

Personal Protective Equipment (PPE)

STATEMENT

To minimise the risk of harm to staff, subcontractors and visitors on site through the appropriate use of personal protective equipment (PPE).

COMMITMENT AND POLICY

PRINCIPLE 1*

* Principles as per AS/NZS 4804:2001 "Occupational health and safety management systems – General guidelines on principles, systems and support techniques"

The governing director commits Sparrow Construction to:

- Understanding when personal protective equipment (PPE) should be used, what type of PPE should be used and how PPE should be used.
- Specifying when (PPE) should be used, what type of PPE should be used and how PPE should be used.
- Informing staff of the benefits of PPE.
- Ensuring staff, subcontractors and visitors are trained in the use of the appropriate PPE.
- Ensuring the appropriate PPE is used.
- Providing staff with the appropriate PPE.
- Managing the hazards caused by wearing PPE.
- Managing the impact on productivity of wearing PPE.
- Ensuring the use of PPE through informal and formal inspections and audits.
- Taking corrective action for non compliance.
- Taking corrective action when this policy is found to have input or outcome deficiencies.
- Measuring the effectiveness of this policy in minimising harm, ie outcomes.
- Regularly reviewing and improving this policy.
- Complying with legislative, statutory, client and contractual requirements.



Mike Sparrow
Governing Director

Personal Protective Equipment (PPE)

PLANNING

PRINCIPLE 2

The purpose of personal protective equipment (PPE)

SCL recognises that most construction workers by the time they reach retirement age are often physically 'worn out' from their construction activities and the environment they worked in; suffering from chronic injuries and the legacy of acute injuries.

Wearing PPE is one of the ways that must be utilised in endeavouring to achieve zero harm to the construction workforce.

There are many cases where the use of PPE would have:

- prevented chronic injury (eg dust masks preventing chronic obstructive pulmonary disease)
- prevented acute injury (eg safety glasses preventing the loss of sight from swarf when drilling steel) or reduced the extent of injuries suffered in an accident (eg hard hats preventing concussion when tools are inadvertently dropped by people working above)

Personal protective equipment:

- Protects against harm in an existing hazardous environment (eg solar radiation)
- Protects against harm in an environment made hazardous by our construction activities (eg silica dust generated when breaking up concrete)
- Protects against contact with chemically hazardous construction materials (eg concrete)
- Reduces or eliminates injuries when accidents happen (ie unplanned activities)

Guidance on protection provided by PPE

Governmental occupational safety organisation publications provide general guidance on PPE – refer to Appendix A.

We share the view of Work Cover New South Wales that *“PPE is one of the least effective ways of controlling risks to health and safety and should only be used:*

- *when there are no other practical control measures available,*
- *as an interim measure until a more effective way of controlling the risk can be used,*
- *to supplement higher level control measures.”*

Personal Protective Equipment (PPE)

In essence we are endeavouring to protect people's:

- brains
- lungs
- eyes
- spinal cords
- hearing
- skin

Australian/New Zealand Standards and other standards provide specific:

- guidelines on the selection of the specific types of PPE (eg low, medium or high impact resistance safety glasses), and
- guidelines on a comprehensive hazard and risk management programme (eg protection of eyes by use of screens or guards on machines to shield from flying fragments).

For example, in the case of the selection, use and maintenance of respiratory equipment, the standard requires a respiratory protection programme. This includes:

- appointment of programme administrator
- selection of respiratory protective equipment (RPE)
- medical screening of users of RPE
- issue of RPE
- fitting of equipment
- wearing of RPE (where required)
- maintenance of RPE
- disposal of equipment
- recordkeeping
- programme evaluation

SCL rules for the selection, use and maintenance of PPE (PPE Rules)

SCL has produced a set of minimum requirement rules for the use of PPE based on the relevant standards. Every attempt has been made to the minimise the number of rules and keep the rules simple by selecting a higher level of PPE to reduce the number of options and the potential of using the wrong PPE.

The rules identify and differentiate between easy to use 'standard' PPE requiring only nominal training and 'specialist' PPE requiring comprehensive training.

It is important to note that the use of PPE does introduce new hazards into the workplace that must be managed, eg ear protection impacts on our being able to hear what people are telling us.

Personal Protective Equipment (PPE)

Compliance with requirements in the relevant standards for respiratory, hearing, etc management programmes will be met by:

- using the PPE rules to stipulate what PPE must be worn in what working environments
- differentiating between standard PPE and specialist PPE requiring specialist training
- pre-employment and annual medical checkups
- keeping up to date with latest practices from sources such as the Ministry of Business, Innovation and Employment's Worksafe organisation; Site Safe; Registered Master Builders; Carpenters' Union; trade magazines; etc.

Training in the use of PPE

Nominal on site training will be provided for the easy to use 'standard' PPE.

Comprehensive training will be organised for using specialist PPE.

It is important to note that adoption of full PPE body protection in the construction industry is fragmented. It is becoming widespread on large government projects and commercial projects, but not on smaller commercial projects or in the residential building sector.

Reasons that wearing full PPE body protection is not embraced include:

- it is often unpleasant to wear
- it is expensive

As well as insisting that PPE is worn, SCL will regularly advise and remind its staff of the benefits of PPE, particularly in preventing chronic injuries, in spite of the fact that it is often unpleasant to wear.

Supply, inspection, maintenance and replacement of PPE

SCL will supply SCL staff with all PPE. The procedure for purchasing the PPE will be the same as for purchasing materials.

The Sparrow Construction logo will be used to identify SCL PPE equipment – for example overalls will be embroidered with the Sparrow Construction logo.

It is the individual staff member's responsibility to ensure that the PPE they use is in good condition and current. They are to obtain replacement PPE for any that is not.

Site PPE requirements

The site safety plan and site manager will identify individual project PPE requirements over and above the PPE minimum requirement rules.

Communication

Communication about PPE requirements will be via SCL's Health and Safety Memos.



Personal Protective Equipment (PPE)

SUMMARY AND CONSOLIDATION OF RELEVANT SECTIONS OF STANDARDS


HEAD PROTECTION PPE

Specifying standard for selection: AS/NZS 1800:1998 Occupational protective helmets – Selection, care, use

Specifying standard for manufacture: AS/NZS 1801:1997 Occupational protective helmets

HAZARDS/RISKS	Type of PPE Relative section of AS/NZS 1800:1998 for selection of type of PPE	Instructions for use AS/NZS 1800:1998	Inspection regime AS/NZS 1800:1998	Maintenance action AS/NZS 1800:1998	Recordkeeping requirements AS/NZS 1800:1998	Hazards caused by use of RPE and mitigation of those hazards
<p>Possibility of being struck on head by falling object</p> <p>Possibility that head might strike against fixed object</p> <p>Possibility inadvertent head contact may be made with electrical hazards (AS/NZS 1801 helmets only suitable up to 650V)</p> <p><i>above as per clause 2.2 AS/NZS 1800</i></p>	 <p>Helmet Type 1 for industrial use <i>as per clause 2.5</i></p>  <p>two point chin strap</p>	<p>Write date of issue in space provided on manufacturer's helmet label</p> <p>Adjust harness so hat fits properly</p> <p>Avoid storing near windows where the helmets can get hot <i>as per clause 2.10a</i></p>	<p>Inspect all components weekly</p>	<p>Clean regularly with warm water and soap <i>as per clause 3.1</i></p> <p>Discard helmet if damaged due to impact or deterioration <i>as per clause 3.2</i></p> <p>Discard helmet after three years from date of issue</p> <p>Replace harnesses every two years or less</p> <p>NOTE: Does not apply to infrequently used helmets <i>as per clause 3.4</i></p> <p>Do not clean with solvents <i>as per clauses 2.10b, 2.10c</i></p>	<p>None required</p>	<p>Hats falling off due to:</p> <ul style="list-style-type: none"> • bending over • wind <p>All hats to be equipped with two point chin strap</p> <p>Vision when looking up (eg during crane operations) impacted by peak</p> <p>Use Type 1, 2 or 3 helmet with no brim.</p>
	<p>Accessories</p> <p>Face shields and earmuffs must meet requirements of other PPE sections</p>					

Personal Protective Equipment (PPE)

HAZARDS/RISKS	Type of PPE Relative section of AS/NZS 1800:1998 for selection of type of PPE	Instructions for use AS/NZS 1800:1998	Inspection regime AS/NZS 1800:1998	Maintenance action AS/NZS 1800:1998	Recordkeeping requirements AS/NZS 1800:1998	Hazards caused by use of RPE and mitigation of those hazards
Sun	<p>Cloth sun covers are available – MUST BE NON FLAMMABLE</p> 					<p>May impact on field of vision</p> <p>Do not use where impact on field of vision would compromise safety</p>


Personal Protective Equipment (PPE)

LUNG PROTECTION AGAINST NON TOXIC PARTICULATES USING RESPIRATORY PROTECTIVE EQUIPMENT (RPE)


- **NOT** suitable for toxic particulates or oxygen deficiency, mists, fumes, smokes, gases, vapours, micro organisms
- Required whenever dust generated/present – particularly concrete dust (silica dust)

Specifying standard for selection: AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment

Specifying standard for manufacture: AS/NZS 1716:2012 Respiratory protective devices

HAZARDS/RISKS	Type of RPE Relative section of AS/NZS 1715:2009 for selection of type of RPE	Instructions for use Note: negative impact of facial hair on effectiveness of mask due to lack of seal	Inspection regime AS/NZS 1715:2009	Maintenance action AS/NZS 1715:2009	Recordkeeping requirements AS/NZS 1715:2009	Hazards caused by use of PPE and mitigation of those hazards
DUST , ie mechanically generated (eg from grinding) particulates (eg silica) of sizes most commonly encountered in industry and mechanically and thermally generated (eg welding fumes) particulates	Disposable Class P2 dust mask (particulate filter)  <i>as per clause 4.2.3.4</i>	Ensure snug fit Dispose of when there is a perceived increase in the resistance to breathing	Inspection <i>as per clause 2.8.2</i> <ul style="list-style-type: none"> • Before and after each use (if used multiple times) Checklist <ul style="list-style-type: none"> • Physical damage (eg holes) to filter • Straps for elasticity and deterioration • Metal nose clip for deterioration <i>as per Table 9.1</i>	Obtain new mask	No records required for disposable RPE <i>as per clause 2.9</i>	Muffled speech impacting on communication Agree on meaning of hand signals before starting work

Personal Protective Equipment (PPE)

HAZARDS/RISKS	Type of RPE Relative section of AS/NZS 1715:2009 for selection of type of RPE	Instructions for use Note: negative impact of facial hair on effectiveness of mask due to lack of seal	Inspection regime AS/NZS 1715:2009	Maintenance action AS/NZS 1715:2009	Recordkeeping requirements AS/NZS 1715:2009	Hazards caused by use of PPE and mitigation of those hazards
As above and mechanically and thermally generated (eg welding fumes) particulates	Half face piece replaceable filter type Class P2 dust mask  <i>as per clause 4.2.3.4</i>	Replace filters when there is a perceived increase in the resistance to breathing <i>as per clause 9.5.2</i> ONLY REPLACE WITH NEW FILTERS	Every three months by SCL inspector <i>as per Table 9.1 Checklist</i> <ul style="list-style-type: none"> • Filters – dirty or missing • Facepiece – dirty or damaged • Head straps – faulty • Valves – dirty, damaged or missing • Breathing tube – faulty 	Replace filters Repair or replace mask components or replace mask	No records required for filters used in half face piece RPE where these are changed regularly <i>as per clause 2.9</i>	As above
Toxic particles and oxygen deficiency, mists, fumes, smokes, gases, vapours, micro organisms	SPECIALIST PPE	SPECIALIST TRAINING REQUIRED				


Personal Protective Equipment (PPE)

EYE (and face) PROTECTION


Specifying standard for selection: AS/NZS 1336:2014 Eye and Face Protection Guidelines

Specifying standard for manufacture: AS/NZS 1337 Part 1 Eye and face protectors for occupational applications (non prescription; low, medium, high and very high impact)


AS/NZS 1337 Part 6 Prescription eye protectors against low and medium impact

#	HAZARDS/RISK AS/NZS 1336:2014	Type of PPE AS/NZS 1336:2014	Instructions for use AS/NZS 1336:2014	Inspection regime AS/NZS 1336:2014	Maintenance action AS/NZS 1336:2014	Recordkeeping requirements AS/NZS 1336:2014	Hazards caused by use of PPE and mitigation of those hazards
1	<p>Flying fragments and objects with low velocity of low mass from manual chipping, riveting, spalling, hammering, handling wire and brick cutting</p> <p>Small flying particles and objects with medium velocity or medium mass from machine disc cutting of materials, scaling, grinding and machining metals, certain wood-working operations, stone dressing</p> <p>Debris from horticultural activities using lawnmowers, wire snippers, lawn edgers, etc</p> <p>Solar radiation</p>	<p>Medium impact eye protectors marked 'I' or 'F' and O for outdoor use</p> <p>NOTE: high impact (marked 'V' or 'B') and extra high impact (marked 'A') will give greater protection</p>  <p>Table 4.1</p> <p>Manufacturer must comply with AS/NZS 1337.1</p> <p>NOTE: Contacts can be worn under eye protectors as per clause 4.2 (d)</p>	<p>Get used to wearing the eye protectors before commencing a task <i>as per clause 4.7.4</i></p> <p>Avoid/regularly wash off sunscreen and construction chemicals because these substances are known to degrade some eye protector materials <i>as per clause 4.5(d) (iv)</i></p>	<p>Wearers to self check before use and during use</p> <p>Thermally tempered glass oculars, filters or lenses are to be replaced 18 months from date of manufacture because thermally tempered glass gradually loses impact resistance as per clause 4.5(e)</p>	<p>Wash with non abrasive soap or detergent in warm water using a soft cloth and then rinse and dry (washing facilities and tissues to be provided on site) <i>as per clause 4.5 (d) (i)</i></p> <p>Replace oculars, filters and lenses when scratched, abraded, pitted, etc <i>as per clause 4.6</i></p> <p>(clause 4.6 also requires that they are to be replaced at a minimum two years after issue unless evaluated by a suitably qualified person)</p>	None required	<p>Fogging and perspiration</p> <p>Use of antifogging compounds and sweat bands <i>clause 4.4</i></p> <p>Dirty or scratched glasses impairing vision</p> <p>Clean or replace</p>


Personal Protective Equipment (PPE)

#	HAZARDS/RISK AS/NZS 1336:2014	Type of PPE AS/NZS 1336:2014	Instructions for use AS/NZS 1336:2014	Inspection regime AS/NZS 1336:2014	Maintenance action AS/NZS 1336:2014	Recordkeeping requirements AS/NZS 1336:2014	Hazards caused by use of PPE and mitigation of those hazards
2	As above Discomfort from the sun's glare	As above  Tinted sunglasses – manufacture must comply with AS/NZS 1337.1 as per clause 5.10	As above USE ONLY OUTSIDE NOTE: TINTED GLASSES ARE NOT TO BE WORN INSIDE (Does not apply to specialist eye protectors for welding, etc)	As above	As above	As above	As above
3	As for 1	Prescription safety glasses Medium or high impact eye protectors as per clause 4.2.2 Manufacture must comply with AS/NZS 1337.6	As above	As above Prescription eye protector wearers are to have an eye examination every two years as per clause 4.6	As above	Records of eye inspections are to be kept on staff register	As above

Personal Protective Equipment (PPE)

#	HAZARDS/RISK AS/NZS 1336:2014	Type of PPE AS/NZS 1336:2014	Instructions for use AS/NZS 1336:2014	Inspection regime AS/NZS 1336:2014	Maintenance action AS/NZS 1336:2014	Recordkeeping requirements AS/NZS 1336:2014	Hazards caused by use of PPE and mitigation of those hazards
4	As for 1	<p>Fit over eye protectors including face shields over prescription glasses</p> <p>Medium impact eye protectors marked 'I' or 'F' and O for outdoor use</p> <p>NOTE: high impact (marked 'V' or 'B') and extra high impact (marked 'A') will give greater protection</p> <p>Over prescription glasses <i>as per clause 4.4.2 (c)</i></p> <p>Manufacture must comply with AS/NZS 1337.6</p> 	As above – ensure clearance between fit over eye protectors and prescription glasses	As for 1	As above	As for 1	As above

Personal Protective Equipment (PPE)

#	HAZARDS/RISK AS/NZS 1336:2014	Type of PPE AS/NZS 1336:2014	Instructions for use AS/NZS 1336:2014	Inspection regime AS/NZS 1336:2014	Maintenance action AS/NZS 1336:2014	Recordkeeping requirements AS/NZS 1336:2014	Hazards caused by use of PPE and mitigation of those hazards
5	High velocity particles from explosive power tools, machine disc cutting of materials, scaling, grinding	High impact eye protectors marked 'V' or 'B' NOTE: extra high impact (marked 'A') will give greater protection  <i>as per Table 4.1</i>	As above	As for 1 Every three months	As for 1	On tools register	As above
6	Non ionizing radiation with hot solids from welding, gas cutting, brazing, furnace work	SPECIALIST PPE	SPECIALIST TRAINING REQUIRED				

Personal Protective Equipment (PPE)

HEARING PROTECTION USING BASIC PPE

“Every employer shall take all practicable steps to ensure, in relation to every place of work under the control of that employer, that no employee is exposed to noise above the following levels:


- (a) a noise exposure level, $L_{Aeq,8hr}$ of 85 dB(A); and
- (b) a peak noise level (L_{peak}) of 140 dB(A),— whether or not the employee is wearing a personal hearing protection device.”

Specifying standard for selection: AS/NZS 1269.3:2005 Occupational Noise Management Part 3: Hearing protector program

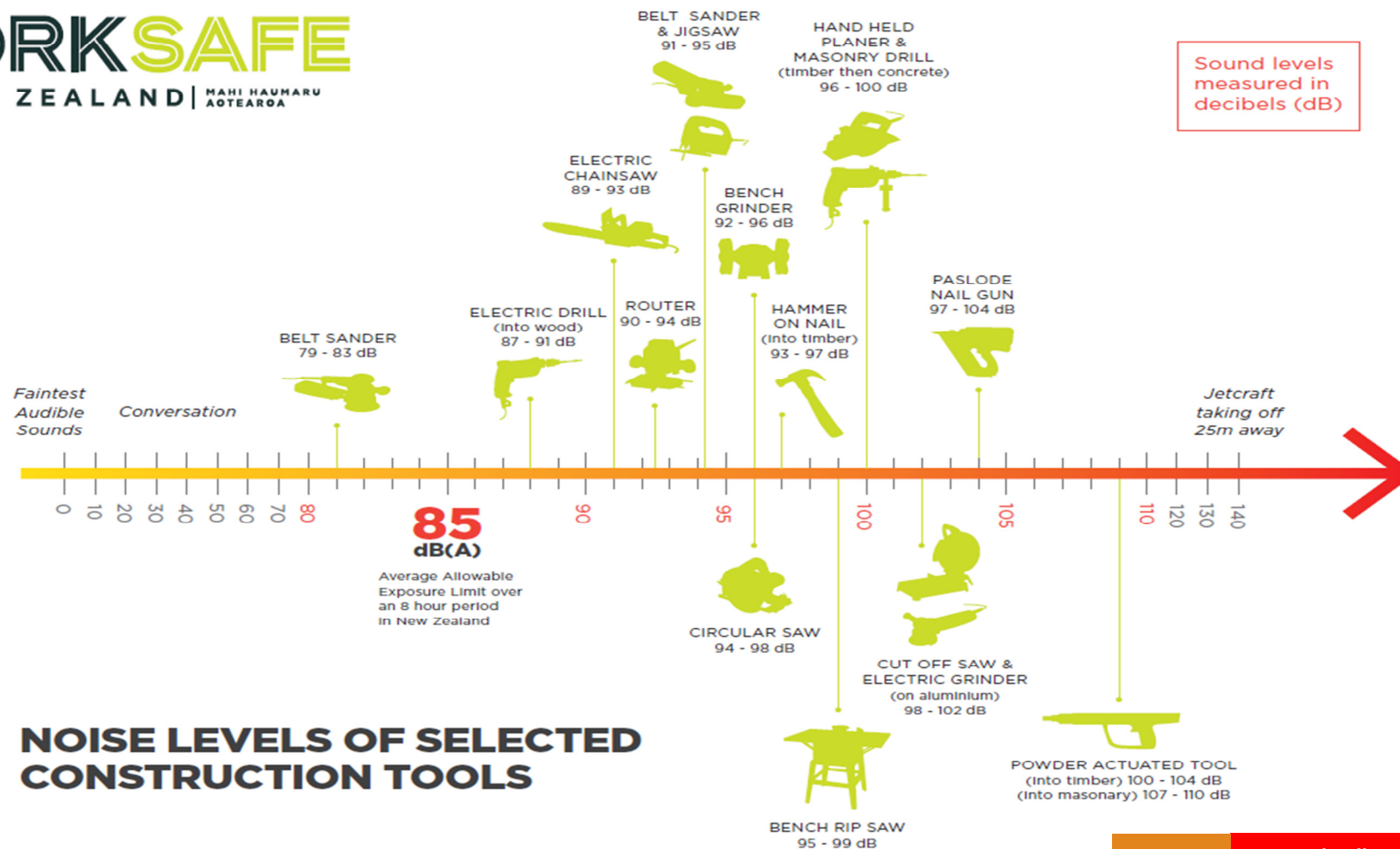
Specifying standard for manufacture: AS/NZS 1270:2002 Acoustics – Hearing protectors

HAZARDS/RISKS	Selection of type of PPE Class of hearing protector required AS/NZS 1269.3:2005 Acoustic noise management Table A1 as per Regulation 11 – Noise Health and Safety in Employment Regulations 1995	Instructions for use	Inspection regime AS/NZS 1269.3:2005	Maintenance action AS/NZS 1269.3:2005	Recordkeeping requirements AS/NZS 1269.3:2005	Hazards caused by use of PPE and mitigation of those hazards
Sounds less than 85 $L_{Aeq,8hr}$ dB(A), eg hand saws	No ear protection required <i>(sound levels as per NZS 6803:1999 Acoustics – construction noise Tables C.1-C.12 reproduced from BS 5228:Part 1:1997)</i>					

Personal Protective Equipment (PPE)

HAZARDS/RISKS	Selection of type of PPE Class of hearing protector required AS/NZS 1269.3:2005 Acoustic noise management Table A1 as per Regulation 11 – Noise Health and Safety in Employment Regulations 1995	Instructions for use	Inspection regime AS/NZS 1269.3:2005	Maintenance action AS/NZS 1269.3:2005	Recordkeeping requirements AS/NZS 1269.3:2005	Hazards caused by use of PPE and mitigation of those hazards
Sounds up to 110 L _{Aeq,8h} , dB(A), eg placing concrete, earthworks plant, power saw, concrete saw, etc	Class 5 ear protection 	Particular care is required with fitting earplugs, which will provide little protection if poorly fitted as per clause 7.2.1	User to inspect earmuffs before use	Clean earmuffs (in particular cushions) and reusable earplugs and ear canal caps with warm soapy water whenever dirty or at least once a week Replace when damaged <i>Above as per clauses 8.2.2, 8.2.3</i>	None required	Impaired hearing, making it more difficult to communicate. Agree hand signals prior to starting work.
Sounds over 110 L _{Aeq,8h} , dB(A), eg demolition work, powder fired fastener, vehicle horn	Seek specialist advice Note: can combine Class 5 earplug plus Class 5 earmuff and limited exposure as per University of Toronto Environmental Health and Safety Hearing Protection Standard http://www.ehs.utoronto.ca/resources/manindex/standards/hearstd.htm					

Personal Protective Equipment (PPE)



NOISE LEVELS OF SELECTED CONSTRUCTION TOOLS

Noise doubles every 3 decibels. A tool operating at 88 dB(A) is actually twice as loud as a tool operating at 85 dB(A).

85-110 dB mandatory Class 5 ear protection

110-140 dB
special study required


>140dB Illegal to work

Personal Protective Equipment (PPE)


FOOT PROTECTION USING BASIC PPE

Specifying standard for selection: AS/NZS 2210.1:2010 Safety, protective and occupational footwear Part 1: Guide to selection, care and use

Specifying standard for manufacture: AS/NZS 2210.3:2009 Occupational protective footwear Part 3: Specification for safety footwear
(safety footwear has more rigorous requirements than protective footwear which has more rigorous requirements than occupational footwear)

HAZARDS/RISKS	Selection of type of PPE AS/NZS 2210.1	Instructions for use	Inspection regime AS/NZS 2210.1	Maintenance action AS/NZS 2210.1	Recordkeeping requirements AS/NZS 2210.1	Hazards caused by use of PPE and mitigation of those hazards
Slipping Dropping objects on feet Stepping on nails, etc Chemical damage to sole	Type B – ankle boot Safety Classification S3 (ie closed seat region, anti static footwear, energy absorption of seat region, water penetration and water absorption, penetration resistance, cleated outsole) <i>as per Figure 2 and Table 1.3</i>  Steel toe caps, steel mid sole	When purchasing, try on boots to ensure they are comfortable and fit well	Inspect prior to use for significant wear or damage <i>as per clause 4.2.4</i> NOTE: Appendix B provides guidance, but use common sense, ie replace if signs of significant wear or damage	Clean regularly <i>as per clause 4.2.1</i>	None required	None

Personal Protective Equipment (PPE)


HAZARDS/RISKS	Selection of type of PPE AS/NZS 2210.1	Instructions for use	Inspection regime AS/NZS 2210.1	Maintenance action AS/NZS 2210.1	Recordkeeping requirements AS/NZS 2210.1	Hazards caused by use of PPE and mitigation of those hazards
As above, plus: Water Concrete	Type D – knee high boot (gumboot) Safety Classification S5 (ie anti static footwear, energy absorption of seat region, water penetration and water absorption, penetration resistance, cleated outsole) <i>as per Figure 2 and Table 1.4</i>  Steel toe caps, steel mid sole	As above	As above	As above	As above	As above

Personal Protective Equipment (PPE)


BODY PROTECTION USING BASIC PPE

Specifying standard for selection: AS/NZS 4501.1:2008 Occupational protective clothing Part 1: Guidelines on the selection, use, care and maintenance of protective clothing (*information provided is general not specific*)
 AS/NZS 1906.4:2010 Retroreflective materials and devices for road traffic control purposes
 Part 4: High-visibility materials for safety garments
 AS/NZS 4602.1:2011 High visibility safety garments Part 1: Garments for high risk applications
 AS/NZS 4453.3:1997 Protective clothing for users of hand-held chainsaws Part 3: Protective legware
 AS/NZS 2604:2012 Sunscreen products – evaluation and classification



Specifying standard for manufacture: AS/NZS

HAZARDS/RISKS	Selection of type of PPE See standard referenced in each section	Instructions for use	Inspection regime AS/NZS 2210.1	Maintenance action AS/NZS 2210.1	Recordkeeping requirements AS/NZS 2210.1	Hazards caused by use of PPE and mitigation of those hazards
Not being seen Being injured by construction activities or third parties	As a minimum, high viz vest (always done up or pullover type) which complies with AS/NZS 4602.1:2011 	If vest type, ensure always done up	Check clean	Warm machine wash and drip dry in shade Do not use bleach	Not required	Undone high viz vest can get tangled up in equipment, etc


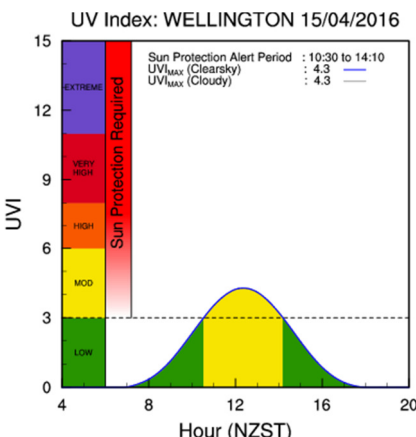
Personal Protective Equipment (PPE)

HAZARDS/RISKS	Selection of type of PPE See standard referenced in each section	Instructions for use	Inspection regime AS/NZS 2210.1	Maintenance action AS/NZS 2210.1	Recordkeeping requirements AS/NZS 2210.1	Hazards caused by use of PPE and mitigation of those hazards
Stress from getting wet in the rain when working in a high voltage environment	<p>Raincoat and leggings must have limited flame spread, which means they must comply with:</p> <ul style="list-style-type: none"> • EN 533 Limited flame spread <p>and ideally also comply with:</p> <ul style="list-style-type: none"> • AS/NZS 1906.4:2010 Class F(W)* • AS/NZS 4602.1:2011 suitable for wet weather day/night use, TTMC orange only* • BS EN 1149.1:1996 Electrostatic properties • BS EN 1149.3:2004 Electrostatic charge decay <p>* raincoat only</p> 		Before and after each use check for soiling and abrasion damage, etc	<p>Hand or machine wash maximum temperature 40°C using soap flakes.</p> <p>Avoid rigorous abrasion, fabric softener, bleach, dry cleaning, ironing</p> <p>Line dry or tumble dry only on low heat</p>	None required	<p>Overheating</p> <p>Bulk impeding movement</p>

Personal Protective Equipment (PPE)

HAZARDS/RISKS	Selection of type of PPE See standard referenced in each section	Instructions for use	Inspection regime AS/NZS 2210.1	Maintenance action AS/NZS 2210.1	Recordkeeping requirements AS/NZS 2210.1	Hazards caused by use of PPE and mitigation of those hazards
Skin injury from the sun or construction activities in the electrical industry	<p>Single or two piece overalls to provide full body cover protection</p> <p>Fabric arc protection to exceed NFPA 70E Cat 2 ATPV 8.8 cal/sqcm</p> <p>Fabric to meet EN 531 and EN 533 for heat protection and limited flame spread</p> <p>Garment design and materials to comply with AS/NZS 4602.1:2011 non fluorescent fabric and Transit NZ CoPTTM</p>  <p>Electra requires minimum protection 9.5Cal or greater</p> <p>Transpower requires minimum protection high risk category 2 8.0Cal (Transpower code TPSS0601 Issue 3 May 2014)</p>	Keep done up	Before use check clean and zips working	Warm machine wash. Do not use soap or bleach. Line dry or tumble dry on low heat	Not required	<p>Overheating in summer (drink plenty of water and consider wearing a cooling scarf)</p> 
Skin injury from the sun or construction activities	Trousers and long sleeved shirts made from wool or cotton	Keep done up	Check before use garments clean and in good repair		Not required	

Personal Protective Equipment (PPE)



HAZARDS/RISKS	Selection of type of PPE See standard referenced in each section	Instructions for use	Inspection regime AS/NZS 2210.1	Maintenance action AS/NZS 2210.1	Recordkeeping requirements AS/NZS 2210.1	Hazards caused by use of PPE and mitigation of those hazards
Injury to legs from chainsaws	Chaps or full trousers  <i>as per AS/NZS 4453.3:1997</i> internal chain stopping protective fibre, water and oil resistant fabric finish	Store to prevent contamination by products likely to cause deterioration or make clothing hazardous	Examine thoroughly after each use, and at regular intervals when in storage, for broken fasteners or straps and damaged or cut protective materials	Repair broken or defective fasteners Replace garment when protective materials cut or damaged	Not required	None
Sun on exposed skin surfaces, eg face 	Sunscreen Minimum requirements – SPF 50+ UVA/UVB broad spectrum, 4 hours water resistance sunscreen <i>as per AS/NZS 2604:2012:</i> <i>skin protected by SPF50 sunscreen will receive a sunburning dose of 2% in 10 minutes, 6% in 30 minutes and 30% in 150 minutes</i>	Apply generously at least 20 minutes before sun exposure, reapply every two hours especially after swimming, towelling and perspiration. Avoid contact with eyes and discontinue if use causes irritation or rashes. Avoid contact with safety glasses, etc, as may cause damage.	None	As per instructions for use	Not required	Slippery hands, etc Damage to safety glasses, etc

Personal Protective Equipment (PPE)


HAND PROTECTION USING BASIC PPE (GLOVES)

Specifying standard for selection: AS/NZS 2161.1:2000 Occupational protective gloves Part 1: Selection, use and maintenance

Specifying standard for manufacture: AS/NZS 2161.3:2005 Occupational protective gloves Part 3: Protection against mechanical risks
 AS/NZS 2161.5:1998 Occupational protective gloves Part 5: Protection against cold

HAZARDS/RISKS	Selection of type of PPE AS/NZS 2161.1	Instructions for use	Inspection regime AS/NZS 2161.1	Maintenance action AS/NZS 2161.1	Recordkeeping requirements AS/NZS 2161.1	Hazards caused by use of PPE and mitigation of those hazards
Mechanical risks: Abrasion, eg from brick/block handling, steel fabrication, construction, demolition, manufacturing, quarrying work Puncture, eg from swarf, reinforced steel mesh handling, wire handling, demolition work	Leather/pigskin, neoprene, nitrile – <i>as per Table 1</i> 	Clean hands prior to use Clean gloves prior to taking off Store in suitable location away from direct sunlight and extremes of temperature	Before each use check for wear between fingers, seam failure, cracking/bubbling or obvious pinholes, swelling/shrinking	Gloves with obvious faults should be discarded	Not required	Clumsiness, mishandling of small materials and tools Sweating
Chemical burns and/or dermatitis (temporary or permanent inflammation of the skin), eg wet concrete, grouts, epoxies, formoil	PVC, PVA, nitrile, neoprene, rubber, vinyl – <i>as per Table 1</i> 	As above	As above	As above	As above	As above

Personal Protective Equipment (PPE)

HAZARDS/RISKS	Selection of type of PPE AS/NZS 2161.1	Instructions for use	Inspection regime AS/NZS 2161.1	Maintenance action AS/NZS 2161.1	Recordkeeping requirements AS/NZS 2161.1	Hazards caused by use of PPE and mitigation of those hazards
Vibration white finger from continuous use of vibrating hand held machinery	Refer to specialist ergonomist advice – <i>as per Table 1</i> Example pictured has silicone gel palm pads to absorb vibration 	As above	As above	As above	As above	As above
Cold from outdoor winter, cold room	Leather, wool, aramid blends – <i>as per Table 1</i>	As above	As above	As above	As above	As above

Personal Protective Equipment (PPE)

IMPLEMENTATION

PRINCIPLE 3

GENERAL PPE RULES

An assessment must be made of the hazards and risks prior to starting any task to determine what PPE must be used and whether standard PPE is adequate or specialised PPE is required.

- 1 SCL will provide all staff with PPE.
- 2 SCL will provide all training on how to use PPE – training for standard PPE will be provided by the site supervisor, training for specialised PPE will be provided by training providers as required.
- 3 Staff are to ensure that all PPE is in good condition through inspections before and after use.
- 4 Additionally, half face piece Class P2 dust masks and high impact face shields will be inspected as part of the three-monthly electrical tool inspection regime.
- 5 Both PPE specific PPE rules (below) and site specific PPE rules must be complied with.

HARD HAT (HELMET) PPE RULES

Hard hats (Type 1, 2 or 3 helmets) must be worn when there is a risk of you being struck on the head by falling objects, or your head striking a fixed object, or your head making contact with electrical hazards.

- 1 The hard hats are to be fitted with a two point chin strap.
- 2 The date of issue must be recorded on the label provided inside the helmet.
- 3 The hard hats are to be inspected before use and replaced if not in good condition.
- 4 The hard hats are to be replaced after two years of continuous use.
- 5 Cloth sun covers are only to be used if they are clearly labelled as non flammable.

Personal Protective Equipment (PPE)

RESPIRATORY PROTECTIVE EQUIPMENT (RPE) RULES

RPE is to be worn when there is a risk from the work environment of damage to your lungs and/or systemic injury to you.

- 1 Class P2 RPE will be used as a minimum to protect against non toxic particulates as it provides protection against accidental exposure to asbestos (refer to <http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/asbestos-factsheets/personal-protective-equipment-to-use-when-working-with-asbestos>), whereas Class P1 does not.
- 2 Disposable Class P2 RPE and replaceable Class P2 filter cartridges are to be disposed of when there is a perceived increase in the resistance to breathing.
- 3 Replaceable filter masks will be inspected and tagged as inspected every three months.
- 4 Other classes of RPE for treating against toxic particles, oxygen deficiency, mists, fumes smokes, gases, vapours and micro organisms require specialist training.

EYE PROTECTION RULES

Eye protectors are to be worn when there is a risk that your work activities or the environment you are working in might cause damage to your eyes.

- 1 High impact full face eye protection – marked ‘V’ or ‘B’ and ‘O’ (outdoor) – must be used when using high velocity power tools, grinders and chainsaws.
- 2 Where the above is not required, medium impact safety glasses – marked ‘I’ or ‘F’ and ‘O’ (outdoor) – must be used as a minimum. **Low impact eye protectors are not to be used.**
- 3 Only clear (not tinted) safety glasses are to be worn inside.
- 4 Other eye protection equipment such as welding goggles requires specialist training.

HEARING PROTECTION RULES

Hearing protection is to be worn when noise levels are greater than 85dB, ie many construction work situations including the use of power tools.

No one is to work in an environment where noise levels are greater than 110dB without specialist advice.

No one is to work in an environment where peak noise level (L_{peak}) is higher than 140 dB(A),— whether or not the employee is wearing a personal hearing protection device.”

- 1 Class 5 ear protection must be worn as a minimum.
- 2 Earmuffs are to be inspected before use and replaced if there is any sign of damage to the cushions.
- 3 Class 5 earmuffs and class 5 earplugs are to be used in combination when using powder actuated tools, masonry drills and electric and pneumatic breakers.

Personal Protective Equipment (PPE)

FOOT PROTECTION RULES

Foot protection is to be worn at all times.

- 1 Lace up ankle boots with steel toe caps and steel mid soles are to be worn as standard (ie Type B Safety Classification S3).
- 2 When working in muddy or wet conditions or placing concrete, knee high gumboots are to be worn as standard (ie Type B Safety Classification S5).

BODY PROTECTION RULES

Body protection is to be worn to protect against the construction environment and activities

- 1 Non-flammable full body cover is to be worn at all times (HV industry has specific additional requirements).
- 2 SP50 sunscreen is to be applied at two-hourly intervals during the periods identified by NIWA in their UVI forecast – to be found at <https://www.niwa.co.nz/our-services/online-services/uv-and-ozone/forecasts>.
- 3 Raincoats and leggings are to be worn when working in the rain.
- 4 High visibility garments are to be worn when controlling traffic and in other high risk situations, eg around construction machinery.
- 5 Chaps are to be worn when using a chainsaw.

HAND PROTECTION RULES

- 1 Chemical resistant “rubber” gloves are to be worn when working with wet concrete, epoxies and other construction chemicals.
- 2 Silicone gel palm gloves are to be worn when continuously using vibrating hand held machinery.
- 3 Leather gloves are to be worn when handling metal (eg wire, reinforcing) and carrying out concrete and masonry demolition work.

Personal Protective Equipment (PPE)

Standard PPE

List of standard PPE provided by SCL:

Individual PPE

- 1 Hardhat (Type 1 helmet) with 2 point chin strap
- 2 Sun hat for hardhat
- 3 Class P2 dust masks
- 4 Class P2 half piece replaceable filter type Class P2 dust mask
- 5 Class 5 ear muffs
- 6 Class 5 ear plugs
- 7 Full face shields marked 'V' or 'B' – preference extra high impact (marked 'A')
- 8 Safety glasses medium impact marked "I" or "F" and "O" for outdoor use
- 9 Tinted safety glasses as above
- 10 Lace up safety boots with steel caps and sole plates Type B – ankle boot
Safety Classification S3
- 11 Knee height safety gumboots with steel caps (and ideally sole plates) Type D –
Safety Classification S5
- 12 Hi viz vest (night/day)
- 13 Fire retardant overalls 12Cal HRC2 with SCL logo- (Hi viz night/day)
- 14 Fire retardant Arcpro raincoat and leggings (Hi viz night/day)
- 15 Fire retardant (night/day) wool coat
- 16 Necktie coolers
- 17 SP50 sunscreen
- 18 Leather gloves
- 19 Neoprene rubber gloves

Communal PPE

- 1 Anti vibration gloves
- 2 Chaps

Personal Protective Equipment (PPE)



Personal Protective Equipment (PPE)

MEASUREMENT AND EVALUATION

PRINCIPLE 4

SCL has given consideration to how to measure and evaluated compliance with the two components of this policy, ie the inputs:

- ensuring the PPE is in good condition
- wearing PPE as required

and the outputs:

- reduction in chronic injuries
- reduction in acute injuries

The requirements to measure and evaluate the effectiveness of the PPE policy will be carried out as follows:

Inputs

Non compliance of staff with the requirements that they wear PPE that is in good condition in situations as required by this policy and the site rules will be identified and recorded during informal and formal inspections and during audits. Repeat non compliance is both morally and legally unacceptable.

Outputs

Its is not feasible to measure the reduction in chronic injuries – this would involve a larger sample size than SCL has staff and would involve a long term study.

Acute injuries and near misses will be investigated to determine if:

- The PPE policy needs to be revised to provide additional protection.
- The PPE policy was not complied with.

REVIEW AND IMPROVEMENT

PRINCIPLE 5

The PPE policy will be reviewed by the governing director as required by legislative and other changes, but at a minimum every twelve months.

SCL has started discussions about making full body cover mandatory.

Personal Protective Equipment (PPE)

Appendix A : Guidance from governmental occupational safety organisations

Worksafe	Workcover New South Wales	HSE (Great Britain)	OSHA (USA) Doc 4/2006
http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/disaster-recovery-personal-protective-equipment-ppe/ppe.pdf	http://www.workcover.nsw.gov.au/health-and-safety/manage-workplace-safety/personal-protective-equipment	This is a web-friendly version of leaflet INDG174(rev2), published 06/13 http://www.hse.gov.uk/pubns/indg174.pdf	https://www.osha.gov/OshDoc/data_General_Facts/ppe-factsheet.pdf
<ul style="list-style-type: none"> • Damaged structures • Falling objects • Hard hats • Boots • Safety goggles/glasses • Sharp debris • Spilled chemicals • Overalls • Gloves • Boots • Safety goggles/glasses • Plant noise • Demolition noise • Machine noise • Earplugs or earmuffs • Dust • Fumes • Asbestos • Chemicals • Particulate dust mask for dusts • Respirators with cartridges for chemicals • Safety goggles/glasses 	PPE includes: <ul style="list-style-type: none"> • eye protection, like goggles, glasses and face shields • hearing protection, like ear plugs and ear muffs • respiratory protection, like filter respirators, air line respirators and self-contained breathing apparatus (SCBA) • foot protection, like safety shoes and boots, spats and rubber gumboots • head protection, like hard hats, helmets and broad brimmed hats • body protection, like aprons, overalls, gloves and high visibility clothing • any substance used to protect health, like sunscreen 	Head Hazards: Impact from falling or flying objects, risk of head bumping, hair entanglement. Options: A range of helmets, hard hats and bump caps. Note: Some safety helmets incorporate or can be fitted with specially-designed eye or hearing protection. Don't forget neck protection, eg scarves for use during welding. Do not use head protection if it is damaged – replace it. Breathing Hazards: Dust, vapour, gas, oxygen-deficient atmospheres. Options: Disposable filtering face-piece or respirator, half- or full-face respirators, airfed helmets, breathing apparatus. Note: The right type of respirator filter must be used as each is effective for only a limited range of substances. Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, only use breathing apparatus – never use a filtering cartridge. Filters only have a limited life; when replacing them or any other part, check with the	Protection from head injuries Hard hats can protect your workers from head impact, penetration injuries, and electrical injuries such as those caused by falling or flying objects, fixed objects, or contact with electrical conductors. Also, OSHA regulations require employers to ensure that workers cover and protect long hair to prevent it from getting caught in machine parts such as belts and chains. When to wear respiratory protection When engineering controls are not feasible, workers must use appropriate respirators to protect against adverse health effects caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. Respirators generally cover the nose and mouth or the entire face or head and help prevent illness and injury. A proper fit is essential, however, for respirators to be effective. Required respirators must be NIOSH-approved and medical evaluation and training must be provided before use.

Personal Protective Equipment (PPE)

<ul style="list-style-type: none"> • Dust • Welding flash • Concrete or wood debris • Glasses • Safety goggles 		<p>manufacturer's guidance and ensure the correct replacement part is used. If you are using respiratory protective equipment, look at HSE's publication Respiratory protective equipment at work: A practical guide (see 'Further reading').</p>	
		<p>Eyes</p> <p>Hazards: Chemical or metal splash, dust, projectiles, gas and vapour, radiation.</p> <p>Options: Safety spectacles, goggles, face-shields, visors.</p> <p>Note: Make sure the eye protection has the right combination of impact/dust/ splash/molten metal eye protection for the task and fits the user properly.</p>	<p>Protection from eye and face injuries</p> <p>Besides spectacles and goggles, personal protective equipment such as special helmets or shields, spectacles with side shields, and faceshields can protect workers from the hazards of flying fragments, large chips, hot sparks, optical radiation, splashes from molten metals, as well as objects, particles, sand, dirt, mists, dusts, and glare.</p>
		<p>Protecting the body</p> <p>Hazards: Temperature extremes, adverse weather, chemical or metal splash, spray from pressure leaks or spray guns, impact or penetration, contaminated dust, excessive wear or entanglement of own clothing.</p> <p>Options: Conventional or disposable overalls, boiler suits, specialist protective clothing, eg chain-mail aprons, high-visibility clothing.</p> <p>Note: The choice of materials includes flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility. Don't forget other protection, like safety harnesses or life jackets.</p>	<p>Protection from body injury</p> <p>In some cases workers must shield most or all of their bodies against hazards in the workplace, such as exposure to heat and radiation as well as hot metals, scalding liquids, body fluids, hazardous materials or waste, and other hazards. In addition to fire-retardant wool and fireretardant cotton, materials used in whole-body personal protective equipment include rubber, leather, synthetics, and plastic.</p>

Personal Protective Equipment (PPE)

		<p>Hands and arms</p> <p>Hazards: abrasion, temperature extremes, cuts and punctures, impact, chemicals, electric shock, skin infection, disease or contamination.</p> <p>Options: Gloves, gauntlets, mitts, wrist-cuffs, armlets.</p> <p>Note: Avoid gloves when operating machines such as bench drills where the gloves could get caught. Some materials are quickly penetrated by chemicals so be careful when you are selecting them, see HSE's skin at work website (www.hse.gov.uk/skin). Barrier creams are unreliable and are no substitute for proper PPE. Wearing gloves for long periods can make the skin hot and sweaty, leading to skin problems; using separate cotton inner gloves can help prevent this. Be aware that some people may be allergic to materials used in gloves, eg latex.</p>	<p>Protection from hand injuries</p> <p>Workers exposed to harmful substances through skin absorption, severe cuts or lacerations, severe abrasions, chemical burns, thermal burns, and harmful temperature extremes will benefit from hand protection.</p>
		<p>Feet and legs</p> <p>Hazards: Wet, electrostatic build-up, slipping, cuts and punctures, falling objects, metal and chemical splash, abrasion.</p> <p>Options: Safety boots and shoes with protective toe caps and penetration-resistant mid-sole, gaiters, leggings, spats.</p> <p>Note: Footwear can have a variety of sole patterns and materials to help prevent slips in different conditions, including oil or chemical-resistant soles. It can also be anti-static, electrically conductive or thermally insulating. It is important that the appropriate footwear is selected for the risks identified.</p>	<p>Protection from foot and leg injuries</p> <p>In addition to foot guards and safety shoes, leggings (eg leather, aluminized rayon, or other appropriate material) can help prevent injuries by protecting workers from hazards such as falling or rolling objects, sharp objects, wet and slippery surfaces, molten metals, hot surfaces and electrical hazards.</p>

Personal Protective Equipment (PPE)

Appendix B : Transpower PPE Requirements

APPENDIX A

TP.SS 06.01

Issue 1

Apr 2013

A PPE MINIMUM REQUIREMENTS SUMMARY

Work Type or Category		FBC	FBC 8 Cal	Hi Vis (3)	FR Clothing (4)	Fall arrest	Hard Hat	Safety Glasses	Ear Muff	Safety Boots	Safety Shoes	Gloves (4)	Breath ing	Other
Transmission Lines	L/O liaison				R						R			
	Line work		M	M	R	M	M	M	AR	M		M	AR	
	Live Line		M	M	R	M	M	M		SS		M		Live Line suits + accessories
	Vegetation		M	M	R	AR	M	M	AR	M		M	AR	Chainsaw caps, face shields
	Patrols & CA		M	M	R	AR	AR	M	AR	M		AR	AR	
	Helicopter (Crew)		M	M	R		SS	M	SS		M	AR	AR	Flight helmet or headset shell
	Foundation	M	SS	M	R		AR	M	AR	M		M	AR	
	Tower Building	M	R	M	R	M	M	M	AR	M		M	AR	
	Wiring		M	M	R	AR	M	M	AR	M		M	AR	
	Access	M	SS	R	R		AR	M	AR	M		AR	AR	
Tower Painting	M	SS	SS	SS	M	M	M	AR	M		M	AR	Water blasting protection.	
Substations	Outdoor subs		M	M	R	AR	M	M	AR	M	SS	M	AR	See TP.OG 42.02
	Indoor Subs		M	M	R	AR	AR	M	AR		M	AR	AR	
	Civil- Ground	M	R	M	R		AR	M	AR	M		AR	AR	Remote from Live equipment
	Civil Above Ground	M	R	M	R	M	M	M	AR	M		AR	AR	Remote from Line equipment
	Concrete Work	M	SS	M	R		AR	M	AR	M		M	AR	HD Rubber gloves
	Building Maintenance	M	R	M	R	AR	AR	M	AR		M	AR	AR	Remote from Live Equipment
Emergency Services			M			AR	R	AR		R	AR		Escorted and supervised	
Other	Comms Towers		M	M	R	M	M	M	AR	M		AR	AR	
	Comms Buildings	M	M	M	R		AR	M	AR		M	AR	AR	
	Visitors to work sites		M	M	R		M	M	AR	R	M	AR	AR	Escorted and supervised

- Notes:
1. See main content of Service Specification for full description of requirements.
 2. M= Mandatory R = Recommended, AR= As Required. SS = See main body of Service Specification for specific details.
 3. Normally incorporated with FBC.
 4. Includes underwear and socks