical apparatus, additional earths/bonds may be applied as necessary. These additional earths/bonds at the worksite are designated as work party earths/bonds.</p> <p>Work party earths/bonds are under the control of the work party and can be attached or removed by Authorised Persons during the currency of the Electrical Access Authority.</p> <p>Subsequent to the issue of an Electrical Access Authority additional Recipients may sign on the Electrical Access Authority, after appropriate instruction by the Recipient in Charge or by an Authorised Recipient acting with the knowledge of the Recipient in Charge.</p>	<p>Any person involved in the issue or receipt of an Electrical Access Authority who is not satisfied with the conditions, may request to have additional precautions taken, either before the Electrical Access Authority is issued or during the currency of the work.</p> <p>After the issue of an Access Authority covering LV electrical apparatus, additional earths/bonds may be applied as necessary. These additional earths/bonds at the worksite are designated as work party earths/bonds.</p> <p>Work party earths/bonds are under the control of the work party and can be attached or removed by Authorised Persons during the currency of the Electrical Access Authority.</p> <p>Subsequent to the issue of an Electrical Access Authority additional Recipients may sign on the Electrical Access Authority, after appropriate instruction by the Recipient in Charge or by an Authorised Recipient acting with the knowledge of the Recipient in Charge.</p>	No change
4.3.4.1 Persons Permitted to Sign onto Low Voltage Electrical Access Authorities Recipients of	4.3.4.1 Persons Permitted to Sign onto Low Voltage Electrical Access Authorities Recipients of	
Recipients of a LV Electrical Access Authority shall be Authorised Persons, or Instructed Persons approved to work under that specific Electrical Access Authority. In the latter case it shall be the responsibility of the Recipient in Charge to ensure that such persons are placed under the supervision of an Authorised Person.	Recipients of a LV Electrical Access Authority shall be Authorised Persons, or Instructed Persons approved to work under that specific Electrical Access Authority. In the latter case it shall be the responsibility of the Recipient in Charge to ensure that such persons are placed under the supervision of an Authorised Person.	No change
4.3.4.2 Temporary Cessation of Work or Absence of Recipients	4.3.4.2 Temporary Cessation of Work or Absence of Recipients	
Following a cessation of work or when Recipients have been temporarily absent from the worksite, upon return each Recipient shall report to the Recipient in Charge to re-confirm the conditions of the Electrical Access Authority.	Following a cessation of work or when Recipients have been temporarily absent from the worksite, upon return each Recipient shall report to the Recipient in Charge to re-confirm the conditions of the Electrical Access Authority.	No change
4.3.4.3 Change of a Low Voltage Electrical Access Authority Conditions	4.3.4.3 Change of a Low Voltage Electrical Access Authority Conditions	
The isolations specified on the Electrical Access Authority shall not be changed during the currency of the Access Authority.	The isolations specified on the Electrical Access Authority shall not be changed during the currency of the Access Authority.	No change
4.3.5 Cancellation of Low Voltage Access Authorities	4.3.5 Cancellation of Low Voltage Access Authorities	
4.3.5.1 Authorised Recipients Signing Off a Low Voltage Electrical Access Authority	4.3.5.1 Authorised Recipients Signing Off a Low Voltage Electrical Access Authority	

2013	2019	Comment
<p>It shall be the duty of each Authorised Recipient of an Access Authority to sign off before the Access Authority is relinquished and they are clear and will remain clear of the electrical apparatus.</p>	<p>It shall be the duty of each Authorised Recipient of an Access Authority to sign off before the Access Authority is relinquished and <b>to ensure</b> they are clear and will remain clear of the electrical apparatus.</p> <p><b>Before an Access Authority is relinquished, it shall be the duty of each Authorised Recipient to ensure they are clear and will remain clear of the electrical apparatus and that they have signed off.</b></p>	<p>Add the words 'to ensure' to correct grammar</p> <p>or</p> <p>Alternative text for GBC to consider</p>
<p>4.3.5.2 Responsibilities of the Recipient in Charge when Relinquishing a Low Voltage Access Authority for Cancellation</p>	<p>4.3.5.2 Responsibilities of the Recipient in Charge when Relinquishing a Low Voltage Access Authority for Cancellation</p>	
<p>When an Access Authority is to be relinquished for cancellation, the Recipient in Charge shall:</p> <ul style="list-style-type: none"> <li>• Ensure that all Authorised Recipients signed on the Access Authority have ceased work covered by the Access Authority and have signed off.</li> <li>• Ensure that all Authorised Recipients and equipment are clear and will remain clear of the electrical apparatus.</li> <li>• Confirm the removal of any work party applied bonds/earths.</li> <li>• Sign off as the Recipient in Charge and relinquish the Access Authority.</li> <li>• Advise the Operating Authority of any condition of the electrical apparatus which could affect its operation.</li> <li>• Ensure assets are fit for service prior to cancellation of permits and restoration of supply.</li> </ul>	<p>When an Access Authority is to be relinquished for cancellation, the Recipient in Charge shall:</p> <ul style="list-style-type: none"> <li>• Ensure that all Authorised Recipients signed on the Access Authority have ceased work <b>on the apparatus</b> covered by the Access Authority and have signed off.</li> <li>• Ensure that all Authorised Recipients and equipment are clear and will remain clear of the electrical apparatus.</li> <li>• Confirm the removal of any work party applied bonds/earths.</li> <li>• Sign off as the Recipient in Charge and relinquish the Access Authority.</li> <li>• Advise the Operating Authority of any condition of the electrical apparatus which could affect its operation.</li> <li>• Ensure assets are fit for service prior to cancellation of permits and restoration of supply.</li> </ul>	<p>Add 'on the apparatus' for clarity</p>
<p>4.3.5.3 Absence of a Recipient at Relinquishment</p>	<p>4.3.5.3 Absence of a Recipient at Relinquishment</p>	
<p>The practice of signing off an Access Authority on behalf of another person should be avoided. Organisation procedures shall be implemented with instructions for signing off Recipients where the Recipients could not be located.</p>	<p>The practice of signing off an Access Authority on behalf of another person should be avoided. Organisation procedures shall be implemented with instructions for signing off Recipients where the Recipients could not be located.</p>	<p>No change</p>
<p><b>PART 5</b></p>		
<p>5.1 ELECTRICAL SAFETY PROCEDURES</p>	<p>5.1 ELECTRICAL SAFETY PROCEDURES</p>	
<p>5.1.1 General</p>	<p>5.1.1 General</p>	
<p>A Distribution Network shall have procedures to facilitate a safe system of access by persons, not under the control of the Distribution Network, to work in the vicinity of electrical apparatus. On receipt of notification (e.g. No Go Zone enquiry) these procedures shall be applied. For the purposes of this section, persons not under the control of the Distribution Network are persons, companies or organisations that have no contractual obligation to the Distribution Network and are not</p>	<p>A Distribution Network shall have procedures to facilitate a safe system of access by persons, not under the control of the Distribution Network, to work in the vicinity of electrical apparatus. On receipt of notification (e.g. No Go Zone enquiry) these procedures shall be applied. For the purposes of this section, persons not under the control of the Distribution Network are persons, companies or organisations</p>	

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<p>performing work for the Distribution Network. The Distribution Network shall ensure appropriate instruction is provided on the electrical hazards. The Distribution Network shall instruct the person controlling the work that they are responsible for having a safe system of work in place to avoid the risk from electrical hazard and will ensure all persons are aware of the safe system of work. For work by other network Distribution Networks, on or adjacent to Network Assets, refer to Clause 2.1.6.</p>	<p>that have no contractual obligation to the Distribution Network and are not performing work for the Distribution Network. The Distribution Network shall ensure appropriate <b>advice</b> is provided <b>regarding</b> the electrical hazards. The Distribution Network shall <b>direct</b> the person controlling the work that they are responsible for having a safe system of work in place to avoid the risk from electrical hazard and will ensure all persons are aware of the safe system of work. For work by other <b>electrical asset owners</b> on or adjacent to Network Assets, refer to Clause 2.1.6.</p>	<p>Replace 'instruction' with 'advice' as instruction infers training. NGZ processes are not a training exercise but an administrative, engineering or isolation control for electrical hazards. Replace 'on' with 'regarding' for readability. Replace 'instruct' with 'direct' for same reasons</p> <p>Replace 'network Distribution Networks' with electrical asset owners to correct grammar and better align with 2.1.6</p>
5.1.2 Permit to Work Adjacent to Network Assets	5.1.2 Permit to Work Adjacent to Network Assets	
<p>Where the safe system of access referred to in Clause 5.1.1 is used it shall include the use of the Permit to Work Adjacent to Network Assets. When a Permit to Work Adjacent to Network Assets is required the Distribution Network shall require a written application to be submitted. The application shall include sufficient information to enable the Distribution Network to determine appropriate control measures to enable safe access. The procedure for the Permit to Work Adjacent to Network Assets shall include:</p> <ul style="list-style-type: none"> <li>• An approved issuer who is an Authorised Recipient or an Authorised Electrical Operator.</li> <li>• Nominated person in charge of the work including worksite contact details.</li> <li>• Control measures (precautions) undertaken by the Distribution Network.</li> <li>• Instructions given to the nominated person in charge of the work.</li> <li>• A process for the issue and cancellation.</li> </ul>	<p>Where the safe system of access referred to in Clause 5.1.1 is used it shall include the use of the Permit to Work Adjacent to Network Assets. When a Permit to Work Adjacent to Network Assets is required the Distribution Network shall require a written application to be submitted. The application shall include sufficient information to enable the Distribution Network to determine appropriate control measures to enable safe access. The procedure for the Permit to Work Adjacent to Network Assets shall include:</p> <ul style="list-style-type: none"> <li>• An approved issuer who is an Authorised Recipient or an Authorised Electrical Operator.</li> <li>• Nominated person in charge of the work including worksite contact details.</li> <li>• Control measures (precautions) undertaken by the Distribution Network.</li> <li>• Instructions given to the nominated person in charge of the work.</li> <li>• A process for the issue and cancellation.</li> </ul>	No change
5.1.3 Work on Abandoned Underground Cables	5.1.3 Work on Abandoned Underground Cables	
<p>Abandoned assets of an electrical network are deemed unserviceable and will not be returned to service. Abandoned assets may not be recorded on the Distribution Networks asset database. For work by persons (not under the control of the Distribution Network) on abandoned electrical assets, the use of a safe system of access shall be provided by the Distribution Network in accordance with organisational procedures.</p>	<p>Abandoned assets of an electrical network are deemed unserviceable and will not be returned to service. <b>In some instances</b> abandoned assets may not be recorded on the Distribution Networks asset database. For work by persons (not under the control of the Distribution Network) on abandoned electrical assets, the use of a safe system of access shall be provided by the Distribution Network in accordance with organisational procedures.</p>	Add 'In some instances..' as current text infers it is voluntary to record or not record

2013	2019	Comment
<p>5.1.4 Vegetation Management Adjacent to Network Assets</p> <p>Persons carrying out vegetation management activities shall comply with the No Go Zone guidelines. The only exceptions shall be organisations operating under standards established by Energy Safe Victoria and in accordance with Distribution Network Access procedures.</p>	<p>5.1.4 Vegetation Management Adjacent to Network Assets</p> <p>Persons carrying out vegetation management activities shall comply with the No Go Zone guidelines. The only exceptions shall be organisations operating under standards established by Energy Safe Victoria and in accordance with Distribution Network Access procedures.</p>	<p>Discuss with GBC. May need additional text to cover instances where Live HV cutters are engaged directly by a council in a process approved by the network operator. (The ESV rules do not cover live HV)</p>
<p>5.1.5 Work on Customer Assets Connected to Network Assets</p> <p>A Distribution Network shall have a process to facilitate access to customer owned assets, that are reliant on isolation by the Distribution Network.</p>	<p>5.1.5 Work on Customer Assets Connected to Network Assets</p> <p>A Distribution Network shall have a process to facilitate access to customer owned assets that are reliant on isolation by the Distribution Network.</p>	<p>Delete comma between 'assets' and 'that' for grammar purposes</p>
<p>5.1.5.1 Procedure for Isolation of a Customer's Low Voltage Supply (SILV)</p> <p>A Statement of Isolation LV (SILV) shall only be issued to the customer by an Authorised Recipient or an Authorised Electrical Operator when isolation of a customer's electricity supply is reliant on a Distribution Networks' assets; that is:</p> <ul style="list-style-type: none"> <li>• Pole mounted isolators/fuses; or</li> <li>• Any isolation point within a substation enclosure or switch/fuse cubicle, or</li> <li>• Where the customer LV isolation is reliant upon HV switching of the Distribution Network.</li> </ul> <p>The SILV states the condition of isolation of the customer's LV supply from the Distribution Network assets and does not by itself authorise work on the customer's electrical apparatus.</p> <p>The conditions of isolation and any applied earthing/bonding shall remain unchanged until the statement is cancelled.</p> <p>The SILV shall where practicable detail all relevant precautions taken for the safety of the work party/ies.</p> <p>The SILV process shall include:</p> <ul style="list-style-type: none"> <li>• The customer's request for isolation of supply.</li> <li>• Indication from the customer of the works to be undertaken.</li> <li>• The formal issue of a SILV to the customer's nominated representative.</li> <li>• The formal cancellation of the SILV by the customer's nominated representative.</li> <li>• Completion of any other documentation to enable energisation of supply.</li> </ul>	<p>5.1.5.1 Procedure for Isolation of a Customer's Low Voltage Supply (SILV)</p> <p>A Statement of Isolation LV (SILV) shall only be issued to the customer by an Authorised Recipient or an Authorised Electrical Operator when isolation of a customer's electricity supply is reliant on a Distribution Networks' assets; that is:</p> <ul style="list-style-type: none"> <li>• Pole mounted isolators/fuses; or</li> <li>• Any isolation point within a substation enclosure or switch/fuse cubicle, or</li> <li>• Where the customer LV isolation is reliant upon HV switching of the Distribution Network.</li> </ul> <p>The SILV states the condition of isolation of the customer's LV supply from the Distribution Network assets and does not by itself authorise work on the customer's electrical apparatus.</p> <p>The conditions of isolation and any applied earthing/bonding shall remain unchanged until the statement is cancelled.</p> <p>The SILV shall where practicable detail all relevant precautions taken for the safety of the work party/ies.</p> <p>The SILV process shall include:</p> <ul style="list-style-type: none"> <li>• The customer's request for isolation of supply.</li> <li>• Indication from the customer of the works to be undertaken.</li> <li>• The formal issue of a SILV to the customer's nominated representative.</li> <li>• The formal cancellation of the SILV by the customer's nominated representative.</li> <li>• Completion of any other documentation to enable energisation of supply.</li> </ul>	<p>No change</p>
<p>The SILV shall include a section for the customer to notify the Distribution Network that it is safe to restore supply at the completion of works and shall also have reference to any other formal documentation e.g.</p>	<p>The SILV shall include a section for the customer to notify the Distribution Network that it is safe to restore supply at the completion of works and shall also have reference to any other</p>	<p>Delete (Installations) as these regulations sunset in Dec 2019</p>

2013	2019	Comment
Certificate of Electrical Safety (CES) as per the Electricity Safety (Installations) Regulations.	formal documentation e.g. Certificate of Electrical Safety (CES) as per the Electricity Safety Act and Regulations.	
<b>5.1.5.2 High Voltage Customer Supply Isolations</b>	<b>5.1.5.2 High Voltage Customer Supply Isolations</b>	
Isolations of HV customer supplies are covered by the SCAP process, refer Clause 3.3.3.5.	Isolations of HV customer supplies are covered by the SCAP process, refer Clause 3.3.3.5.	No change