

Work in Substations - General

Summary:

This document supports the Power System Safety Rules and its requirements assembled under 'Work in Substations – General' Category 3 and apply to all persons working within substations covering activities or work that will not affect the Power System.

This includes general facilities and yard maintenance, including low voltage electrical work such as air conditioning, and construction activities.

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When referring to TransGrid's policies, frameworks, procedures or work instructions, please use the latest version published on the intranet.

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1. Overview

1.1. Purpose

This document supports the Power System Safety Rules and its requirements assembled under 'Work in Substations – General' Category 3. The document describes instructions for general work in substations and is complementary to the Power System Safety Rules, advising on how to apply these principles for different types of work.

1.2. Policy Base

Document No.	Document
GD SR G1 100	Power System Safety Rules (PSSR or the Rules)

1.3. Reference Documents

Document No.	Document
-	Health and Safety Risk Assessment
	Inspection Test Licencing and Competency
-	Contractor Health Safety and Environment Management
GD SR G3 152	Safe Work Practices on High Voltage Substation Apparatus
GD SR G3 172	Safe Work Practices on HV Cables
GM AS S2 012	Substation Emergency Response Manuals Template
GD SR G4 159	Mobile Plant in the Vicinity of High Voltage Conductors
	Code of Practice – Managing electrical risks in the workplace

1.4. Scope

This work instruction applies to all persons working within substations and covers activities for work that will not affect the Power System. This includes general facilities and yard maintenance, including low voltage electrical work such as air conditioning, and construction activities.

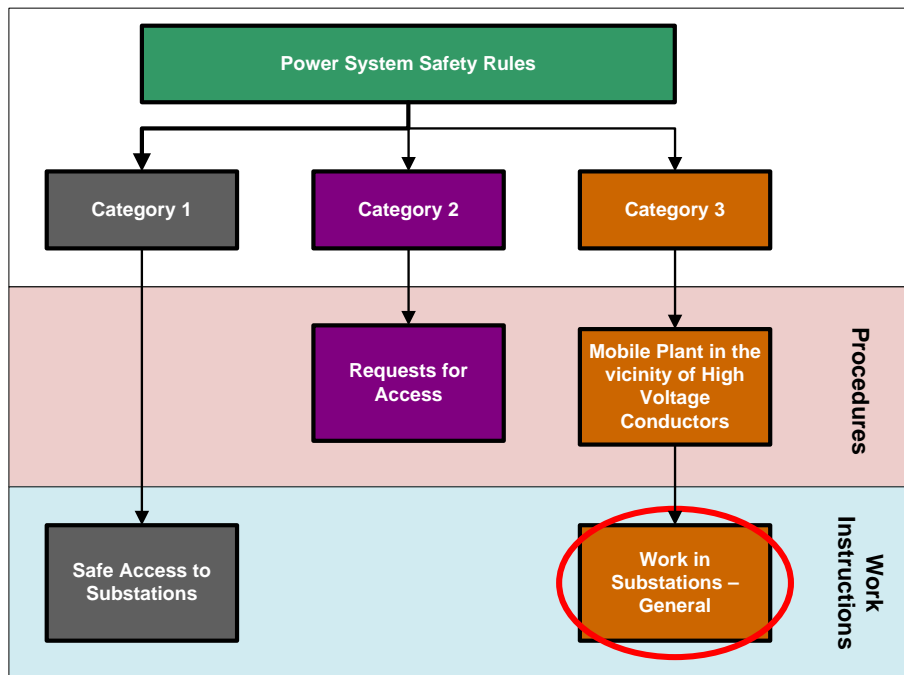
This is in addition to the requirements of any Legislation, Codes of Practice or Guidelines, as applicable.

1.5. Accountability

Responsible person	Responsibility
Manager/Health, Safety and Environment	Maintenance and ownership of this work instruction
Mgr – Training	Develop training package for implementation
Authorised persons	Comply with this work instruction
Instructed Persons	Comply with directions of the authorised person

1.6. Document Location

Block diagram showing position of document in relation to others



2. Work in Substations - General

This instruction assembles knowledge required for personnel to be authorised Category 3 under the Rules.

The work instructions detailed in this document cover the following types of work:

- Work within Substation Buildings and Car Parks (Cat 3.1)
- Work in Switchyards and High Voltage Areas not affecting Substation Apparatus (Cat 3.2)
- Work in Switchyards or High Voltage Areas affecting Substation Apparatus (Cat 3.3)

2.1. Personal Protective Equipment (PPE)

All persons shall observe the additional PPE requirements for work on site.

2.3.3. Substation Workplace Risk Assessment (WRA)

Each substation has a workplace risk assessment that defines the control measures to be implemented by all personnel undertaking work on the site. This shall be reviewed prior to work commencing.

2.3.4. Documented Pre Work Risk Assessment (PWRA)

A documented risk assessment shall be completed prior to commencing any work and updated should any hazards change or new hazards arise. The documented risk assessment shall include a review of the substation workplace risk assessment and assessment of the risks associated with the tasks to be performed.

2.3.5. Emergency Response

All persons are required to be aware of [Substation Emergency Response Manuals Template](#) at any site at which they are working.


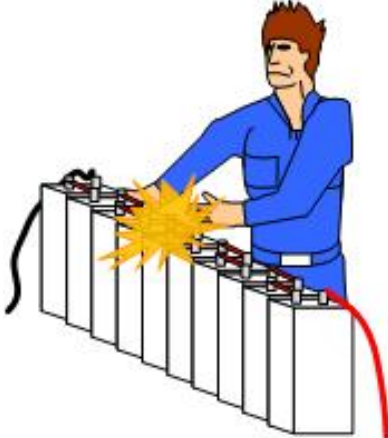
3. Work in Substations

The following sections list the hazards encountered within substations and controls to be implemented.

3.1. Work within Substation Buildings and Car Parks

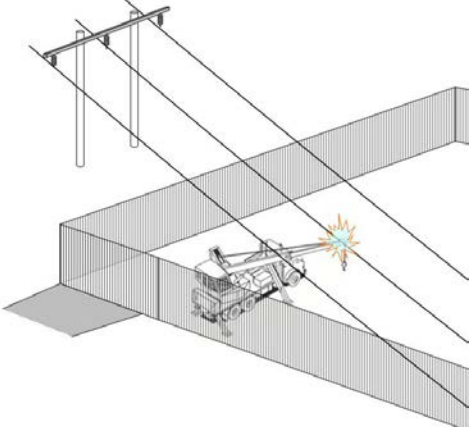
3.1.1. Substation Building Hazards and Controls 1 – 2

The hazards listed below shall be reviewed as part of the pre-work risk assessment for Work in Substation Buildings.

No	Hazard	Risk	Control
1	Use of electrical leads and appliances	<p>Electrocution or injury. Not all substation outlets are RCD protected.</p> 	<p>All electrical leads and appliances shall be tested and tagged.</p> <p>All damaged leads and appliances shall be removed from service and reported.</p> <p>Portable RCD devices shall be used at all times.</p>
2	Battery rooms & associated systems	<p>Injury as a result of DC electrical contact, fumes in battery rooms or explosive battery failures.</p> 	<p>Ensure controls noted on battery room doors are implemented.</p> <p>Confirm ventilation is adequate prior to entry.</p> <p>Ensure eye wash provisions are available</p> <p>Review site Workplace Risk Assessment.</p>

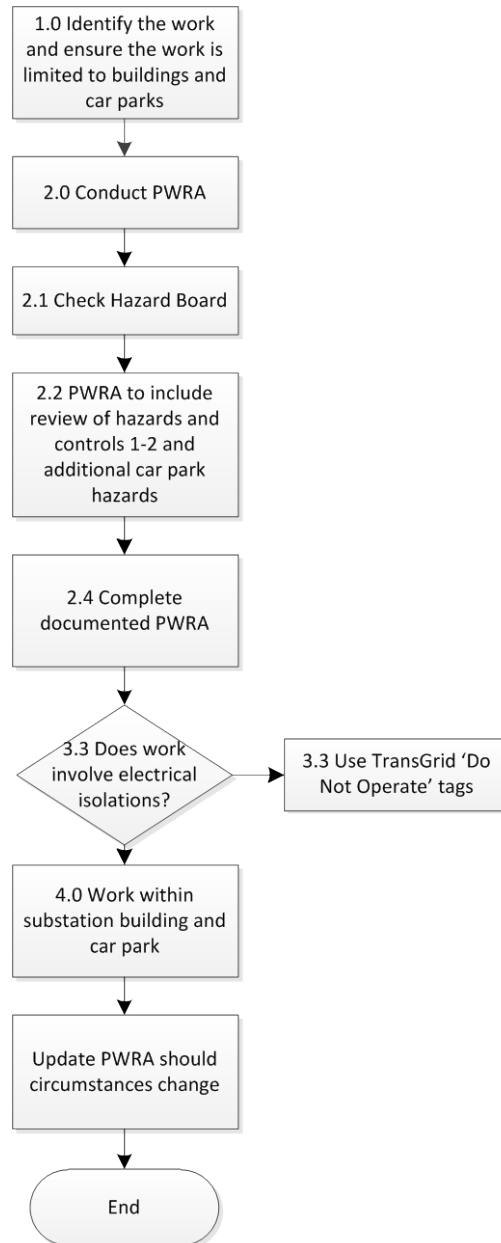
3.1.2. Additional Substation Car Park Hazards and Controls

The hazards listed below shall be reviewed as part of the pre-work risk assessment for Work in Substation Car Parks.

Hazard	Risk	Control
Overhead Lines	<p>Contact with or near approach to a live high voltage overhead line can cause severe injuries or death.</p>  <p>When vertically extendible equipment, such as cranes, elevated work platforms, etc. are being used in the vicinity of live high voltage exposed conductors, danger may arise due to the possibility of the equipment coming on or near these conductors.</p>	<p>Personnel and plant clearance distances shall be maintained as specified in 'Safe Approach Distances to exposed conductors' at all times.</p> <p>Refer to 'PSSR' Attachment B for further information.</p> <p>This is in addition to the requirements of any Legislation, Codes of Practice or Guidelines, including the need for a safety observer, as applicable.</p>

3.1.3. Work within Substation Buildings and Car Parks - Process and Instruction

Work within Substation Buildings and Car Parks – Flow Chart



Work within Substation Buildings and Car parks – Instruction

Step	Action	Resources
1.	<p>Identify the work and ensure the work is limited to buildings and car parks. Examples include:</p> <p>1.1 General facilities work</p> <ul style="list-style-type: none"> • Cleaning • Any other work that does not require excavation or access to the switchyard that can be undertaken without disturbing the operation of the substation. <p>1.2 Electrical Work</p> <ul style="list-style-type: none"> • Electronic gates; and • Work on building services not affecting the operation of the substation, such as air conditioning or indoor lighting. 	Person authorised 3.1
2.	<p>Conduct a Pre-Work Risk Assessment (PWRA)</p> <p>1.3 Check the local Hazard Identification Board for any temporary hazard notifications.</p> <p>1.4 Review substation hazards and controls 1 – 2 and additional substation car park hazards and controls</p> <p>1.5 Identify any additional hazards and apply appropriate control measures.</p> <p>1.6 Complete a documented pre-work risk assessment.</p> <p>1.7 Update PWRA if hazards change or new hazards arise</p>	Person authorised 3.1 Substation Building Hazards and Controls 1 – 2 Additional Substation Car Park Hazards and Controls
3.	<p>Electrical Work</p> <p>3.1 All low voltage electrical work shall be carried out in accordance with any Legislation, Codes of Practice or Guidelines, as applicable.</p> <p>3.2 Confirm the qualifications of persons performing electrical work are appropriate for the proposed work.</p> <p>3.3 If isolations are required use TransGrid approved Do Not Operate Tags.</p>	Code of Practice ‘Managing Electrical Risks in the Workplace’ Person authorised 3.1 Qualified and trained in Electrical Work.
4.	<p>Work within a substation building or car park</p> <p>3.4 Apply all of the controls and safe guards identified in the PWRA.</p> <p>3.5 Maintain safe approach distances at all times</p> <p>3.6 Comply with the requirements of Warning tags and Do Not Operate tags.</p> <p>3.7 Note any new hazards on the local Hazard Identification Board at the first reasonable opportunity.</p>	Person authorised 3.1

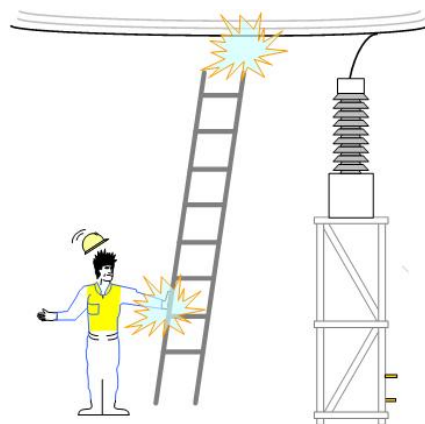
(Source: ‘Power System Safety Rules’ GD SR G1 100 & ‘Health and Safety Risk Assessment’)


3.2. Work in Switchyards or High Voltage Areas not affecting Substation Apparatus

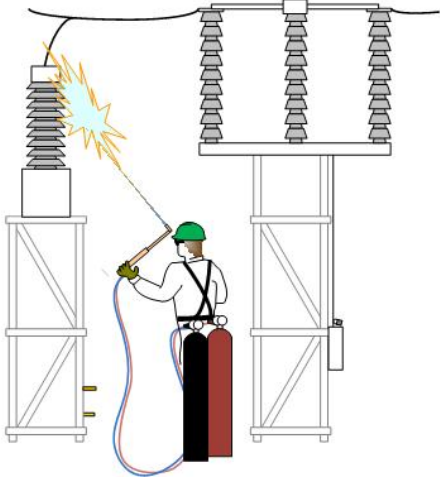
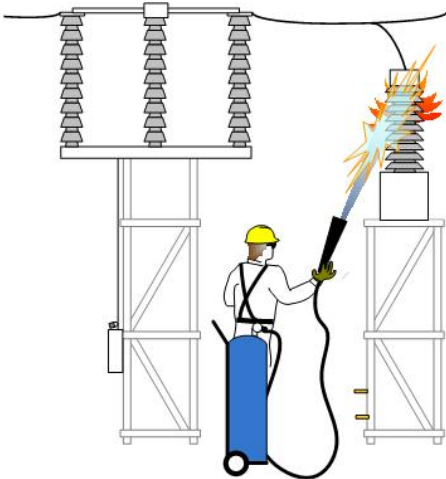
3.2.1. Switchyards and High Voltage Areas Hazards and Controls 3 – 11

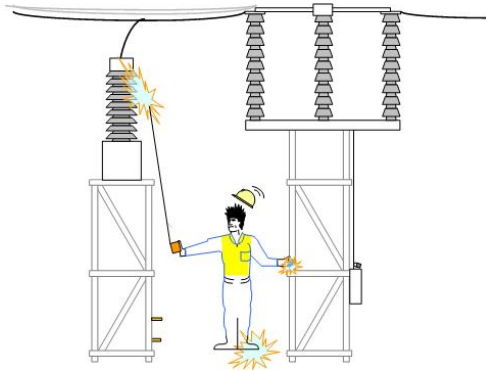
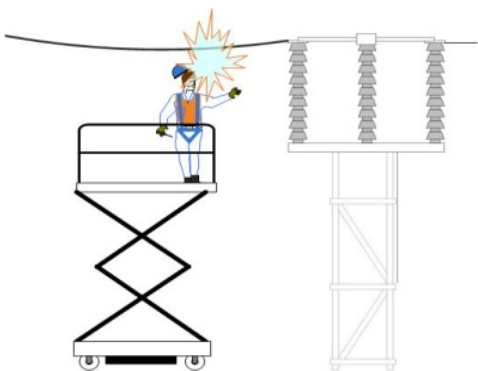
The hazards listed below shall be reviewed as part of the pre-work risk assessment for Work in Switchyards or High Voltage Areas.

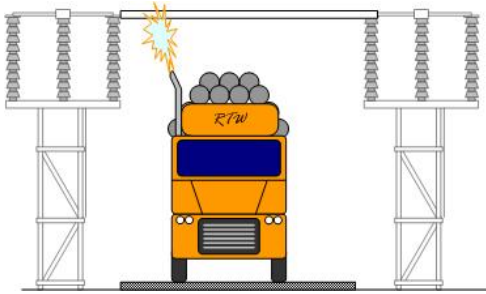
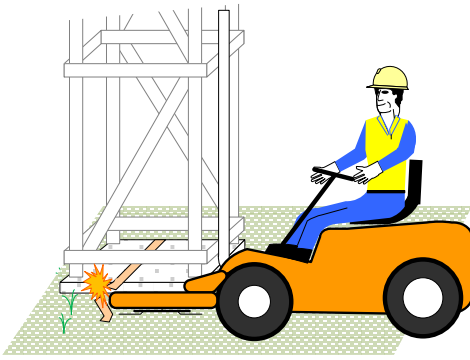
No	Hazard	Risk	Control
3	Enclosed Spaces including GIS switchrooms, basements and tunnels	Injuries may result in exposure to HV from cable sheaths, earthing systems, close proximity to moving parts on switchgear and possibility of engulfment due to release of SF6 gas.	<p>Site specific induction</p> <p>No works around SF6 equipment unless planned and documented risk assessments & control measures adopted.</p> <p>Report any incidental mechanical impacts on SF6 filled equipment and undertake appropriate corrective actions where necessary.</p>
4	Near Approach	<p>Contact with or near approach to a live high voltage exposed conductor can cause severe injuries or death, which can occur by the following means:</p> <ul style="list-style-type: none"> • By touching the live high voltage exposed conductor with any portion of the body. • By bringing any portion of the body so close to the live high voltage exposed conductor that an arc occurs between the conductor and the body. • By bringing close to or touching the live high voltage exposed conductor with material or equipment, other than equipment specially designed for such contact. 	<p>Personnel and plant clearance distances shall be maintained as specified in 'Safe Approach Distances to exposed conductors' at all times.</p> <p>Refer to 'PSSR' Attachment B for further information.</p>



No	Hazard	Risk	Control
5	Electric Arcs	<p>Serious injury can result from burns caused by electric arcs.</p>  <p>High voltage exposed conductors are arranged to be surrounded by sufficient air to prevent formation of an arc, but if an object moves to within a close proximity to a live conductor an arc will form.</p> <p>Arcs are avoided under normal switching practices methods, but may be formed during abnormal practices such as attempting to apply an earth to a live high voltage exposed conductor or by opening a disconnecter which is carrying current (current is normally interrupted by a circuit breaker).</p> <p>Such electric arcs may be the source of an explosion which will scatter molten material and radiate intense light and heat and can seriously injure a person in the immediate vicinity by burns or by damage to the eyes.</p>	<p>Personnel and plant clearance distances shall be maintained as specified in 'Safe Approach Distances to exposed conductors' at all times.</p> <p>Refer to 'PSSR' Attachment B for further information.</p>

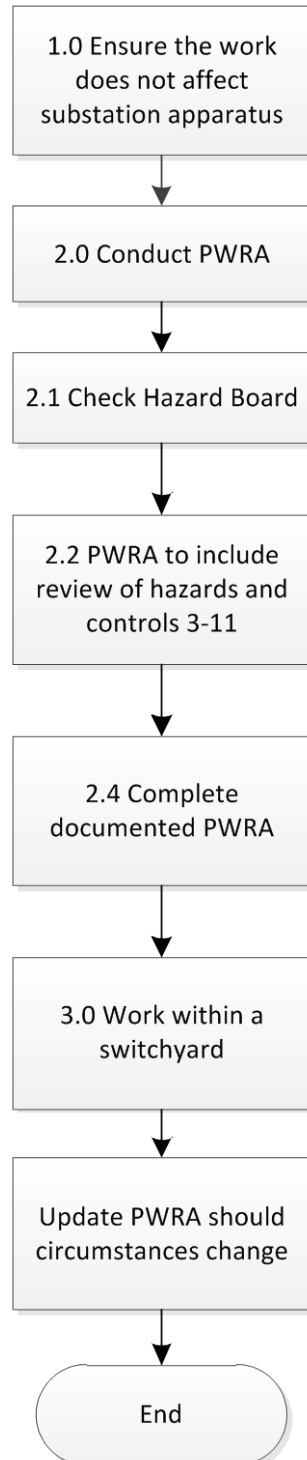
No	Hazard	Risk	Control
6	Fire in the Vicinity of Live High Voltage Exposed conductors	<p>Fires in the vicinity of live high voltage exposed conductors can cause an arc to form along the path of the flame should a tongue of flame or vapour come near or make contact with these conductors.</p>  <p>LPG equipment, welding torches and similar equipment can, under certain circumstances, throw a long stream of flame.</p>	<p>Personnel and plant clearance distances shall be maintained as specified in 'Safe Approach Distances to exposed conductors' at all times.</p> <p>Refer to 'PSSR' Attachment B for further information.</p> <p>Care shall be exercised when using flame-producing equipment near live high voltage exposed conductors.</p> <p>Fire fighting equipment shall not be used unless the HV equipment has been made safe to do so.</p> <p>Persons are only to act within the limits of their training and abilities when fighting uncontrolled fires.</p> <p>The Fire Brigade shall not be given access unless the TransGrid site controller has given approval for access.</p>
7	Suitability of Fire Extinguishers	<p>Fire extinguishers which are marked 'Suitable for use on Electrical Fires' are intended for use on low voltage circuits only.</p> 	<p>Fire extinguishers shall not be used on High Voltage electrical fires.</p> <p>High Voltage electrical fires shall be reported and any fire fighting shall be under the direction of a TransGrid controller.</p> <p>Persons are only to act within the limits of their training and abilities when fighting uncontrolled fires.</p>

No	Hazard	Risk	Control
8	Use of Metallic Tapes and Other Conductive Equipment	<p>Danger can arise when making measurements using steel tapes, metal reinforced linen tapes and long steel rules in the vicinity of conductors.</p>  <p>Ladders, lengths of conduit or pipe and other similar long equipment can be a hazard if not handled correctly to keep them from coming near high voltage exposed conductors.</p>	<p>Steel tapes, metal reinforced linen tapes and long steel rules are prohibited items and shall not be used in switchyards.</p> <p>Most linen tapes are metal reinforced and for this reason, shall also not be used in switchyards. Fibre glass tapes shall be used in such locations.</p> <p>Ladders, lengths of conduit or pipe and other similar long equipment are to be carried below shoulder height. This may require two persons to manage.</p> <p>Personnel and plant clearance distances shall be maintained as specified in 'Safe Approach Distances to exposed conductors' at all times.</p> <p>Refer to 'PSSR' Attachment B for further information.</p>
9	Use of Vertically Extendible Equipment	<p>When vertically extendible equipment, such as cranes, elevated work platforms, etc. are being used in the vicinity of live high voltage exposed conductors, danger may arise due to the possibility of the equipment coming on or near these conductors.</p>  <p>This may occur by the sudden unexpected movement of the equipment on unstable surfaces or by the misjudgement of safe approach distances.</p>	<p>Personnel and plant clearance distances shall be maintained as specified in 'Safe Approach Distances to exposed conductors' at all times.</p> <p>Refer to 'PSSR' Attachment B and the procedure Mobile Plant in the Vicinity of High Voltage Conductors for further information.</p> <p>This is in addition to the requirements of any Legislation, Codes of Practice or Guidelines, including the need for a safety observer, as applicable.</p>

No	Hazard	Risk	Control
10	Large vehicles, vertically mounted exhausts and long antennae	<p>Large vehicles such as semi-trailers could potentially come within minimum safe approach distances while travelling through a switchyard. Similarly, long antennae may create a similar hazard in some circumstances.</p>  <p>The possibility of coming within safe approach distances is increased at lower voltage levels due to lower clearance.</p>	<p>Personnel and plant clearance distances shall be maintained as specified in 'Safe Approach Distances to exposed conductors' at all times.</p> <p>Refer to 'PSSR' Attachment B and the procedure Mobile Plant in the Vicinity of High Voltage Conductors for further information.</p> <p>Persons must be authorised to category 3.3 to supervise vehicles delivering goods, but shall consider the risks prior to allowing entry and during travel within the switchyard. The category 3.3 authorised person shall ensure that they are able to effectively supervise them at all times within the switchyard.</p>
11	Earthing Systems	<p>Damage to earthing system from grass cutting or digging.</p>  <p>If the earthing system is damaged dangerous voltages may occur.</p>	<p>No digging is permitted under the category 3.2 level of authorisation.</p> <p>Grass cutting height shall be adjusted so dirt is not exposed when cutting.</p> <p>Cutting blades shall be enclosed to ensure side contact is not possible.</p> <p>Care shall be taken when cutting grass around all structure footings.</p> <p>Any damage to earthing systems must be reported immediately. Do not approach or attempt repairs.</p>

3.2.2. Work in Switchyards or High Voltage Areas not affecting Substation Apparatus - Process and Instruction

Work in Switchyards or High Voltage Areas not affecting Substation Apparatus – Flow Chart



Work in Switchyards or High Voltage Areas not affecting Substation Apparatus – Instruction

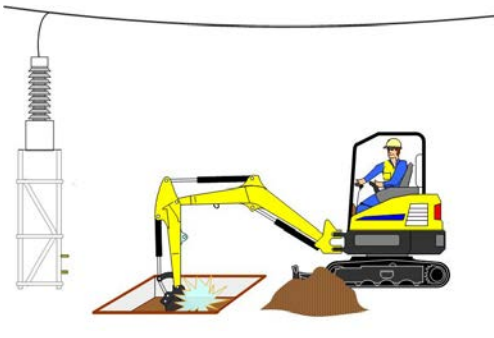
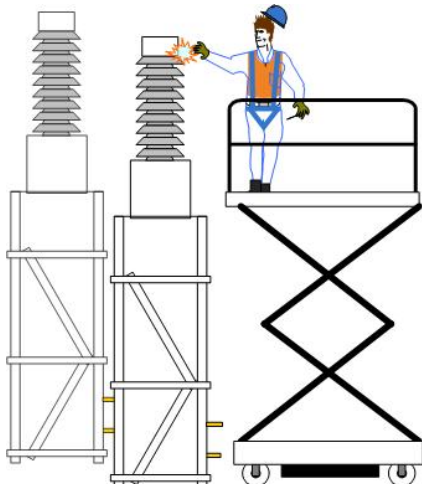
Step	Action	Resources
1.	<p>Ensure the work does not affect substation apparatus. Examples include:</p> <ul style="list-style-type: none"> 1.1 Grass cutting 1.2 Pest Control 1.3 Building maintenance 1.4 Painting 1.5 Plumbing 1.6 Fire protection maintenance 	Person Authorised 3.2
2.	<p>Conduct pre-work risk assessment</p> <ul style="list-style-type: none"> 1.7 Check the local Hazard Identification Board for any temporary hazard notifications. 1.8 Review switchyard hazards and controls 3 – 11. 1.9 Identify any additional hazards and control measures required. 1.10 Complete a documented pre-work risk assessment. 1.11 Update PWRA if hazards change or new hazards arise 	Switchyard Hazards and Controls 3 – 11
3.	<p>Work within a switchyard</p> <ul style="list-style-type: none"> 3.1 Apply all of the controls and safe guards identified in the pre-work risk assessment. 3.2 Maintain safe approach distances 3.3 Use tools and equipment in accordance with approved procedures. 3.4 All persons shall comply with the requirements of Warning tags and Do not operate tags. 3.5 Note any new hazards on the local Hazard Identification Board at the first reasonable opportunity. 	Person authorised 3.2

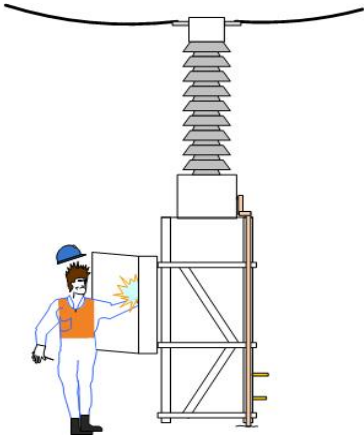
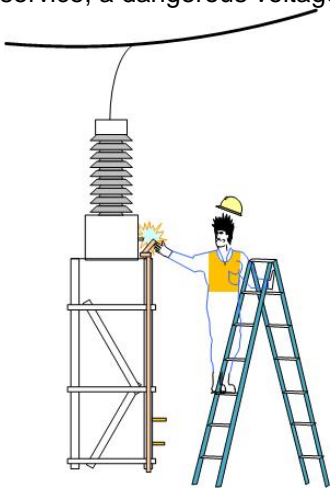
(Source: 'Power System Safety Rules' GD SR G1 100 & 'Health and Safety Risk Assessment')

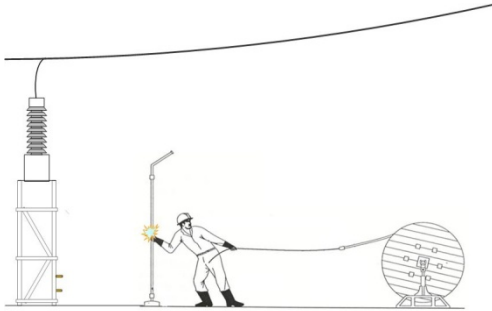

3.3. Work in Switchyards or High Voltage Areas affecting Substation Apparatus including earth grids

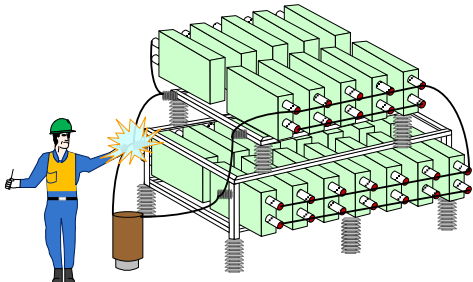
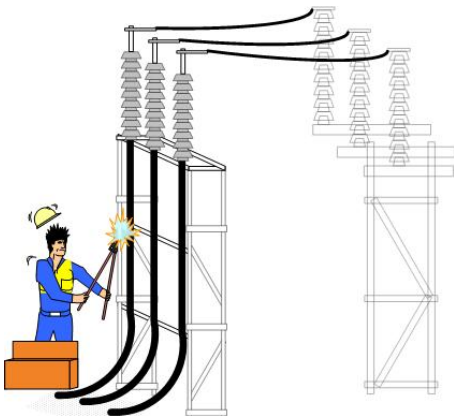
3.3.1. Switchyards or High Voltage Areas Hazards and Controls 12 – 19

The additional hazards listed below shall be reviewed as part of the pre-work risk assessment for Work in Switchyards or High Voltage Areas affecting substation apparatus including earth grids.

No	Hazard	Risk	Control
12	Buried Services	<p>Any excavation or digging in a switchyard has the possible danger of contact with buried services including: HV or LV cables, earthing systems, gas, water, sewer, fire services and telecoms cables.</p> 	<p>A TransGrid Excavation Permit is required for any excavation in TransGrid premises and excavating plant shall be earthed in an approved manner whilst digging in a switchyard.</p> <p>Affected services may need to be isolated and earthing grid may need to be bridged by Cat 5.5 person</p> <p>Refer to Safe Work Practices on HV Substation Apparatus and the procedure Mobile Plant in the Vicinity of High Voltage Conductors for further information.</p>
13	Induced Voltages	<p>There is a danger of induced voltages when carrying out work on isolated electrical apparatus that is located close to live electrical apparatus. Such induction may result either from in-service equipment, high voltage switching or electrical faults in adjacent equipment.</p> 	<p>Avoid contact.</p> <p>Use an approved method to create and work in an insulated or equipotential area.</p> <p>Bonded work areas shall be applied to ensure equipotential conditions are maintained.</p> <p>For example: support structures, scaffolding or elevating work platforms used to provide access to disconnected apparatus may require bonding to the equipment being worked on.</p> <p>Refer to Safe Work Practices on HV Substation Apparatus or a Category 5.5 authorised person for further information.</p>

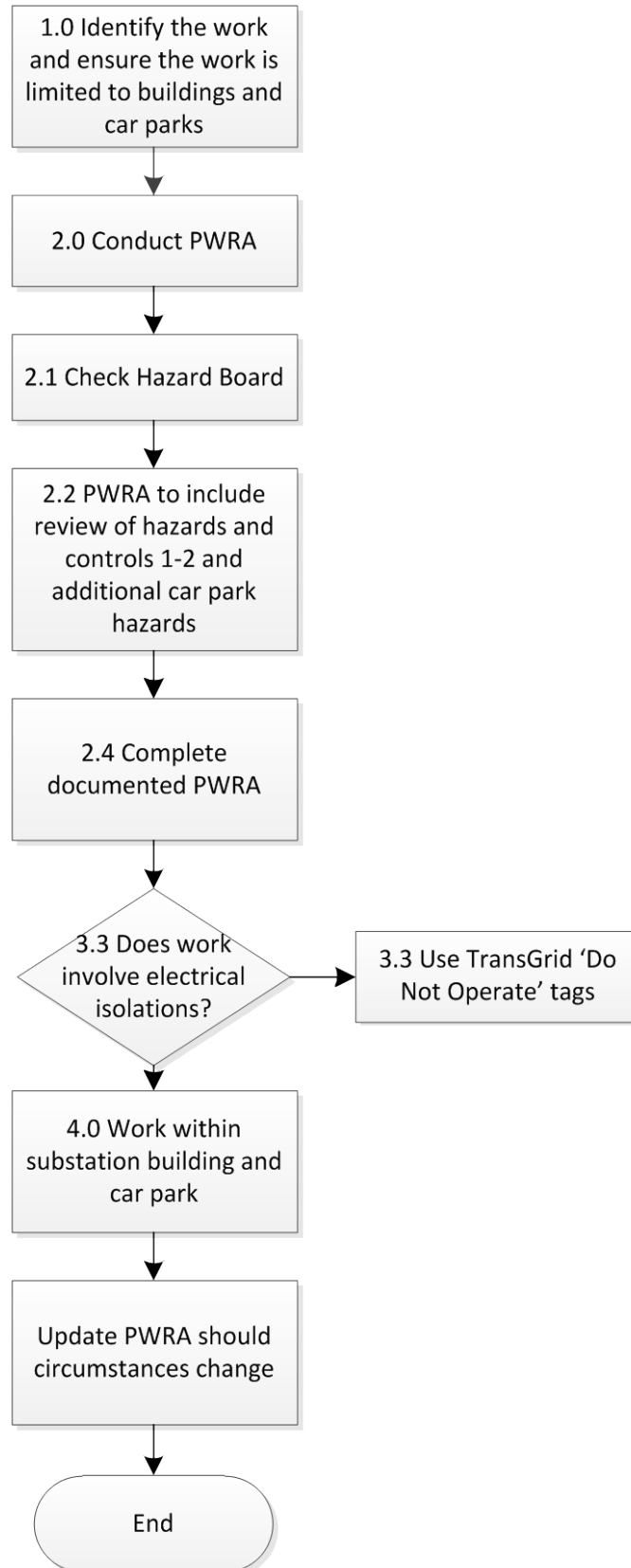
No	Hazard	Risk	Control
14	High Voltages from Unusual Sources	<p>There are some ways in which High Voltage can occur on apparatus which normally carries Low Voltage and particular care is necessary to prevent this.</p>  <p>For example, dangerous voltages may exist on un-bonded cable sheaths or current transformer secondary circuits that are open circuit when the primary circuit is carrying current.</p>	<p>Care is necessary when working on low voltage equipment and circuits to ensure that nothing occurs which can bring about such a condition.</p> <p>Cables shall be fully discharged by a Category 5.5 authorised person using a suitable means of earthing before approaching, or working on or near the apparatus, and before working on the apparatus after electrical testing has been performed.</p> <p>Refer to a Category 5.5 authorised person for further information.</p>
15	Removal of Earth Connections	<p>If an earth connection is removed from High Voltage apparatus which is in service, a dangerous voltage may occur.</p>  <p>Apparatus includes: voltage transformers; the potential tapplings fitted to High Voltage bushings and current transformers; the neutral connections of power transformers; the earth connection of a HV cable sheath; and Surge diverters.</p>	<p>Earth connections between apparatus and the earthing system shall not be removed whilst the apparatus is in service.</p> <p>Isolation of the apparatus is required for this work.</p> <p>Refer to a Category 5.5 authorised person for further information.</p>

No	Hazard	Risk	Control
16	Switchyard Earth Grid Voltage Rise & Transferred Earth Potentials	<p>Substations and the circuits connecting them may be subject to dangerous rises in electrical potential due to faults either locally or elsewhere in the power system.</p>  <p>Overhead conductors/earth wires, metallic communication, control and protection circuits, cable sheaths and pulling ropes, fences, water, sewage and storm water service pipes all provide a means for “remote” earth potentials to be transferred to or from these stations.</p>	<p>Equipment that may be subject to transferred earth potentials shall either be insulated, isolated, or otherwise rendered safe for work by a person authorised 5.5.</p> <p>Refer to Safe Work Practices on HV Substation Apparatus or a Category 5.5 authorised person for further information.</p>
17	Flexible Insulation is not Adequate Protection	<p>Tape, rubber or other fabric applied directly to high voltage conductors shall not be regarded as adequate electrical insulation.</p> 	<p>High voltage conductors covered by flexible insulation shall be treated as exposed high voltage conductors, except where the material is suitable under the relevant Australian Standard for the voltage concerned.</p> <p>Personnel and plant clearance distances shall be maintained as specified in ‘Safe Approach Distances to exposed conductors’ at all times.</p> <p>Refer to ‘PSSR’ Attachment B and the procedure Mobile Plant in the Vicinity of High Voltage Conductors for further information.</p>

No	Hazard	Risk	Control
18	Capacitance Associated With High Voltage Apparatus	<p>Capacitor banks as well as high voltage and low voltage cables may have significant capacitance. This apparatus is able to retain an electrical charge of sufficient magnitude to be hazardous to persons even after the apparatus has been isolated from the source of supply.</p> 	<p>Equipment shall be fully discharged by a person authorised 5.5 using a suitable means of earthing before approaching, or working on or near the apparatus, and before working on the apparatus after electrical testing has been performed.</p> <p>The above precautions shall also be taken by persons when working on high voltage or low voltage cables to avoid the dangers of induction from any nearby energised cables.</p> <p>Refer to Safe Work Practices on HV Cables for further information.</p>
19	Work in the vicinity of HV Cables and Sealing Ends	<p>Damage may result in exposure to HV from sheaths or cable failure.</p> 	<p>Keeping clear of installations.</p> <p>Use of approved work methods to ensure adequate protection & controls are implemented prior to works.</p> <p>Earth connections between apparatus and the earthing system shall not be removed whilst the apparatus is in service.</p> <p>Isolation of the apparatus is required for this work.</p>

3.3.2. Work in Switchyards or High Voltage Areas affecting Substation Apparatus including earth grids - Process and Instruction

Work in Switchyards or High Voltage Areas affecting Substation Apparatus – Flow Chart



Work in Switchyards or High Voltage Areas affecting Substation Apparatus including earth grids – Instruction

Step	Action	Resources
1.	<p>Confirm work will not affect the Power System. Examples include:</p> <ul style="list-style-type: none"> 1.1 Civil and electrical construction activities 1.2 Excavation 1.3 Fencing 1.4 Electrical work within a switchyard on equipment not part the transmission network, such as lighting, security systems and CCTV. 	<p>Person Authorised 3.3</p>
2.	<p>Conduct pre-work risk assessment</p> <ul style="list-style-type: none"> 1.5 Check the local Hazard Identification Board for any temporary hazard notifications. 1.6 Review switchyard hazards and controls 3 – 19. 1.7 Identify any additional hazards and control measures required. 1.8 Complete a documented pre-work risk assessment. 1.9 Update PWRA if hazards change or new hazards arise 	<p>Switchyard Hazards and Controls 3 – 11 Switchyard Hazards and Controls 12 – 19</p>

<p>3.</p>	<p>Site preparation – Excavation</p> <p>3.1 The person controlling the works shall be issued an excavation permit by TransGrid.</p> <p>3.2 The full extent of the proposed excavation shall be marked on site and on the attached drawings.</p> <p>3.3 All known buried cables, earth grid and other services within 1m of the proposed excavation (the Excavation Area) shall be highlighted on the drawings and marked on site prior to excavation.</p> <p>Note: Affected services may need to be isolated as some buried low voltage A.C. lighting and power cables have no earth within the cable and may remain alive if accidentally damaged during excavation.</p> <p>3.4 If any earth grid is within the Excavation Area, temporary bridging leads or copper strip shall be installed to duplicate the earth grid within the Excavation Area. If bridging leads are used they shall have Do Not Operate Tags applied and locked by a person authorised 5.5B</p> <p>3.5 Ensure all requirements of the excavation permit have been met.</p> <p>3.6 Apply controls and safe guards identified in the PWRA and WMS.</p>	<p>PSSR Attachment B Excavation Permit</p> <p>Person authorised 5.5B</p>
<p>4.</p>	<p>Electrical Work</p> <p>3.7 All low voltage electrical work shall be carried out in accordance with any Legislation, Codes of Practice or Guidelines, as applicable.</p> <p>3.8 Confirm the qualifications of persons performing electrical work are consistent with the duties engaged.</p> <p>3.9 If isolations are required use TransGrid approved Do Not Operate Tags.</p>	<p>Code of Practice 'Managing Electrical Risks in the Workplace' .</p> <p>Person authorised 3.3 Qualified & Trained in Electrical Work.</p>
<p>5.</p>	<p>Work within a switchyard</p> <p>3.10 Comply with controls and safe guards identified in the PWRA.</p> <p>3.11 Comply with precautions and warnings given under an excavation permit.</p> <p>3.12 Maintain safe approach distances.</p> <p>3.13 Comply with the requirements of Warning tags and Do Not Operate Tags.</p> <p>3.14 Supervise instructed persons for the purposes of deliveries only.</p> <p>3.15 Note any new hazards on the local Hazard Identification Board at the first reasonable opportunity.</p>	<p>Authorised person 3.3</p>

(Source: 'Power System Safety Rules' GD SR G1 100 & 'Health and Safety Risk Assessment')

4. Change history

Revision no	Approved by	Amendment
0	Lionel Smyth, EGM/Network Services & Operations	<ul style="list-style-type: none"> Nil.
1	Lionel Smyth, EGM/Network Services & Operations	<ul style="list-style-type: none"> Section 'Mobile Cranes & Plant' revised
2	Neil Smith GM/System Operations	<ul style="list-style-type: none"> Hazards and section headings revised in line with Power System Safety Rules v5.1
3	Neil Smith GM/System Operations	<ul style="list-style-type: none"> Correct minor editing error
4	Neil Smith GM/System Operations	<ul style="list-style-type: none"> Section order revised Duplications from other safety documents deleted References updated Hazard/Risk diagrams added Quick Reference Guide added
5	Neil Smith GM/System Operations	<ul style="list-style-type: none"> Revised Hazard 11 controls
6	Ken McCall, Manager/Health, Safety and Environment	<ul style="list-style-type: none"> Update of flowcharts to include requirement to update PWRA if circumstances change. Update of position titles

5. Implementation

This procedure is to be implemented in conjunction with the implementation of TransGrid's Power System Safety Rules. It will be available as a resource, published on the Wire.

6. Monitoring and Review

The General Manager/Systems Operations is responsible for the ongoing monitoring and review of the documents associated with the Power System Safety Rules. This can include but is not limited to:

- Requesting regular feedback on the effectiveness of procedures and work instructions. Appropriate feedback tools include focus groups and online assessments;
- Where a change has occurred in our processes; and
- Recommendations arising from incidents.

7. Attachments

- PSSR Quick Reference Guide Category 3

PSSR Quick Reference Guide Category 3

AREA	WORK	3.1	3.2	3.3
CARPARKS AND BUILDINGS	Cleaning	✓	✓	✓
	Building maintenance	✓	✓	✓
	Pest control	✓	✓	✓
	Plumbing & fire system maintenance	✓	✓	✓
	Supervise delivery	✓	✓	✓
	Low voltage electrical (Qualified)	✓	✓	✓
	Excavation			✓
SWITCHYARD	Grass cutting		✓	✓
	Building maintenance		✓	✓
	Pest control		✓	✓
	Plumbing & fire system maintenance		✓	✓
	Fencing			✓
	Low voltage electrical (Qualified)			✓
	Excavation			✓
	Supervise delivery			✓
	Safety observer (Mobile plant)			✓
	General construction & demolition			✓