TasNetworks
Delivering your power

Defined Task Standard

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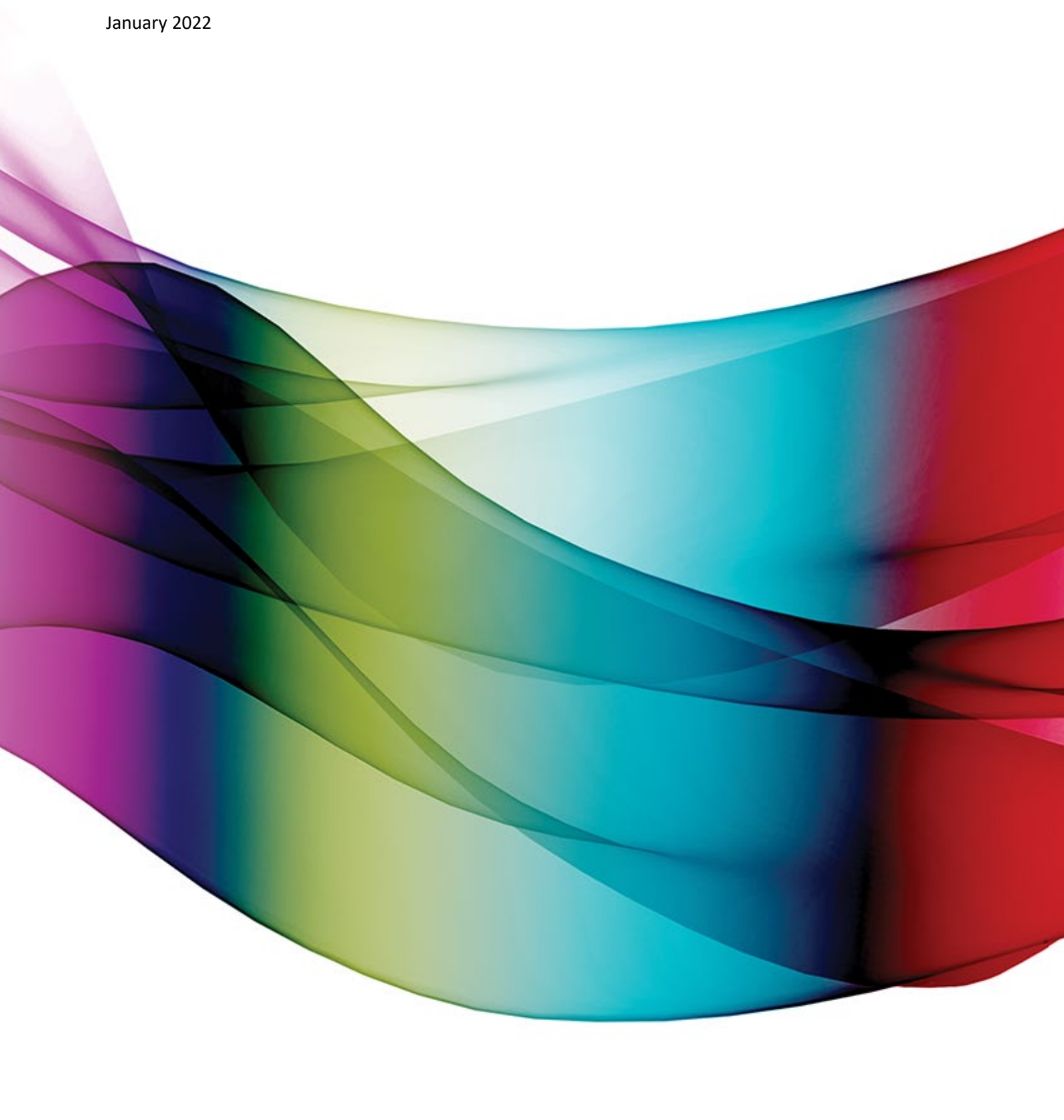

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1 Introduction

Transmission and distribution sites have inherent risks that are not present in most working environments. As a result, a framework of rules have been developed to reduce or remove the additional risk. These rules ensure the safety of people working at TasNetworks sites and maintain the integrity of our network.

Part of the mitigation strategy is to restrict access to TasNetworks substations and Transmission and distribution assets.

The Power System Safety Rules define the principals of working safely on and near our assets. Work on primary equipment or work within a restricted area that could compromise the safety of personnel or the integrity of the network requires a special work permit, called an *access authority*.

Not all work on and around the network requires an access authority. For example, work that does not carry additional risk because it is performed within a restricted area, or work where an access authority is not required to specify or control the risks. These tasks can be performed as a *defined task*.

This standard identifies what work can be done as a defined task. This standard also specifies the control measures required and the process for applying for defined tasks authorisation.

2 Scope

This standard has been developed to identify which work can be classified as a defined task and which work cannot. This standard also identifies a set of restrictions, limitations and processes that need to be followed when working under a defined task.

The core principals of a defined task are that the task is:

- routine in nature,
- performed by an appropriately qualified person,
- not a credible risk to network integrity,
- not a higher safety risk because it is inside a restricted area,
- not performed on primary equipment,
- not a one off task,
- not unique to a specific site and TasNetworks.

A task that is performed routinely at a single TasNetworks site, and is routinely performed by the worker outside TasNetworks, can be performed as a defined task. However, if the task is only going to be performed once at TasNetworks this cannot be performed as a defined task.

While the list of tasks and restriction are not exhaustive, the core principals of a defined task must be adhered to. If any of these principles cannot be met then the work must not be done as a defined task.

This standard does not define the exact method or process of performing any of the defined tasks. All other relevant internal and external policies, rules and standards must be followed. This standard does not supersede any other standard.

2.1 Objectives

The objectives of this procedure are to:

1. ensure a safe system of work is provided for persons performing defined tasks,
2. enable qualified persons to enter a substation and perform defined tasks,
3. improve the process for isolation and risk assessment for secondary tasks.

2.2 Definitions

Access authority – the form of authorisation which allows access to work on or near, or for the testing of, power system apparatus.

Communications circuit – any communication circuit associated with secondary equipment operation or the provision of communication services, including those transiting and terminating within the Substation environment.

Communications equipment – Overhead structures, antenna systems, DC power systems (48v), multiplexers, transmission equipment, radios, switches, routers, media convertors, patch panels, and cables used in the provision of communications circuits or operations services and their components thereof.

Controlled Remote Access Management (CRAM) System - A web application that enables remote IT access to substation operational technology.

Instructed person – general entry level Accreditation for all Employees required to work on or near Power System Apparatus.

Network access order (NAO) – the method of requesting access to the network.

Network Operations Control System (NOCS) – *real-time data and reporting services to market participants and other divisions/groups within TasNetworks*

Operational Technology (OT) – Any transmission or distribution network power system Protection, Control, SCADA, Automation or Telecommunications equipment that is beyond the boundary of the Master Station (NOC) Front End Processor (FEP) hardware.

Person in charge – An Authorised Person to whom an Access Authority can be issued.

Primary equipment – power system equipment which operates at the network voltage, and is directly connected to the AC power system.

Power cycling – Removal of the auxiliary power supply to a secondary device and reinstating the supply after approximately 30 seconds.

Power System – All Apparatus associated with the generation, transmission or distribution of electricity. This includes civil, mechanical and electrical assets.

Power System Safety Rules (PSSR) – The rules that establish a system of uniform and safe operating practices in accessing the Power System.

Qualified person – TasNetworks staff member or an employee of an approved contractor or consultant with training and experience to undertake the defined task.

Restricted area - A defined area where access is controlled, including where high voltage electrical hazards are present.

Risk assessment – A documented process, involving identifying hazards, and evaluating and controlling risk associated with the hazards identified.

Secondary circuit – any low voltage circuit associated with secondary equipment excluding primary low voltage circuits.

Secondary equipment – power system protection, control, metering, monitoring and SCADA devices.

Standard access – Access to specific restricted areas for a fixed period.

Unaccompanied access – Ongoing access to a group of restricted areas for example transmission substations.

3 Risk management

Any person wanting to gain access to restricted areas to perform defined tasks covered by this standard must:

a conduct a risk assessment before commencing the task,
b make risk assessments available at the worksite,
c make contact with all other work parties, including the Person in charge (PIC) of any work party under an Access Authority,
d not enter any defined work area, controlled by an Access Authority, without first contacting the Person in Charge,
e enter their task details in the substation log, prior to the commencement of work,
f where the person intends to take an unauthorised person into a restricted area to perform defined tasks, the relevant group (Asset Engineering/Protection and Control/Communications Services) must be advised. The unauthorised worker must meet the requirements of sections 5.1 (1, 3 and 4), complete an Onsite Environmental and Safety Induction and be directly supervised by an authorised worker at all times.

The risk assessment process must identify the hazards associated with the task and give consideration for potential interaction with other work parties within the substation.

If the risk assessment process identifies that the work has a reasonable and foreseeable potential to encroach on safe approach distances, the work cannot start. The person must advise TasNetworks and arrange for an Access Authority to be issued prior to commencing work. To be issued an Access Authority, the person must hold Person In Charge authorisation.

4 Defined Task Authorisation

In order to hold the defined task authorisation each worker is required to:

1. have completed all TasNetworks inductions,
2. have completed Instructed Person training,
3. have standard access or unaccompanied access to the relevant sites,
4. hold all necessary licences for the tasks they are to perform,
5. be competent in the task.

4.1 Training

There are two forms of training required for defined task authorisation:

1. an onsite induction for all restricted area types required for the task (see the restricted area access standard),
2. online training through the learning management system (LMS).

The LMS component of the training requires refreshing every three years. Onsite inductions are only required once. Onsite inductions are not required if either of the following have been satisfied:

a. Restricted area access training has been completed in the previous 12 months,
b. the relevant restricted area types have been accessed at least four times a year since Restricted area access training was received.

4.2 Applications

Applications can be made through the online application form. TasNetworks employees require authorisation from their line manager. External employees require approval from their line manager and the TasNetworks representative responsible for the work being performed. Approval to hold defined task authorisation must be sought before receiving training.

4.3 Application Approval

Applications for general defined tasks are subject to the approval of the Engineering Leader or an appointed delegate.

Applications for secondary system defined tasks are subject to the approval of the Protection and Control Team Leader or an appointed delegate.

Applications for communication system defined tasks are subject to the approval of the Telecommunication Services Leader or an appointed delegate.

4.4 Defined tasks register

The TasNetworks Authorisation card provides details of the type of defined task approval and expiry date. Specific details of the defined tasks the worker is authorised to perform is held on the register.

5 Defined task restrictions

The following restrictions apply to all defined tasks within restricted areas.

5.1 General access requirements

The following general requirements must be met prior to entering a substation or restricted area. Workers must:

1. have current Instructed Person authorisation,
2. have standard access or unaccompanied access for that site,
3. be able to present their TasNetworks Authorisations card, authorisations, and competencies held,
4. wear the appropriate personal protective equipment as detailed in TasNetworks Personal Protective Equipment Standard,
5. notify Network Operations on entering and leaving any TasNetworks substation:

Transmission: 03 6274 3705

Distribution: 03 6274 3711

5.2 Working near exposed electrical equipment

Many of TasNetworks sites have exposed electrical equipment. Live front boards are present in many distribution substations. These sites have exposed energised LV busbars. In transmission substations exposed overhead equipment can be up to 220 kV.

Work cannot be performed closer to live exposed primary power system apparatus than the distances specified in Table 1.

Table 1 Safe approach distances for defined tasks

Nominal Phase to phase voltages	A. Safe approach distance for personnel	B. Safe approach distance for ladders
LV [1]	1 m for non-electrical workers 0.5 m for electrical workers	3 m
11, 22, 33 kV	2 m	3 m
44 kV	3 m	3 m
110 and 220 kV	4.5 m	6 m

[1] work closer than 0.5 m to exposed LV conductors will require *Live LV Underground Category 1* (LLVUG1) authorisation.

5.3 Ladders

The clearances between bare conductors and the ground and other structures within a substation is based on the voltage of the equipment and the type of area. The use of ladders under, over and near exposed electrical equipment may compromise these clearances.

The use of ladders within the substation switchyard or inside the substations with exposed live equipment is only permitted if the ladder is:

1. made of a non-conductive material,
2. in good working order
3. carried on approved access ways, below waist height,

Ladders must not be used:

1. under overhead lines or equipment,
2. above exposed electrical equipment,
3. where the ladder could contact with energised equipment if it fell,

4. closer than the distances specified in table 1.

5.4 Lifting equipment

The use of lifting equipment within a substation presents a significant risk of accidental contact with energised equipment. Lifting equipment where the highest part of the equipment is more than 2.3 m high must not be used under defined tasks. This includes (but is not limited to):

1. cranes,
2. elevated work platforms (EWP),
3. forklifts,
4. scissor lifts,
5. boom lifts.

5.5 Mobile plant

With the exception of grass cutting equipment, mobile plant is not permitted under defined tasks. This includes (but is not limited to):

1. excavators,
2. augers,
3. rollers,
4. compacters,
5. breakers.

5.6 Excavating

Every substation and transmission tower has a buried earth mat. This earthing system performs an essential function in the operation of the protective devices. The earth mat also protects personnel from step and touch hazards in the event of a fault.

An Access Authority is required for all excavations deeper than 200 mm. No excavations deeper than 200 mm or closer than 5 m to any equipment can be done within a substation, switchyard or tower footing under defined tasks. Asset Engineering must be contacted 14 days before any excavation works.

5.7 Water and other liquids

Liquids must not be sprayed using a high or low-pressure hose within substation buildings or within 4.5 m of primary equipment.

5.8 Electrical work on LV systems

Electrical work on the low voltage AC system is allowed, if the work can be performed safely by isolating the circuit at the main LV switchboard. If work needs the main circuit breaker to be opened then an access authority will be needed. The main LV switchboard isolator must not be used as the method of isolation when working under task.

No modification can be made to the LV switchboard unless under an access authority.

5.9 Other work parties

Before commencing any task all other work parties must be identified. The person in charge (PIC) of all other work parties must be contacted before entering switch yards and switch rooms. If other parties enter the restricted area after the defined task has started, the other parties must be contacted before the defined task is continued.

After consultation with Network Operations, the person in charge of an access authority has the right to refuse other tasks being performed, if the task could reasonably be expected to:

1. affect the work performed under the access authority,
2. impact the safety of any personnel,
3. put the network security at risk.

6 General substation defined tasks

Subject to the general restrictions and the restrictions identified in this section, the following defined tasks are permitted within TasNetworks substation restricted areas:

1. grounds maintenance,
2. building cleaning,
3. Thermographic inspection (thermal imaging) and SF6 camera inspection,
4. locksmith services and maintenance,
5. weather station maintenance,
6. substation security system maintenance,
7. substation fence and gate maintenance,
8. auditing/inspecting of non-power system apparatus/equipment,
9. fire detection equipment maintenance and testing,
10. emergency exit and emergency light testing and maintenance,
11. safety equipment inspection and testing,
12. air conditioner servicing,
13. minor building maintenance,
14. load measurement of low voltage primary equipment,
15. diesel generator maintenance and on-load testing,
16. Earth system testing and audits.

Authorisation will be granted for specific tasks in this list. Being granted authorisation to conduct one of the defined task listed above does not automatically provide authorisation for any other tasks.

6.1 Grounds maintenance

Ground maintenance can include:

1. grass cutting using:
    a. push mower,
    b. ride on mower (see limitations below),
    c. line trimmer.
2. weed killing,
3. pest control.

Limitations:

1. Any equipment and person must not be higher than 2.3 m (i.e. ride on mower and operator combined height must be less than 2.3 m)
2. Low pressure herbicide sprays may be used under overhead equipment at ground level only.

6.2 Building cleaning

Includes cleaning:

1. the office, toilet, and other facilities areas,
2. the walls and doors of the outside of the building
3. cleaning floors and walls in general access areas
4. cleaning gutters if outside the distances in column B, Table 1,

Excludes:

1. spraying water or other fluids (high or low pressure),
2. cleaning in marked out or roped off areas i.e. behind switchgear.

6.3 Thermographic inspection (thermal imaging) and SF6 camera inspection

Thermographic and SF6 camera inspections can be undertaken within TasNetworks substations:

1 from ground level or ladder,
2 if covers or protective barriers do not need to be removed,
3 when outside distances defined in column A, Table 1.

6.4 Locksmith services and maintenance

Locks can be serviced, maintained or replaced to general entry and access doors.

Work cannot be performed on locks which:

1. are on electrical equipment doors,
2. prevent access to energised equipment,
3. are inside the distances defined in column A, Table 1.

6.5 Weather station maintenance

The weather stations can be maintained, repaired or replaced if independent of primary equipment. Any connection to the substations communications equipment may be modified at the weather station. However, interaction with other components of the SCADA system require the appropriate secondary system defined task.

6.6 Substation security system maintenance

Maintenance, repair or replacement of LV substation security equipment. This includes work on:

1. card readers,
2. alarm systems,
3. security camera,
4. any other equipment specifically relating to substation security,

No work can be carried out on equipment that is not exclusively used for security i.e. SCADA equipment, without the appropriate defined task or an access authority.

6.7 Substation fence and gate maintenance

Maintenance, repair or replacement of substation gates and fences. This defined task covers:

1. electric fences,
2. cyclone fences,
3. standard access gates,
4. motorised entry gates,

Earth works inside a substation restricted area may require an access authority. An access authority is not required for fence work on TasNetworks property that is outside of the restricted area, for example a customer boundary fence.

All metal gates and fences in TasNetworks restricted areas must be bonded to the substation earth.

6.8 Auditing/inspecting of non-power system apparatus/equipment

Visual inspections are permitted without defined tasks, however, if any electrical equipment covers, doors or barriers are to be opened or removed this defined task is required.

This excludes audits and inspections of LV exposed equipment that requires the removal of protective barriers.

6.9 Fire detection/suppression testing and maintenance

The fire system may be tested in accordance with AS 1851.

Repair and replacement of the fire system equipment does not require an access authority with the following restrictions:

1 only equipment exclusively for fire detection and suppression
2 SCADA and alarm systems which are not exclusively fire system are not included
3 the fire system equipment is not above exposed primary equipment
4 the safe approach distance in Table 1 are maintained.

6.10 Emergency exit and emergency light testing and maintenance

The emergency exit door and associated hardware, emergency lighting, and other emergency egress equipment can be maintained, repaired, or replaced under defined task.

All metallic objects must be bonded to the substation earth system, with the exception of handles and push bars. The earth connection must be inspected by a suitably qualified person.

6.11 Safety equipment inspection and testing

Safety equipment not connected to primary equipment may be inspected or tested by a suitably qualified person. This includes:

1. earth leads,
2. insulated sticks,
3. voltage indicators.

6.12 Air conditioner servicing

Repair, replacement, testing and servicing of the air conditioning and heating system equipment does not require an access authority. This work can be performed under defined tasks. if:

1. air conditioning or heating equipment is not above primary equipment,
2. the safe approach distance in Table 1 must be maintained.

6.13 Minor building maintenance

This is civil maintenance on the building and other civil structure such as external walls. This task includes:

1. painting and graffiti removal,
2. installing or removing signage,
3. repairing or replacing doors, windows and vents,
4. repairing or replacing lighting,
5. minor plumbing and roofing work.

This excludes any activities that:

1 require earth works or mobile plant equipment,
2 are on the foundations or structure of primary or secondary equipment,
3 may interfere with the foundations or structure of primary or secondary equipment.

6.14 Load measurement of low voltage primary equipment

Load measurements may be taken from low voltage circuits by either reading a digital or analogue meter, or by clamping onto insulated conductors.

When reading a meter, the maximum demand may be reset if required. No other setting may be changed.

Load measurements of energised equipment can be taken by clamping onto insulated conductors, with the following restrictions:

1. A valid electrical practitioners licence is required.
2. No connections may be made to exposed energised conductors.
3. Safe approach distances in Table 1 must be maintained.

6.15 Diesel generator maintenance and on-load testing.

Before work is performed on diesel generators distribution or transmission operations must be contacted to confirm that the generator can be isolated from the system without causing disruption to primary or secondary equipment. Maintenance is not permitted on generators connected to the system under defined tasks.

6.16 Earth system testing and audits

Earth system audits may include:

1. a visual inspection,
2. continuity testing,
3. off frequency current injection for:
    a. earthing system impedance measurement,
    b. earth grid resistance measurement,
    c. earth potential rise measurement,
    d. current distribution measurements,
    e. touch and step voltage testing,
    f. soil resistivity testing.

No part of the earth system may be removed or disabled during the earth system testing.

For separated HV and LV earth systems a temporary CMEN connection may be made if the LV earth system is less than 1 Ω.

7 Secondary systems restrictions

Work on electrical secondary equipment is unique to power system environments. However, tasks that do not require access to primary equipment do not require an access authority in most cases.

If the task requires primary equipment to be operated a Network Access Order is needed. This may also require an access authority. An access authority will not be required if all of the following are satisfied:

- the operation of the equipment is performed with Network Operations,
- the operation of the primary equipment will not result in an interruption to supply,
- there is no risk to personnel through the operation of the equipment.

If any work on secondary systems could foreseeably impact the safety of personnel or security of power system, then primary equipment outage must be arranged, unless the risk can be effectively mitigated through appropriate secondary isolations. If any switching is required to perform the task safely, then an access authority is required. The task must not be performed as a defined task if a switching is required for safety.

If an access authority has been issued for the same area that the defined task is to be performed in, Network operations and the PIC should be consulted. The compatibility of the tasks should be assessed. The defined task may need to be completed under the access authority or deferred. Work in the same area includes:

1. the same restricted area,
2. equipment connected to the circuit that work is being performed on,
3. equipment which is part of the same protection scheme.

In addition to the site access requirements and the general restrictions, the following restrictions apply to defined tasks on secondary systems:

1. Secondary isolations should be made where applicable
2. Contact Network Operations prior to performing works, and again on completion.
3. Advise Network Operations prior to disturbing SCADA or in service protection. Alert them to the possible affects.
4. CRAM access protocols are to be adhered to
5. Determine if NOCS is impacted - arrange scan inhibit or disable any affected script calc., AIS or control scheme as applicable.
6. When isolating in service current transformers, ensure correct method for isolating are adhered to. Ensure shorts are of good quality. Regular checks should be performed to ensure shorts are in working condition.
7. A Network Access Order to be arranged when applicable.
8. Modified drawings must be marked up legibly and handed to TasNetworks drawing office or responsible officer (if contractor) within two weeks.
9. Modified device settings must be handed to TasNetworks responsible officer (if contractor) within one week

8 Substation Secondary Systems

Subject to the restrictions identified in this section, the following secondary systems defined tasks are permitted within TasNetworks substation restricted areas:

1 isolation and restoration of secondary circuits,
2 installation, modification or removal of secondary devices and circuits,
3 fault finding on low voltage secondary circuits,
4 interrogation of secondary devices,
5 re-configuration of secondary devices,
6 functional testing of secondary devices and circuits,
7 power cycling of secondary devices,
8 on-load measurements of secondary circuits,
9 auditing and inspections of secondary circuits, installations and devices.

Authorisation will be granted for specific tasks in this list. Being granted authorisation to conduct one of the defined task listed above does not automatically provide authorisation for any other tasks.

These tasks can be approved for protection, SCADA or revenue metering. Authorisation to perform defined tasks in one category does not automatically include defined tasks in other categories (ie protection defined tasks does not assume SCADA or metering approval for the same task).

8.1 Isolation and restoration of secondary circuits

The intent of secondary isolations is to identify, control and contain the operation of equipment. Correct application of isolations prevent unintentional operation of primary plant or adverse effects on the secondary circuits. Secondary isolations are the most effective method of mitigating the safety and reliability risks associated with intrusive secondary system work. Conversely, ineffective or incorrect isolation of secondary system can result in significant risk to the safety and reliability of the network.

Isolation of secondary circuits is permitted to:

1. safely enable power cycling,
2. replace secondary equipment,
3. install secondary equipment,
4. remove secondary equipment,
5. reconfigure secondary devices,
6. perform secondary injection testing of secondary equipment,
7. fault find on secondary equipment and circuits.

Secondary isolations are limited to the secondary system and must not involve the primary equipment. Junction boxes off the ground on primary equipment is not to be used for isolation under a defined task. Isolation points in the switchyard may be used if they are accessible from the ground and safe approach distances in Table 1 are observed.

A primary equipment outage is required if:

1. insufficient or unsafe secondary isolation facilities exist,
2. secondary isolations could affect the safety of personnel or security of the power system.

The following precautions must be observed when performing secondary isolations:

1. Always use an approved isolation sheet.
2. Isolations sheet to be reviewed by another Technician or engineer prior to commencement of works
3. Schematics must to be printed out or available via soft copy prior to performing isolations, to be used as a check when onsite to verify wiring is correct during isolation process.
4. Contact Network Operations prior to commencing works and after final restoration.
5. Follow correct isolation process and order, using appropriate tools for the work task
6. Isolation and restoration process is to be performed by two people
7. Always measure for DC voltage on the circuit breaker fail (CBF) or trip links prior to restoring. **DO NOT CLOSE** if voltages are present and cannot be accounted for.
8. When isolating current transformers ensure that you follow the correct isolations process to ensure you do not open circuit the current transformer- **an open circuit CT can develop lethal/dangerous voltages.**

8.2 Installation, modification or removal of secondary devices and circuits

Secondary equipment and circuits may be:

1. removed,
2. replaced with the same or upgraded device,
3. installed as additional secondary equipment or circuit,
4. disconnected,
5. decommissioned,
6. modified.

Temporary monitoring or recording equipment may be installed to secondary equipment or secondary circuits.

The following processes, exclusions and limitations apply:

1. If secondary equipment installation or removal work is associated with planned primary outage then access authority will apply.
2. Testing shall be performed prior to returning to service.

   Note: If functional trip checks of the breaker cannot be performed on like for like replacement, then as a minimum, the existing wiring/lings/terminals must be tested.

3. Contact inputs, outputs and basic protection operation must be tested where applicable.
4. Complete a report stating the nature of the failure, the details of the secondary equipment (old and new) and update SAP accordingly (including a master data notification).

8.3 Interrogation of secondary devices

Non-intrusive interrogation of secondary devices is permitted locally through manufacturer software interface or by CRAM remote access to obtain data only. Where it is performed locally the interrogating computer must be approved by TasNetworks or provided by TasNetworks for the purpose.

Information may be extracted to obtain information, such as:

- performance data,
- historical or recorded data,
- fault data for analysis,
- Extracting settings and configuration.

This does not include reconfiguration of the device.

8.4 Re-configuration of secondary devices

Secondary devices may be reconfigured locally through the device HMI or via the manufacturers software interface.

Changes to the device configuration are to be performed on site and not via remote CRAM access facility for all substation assets. Distribution pole mounted devices may be configured remotely.

Reconfiguration of the device is limited to software and setting modifications. Devices and circuits cannot be changed under this defined task.

8.5 Functional testing of secondary devices and circuits

This task related to injecting secondary current into test links, by means of specialised test equipment, to confirm correct functionality and operation of secondary equipment.

If secondary equipment testing is associated with planned preventative maintenance or project outage then access authority may apply.

8.6 Power cycling of secondary devices

During power cycling the auxiliary power supply to secondary equipment is removed and re-stored after approx. 30 secs. Power cycling is permitted to:

- reset equipment
- enable refresh/capture of updated settings

In some cases power cycling can result in the operation of primary protection equipment. The device should be isolated if this is a possibility. Where isolations are simple and only involve the device being power cycled a second person is not required to review, or be present for the isolation. However, the following is required:

- Network operations must be advised what is going to be isolated and when it is restored.
- An isolation sheet is required.
- The isolation sheet should be linked to the work order and reviewed afterward the isolations are restored.

8.7 On-load measurements of secondary circuits

On-load measurements can be performed through interfacing with the relay or through direct measurement of the secondary circuit.

The device interface may be used for relay on load measurements. If the software interface is used, ensure that the settings are not affected, and perform a read only.

If the load measurement requires connection to the secondary circuit, all instrument insulation must have the correct rating for the device being interrogated. If a direct measurement of an AC circuits is required a clamp on ammeter is the preferred method of current measurement.

The correct current transformer isolating procedure must be followed when measuring current circuits if you are required to break the circuit to obtain the measurement.

8.8 Auditing and inspections of secondary circuits, installations and devices

Non-intrusive auditing and inspection of secondary systems only. This may include visual or physical inspection of secondary equipment and associated secondary circuits and connections (including communication and optic fibre cables)

Auditing and inspection does not include interrogating the device, modifying settings or otherwise interacting with the configuration of secondary devices or circuits.

8.9 Fault finding on low voltage secondary circuits

Fault finding may be performed on low voltage secondary systems as defined task. This includes:

1. inspection of secondary equipment and associated secondary circuits and connections,
2. remote CRAM access to secondary,
3. identifying and resolving alarms.

Any fault finding activity which could impact the safety of personnel or security of power system must not be performed under defined task. Alternative fault finding methods should be identified, a primary equipment outage should be arranged, or the fault finding should be delayed until the conditions have changed.

9 Communication system restrictions

Work on communication systems within a substation environment is unique and caution must be taken to ensure the security of the power system.

If a planned task is identified as likely to impact secondary systems or requires primary equipment to be operated a Network Access Order is needed. This may also require an access authority.

If any work on a communications system could foreseeably impact the safety of personnel or security of power system, then a secondary system outage or isolation must be arranged and equipment providing a communications circuit for duplicated or diversity systems left in service to cover an out of service system must be considered.

Isolation of communications circuits must be applied where a risk of adverse effects to secondary systems or other plant exists. Isolations shall be made, on the communications frame, on the Optical distribution Frame, or via communications circuit interface configuration settings

Isolations shall be in place to prevent the inadvertent operation of secondary system protection devices or the disruption of operational services.

Loopback application to an individual circuit or bearer shall not be undertaken where protection circuits are provided, unless these circuits are disconnected prior to testing or secondary system isolations have been applied.

In addition to the site access requirements and the general restrictions, the following restrictions apply to defined tasks on communications systems:

1. communications circuit isolations should be made where applicable
2. contact Telecommunications Network Operations prior to performing works, and again on completion.
3. confirm Network Operations and/or NOCS have been advised prior to disturbing SCADA or in service protection circuits.
4. a Network Access Order to be arranged when applicable.
5. defined tasks will not apply where a work permit is required, as referenced in the Power System Safety Rules 11.9

10 Substation Communications Systems

Subject to the restrictions identified in this section, the following communications systems defined tasks are permitted within TasNetworks substation restricted areas:

1. Installation, commissioning, modification, configuration or removal of communication equipment and communication circuits.
2. Maintenance of communications equipment.
3. Fault finding and testing on communications equipment and communications circuits.

Authorisation will be granted for specific tasks in this list. Being granted authorisation to conduct one of the defined task listed above does not automatically provide authorisation for any other tasks.

10.1 Installation, commissioning, modification, configuration or removal of communications equipment and communication circuits

Communications equipment and communications circuits may be:

1. replaced with the same or upgraded device,
2. installed as additional communications equipment or communications circuit,
3. commissioned,
4. reconfigured,
5. isolated,
6. disconnected,
7. decommissioned,
8. removed.

The following processes, exclusions and limitations apply:

1. If communications equipment installation or removal work is associated with planned primary outage then an access authority will apply.
2. Installations outside the original communications equipment footprint will require prior approval by Asset Engineering and may require an Access Authority.

10.2 Maintenance of communications equipment

Periodic maintenance of communications equipment is undertaken in accordance with the Asset Management Plans and may include a combination of includes:

1. physical condition assessment of equipment,
2. Non-intrusive interrogation of equipment,
3. cleaning of or replacement of equipment filters,
4. battery maintenance and discharge testing.

10.3 Fault finding and testing on communications equipment and circuits

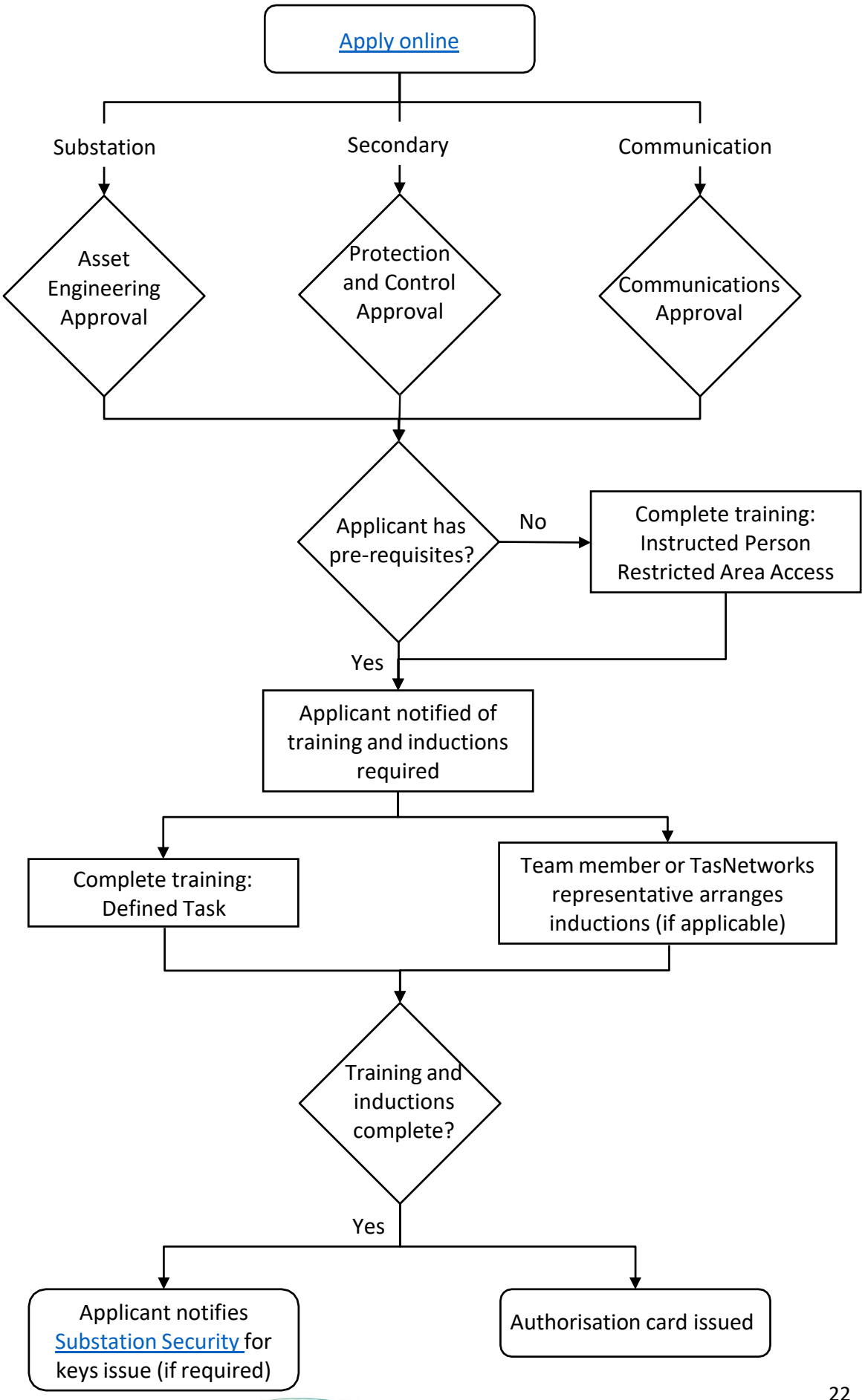
Temporary testing, monitoring or recording equipment may be installed to communication equipment or circuits.

This task is related to performing equipment or circuit tests to confirm correct functionality and operation of communications equipment and includes:

1. BER circuit tests,
2. throughput tests,
3. radio frequency feeder and path tests,
4. optical path tests,
5. loopback tests.

Communication circuit testing shall not be undertaken on a circuit providing secondary system protection services unless these circuits have been isolated prior to testing or secondary system isolations have been applied.

11 Defined Task Application Process



12 Compliance

Breaches of this policy will be treated seriously and may if necessary result in disciplinary action being undertaken. Depending on the circumstances of the case, this may include an apology, counselling, training, demotion or termination of employment. Behaviour that is not a breach of this Policy may still be found to be inappropriate or unreasonable. For example, it may be a breach of the TasNetworks Code of Conduct. In this instance, disciplinary action may still result.

Public Interest Disclosure Statement ("Whistleblowers")

If an individual is concerned about consequences associated with reporting a serious breach of this Policy, that individual should refer to the Public Interest Disclosure (Whistleblowers) Policy available on The Zone or talk to their Leader.

13 Administration of this Policy

This policy is administered by the TasNetworks Network Commercial and Major Customer group and will be reviewed on a two yearly basis and updated where applicable.

Authorisations		
Action	Name	Date
Prepared by	Hugh Morris	07/07/2020
Reviewed by	James Goodger	20/10/2020
Endorsed by	Network Access Framework Steering Committee	18/02/2021
Approved by	Michael Ash	25/02/2021

Document control				
Date	Version	Description	Author	Approved by
07/07/2020	1.0	Original TasNetworks Issue	Hugh Morris	Michael Ash
21/01/2022	1.1	Minor updates and clarifications	Hugh Morris	James Goodger