

Personal Protective Equipment Procedure

Hazard and Risk

1.0 Introduction

1.1 Purpose and Scope

This Procedure provides Northpower's requirements for the provision, issue, storage and maintenance of personal protective equipment (**PPE**). This procedure details the minimum company expectations and requirements for PPE.

1.2 Application

This Procedure applies to all Northpower business units and contractors. Specific PPE requirements can be developed for individual business areas such as the Power Station, stores etc., but these must be documented and readily available.

2.0 References

| Reference | Details |
|-------------|-----------------------------------------------------------------------------|
| SM-EI | Safety Manual Electrical Industry |
| ASTM F2412 | Standard test methods for foot protection |
| AS/NZS 1715 | Selection, use and maintenance of personal respiratory protective equipment |
| Procedure | General Switching Operations Procedure |

3.0 Definitions

| Terminology | Definition |
|-------------|----------------------------------|
| PPE | Personal Protective Equipment |
| PFAS | Personal fall-arrest system |
| RPE | Respiratory Protective Equipment |
| EPZ | Equipotential Zone |
| MEWP | Mobile Elevating Work Platform |



4.0 Procedure

The general requirements for providing PPE to employees is to ensure that the PPE is:

- Readily available
- In good condition
- Manufactured to an AS/NZS or other International Standard
- Compatible with other PPE worn
- Not introducing other risks such as limited mobility or vision
- Worn as intended

The general requirements for employees are:

- They shall receive PPE when required for protection purposes
- They shall be trained and given instructions and information regarding:
 - What risks the PPE is designed to protect against
 - How to wear/use the PPE
 - When to wear/use PPE
 - What will happen if PPE is not worn or used properly
 - How to report defects
 - Where to obtain replacements
 - How to check the PPE
- They shall be consulted where appropriate on the choice of PPE

PPE must be:

- Maintained in an effective state
- Cleaned (if appropriate)
- In good working order and good repair
- Tested with expiry dates being clearly visible where appropriate.

For the avoidance of doubt, a maintenance system should be employed to ensure:

- Regular examinations including user checks take place
- Testing is carried out – to ensure PPE is operating as intended
- Repairs are conducted
- Replacement is provided where appropriate





5.0 Risk Assessment

As part of the risk assessment you shall ensure that the PPE intended to be worn is appropriate for the particular task (considering the hazards / risks) and the circumstances under which the PPE is to be worn. Where repeat tasks or routine work activities are carried out it will not be necessary to record this assessment (for example the wearing of safety footwear), but in other cases, such as confined space entry, there needs to be a clear documented process which describes the hazards involved and the type of PPE to be worn.

If the compulsory use of any item of PPE makes the job more hazardous, then the employee is to cease work. The employee is to document why this PPE is creating this heightened risk and report it on an incident form or through the 0800NPSAFE hotline.

If immediate action is necessary, the Project Manager or Supervisor must be notified before continuing, and only under exceptional circumstances can the item of PPE be removed. To remove a PPE item, the employee must demonstrate on the Risk Assessment that extra controls can be implemented to reduce the overall risk rating to be lower than that with the PPE item on. The removal of a critical item of PPE can only be done with the approval of a Tier 3 Manager.

It is preferred that the work be postponed rather than the employee continue to work without the stated PPE item.

6.0 PPE Requirements

Safety Helmets

SM-EI EG3.2021 states Safety helmets shall be worn in all designated areas and in any other area where there is a risk of a head injury from falling or moving objects. Hard hats shall be worn in the following situations from the moment of arrival on job to leaving site:

1. All outdoor sites where tools or machinery are being used, materials are being assembled, or equipment is being accessed or worked on.
2. Any work inside a Switch Yard.
3. All indoor sites where there is a risk of arc flash, or a risk of materials dropping from above (unless stowed securely).
4. In all areas when carrying out any loading/unloading etc. unless in a vehicle cab with overhead protection.
5. With the exception of vegetation trainees, all trainees will be identified on site by wearing a blue coloured hard hat. To comply with the Forestry Regulations, vegetation trainees will be identified on site by wearing a yellow coloured hard hat.
6. On Transpower work sites, the onsite Supervisor will be required to wear a Red Hard hat, so they are identified as the Person in Charge.
7. Safety helmets used with a personal fall-arrest system (PFAS) where there is a risk of free fall that may result in a head injury, shall be fitted with a head and chin harness to ensure helmet does not dislodge during free fall (chin strap strength shall be at least 150N).



Note: The standard industrial helmet harness and headband has a life expectancy of 2 years. Northpower requires the helmet & harness to be replaced 2 years after the date of issue, or if this date is not recorded, then 2 years after the date of manufacture.

Petzl Vertex Best helmets have a recommended life span of 10 years from manufacture but will be replaced after 3 years from date of issue.

Fall Protection

SM-EI PH 3.2021 working at height states:

When preparing to work at height, workers shall select equipment that enables them to:

- Be attached at all times (except when climbing a ladder without an LAS system)
- Either prevent a fall from occurring or, where this is not possible, eliminate risk of harm from a fall (for example, by using a personal arrest system)

Any staff carrying out work from an Elevated Work Platform (**EWP**) must use a full harness and lanyard. The lanyard shall be less than 2 metres long and used with a shock absorber if it is longer than 600mm.

1. All staff working on ladders or structures must use a fall arrest system when the risk of a fall is present. The use of the LAS system shall be used on all extension ladders unless the individual can adequately demonstrate why it cannot, this demonstration must be recorded on the risk assessment.
2. Tree cutters shall wear body climbing harnesses when climbing.

Note: Fall arrest systems shall be used at all times while climbing or working on network assets with the exception of a few activities.

Eye Wear Protection

SM-EI EE 3.2161 states, to protect eyes, precautions must be taken, including the following:

1. Safety glasses shall be worn at all times, on all outdoor work sites, and in other situations where there is a likelihood of an eye injury e.g. tools or machinery being used, airborne dust or debris etc. Two pairs of safety glasses are required to ensure the employee can ensure suitable visibility due to changing conditions (day/night).
2. In situations where there is an increased likelihood of an injury the employee shall wear a high impact face shield. The use of the face shield shall be when operating a tool that has fast moving parts – e.g. grinders.

A full face shield shall be worn and be down while undertaking the following activities:

- a. LV breach joints live.
- b. LV live pillar or live frame work including connecting or disconnecting L/V fuses.
- c. Live HV and LV overhead work for the period of time when connections or disconnections are being made. Examples include but are not limited to:
 - i. Installing or removing temporary jumpers
 - ii. Cutting away or connecting jumpers on an OH switch





- iii. Cutting in or reinstating a break
- d. Cutting any 'in ground' cables (400V, 11 kV, 33 kV).
- e. Worn when operating any equipment involving Live Switching (400V, 11 kV, 33 kV).
The removal of LV pole fuses is not classified as Live Switching.
- f. Visors and safety glasses shall be worn for tree cutting and trimming work.

Prescriptive Safety Eye Wear

Northpower have a Corporate Account with Specsavers Optometrist and require that all Prescription Glasses are arranged through this provider. If an employee requires non-metallic prescription safety glasses, then they should complete the approval request form on Knowledge Central (bottom of home page) to seek approval from their direct Manager to arrange the new eye wear as outlined below:

Northpower is prepared to pay for a one-off cost of up to \$679 including GST to any employee who needs prescription glasses for normal work activities, and who requires glasses for personal protection equipment. For subsequent replacements thereafter Northpower is prepared to contribute 50% of the cost of replacing prescription safety glasses up to a maximum of \$299, but this contribution is limited to, not more than once per calendar year.

The cost of any enhancements in the prescription safety glasses over the basics shall be at the employee expense. The employee's Manager does have some ability to approve a higher reimbursement if the employee has a specific requirement and that is justified.

Note: Metal framed eyewear may only be worn when covered with protective goggles, full face shields or such. The preference is to have non-metallic eyewear.

Work Gloves

1. Work gloves shall be worn when employees are undertaking general duties. Exemptions may be granted from time to time to allow the gloves to be removed. To remove the gloves, the employee shall gain approval from their Manager. The approval shall be based on the gloves increasing the overall risk of harm on the employee.
2. There is a preference for Kevlar cut resistant gloves as standard, especially when using sharp objects. The Kevlar glove is cut resistant and offers protection against straight edged objects; however, these gloves will not prevent injuries resulting from a stabbing motion.

Insulating Gloves – General

1. All field staff engaged in electrical work shall be issued with one pair of Class 1 insulating gloves and, if appropriate one pair of Class 0 insulating gloves. Insulating gloves shall be kept in a protective glove bag when not being used.
2. All staff shall ensure their gloves are suitable for use by undertaking a visual inspection.
3. Insulating gloves shall be roll tested (air tested), immediately prior to use, or more often if there is a reason to believe damage may have occurred.





4. Insulating gloves shall always be used with approved outer protectors. The protectors must not extend to within 25mm of the cuff of the glove.
5. Insulated gloves shall be tested every 6 months. Results shall be recorded and test date marked on the gloves.
6. Employees must use insulating gloves rated for the voltage of the equipment intended to be worked on, or when undertaking the following:
 - All live work
 - All 400V and 11 kV switching O/H and U/G.
 - When cutting any 'in ground' cables (only to be done by experienced cable jointers).
 - Handling conductors on the ground, in fault situations
 - When a risk exists from a potential electrical back feed
 - When an employee cannot adequately isolate, lock and tag out an electrical circuit.
 - Travelling from the ground to the work area "Ground to Ground" on "energised or isolated" conductors, equipment or structures.
 - When working within an equipotential bonded zone (EPZ) or where they are required to as part of Northpower's mitigation process.
7. Northpower will allow in certain circumstances for employees to remove their gloves, however this is only allowed when the work is temporarily suspended; and the employee withdraws themselves and their MEWP to a safe distance away from the work area. The person and MEWP must be clearly outside of the Minimum Approach Distance so the desired activity may be performed; activities are limited to cleaning fogged safety glasses or removing excessive perspiration.
8. Gloves must not be removed in order to answer cell phones specifically when working within the "Live or EPZ environment".
9. Mobile phones are not to be taken aloft, and shall be left in the vehicle while working on energised equipment. Should the employee need to answer the call whilst they are performing work, the employee shall cease work, communicate with the team that work needs to cease and remove them self from the work environment.

Leather Footwear

1. Steel capped or Fibreglass capped safety footwear must be worn at all times by all persons when on a worksite. There can be no exposed metal toe caps on the safety footwear.
2. All footwear is to have rubber or similar soles with no metal rivets/nails that comply with the Electrical Standards. The Leather work boots shall be tested as per ASTM F2412 "Electric Shock Resistant Footwear" prior to issue. There is no requirement for testing of the leather boots post issue.
3. Office staff carrying out field work or site inspections must wear footwear that complies with above (Leather Footwear).





4. Visitors to workshops or field work sites must always wear safety footwear. Visitors must not be within the work area while employees are working on underground cables that are energised.
5. For Non Electrical Workers, their leather footwear shall be replaced on a fair wear and tear basis only.
6. For Electrical workers, leather footwear shall be replaced at 24 months or earlier on a fair wear and tear basis.

Di-electric “Yellow Gumboots”

1. Dielectric footwear will predominately be issued to field staff involved in electrical work. Dielectric footwear shall be tested prior to issue (Di-electric footwear refers to the “Yellow Gumboots”) and shall be replaced on a fair wear and tear replacement basis, or at 24 month intervals, whichever is earlier.
2. Dielectric footwear shall be worn by all field workers exposed to the EPZ risk on worksite when an equipotential bonded zone cannot be established.

Overalls, Coats, Pants and Over Jackets

1. Full cover clothing is provided to workshop and field staff to provide the employee with protection from potential UV burns, electrical / flash burns and skin abrasions.
2. Staff shall have overalls fully zipped and arms covered at all times while on a work site.
 - Overalls must not be altered without authorisation – e.g. sleeves cut off.
 - Alternative full cover clothing, if issued (see Company Clothing Policy), must provide full cover at all times while on site.
3. All zips shall be non-conducting.
4. All overalls shall be arc rated (minimum 8 cal/cm²).
5. All clothing worn under the overalls must be non-flammable and non-melting, as this could seriously undermine the protection provided by the FR overalls. This means no synthetic materials such as nylon or acrylics. All under garments such as underwear, shirts, shorts must be constructed from cotton, wool, merino or silk.
6. Only Fire Retardant wet weather gear is to be worn on work sites – where a risk of fire or electricity is present.
7. Staff shall receive a minimum of 3 sets of overalls/undergarments upon appointment (more at Manager’s discretion). Replacement garments will be on a fair wear and tear basis and shall be approved by their manager. If a garment is ripped or torn, the item shall be removed from service and replaced at the earliest opportunity.
8. Chaps or chainsaw trousers, mitt, and visor shall be worn by anyone using a chainsaw. Tree cutters are issued with chainsaw trousers. Chaps will be issued to vehicles carrying chainsaws for occasional use.
9. Beanies shall be woollen only.





Switching Jackets and Visors

1. A switching jacket complying with international standards and with not less than a 40 cal/cm² rating must be worn while operating or while within one metre of a high voltage switch being operated where any part of that switch is energised.
2. Switching jackets must be used in addition to standard personal protective equipment including safety glasses which must be worn under the visor. Refer SWGOPS-0001 General Switching Operations.
3. The visor that is to be worn during switching operations must be 20 cal/cm² or greater.

7.0 Hearing Protection

Hearing protection of the correct class must be worn at all times in all designated areas, and where the noise level is above a daily average level of 85 dBA (over no more than 8 hours per day), or a peak of 140 dB. Wear hearing protection of the correct class required. The class of hearing protection (classes 1 to 5 are available) depends on the noise level and the duration of exposure to the noise. Northpower has a preference for earmuffs rather than ear plugs.

8.0 Respiratory Protective Equipment (RPE)

Employees shall be suitably trained, authorised and competent to wear air purifying respirators before doing so. Respiratory Protective Equipment (RPE) *SM-EI CH 3.2031* states:

Air purifying respirators shall be used:

- When working in dusty atmospheres. In extremely dusty atmospheres, the cotton gauze type of respirator may be inadequate and the employee may need to seek an alternative);
- Where toxic gases are present, a suitable air purifying respirator is available, and a supplied-air respirator is not being used.

When air purifying respirators are used:

- The correct type of filter to suit the exposure shall be fitted
- A proper face fit shall be obtained.
- Only cartridges that are known to have adequate life remaining shall be used. If there is any doubt, a fresh cartridge shall be used.

All Staff required to wear re-usable RPE must be fit tested, when issued / fitted to the employee for the first time. RPE items are not to be shared between employees. RPE must be fit for purpose and maintained to AS/NZS 1715 standard.

Note: Reusable RPE has a life expectancy (5 years after the date of manufacture or as stated in the manufacturer's warranty). Reusable RPEs must be discarded after this date and replaced. RPE equipment shall be stored in an airtight container.





9.0 General

Handling Hazardous Substances

The Safety Data Sheet (SDS) for any chemical or hazardous substance that is to be used shall be checked to determine the appropriate PPE that is required. Any PPE that is stipulated on the SDS shall be worn at all times.

Jewellery (metal or plastic)

Rings, earrings, watches, metal bands or metal fashion items shall not be worn in areas:

Where there is risk of a heat source or an electric arc exists,

Where there is a risk that the jewellery could be snagged or caught up during physical work

- Where there is a risk that the jewellery has the potential to damage the PPE being worn.
- As per SMEI SH3.3011

Sun Protection

1. Staff exposed to sunlight, are recommended to use sunscreen protection throughout the entire year. Sunscreen is available from the Store.
2. Staff working outdoors need to ensure that sunscreen is applied to exposed skin (typically the face and neck) and reapplied as necessary through the day.

Breach of PPE Policy

Staff not complying with Northpower's PPE policy or standards will not be allowed on site. Non-compliance with this procedure will be subject to the Companies Disciplinary Procedures.

PPE IS THE LAST LINE OF DEFENCE

10.0 Document Review History

| Version Number | Date | Revision Notes (reason for change) |
|----------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 18/02/2020 | KC Review |
| 6.0 | 31/07/2020 | QMS Document Refresh - new template |
| 7.0 | 29/10/2020 | Clean up post migration - Eye protection (3c) changes made to reflect face shield down while connecting and disconnecting during live overhead work (HV and LV). |
| 8.0 | 01/09/2021 | References to SM-EI updated 6.0 Fall protection updated - bullet points added |
| 9.0 | 19/07/2024 | 9.0 Jewellery section updated to include metal and plastic |

Controlled Document

