**Construction Work Policy And Guidance**

**Policy statement**

1. Defence will maintain a safe workplace for workers performing construction work. This will be achieved through effective contract, contractor and personnel management and assurance activities.

**Scope**

2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.

3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

**Policy - core elements**

4. This policy applies to all construction work undertaken by workers for Defence business, and to all workplaces where construction work is carried out for, or on behalf of, Defence. This includes high risk construction work and demolition.

5. A risk assessment must be undertaken when planning or working on construction activities.


7. A list of the types of construction work that have been classed as high risk is in *Work Health and Safety Regulations 2011, Regulation 291 – Meaning of high risk construction work* (Annex A). Before high risk construction work can start, a safe work method statement is required which sets out the high risk construction work activities to be carried out at the workplace, the hazards arising from those activities and the safeguards to be put in place to control the risks.

8. Under the *Work Health and Safety Regulations 2011*, work connected to demolishing a structure is classed as construction work. Hence, when carrying out demolition work, the requirements relating to construction work must be applied.

9. External/environmental and personal risk factors are to be considered in the assessment of construction work risk.

10. As required by *Work Health and Safety Regulations 2011, Regulation 317 – Duty to ensure worker has been trained* (Annex B), workers must hold, available for inspection, a general construction induction training card or a general induction training certification.
Roles and responsibilities

11. Group Heads and Service Chiefs (as officers of the Person Conducting a Business or Undertaking) are responsible for allocating sufficient resources to implement the requirements of this policy to manage effectively construction work. Group Heads and Service Chiefs must ensure:

11.1. risks associated with construction work are managed; and
11.2. workers are not directed, nor allowed, to carry out construction work without evidence that they have the training or qualifications required for that work.

12. Deputy Secretary Estate and Infrastructure Group (when dealing with a principal contractor) is responsible for:

12.1. providing policies, procedures and templates to address where Defence, the principal contractor and other persons share duties, and how those shared duties are to be managed to ensure compliance with work health and safety legislation. These policies, procedures and templates must include management or control of the workplace and accountability for designated roles and responsibilities (some of which may be shared);
12.2. ensuring the Defence contract manager monitors and verifies contractor safety performance and measures contractor performance (through inspection, audit or other assurance and reporting activities) against progress and key performance indicators in the contract; and
12.3. ensuring those managing/controlling the workplace take all reasonable steps to obtain current underground essential services information before directing or allowing excavation work to commence.

13. Deputy Secretary Capability Acquisition and Sustainment Group in keeping with the capability life cycle is responsible for:

13.1. identifying required construction work; and
13.2. reducing risks during the acquisition and sustainment phases.

Contract guidance

14. Defence cannot ‘contract out’ its obligations under the Work Health and Safety Act 2011. Defence must implement contractual arrangements that ensure designers, manufacturers, importers, suppliers and installers provide goods and/or services that support the Commonwealth complying with its duties under the Work Health and Safety Act 2011. Defence must also apply processes (e.g., workplace inspections/audits, supervision, training, monitoring and reporting) to ensure the safety of workers (and others) to whom Defence owes a duty of care, and must comply with the Work Health and Safety Act 2011 and Work Health and Safety Regulations 2011.

15. Groups and Services who commission and manage construction work are to establish and document recognised assurance activities and systems (inspection, audit, reporting and monitoring) to ensure that Defence and contractors comply with the provisions of the work health and safety legislation and codes of practice. The right to conduct such assurance activities and systems is to be included in the contract and in any implementation document for field operations.
Incidents and investigations
16. As detailed in the *Work Health and Safety Act 2011*, notifiable health and safety incidents arising from Defence business are to be reported immediately to the Defence contract manager. Notifiable incidents comprise the death of a person, a serious injury or illness of a person and dangerous incidents. Further information about notifiable incidents and reporting requirements is in *SafetyMan – Work Health and Safety Event (Incident) Reporting Policy and Guidance*.

Training
17. The *Work Health and Safety Regulations 2011*, Chapter 6, Part 6.5 – General construction induction training (Annex C) relates to general construction induction training. Defence and prime contractors must have systems, policies and procedures in place to confirm that the requirements of Part 6.5 are achieved.

Control of the workplace
18. The person with control of the workplace is generally the person who controls access to that workplace, for example:
   18.1. a fully fenced building site that is controlled by a contractor, where access by Defence personnel is prevented or controlled by the contractor, is generally considered to be a contractor-controlled workplace; and/or
   18.2. a Defence managed and occupied workplace within a fully fenced building which allows access by both Defence and contractor workers would generally be considered to be a Defence-controlled workplace.

19. Where a principal contractor is engaged, the principal contractor will have management or control of the workplace necessary to discharge the duties of the principal contractor under the *Work Health and Safety Act 2011* and *Work Health and Safety Regulations 2011*. In circumstances where a principal contractor is engaged it is likely Defence would retain some degree of management or control of a workplace.

20. In circumstances where a principal contractor is not engaged by Defence (and Defence is the principal contractor for the relevant construction work), Defence will have management or control of the workplace necessary to discharge the duties of a principal contractor. Such circumstances will generally arise where Defence is unable to provide a contractor with the requisite degree of management or control of the workplace to discharge the duties of the principal contractor—eg where a workplace is shared and access cannot be managed or controlled by the contractor. In such circumstances management or control of the workplace will be shared by the construction contractor and Defence.

21. Many of the construction workplaces found on Defence premises will be managed or controlled (at least in part) by Estate and Infrastructure Group or a principal contractor under contract to the Commonwealth. However, there will also be construction requirements managed by the Groups and Services outside of the normal fixed infrastructure environment, usually during operations or exercises. Groups and Services undertaking construction of temporary facilities without contracted support and outside of Estate and Infrastructure Group control will be responsible for the control of the workplace in all instances.

22. The work health and safety legislation specifically acknowledges that management or control of a workplace may be a shared duty. Legal advice should be sought when required to clarify shared work health and safety duties and the implementation of policies and procedures.
23. Workplaces where Defence has primary management or control are to be managed to protect the health, safety and welfare of workers and third parties at or near the workplace. Defence obligations include:

23.1. maintaining a safe workplace, without risk to health, that provides adequate facilities for workers' welfare at work;

23.2. ensuring safety at work in connection with the supply, use, handling, storage and transportation of plant or substances;

23.3. ensuring safe access to and egress from the workplace; and

23.4. ensuring, before commencement of the work, the contractor is aware of the necessary information on the Defence safety standards and policy.

24. For workplaces where Defence has primary management or control:

24.1. all the contractor’s workers must receive a safety induction briefing, be inducted into the workplace prior to starting any work, and attend all site safety briefings;

24.2. contractors must provide appropriate mechanisms for continuing consultation and review of safety matters;

24.3. contractors must ensure that their system of work does not place workers at risk of injury/illness; and

24.4. contractors must report to the area supervisor daily to advise of their presence in the workplace. This is to ensure that emergency management procedures, if enacted, cover all workers and people present at the workplace.

Contractor safety management plan

25. Defence is to ensure that a contractor with primary management or control of a workplace (eg a principal contractor) has an agreed and appropriate safety management system in place that will ensure the safety of the workers and other persons in the vicinity.

26. Contractors must supply a draft safety management plan to Defence at the time of tender and update it in accordance with contract terms and conditions (when awarded a contract). This plan is to show how the contractor will provide a safe and healthy workplace for its workers, sub-contractors and third parties. This plan is reviewed but not approved by Defence.

References and related documents

27. Work Health and Safety Act 2011
28. Work Health and Safety Regulations 2011
29. National Construction Code
30. Building Code of Australia
31. Codes of Practice
   31.1. Construction Work
   31.2. Confined Spaces
   31.3. Demolition Work
   31.4. Excavation Work
   31.5. First Aid in the Workplace
   31.6. Hazardous Manual Tasks
31.7. How to Manage and Control Asbestos in the Workplace
31.8. How to Manage Work Health and Safety Risks
31.9. How to Safely Remove Asbestos
31.10. Managing Electrical Risks in the Workplace
31.11. Managing Risks of Hazardous Chemicals
31.12. Managing Noise and Preventing Hearing Loss at Work
31.13. Managing the Risk of Falls at the Workplace
31.14. Managing the Risks of Plant in the Workplace
31.15. Managing the Work Environment and Facilities
31.16. Preventing Falls in Housing Construction
31.17. Safe Design of Structures
31.18. Welding Processes
31.19. Work Health and Safety Consultation, Cooperation and Coordination

Document Reference: Construction Work Policy and Guidance

Policy Owner: WHS Strategy and Policy

Date Published: 12-Jul-18  Date of Next Review: Mar-20

Objective ID: AB36411963  Version: 1.1

Annexes
A. Work Health and Safety Regulations 2011,
   • Regulation 289 – Meaning of construction work
   • Regulation 290 – Meaning of structure
   • Regulation 291 – Meaning of high risk construction work
B. Work Health and Safety Regulations 2011, Regulation 317 – Duty to ensure worker has been trained
C. Work Health and Safety Regulations 2011, Chapter 6, Part 6.5 – General construction induction training
Annex A
Work Health and Safety Regulation 2011

289 - Meaning of “construction work”

(1) In this Chapter, "construction work" means any work carried out in connection with the construction, alteration, conversion, fitting-out, commissioning, renovation, repair, maintenance, refurbishment, demolition, decommissioning or dismantling of a structure.

(2) Without limiting subclause (1), "construction work" includes the following:

(a) any installation or testing carried out in connection with an activity referred to in subclause (1),

(b) the removal from the workplace of any product or waste resulting from demolition,

(c) the prefabrication or testing of elements, at a place specifically established for the construction work, for use in construction work,

(d) the assembly of prefabricated elements to form a structure, or the disassembly of prefabricated elements forming part of a structure,

(e) the installation, testing or maintenance of an essential service in relation to a structure,

(f) any work connected with an excavation,

(g) any work connected with any preparatory work or site preparation (including landscaping as part of site preparation) carried out in connection with an activity referred to in subclause (1),

(h) an activity referred to in subclause (1), that is carried out on, under or near water, including work on buoys and obstructions to navigation.

(3) In this Chapter, "construction work" does not include any of the following:

(a) the manufacture of plant,

(b) the prefabrication of elements, other than at a place specifically established for the construction work, for use in construction work,

(c) the construction or assembly of a structure that once constructed or assembled is intended to be transported to another place,

(d) testing, maintenance or repair work of a minor nature carried out in connection with a structure,

(e) mining activities or petroleum activities.

Regulation 290 - Meaning of “structure”

(1) In this Chapter, "structure" has the same meaning as it has in the Act.

Examples:

i. A roadway or pathway.

ii. A ship or submarine.

iii. Foundations, earth retention works and other earthworks, including river works and sea defence works.
iv. Formwork, falsework or any other structure designed or used to provide support, access or containment during construction work.

v. An airfield.

vi. A dock, harbour, channel, bridge, viaduct, lagoon or dam.

A sewer or sewerage or drainage works.

(2) This Chapter does not apply to plant unless:

(a) the plant is:

   (i) a ship or submarine, or
   (ii) a pipe or pipeline, or
   (iii) an underground tank, or
   (iv) designed or used to provide support, access or containment during work in connection with construction work, or

(b) work on the plant relates to work that is carried out in connection with construction work, or

(c) the plant is fixed plant on which outage work or overhaul work that involves or may involve work being carried out by 5 or more persons conducting businesses or undertakings at any point in time.

Note: This Chapter does not apply to the manufacture of plant (see clause 289 (3) (a)).

291 - Meaning of “high risk construction work”

In this Chapter, "high risk construction work" means construction work that:

(a) involves a risk of a person falling more than 2 metres, or

(b) is carried out on a telecommunication tower, or

(c) involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure, or

(d) involves, or is likely to involve, the disturbance of asbestos, or

(e) involves structural alterations or repairs that require temporary support to prevent collapse, or

(f) is carried out in or near a confined space, or

(g) is carried out in or near:

   (i) a shaft or trench with an excavated depth greater than 1.5 metres, or
   (ii) a tunnel, or

(h) involves the use of explosives, or

(i) is carried out on or near pressurised gas distribution mains or piping, or

(j) is carried out on or near chemical, fuel or refrigerant lines, or

(k) is carried out on or near energised electrical installations or services, or

(l) is carried out in an area that may have a contaminated or flammable atmosphere, or

(m) involves tilt-up or precast concrete, or
(n) is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians, or
(o) is carried out in an area at a workplace in which there is any movement of powered mobile plant, or
(p) is carried out in an area in which there are artificial extremes of temperature, or
(q) is carried out in or near water or other liquid that involves a risk of drowning, or
(r) involves diving work.
Annex B
Work Health and Safety Regulations 2011

317 – Duty to ensure worker has been trained

(1) A person conducting a business or undertaking must not direct or allow a worker to carry out construction work unless:

(a) the worker has successfully completed general construction induction training; and

(b) if the worker completed the training more than 2 years previously—the worker has carried out construction work in the preceding 2 years.

Penalty:

(a) In the case of an individual—$3 600.

(b) In the case of a body corporate—$18 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

(2) The person conducting the business or undertaking must ensure that:

(a) the worker holds a general construction induction training card; or

(b) if the worker has applied for but not yet been issued with a general construction induction training card, the worker holds a general construction induction training certification, issued within the preceding 60 days.
Annex C
Work Health and Safety Regulations 2011
Chapter 6 - Construction Work

Part 6.5 General construction induction training

Division 1 - General construction induction training requirements

316 - Duty to provide general construction induction training
A person conducting a business or undertaking must ensure that general construction induction training is provided to a worker engaged by the person who is to carry out construction work, if the worker—

(a) has not successfully completed general construction induction training; or
(b) successfully completed general construction induction training more than 2 years previously and has not carried out construction work in the preceding 2 years.

Maximum penalty:

(a) in the case of an individual—$3 600; or
(b) in the case of a body corporate—$18 000.

Note Strict liability applies to each physical element of each offence under this regulation, unless otherwise stated (see s 6A).

317 - Duty to ensure worker has been trained
(1) A person conducting a business or undertaking must not direct or allow a worker to carry out construction work unless—

(a) the worker has successfully completed general construction induction training; and
(b) if the worker completed the training more than 2 years previously—the worker has carried out construction work in the preceding 2 years.

Maximum penalty:

(a) in the case of an individual—$3 600; or
(b) in the case of a body corporate—$18 000.

Note Strict liability applies to each physical element of each offence under this regulation, unless otherwise stated (see s 6A).

(2) The person conducting the business or undertaking must ensure that—

(a) the worker holds a general construction induction training card; or
(b) if the worker has applied for but not yet been issued with a general construction induction training card, the worker holds a general construction induction training certification, issued within the preceding 60 days.

318 - Recognition of general construction induction training cards issued in other jurisdictions
(1) In this part (other than division 6.5.2), a reference to a general construction induction training card includes a reference to a similar card issued under a corresponding WHS law.

(2) Subsection (1) does not apply to a card that is cancelled in the corresponding jurisdiction.

**Division 2 – General construction induction training cards**

319 - Issue of card

(1) A person who has successfully completed general construction induction training may apply to the regulator for a general construction induction training card.

(2) The application must be made in the manner and form required by the regulator.

(3) The application must include the following information:

   (a) the applicant’s name and any other evidence of the applicant’s identity required by the regulator;

   (b) either:

      (i) a general construction induction training certification issued to the applicant; or

      (ii) a written declaration by the person who provided the general construction induction training on behalf of the relevant RTO that the applicant has successfully completed general construction induction training.

(4) The application must be accompanied by the relevant fee.

(5) The application must be made:

   (a) within 60 days after the issue of the general construction induction training certification; or

   (b) if the application is accompanied by a declaration referred to in subparagraph (3)(b)(ii), at any time after completion of the general construction induction training.

(6) The regulator must issue a general construction induction training card to the applicant if:

   (a) the application has been made in accordance with this regulation; and

   (b) the regulator is satisfied that the applicant has successfully completed general construction induction training.

(7) The regulator must make a decision on the application as soon as practicable.

(8) If the regulator has not decided on the application within 60 days, the applicant is taken to hold a general construction induction training card until a decision is made.

320 - Content of card

A general construction induction training card must:
(a) state the following:

(i) that the card holder has completed general construction induction training;

(ii) the name of the card holder;

(iii) the date on which the card was issued;

(iv) a unique identifying number;

(v) that the card is issued in accordance with these Regulations; and

(b) contain the card holder’s signature.

321 - Replacement card

(1) If a general construction induction training card issued by the regulator is lost, stolen or destroyed, the card holder may apply to the regulator for a replacement card.

Note: A card holder is required to keep the card available for inspection under regulation 326.

(2) An application for a replacement general construction induction training card must be made in the manner and form required by the regulator.

(3) The application must:

(a) include a declaration about the circumstances in which the card was lost, stolen or destroyed; and

Note: See section 268 of the Act for offences relating to the giving of false or misleading information under the Act or these Regulations.

(b) be accompanied by the relevant fee.

(4) The regulator may issue a replacement card if satisfied that the original general construction induction training card has been lost, stolen or destroyed.

322 - Refusal to issue or replace card

The regulator may refuse to issue a general construction induction training card or a replacement general construction induction training card if satisfied that the applicant:

(a) gave information that was false or misleading in a material particular; or

(b) failed to give information that should have been given; or

(c) produced a general construction induction training certification that had been obtained on the basis of the giving of false or misleading information by any person or body.
Note: A decision to refuse to issue or replace a general construction induction training card is a reviewable decision (see regulation 676).

323 - Cancellation of card—grounds

The regulator may cancel a general construction induction training card issued by the regulator if satisfied that the card holder, when applying for the card:

(a) gave information that was false or misleading in a material particular; or

(b) failed to give information that should have been given; or

(c) produced a general construction induction training certification that had been obtained on the basis of the giving of false or misleading information by any person or body.

Note: A decision to cancel a general construction induction training card is a reviewable decision (see regulation 676).

324 - Cancellation of card—process

(1) The regulator must, before cancelling a general construction induction training card, give the card holder:

(a) written notice of the proposed cancellation that outlines all relevant allegations, facts and circumstances known to the regulator; and

(b) a reasonable opportunity to make submissions to the regulator in relation to the proposed cancellation.

(2) On cancelling a general induction card, the regulator must give the card holder a written notice of its decision, stating:

(a) when the cancellation takes effect; and

(b) the reasons for the cancellation; and

(c) when the card must be returned to the regulator.

325 - RTO may enter agreement to issue cards

(1) The regulator may enter into an agreement with an RTO that empowers the RTO to exercise the functions and powers of the regulator under regulations 319, 321 and 322, with any necessary alterations.

(2) If an RTO with whom the regulator has entered an agreement under this regulation exercises functions and powers of the regulator in accordance with the agreement, the exercise of those functions and powers has the same effect as if they had been exercised by the regulator.
(3) Without limiting subregulation (2):

(a) a decision of an RTO in exercising a function or power of the regulator in accordance with the agreement is taken to be a decision of the regulator; and

(b) a general construction induction training card issued by the RTO is taken to have been issued by the regulator.

(4) Nothing in an agreement under this regulation prevents the regulator from exercising its functions and powers under this Division.

Division 3 – Duties of workers

326 - Duties of workers

(1) A worker carrying out construction work must keep available for inspection under the Act:

(a) his or her general construction induction training card; or

(b) in the circumstances set out in subregulation 319(5), a general induction training certification held by the worker, until a decision is made on the application for the general construction induction training card.

Penalty:

(a) In the case of an individual—$1 250.

(b) In the case of a body corporate—$6 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

(2) A card holder, on receiving a cancellation notice under subregulation 324(2), must return the card in accordance with the notice.

Penalty:

(a) In the case of an individual—$1 250.

(b) In the case of a body corporate—$6 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

(3) Paragraph (1)(a) does not apply if the card is not in the possession of the worker (the card holder) because:

(a) it has been lost, stolen or destroyed; and
(b) the card holder has applied for, but has not received, a replacement card under regulation 321.

327 - **Alteration of general construction induction training card**

A person who holds a general construction induction training card must not intentionally or recklessly alter the card.

Penalty:

(a) In the case of an individual—$3 600.

(b) In the case of a body corporate—$18 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.
Construction Work Procedure 01 - Construction Induction Training Card

1. This procedure provides tools, information and/or guidance relating to the SafetyMan - Construction Work Policy and Guidance.

2. The Work Health and Safety Regulations 2011 require persons conducting a business or undertaking to ensure general construction induction training is provided to workers who do construction work. Those workers must carry a general construction induction training card while in the workplace.

3. This procedure describes the requirement for general construction induction training, the need for a construction induction training card and an agreement between Defence and Comcare that allows the Army and Navy as Registered Training Organisations to issue construction induction training cards to ADF members who do construction work (as defined in the Work Health and Safety Regulations 2011).

Construction induction training process for workers other than ADF members

4. Construction induction training must be completed by workers before they start construction work. The training must be provided by a Registered Training Organisation and lead to the award of the nationally recognised unit of competency, CPCCOHS1001A – Work safely in the construction industry.

5. Within 60 days of qualifying for the award the unit of competency, CPCCOHS1001A – Work safely in the construction industry, the worker must apply to the state/territory work health and safety regulator for the issue of a construction induction training card.

6. The Work Health and Safety Regulations 2011 prescribe the following conditions to the general construction induction training card:

   6.1. if a card is lost, stolen or destroyed, the worker may obtain a replacement card from the regulator;

   6.2. workers must carry the card when undertaking construction work or, if prior to being issued with the card, carry evidence of having successfully completed training); and

   6.3. workers must not alter the information on the card.

ADF members performing construction work

7. Defence trains ADF members who do construction work.

8. ADF members who hold the required unit of competency, CPCCOHS1001A – Work safely in the construction industry, must apply to Comcare for a Commonwealth construction induction training card. However, ADF members who are working in a Commonwealth workplace and who hold a valid state- or territory-issued card are not required to apply for a Commonwealth card as the Commonwealth recognises valid cards issued by all states/territories.

9. Navy and Army personnel who do work that falls within the definition of construction work, and who have completed construction induction training provided by their respective
Registered Training Organisation can be issued with a construction induction training card that is valid for Defence work, but only within their Service. However, instead of issuing a Defence construction induction training card, Comcare allow the construction induction training card information to be printed on the back of the Defence ID card. The card must be kept available for inspection when undertaking construction work and produced when requested by a Comcare inspector.

10. Air Force personnel who do construction work can access training from Registered Training Organisations outside Defence. Once awarded the required competency, CPCCOHS1001A – Work safely in the construction industry, they may then apply for a national construction induction training card, as described in paragraph 8.

References and related documents
11. Work Health and Safety Regulations 2011
12. Comcare

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<td>WHS Strategy and Policy</td>
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<td>Date Published:</td>
<td>12-Jul-18</td>
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<tr>
<td>Date of Next Review:</td>
<td>Mar-20</td>
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<tr>
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Electrical Safety Policy And Guidance

Policy statement
1. Defence Workers will follow the hazard and risk management principles when working with or near electrically powered equipment.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The applicability of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. A risk management approach must be taken when identifying and remediating workplace electrical hazards. The risk management principles of the Safe Work Australia Code of Practice - Managing Electrical Risks in the Workplace provide the minimum standard to be used.
5. Electrical equipment exposed to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust must be regularly inspected and tested. Records of inspections and testing must be maintained until the equipment is tested again or permanently removed from use.
6. An electrical installation is a group of electrical equipment that is permanently connected together and can be supplied with electricity. A risk minimisation approach must be applied when undertaking electrical installations in the workplace which includes during the processes of design, construction and installation, protection, maintenance and testing.

Roles and responsibilities
7. Group Heads and Service Chiefs (as officers of the Persons Conducting a Business or Undertaking) are responsible for ensuring:
   7.1. allocation of sufficient resources to effectively manage electrical risks;
   7.2. prohibited electrical work is not performed;
   7.3. compliance with applicable electrical safety laws in relation to estate, platforms, contractors and/or leased facilities; and
   7.4. testing and compliance requirements are met.
8. Commanders/managers and supervisors must take all practicable steps to protect the health and safety of workers. They have a responsibility to:
   8.1. understand how electrical equipment and risk affects their workers and the work being performed;
8.2. communicate and consult with workers or their management regarding safe management of electrical work;
8.3. consult with workers to identify, assess and control electrical hazards and risks;
8.4. ensure the appropriate risk management is conducted for activities;
8.5. provide information, training, instruction and supervision to workers;
8.6. provide and make available appropriate emergency and safety equipment;
8.7. ensure electrical work is carried out only by qualified persons;
8.8. ensure safety devices are fit for purpose; and
8.9. ensure effective and compliant electrical installations and equipment is used.

9. All workers have a responsibility to:
9.1. understand and follow established safe work practices and procedures, participate in appropriate training and hazard identification, and control risks arising from electrical hazards in accordance with guidance; and
9.2. advise supervisors of any perceived risk that could increase exposure to injury or illness arising from electrical hazards.

Guidance
10. This guidance sets out the general requirements for managing electrical hazards and risks. Specific risks are intended to be covered in respective orders, instructions and publications approved and issued by Defence electrical risk owners within the Groups and Services.

Competency
11. A competent person should be a licensed electrician, a licensed electrical inspector or a person who has successfully completed a structured training course and been deemed competent in the use of a pass-fail type portable applicant tester and the visual inspection of electrical equipment.

12. Only authorised Defence electrical persons may enter the immediate area where powered electrical work is being conducted.

Managing electrical risks
13. Before work is carried out on powered electrical equipment, a written and recorded risk assessment must be undertaken by a competent person.

14. Risk assessments undertaken on powered work are to be kept for 28 days after the work has been completed, or for 5 years if a notifiable incident occurs (a notifiable incident is a death, serious injury or illness or a dangerous incident. Further information is available in SafetyMan – Work Health and Safety Event (Incident) Reporting Policy and Guidance). Risk assessments are to be stored in accordance with the Defence Records Management Policy.

Work practice
15. Electrical work is not to be carried out on electrical equipment while the equipment is powered unless permitted for the purpose of testing or there is no reasonable alternative to properly carry out the work.

16. The electrical equipment is to be tested to determine if it is powered.

17. Ensure that un-powered electrical equipment cannot be inadvertently powered while work is being carried out.
18. While undertaking powered electrical work all persons are to be prevented from making contact with equipment that would create a risk of electric shock.

19. Powered electrical work must be carried out as specified in instructions and publications.

20. Unsafe electrical equipment is to be disconnected or isolated until repaired and tested and found to be safe, or replaced and permanently removed from use.

21. Safe work method statements must be made accessible until the work is complete or for 5 years if a notifiable incident occurs. All records are to be stored in accordance with the Defence Records Management Policy.

22. If involved in construction or demolition work, ensure the Australian/New Zealand Standards - 3012 Electrical installations – Construction and Demolition Sites are complied with.

Electrical inspection and testing

23. The Australian/New Zealand Standard 3760 - In-service Safety Inspection and Testing of Electrical Equipment may be applied by Defence where it is deemed appropriate to instigate an inspection and testing program. This enables persons undertaking the inspection and testing to carry out the task in a safe and effective manner.

24. Electrical equipment used in a ‘hostile work environment’ must be regularly inspected and tested by a competent person. A ‘hostile work environment’ is a workplace where, in operating conditions:

   24.1. the normal use of electrical equipment exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span including conditions that involve exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust;

   24.2. electrical equipment is moved between different locations and damage to the equipment or to a flexible electricity supply cord is reasonably likely;

   24.3. electrical equipment is frequently moved during its normal use; or

   24.4. electrical equipment forms part of, or is used in connection with, an amusement device.

25. Examples of ‘hostile work environments’ include but are not limited to workshops, construction and commercial kitchens.

26. Records of inspections and testing must be maintained until the equipment is tested again or permanently removed from use. The inspection records must include as a minimum:

   26.1. the name of the person who carried out the testing;

   26.2. the date of testing;

   26.3. the outcome of testing; and

   26.4. the date on which the next testing must be carried out.

Registers and tags

27. Records of testing conducted are to be kept by the work area/unit until electrical equipment is next tested or removed permanently from use, or disposed of.

Residual current devices

28. A residual current device, or safety switch, protects against a shock of electricity passing through the body to the earth.
29. Each socket outlet in a hostile work environment is to be protected by a residual current device.
30. Residual current devices are to be tested by a competent person with records kept of the test.
31. Residual current devices are to be replaced if they failed the testing and, therefore, are not operating effectively.

**Personal electrical equipment**
32. Determination of what is deemed personal electrical equipment appropriate for use at the workplace is at the discretion of Group and Services.
33. Personal electrical equipment brought into or used at the workplace is the responsibility of the individual worker. Prior to introduction, the owner is to undertake a visual inspection to ensure the item is in good working condition.
34. If personal electrical equipment is introduced into a ‘hostile work environment’ or the use exposes the equipment to operating conditions that are likely to damage or reduce its expected life span, regular inspection and testing programs will be required.
35. Personal electrical equipment introduced into the workplace must be considered as part of routine inspections.

**Overhead and underground electric lines**
36. Before starting any work near overhead and underground lines, you need to undertake a risk assessment taking into account:
   36.1. Overhead lines:
      36.1.1. heights, sway and sag of lines;
      36.1.2. nature, height and shapes of loads; and
      36.1.3. approach distances and work zones.
   36.2. Underground lines:
      36.2.1. identify cable location, for example if you are going to repair pot-holes;
      36.2.2. talk to asset owners; and
      36.2.3. use insulated hand tools.
37. Control measures from the risk assessment should be implemented and consistent with requirements of the electric supply authority, if there is one.

**References and related documents**
38. *Work Health and Safety Act 2011*
39. *Work Health and Safety Regulations 2011*
40. *Code of Practice - How to Manage Work Health and Safety Risks*
41. *Code of Practice - Managing Electrical Risks in the Workplace*
42. *Code of Practice - Managing the Risk of Plant in the Workplace*
43. *Manual of Infrastructure Engineering-Electrical*
44. *Australian/New Zealand Standards - 3012 Electrical installations – Construction and Demolition Sites*
45. **Australian/New Zealand Standard 3760 - In-service Safety Inspection and Testing of Electrical Equipment**

<table>
<thead>
<tr>
<th>Document Reference:</th>
<th>Electrical Safety Policy and Guidance</th>
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<td>Mar-20</td>
</tr>
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<td>Objective ID:</td>
<td>AB36411964</td>
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Fatigue Management Policy And Guidance

Policy statement
1. Defence will work to eliminate the potential for workers who may experience fatigue in the workplace and the risk of injury and illness it poses.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. Defence is required to:
   4.1. monitor and manage the workload of individuals and teams, so fatigue can be prevented;
   4.2. supervise workers and work processes to identify workers who may be suffering from fatigue;
   4.3. identify the hazards associated with tools, equipment, plant, vehicles, platforms, weapons, chemicals, substances etc used for work processes, and for which, use by an operator experiencing fatigue could increase the risk to worker health and safety;
   4.4. assess the increase in risk that could be attributed to fatigue and implement suitable management strategies/controls; and
   4.5. enhance morale, productivity and Defence capability by managing fatigue.
5. External/environmental and personal risk factors are to be considered in the assessment of fatigue risk. These are pertinent to fatigue management because, for various reasons unrelated to work, workers may arrive at work already fatigued or tired.

Roles and responsibilities
6. Group Heads and Service Chiefs as officers of the Person Conducting a Business or Undertaking are responsible for allocating sufficient resources to effectively manage fatigue related risks.
7. Commanders/managers and supervisors must take all practicable steps to protect the health and safety of workers.
8. Commanders/managers should also consider whether a workplace fatigue management policy should be developed and implemented. A workplace policy is not mandatory, but may be warranted in workplaces where there is increased risk due to fatigue.
9. Additional information about the actions listed above can be found in the Safe Work Australia - Guide for Managing the Risk of Fatigue at Work. The guide includes a fatigue checklist and
a risk management chart that provides guidance for identifying fatigue risk factors and assessing and controlling fatigue risks.

10. Commanders and managers should consider whether parts of their workforce should complete the Campus on-line course ‘Fatigue Management and Awareness’ (Course ID 00010211). The program provides an overview of the symptoms and effects of fatigue and guidance for managing and preventing fatigue.

What is fatigue?

11. Fatigue is more than feeling tired and drowsy. In a work context, fatigue is a state of mental and/or physical exhaustion which reduces a person’s ability to perform work safely and effectively.

12. It can occur because of prolonged mental or physical activity, sleep loss and/or disruption of the internal body clock.

13. Fatigue can be caused by factors which may be work related, non-work related or a combination of both and can accumulate over time.

14. Fatigue can:

14.1. directly harm worker health (eg long-term effects of fatigue can include heart disease, diabetes, hypertension, anxiety, depression);

14.2. impact on morale and productivity; and

14.3. impair work performance and thereby create risks to health and safety.

Reference and related documents

15. Work Health and Safety Act 2011

16. Work Health and Safety Regulations 2011

17. Fatigue Management During Operations - A Commanders’ Guide


<table>
<thead>
<tr>
<th>Document Reference:</th>
<th>Fatigue Management Policy and Guidance</th>
</tr>
</thead>
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<tr>
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<td>Occupational Health and Hygiene Directorate</td>
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<tr>
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<td>Mar-20</td>
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Hazardous Manual Tasks Policy And Guidance

Policy statement
1. Defence is committed to reducing the impact on workers who undertake hazardous manual tasks. A hazardous manual task, as defined in the Work Health and Safety Regulations 2011, means a task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing involving one or more of the following:
   1.1. repetitive or sustained force;
   1.2. high or sudden force;
   1.3. repetitive movement;
   1.4. sustained or awkward posture; or
   1.5. exposure to vibration.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. This policy also applies to Defence organisations that, for the purposes of the work health and safety legislation, design, manufacture, import and/or supply plant, platforms, equipment and structures, that are likely to be handled or used during or as part of a hazardous manual task.
5. Risk management principles are to be applied in the identification of hazardous manual tasks that may cause injury and to the development and application of risk control procedures.
6. Risk assessments must be undertaken when working or planning hazardous manual tasks.
7. External/environmental and personal risk factors are to be considered in the assessment of a hazardous manual task risk.
8. Groups and Services are to develop additional procedures required to integrate the safe management of hazardous manual tasks into their specific business processes including taking reasonable steps to obtain information from designers, manufacturers, suppliers or importers of equipment.

Roles and responsibilities
9. Group Heads and Service Chiefs (as officers of the Person Conducting a Business or Undertaking) are responsible for allocating resources to effectively manage hazardous manual task related risks.

10. Commanders/managers and supervisors must take all practicable steps to protect the health and safety of workers. They have a responsibility to:
   10.1. identify hazardous manual tasks, how these tasks are performed, the tools, objects handled and the work environment;
   10.2. provide all workers with appropriate information, education, training, instruction and supervision regarding identified hazardous manual tasks;
   10.3. understand how hazardous manual tasks affect their workers and the work being performed; and
   10.4. consult with workers to identify, assess and control hazardous manual tasks hazards and risks.

11. All workers have a responsibility to:
   11.1. understand and follow established safe work practices and procedures;
   11.2. participate in appropriate training and hazard identification; and
   11.3. control risks arising from hazardous manual tasks hazards in accordance with guidance.

References and related documents

13. *Work Health and Safety Regulations 2011*
High Risk Work Licensing Policy And Guidance

Policy statement
1. Defence will minimise the risk of injury or illness to workers by ensuring that all high risk work activities such as, but not limited to, scaffolding, rigging, crane, hoist and forklift operations are only performed by personnel who are licensed to undertake such work. High risk work requires a person to have a license to perform that work as described in the Work Health and Safety Regulations 2011, Schedule 3 – High risk work licences and classes of high risk work (Annex A).

Scope
2. This policy applies to all Defence workers including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The applicability of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. The Work Health and Safety Regulations 2011, Regulation 81 – Licence required to carry out high risk work (Annex B) requires that a person must not carry out high risk work unless the person holds a high risk work licence for that work.
5. Defence shall not allow, nor direct, a worker to carry out high risk work unless the person holds the appropriate licence for the work.
6. High risk work licences are issued by Comcare (for ADF personnel) and by state/territory regulators (for APS employees). Work Health and Safety Regulations 2011, Schedule 3 – High risk work licences and classes of high risk work sets out the classes of high risk work and the licences required.

Guidance
7. To hold a high risk work licence:
   7.1. Workers must hold a qualification for the class of licence, as set out in the Work Health and Safety Regulations 2011, Schedule 4 - High Risk Work Licences - Competency Requirements (Annex C).
   7.2. Workers should apply to Comcare (ADF personnel) or a state/territory regulator (APS employees) for a licence, in accordance with legislative requirements which include:
      7.2.1. applying within 60 days of having been assessed and certified as competent by a certified assessor;
      7.2.2. being over 18 years of age; and
      7.2.3. ensure all information supports the application.
7.3. ADF personnel who already hold a nationally recognised high risk work licence issued by a State or Territory Regulator are not required to reapply through Comcare, however they may renew their licence with Comcare. All new licence applications for ADF personnel should be made through Comcare.

7.4. Workers must maintain the licence by:
   7.4.1. adhering to the conditions of the licence;
   7.4.2. notifying the authority who issued the licence of any amendments required to the licence; and
   7.4.3. submitting an application for licence renewal prior to expiry of the current licence.

8. The Work Health and Safety Regulations 2011, Regulation 82 - Exceptions (Annex B) allows a worker to carry out high risk work without a licence in specific circumstances. Commanders, managers and supervisors of high risk work should refer to Regulation 82 for definition of those circumstances, which include:
   8.1. whilst workers are in training towards certification for a licence, provided they are supervised by someone who is licensed to carry out the high risk work; and
   8.2. whilst workers are waiting for their licence application to be processed, provided they have been assessed and certified as competent by a certified assessor.

9. This policy must be read in conjunction with any other SafetyMan policies that are relevant to the specific high risk work being undertaken.

Roles and responsibilities

10. Group Heads and Service Chiefs (as officers of the Person Conducting a Business or Undertaking) are responsible for allocating sufficient resources to implement the requirements of this policy to manage effectively high risk work. Group Heads and Service Chiefs must ensure:
   10.1. the risks associated with high risk work are managed through the development and maintenance of safe systems of work for high risk work; and
   10.2. workers are not directed, nor allowed, to carry out high risk work without evidence that they have the licence required for that work.

11. Commanders and managers are responsible for managing, overseeing and monitoring operational procedures involving high risk work and must take all practicable steps to protect the health and safety of workers. They have a responsibility to:
   11.1. ensure workers who perform high risk work are appropriately licensed, trained, instructed and supervised;
   11.2. ensure plant and equipment used for high risk work is operated, maintained and controlled in accordance with documented safe systems of work and operating and maintenance instructions and schedules;
   11.3. ensure high risk work is identified and documented and safe systems of work are in place;
   11.4. understand how hazards associated with high risk work affect their workers and the work being performed;
   11.5. consult with workers to identify, assess and control high risk work hazards and risks; and
   11.6. conduct risk management for high risk work activities.
12. Supervisors of workers performing high risk work must ensure:
   12.1. workers are not directed, nor allowed, to perform high risk work without a licence for that class of high risk work;
   12.2. workers in training for a licence are supervised by a person who has a licence in that class;
   12.3. evidence is sighted, prior to commencing the work, that workers have the licence for that class of high risk work; and
   12.4. records of workers who are licensed to carry out high risk work, including the classes of licence held by each worker, are recorded in PMKeyS using the proficiency codes detailed in the *High Risk Work Licence – Proficiency Table* (Annex D).

13. All workers have a responsibility to:
   13.1. understand and follow established safe work practices and procedures, participate in appropriate training and hazard identification, and control risks arising from high risk work hazards;
   13.2. comply with policy, procedures and workplace instructions relating to this policy;
   13.3. not operate, construct, dismantle or alter any equipment that requires a licence for high risk work - unless they have a licence for that class of high risk work; and
   13.4. ensure high risk work licences remain current and carry the licences while undertaking high risk work.

References and related documents
15. *Work Health and Safety Regulations 2011*

<table>
<thead>
<tr>
<th>Document Reference:</th>
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</tr>
<tr>
<td>Date of Next Review :</td>
<td>Mar-20</td>
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<tr>
<td>Objective ID:</td>
<td>AB36411972</td>
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Annexes
A. Work Health and Safety Regulations 2011, Schedule 3 – High risk work licences and classes of high risk work
B. Work Health and Safety Regulations 2011
   • 81 – Licence required to carry out high risk work
   • 82 – Exceptions
C. Work Health and Safety Regulations 2011, Schedule 4 – High risk work licences – competency requirements
D. High Risk Work Licence – Proficiency Table
### Annex A

**Work Health and Safety Regulations 2011**

**Schedule 3 – High risk work licences and classes of high risk work**

<table>
<thead>
<tr>
<th>Item</th>
<th>High risk work licence</th>
<th>Description of class of high risk work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scaffolding work</strong></td>
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</table>
| 1 | Basic scaffolding | Scaffolding work involving any of the following:  
(a) modular or pre-fabricated scaffolds;  
(b) cantilevered materials hoists with a maximum working load of 500 kilograms;  
(c) ropes;  
(d) gin wheels;  
(e) safety nets and static lines;  
(f) bracket scaffolds (tank and formwork), but excluding scaffolding work involving equipment, loads or tasks listed in item 2(2)(a) to (g) and item 3(2)(a) to (c) |
| 2 | Intermediate scaffolding | (1) Scaffolding work included in the class of Basic scaffolding;  
(2) Scaffolding work involving any of the following:  
(a) cantilevered crane loading platforms;  
(b) cantilevered scaffolds;  
(c) spur scaffolds;  
(d) barrow ramps and sloping platforms;  
(e) scaffolding associated with perimeter safety screens and shutters;  
(f) mast climbing work platforms;  
(g) tube and coupler scaffolds (including tube and coupler covered ways and gantries), but excluding scaffolding work involving equipment, loads or tasks listed in item 3(2)(a) to (c) |
| 3 | Advanced scaffolding | (1) Scaffolding work included in the class of Intermediate scaffolding; and  
(2) Scaffolding work involving any of the following:  
(a) cantilevered hoists;  
(b) hung scaffolds, including scaffolds hung from tubes, wire ropes or chains;  
(c) suspended scaffolds |
<p>| <strong>Dogging and rigging work</strong> | | |
| 4 | Dogging | Dogging work |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>High risk work licence</th>
<th>Description of class of high risk work</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Basic rigging</td>
<td>(1) Dogging work</td>
</tr>
</tbody>
</table>
|      |                        | (2) Rigging work involving any of the following:  
|      |                        | (a) structural steel erection;            |
|      |                        | (b) hoists;                             |
|      |                        | (c) pre-cast concrete members of a structure; |
|      |                        | (d) safety nets and static lines;        |
|      |                        | (e) mast climbing work platforms;        |
|      |                        | (f) perimeter safety screens and shutters;|
|      |                        | (g) cantilevered crane loading platforms, but excluding rigging work involving equipment, loads or tasks listed in item 6(b) to (f) and item 7(b) to (e) |
| 6    | Intermediate rigging   | Rigging work involving any of the following:  
|      |                        | (a) rigging work in the class Basic Rigging; |
|      |                        | (b) hoists with jibs and self-climbing hoists; |
|      |                        | (c) cranes, conveyors, dredges and excavators; |
|      |                        | (d) tilt slabs;                         |
|      |                        | (e) demolition of structures or plant;    |
|      |                        | (f) dual lifts, but excluding rigging work involving equipment listed in item 7(b) to (e) |
| 7    | Advanced rigging       | Rigging work involving any of the following:  
|      |                        | (a) rigging work in the class Intermediate Rigging; |
|      |                        | (b) gin poles and shear legs;            |
|      |                        | (c) flying foxes and cable ways;         |
|      |                        | (d) guyed derricks and structures;        |
|      |                        | (e) suspended scaffolds and fabricated hung scaffolds |

**Crane and hoist operation**

<table>
<thead>
<tr>
<th>Item</th>
<th>Crane and hoist operation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Tower crane</td>
<td>Use of a tower crane</td>
</tr>
<tr>
<td>9</td>
<td>Self-erecting tower crane</td>
<td>Use of a self-erecting tower crane</td>
</tr>
<tr>
<td>10</td>
<td>Derrick crane</td>
<td>Use of a derrick crane</td>
</tr>
<tr>
<td>11</td>
<td>Portal boom crane</td>
<td>Use of a portal boom crane</td>
</tr>
</tbody>
</table>
| 12   | Bridge and gantry crane   | Use of a bridge crane or gantry crane that is:  
|      |                           | (a) controlled from a permanent cabin or control station on the crane; or |

**UNCONTROLLED IF PRINTED**
### High Risk Work Licensing Policy and Guidance

<table>
<thead>
<tr>
<th>Item</th>
<th>High risk work licence</th>
<th>Description of class of high risk work</th>
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<tbody>
<tr>
<td></td>
<td>(b) remotely controlled and having more than 3 powered operations, including the application of load estimation and slinging techniques to move a load</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Vehicle loading crane</td>
<td>Use of a vehicle loading crane with a capacity of 10 metre tonnes or more, including the application of load estimation and slinging techniques to move a load</td>
</tr>
<tr>
<td>14</td>
<td>Non-slewing mobile crane</td>
<td>Use of a non-slewing mobile crane with a capacity exceeding 3 tonnes</td>
</tr>
<tr>
<td>15</td>
<td>Slewing mobile crane—with a capacity up to 20 tonnes</td>
<td>Use of a slewing mobile crane with a capacity of 20 tonnes or less Use of a vehicle loading crane with a capacity of 10 metre tonnes or more, excluding the application of load estimation and slinging techniques to move a load Use of a non-slewing mobile crane with a capacity exceeding 3 tonnes Use of a reach stacker</td>
</tr>
<tr>
<td>16</td>
<td>Slewing mobile crane—with a capacity up to 60 tonnes</td>
<td>Use of a slewing mobile crane with a capacity of 60 tonnes or less Use of a vehicle loading crane with a capacity of 10 metre tonnes or more, excluding the application of load estimation and slinging techniques to move a load Use of a non-slewing mobile crane with a capacity exceeding 3 tonnes Use of a reach stacker</td>
</tr>
<tr>
<td>17</td>
<td>Slewing mobile crane—with a capacity up to 100 tonnes</td>
<td>Use of a slewing mobile crane with a capacity of 100 tonnes or less Use of a vehicle loading crane with a capacity of 10 metre tonnes or more, excluding the application of load estimation and slinging techniques to move a load Use of a non-slewing mobile crane with a capacity exceeding 3 tonnes Use of a reach stacker</td>
</tr>
<tr>
<td>18</td>
<td>Slewing mobile crane—with a capacity over 100 tonnes</td>
<td>Use of a slewing mobile crane with a capacity exceeding 100 tonnes Use of a vehicle loading crane with a capacity of 10 metre tonnes or more, excluding the application of load estimation and slinging techniques to move a load Use of a non-slewing mobile crane with a capacity exceeding 3 tonnes Use of a reach stacker</td>
</tr>
<tr>
<td>19</td>
<td>Materials hoist</td>
<td>Use of a materials hoist</td>
</tr>
<tr>
<td>Item</td>
<td>High risk work licence</td>
<td>Description of class of high risk work</td>
</tr>
<tr>
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</tr>
<tr>
<td>20</td>
<td>Personnel and materials hoist</td>
<td>Use of a personnel and materials hoist Use of a materials hoist</td>
</tr>
<tr>
<td>21</td>
<td>Boom-type elevating work platform</td>
<td>Use of a boom-type elevating work platform where the length of the boom is 11 metres or more</td>
</tr>
<tr>
<td>22</td>
<td>Concrete placing boom</td>
<td>Use of a concrete placing boom</td>
</tr>
<tr>
<td>23</td>
<td>Reach stacker</td>
<td>Operation of a reach stacker of greater than 3 tonnes capacity that incorporates an attachment for lifting, moving and travelling with a shipping container, but does not include a portainer crane</td>
</tr>
<tr>
<td>24</td>
<td>Forklift truck</td>
<td>Use of a forklift truck other than an order-picking forklift truck</td>
</tr>
<tr>
<td>25</td>
<td>Order-picking forklift truck</td>
<td>Use of an order-picking forklift truck</td>
</tr>
<tr>
<td>26</td>
<td>Standard boiler operation</td>
<td>Operation of a boiler with a single fuel source that does not have a pre-heater, superheater or economiser attached</td>
</tr>
<tr>
<td>27</td>
<td>Advanced boiler operation</td>
<td>Operation of a boiler, including a standard boiler, which may have one or more of the following: (a) multiple fuel sources; (b) pre-heater; (c) superheater; (d) economiser</td>
</tr>
<tr>
<td>28</td>
<td>Steam turbine operation</td>
<td>Operation of a steam turbine that has an output of 500 kilowatts or more and: (a) is multi-wheeled; or (b) is capable of a speed greater than 3600 revolutions per minute; or (c) has attached condensers; or (d) has a multi-staged heat exchange extraction process</td>
</tr>
<tr>
<td>29</td>
<td>Reciprocating steam engine</td>
<td>Operation of a reciprocating steam engine where the diameter of any piston exceeds 250 millimetres</td>
</tr>
</tbody>
</table>

### 1 Boom-type elevating work platform

For the purposes of table 3.1 item 21, the length of a boom is the greater of the following:

(a) the vertical distance from the surface supporting the boom-type elevating work platform to the floor of the platform, with the platform extended to its maximum height;

(b) the horizontal distance from the centre point of the boom's rotation to the outer edge of the platform, with the platform extended to its maximum distance.
Annex B
Work Health and Safety Regulations 2011

Regulation 81 - Licence required to carry out high risk work

A person must not carry out a class of high risk work unless the person holds a high risk work licence for that class of high risk work, except as provided in regulation 82.

Note 1: See section 43 of the Act.

Note 2: Schedule 3 sets out the high risk work licences and classes of high risk work that are within the scope of each licence. Schedule 4 sets out the qualifications required for a high risk work licence.

Regulation 82 - Exceptions

(1) A person who carries out high risk work is not required to be licensed to carry out the work if the work is carried out:

   (a) in the course of training towards a certification in order to be licensed to carry out the high risk work; and

   (b) under the supervision of a person who is licensed to carry out the high risk work.

(1A) A person who holds a certification in relation to a specified VET course for high risk work is not required to be licensed to carry out the work:

   (a) for 60 days after the certification is issued; and

   (b) if the person applies for the relevant high risk work licence within that 60 day period, until:

      (i) the person is granted the licence; or

      (ii) the expiry of 28 days after the person is given written notice under subregulation 91(2) of a decision to refuse to grant the licence.

(1B) A person who carries out high risk work is not required to be licensed to carry out the work if the work is carried out while an accredited assessor is conducting an assessment of the person’s competency in relation to the work.

(2) A person who carries out high risk work involving plant is not required to be licensed if:

   (a) the work is carried out at a workplace solely for the purpose of the manufacture, testing, trialling, installation, commissioning, maintenance, servicing, repair, alteration, demolition or disposal of the plant at that workplace or moving the plant within the workplace; and

   (b) the plant is operated or used without a load except when standard weight loads with predetermined fixing points are used for calibration of the plant.
(3) For paragraph (2)(a), *moving* includes operating the plant in order to load the plant onto, or unload it from, a vehicle or equipment used to move it.

(4) A person who carries out high risk work with a crane or hoist is not required to be licensed as a crane operator if:

   (a) the work is limited to setting up or dismantling the crane or hoist; and

   (b) the person carrying out the work holds a licence in relation to rigging, which qualifies the person to carry out the work.

Note: See Schedule 3 for the classes of crane operator licence.

(5) A person who carries out high risk work with a heritage boiler is not required to be licensed as a boiler operator.
## Annex C

### Work Health and Safety Regulations 2011

#### Schedule 4 - High risk work licences - competency requirements

This Schedule sets out the qualifications for high risk work licences.

<table>
<thead>
<tr>
<th>Item</th>
<th>Licence Class</th>
<th>VET course</th>
</tr>
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<tbody>
<tr>
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<td>3</td>
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<td></td>
<td></td>
<td>Licence to erect, alter and dismantle scaffolding intermediate level, and</td>
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<td></td>
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<td>Licence to erect, alter and dismantle scaffolding advanced level</td>
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<td>4</td>
<td>Dogging</td>
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<td></td>
<td></td>
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<td>6</td>
<td>Intermediate rigging</td>
<td>Licence to perform dogging, and</td>
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<tr>
<td></td>
<td></td>
<td>Licence to perform rigging basic level, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Licence to perform rigging intermediate level</td>
</tr>
<tr>
<td>7</td>
<td>Advanced rigging</td>
<td>Licence to perform dogging, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Licence to perform rigging basic level, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Licence to perform rigging intermediate level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Licence to perform rigging advanced level</td>
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<td>8</td>
<td>Tower crane</td>
<td>Licence to operate a tower crane</td>
</tr>
<tr>
<td>9</td>
<td>Self-erecting tower crane</td>
<td>Licence to operate a self-erecting tower crane</td>
</tr>
<tr>
<td>10</td>
<td>Derrick crane</td>
<td>Licence to operate a derrick crane</td>
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<td>11</td>
<td>Portal boom crane</td>
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<td>12</td>
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<td>Licence to Operate</td>
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<tr>
<td>13</td>
<td>Vehicle loading crane</td>
<td>Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)</td>
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<tr>
<td>14</td>
<td>Non-slewing mobile crane</td>
<td>Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)</td>
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<td>15</td>
<td>Slewing mobile crane-with a capacity up to 20 tonnes</td>
<td>Licence to operate a slewing mobile crane (up to 20 tonnes)</td>
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<td>Slewing mobile crane-with a capacity up to 60 tonnes</td>
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<td>Slewing mobile crane-with a capacity up to 100 tonnes</td>
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<td>18</td>
<td>Slewing mobile crane-with a capacity over 100 tonnes</td>
<td>Licence to operate a slewing mobile crane (over 100 tonnes)</td>
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<td>19</td>
<td>Materials hoist</td>
<td>Licence to operate a materials hoist</td>
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<tr>
<td>20</td>
<td>Personnel and materials hoist</td>
<td>Licence to operate a personnel and materials hoist</td>
</tr>
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<td>21</td>
<td>Boom-type elevating work platform</td>
<td>Licence to operate a boom-type elevating work platform (boom length 11 metres or more)</td>
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<tr>
<td>22</td>
<td>Concrete placing boom</td>
<td>Licence to conduct concrete boom delivery operations</td>
</tr>
<tr>
<td>23</td>
<td>Reach stacker</td>
<td>Licence to operate a reach stacker of greater than 3 tonnes capacity</td>
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<td>24</td>
<td>Forklift truck</td>
<td>Licence to operate a forklift truck</td>
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<td>25</td>
<td>Order-picking forklift truck</td>
<td>Licence to operate an order picking forklift truck</td>
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<tr>
<td>26</td>
<td>Standard boiler operation</td>
<td>Licence to operate a standard boiler</td>
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<tr>
<td>27</td>
<td>Advanced boiler operation</td>
<td>Licence to operate a standard boiler, and Licence to operate an advanced boiler</td>
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<tr>
<td>28</td>
<td>Turbine operation</td>
<td>Licence to operate a turbine</td>
</tr>
<tr>
<td>29</td>
<td>Reciprocating steam engine operation</td>
<td>Licence to operate a reciprocating steam engine</td>
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</table>
Annex D

High Risk Work Licence – Proficiency Table

This table provides proficiency codes that align to competency requirements in line with the Work Health and Safety Regulations 2011, Schedule 4 – High risk work licences – competency requirements. Licences issued should be recorded against the corresponding proficiency. This enables reporting of the number or workers holding high risk work licences, as required by Comcare.

<table>
<thead>
<tr>
<th>PMKeyS proficiency code</th>
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<td>National High Risk Work Licence - Intermediate rigging</td>
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<td>National High Risk Work Licence - Advanced rigging</td>
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<td>National High Risk Work Licence - Tower crane</td>
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<td>National High Risk Work Licence - Portal boom crane</td>
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<td>National High Risk Work Licence - Slewing mobile crane 100 tonnes</td>
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<td>National High Risk Work Licence - Turbine operation</td>
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<td>P116106</td>
<td>National High Risk Work Licence - Reciprocating steam engine</td>
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Lead Exposure Management Policy And Guidance

Policy statement
1. Defence will take action to eliminate or, if elimination is not possible, minimise the risks to the health and safety of persons engaged in lead processes.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. Prior to commencing a new lead process within Defence, an assessment of lead exposure will be undertaken before the work commences to allow introduction of adequate control measures to minimise potential personal lead exposures.
5. A lead process will be considered lead risk work until it is determined, through a workplace risk assessment, that lead risk work is not being undertaken.
6. If the process is determined to be lead risk work, the regulator must be notified within seven days and a copy of the notice easily accessible by workers, and health and safety representatives.
7. Workers must undergo health monitoring by a registered medical professional with experience in health monitoring, both prior to and during the undertaking of lead risk work.
9. Environmental and personal risk factors are to be considered in the assessment of lead exposure risk.

Roles and responsibilities
10. Group Heads and Service Chiefs as officers of the Person Conducting a Business or Undertaking are responsible for allocating sufficient resources to effectively manage lead exposure related risks.
11. Commanders/managers and supervisors must take all practicable steps to protect the health and safety of workers. They have a responsibility to:
   11.1. understand how lead exposure affects their workers and the work being performed;
   11.2. consult with workers to identify, assess and control lead exposure related hazards and risks;
11.3. ensure the appropriate risk management is conducted for all activities;
11.4. provide all workers with appropriate information, education, training, instruction and supervision; and
11.5. implement improvements to reduce lead exposure related risks, so far as is reasonably practicable.

12. All workers using, handling and/or storing a lead-based substance/material, in accordance with the Work Health and Safety Regulations 2011, Regulation 392 – Meaning of lead process (Annex B), need to maintain safe work practices. In particular workers are to:

12.1. use the control measures provided by Defence in the way they are intended to be used;
12.2. participate in suitable induction and training programs;
12.3. use the control measures provided for lead-containing hazardous chemicals, plant and processes;
12.4. wear, in a proper manner, the personal protective equipment provided;
12.5. store personal protective equipment in the accommodation provided when the personal protective equipment is not in use;
12.6. remove from their person any personal protective equipment which could cause contamination, and wash before eating, drinking or smoking;
12.7. practice a high standard of personal hygiene, and make proper use of necessary facilities provided for washing, showering and bathing before eating and drinking;
12.8. co-operate with their respective commanders/managers and supervisors in performing workplace risk assessments;
12.9. report promptly to their commanders/managers, through their supervisor, any defects discovered in any control measure, label, or item of personal protective equipment which could affect compliance with the provisions of the Work Health and Safety Regulations 2011;
12.10. co-operate with their respective commanders/managers and supervisors in the conduct of appropriate atmospheric monitoring and/or health monitoring programs that arise from assessments;
12.11. in the case of a female staff member, using, handling and/or storing lead in the workplace, inform her commander/manager as soon as practicable if she is trying to get pregnant, is pregnant or is breast-feeding;
12.12. report for blood lead testing as required;
12.13. attend health monitoring activities if directed by commanders/managers or supervisors; and
12.14. report results of blood lead tests to commanders/managers and supervisors. (The main concern here is for civilian workers and/or contractors to advise Defence of the results of their blood lead tests. Commanders/managers and supervisors must be mindful of their need to ensure medical confidentiality of the informed results while maintaining health and safety standards in the workplace).

Guidance
13. Lead process - a process that creates a risk to the health of a worker at the workplace having regard to blood lead levels of workers, or airborne lead, of the Work Health and Safety Regulations 2011, Regulation 392 – Meaning of lead process and Regulation 393 – Regulator may decide lead process (Annex C).

14. Lead risk work - a lead process that is likely to cause the blood lead level of a worker carrying out the work to exceed:
   14.1. for a female of reproductive capacity - 10μg/dL (0.48μmol/L); or
   14.2. in any other case - 30μg/dL (1.45μmol/L).

15. A lead process risk assessment must have regard for the following:
   15.1. past biological monitoring results of workers;
   15.2. airborne lead levels in the workplace; and
   15.3. the form of lead in use.

16. Health monitoring is to include as a minimum:
   16.1. demographic, medical and occupational history;
   16.2. physical examination; and
   16.3. biological monitoring

17. Work Health and Safety Regulation 2011, Regulation 415 – Removal of worker from lead risk work (Annex D), identifies a requirement to remove workers from carrying out lead risk work where their levels of exposure reaches, or is likely to reach, prescribed markers. If this occurs, Defence is to:
   17.1. determine the exact cause of the exposure;
   17.2. determine the likelihood of recurrence;
   17.3. enable the development of risk management controls to prevent future incidents;
   17.4. contribute to the continuous improvement of Defence’s safety management system; and
   17.5. notify the regulator.

References and related documents
19. Work Health and Safety Regulations 2011
   19.1. Chapter 7.1 - Hazardous Chemicals
   19.2. Chapter 7.2 - Lead
20. SafetyMan
   20.1. Hazardous Chemicals Management Policy
   20.2. Work Health and Safety Event (Incident) Reporting Policy
21. Code of Practice - Labelling of Workplace Hazardous Chemicals
22. Code of Practice - Preparation of Safety Data Sheets for Hazardous Chemicals
23. Safe Work Australia Lead (inorganic) - Hazardous Chemicals Requiring Health Monitoring
24. *Defence Health Manual*
   24.1. Volume 2, Part 9, Chapter 03 Management of Pregnant Members of the Australian Defence Force
   24.2. Volume 2, Part 14, Chapter 07 Determining the Requirement for Occupational Health Monitoring in the Australian Defence Force
   24.3. Volume 2, Part 14, Chapter 08 - Health Surveillance of Inorganic Lead Exposure for Australian Defence Force Personnel
27. *FACOPS Project Delivery Step 4.8 - Disposal of Existing Infrastructure (includes demolition)*
28. *Australian Standards*
   28.4. AS/NZS 1269.0:2005 - Occupational Noise Management, Appendix C, Lead is an Ototoxic Metal

<table>
<thead>
<tr>
<th>Document Reference:</th>
<th>Lead Exposure Management Policy and Guidance</th>
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<td>Occupational Health and Hygiene Directorate</td>
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<tr>
<td>Date Published:</td>
<td>1-May-19</td>
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<td>Date of Next Review</td>
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Annexes

A. Work Health and Safety Regulations 2011, Regulation 415 - Removal of worker from lead risk work

B. Work Health and Safety Regulations 2011, Regulation 392 - Meaning of lead process

C. Work Health and Safety Regulations 2011, Regulation 393 - Regulator may decide lead process

D. Work Health and Safety Regulations 2011, Regulation 415 - Removal of worker from lead risk work
Annex A
Work Health and Safety Regulations 2011

415 - Removal of worker from lead risk work

(1) A person conducting a business or undertaking for which a worker is carrying out work must immediately remove the worker from carrying out lead risk work if following health monitoring:

(a) biological monitoring of the worker shows that the worker’s blood lead level is, or is more than:
   (i) for females not of reproductive capacity and males—50μg/dL (2.42μmol/L); or
   (ii) for females of reproductive capacity—20μg/dL (0.97μmol/L); or
   (iii) for females who are pregnant or breastfeeding—15μg/dL (0.72μmol/L); or
(b) the registered medical practitioner who supervised the health monitoring recommends that the worker be removed from carrying out the lead risk work; or
(c) there is an indication that a risk control measure has failed and, as a result, the worker’s blood lead level is likely to reach the relevant level for the worker referred to in paragraph (a).

Penalty:

(a) In the case of an individual—$6 000.
(b) In the case of a body corporate—$30 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

(2) The person must notify the regulator as soon as practicable if a worker is removed from carrying out lead risk work under subregulation (1).

Penalty:

(a) In the case of an individual—$3 600.
(b) In the case of a body corporate—$18 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.
Annex B
Work Health and Safety Regulations 2011

392 - Meaning of lead process

In this Part, a lead process consists of any of the following carried out at a workplace:

(a) work that exposes a person to lead dust or lead fumes arising from the manufacture or handling of dry lead compounds;

(b) work in connection with the manufacture, assembly, handling or repair of, or parts of, batteries containing lead that involves the manipulation of dry lead compounds, or pasting or casting lead;

(c) breaking up or dismantling batteries containing lead, or sorting, packing and handling plates or other parts containing lead that are removed or recovered from the batteries;

(d) spraying molten lead metal or alloys containing more than 5% by weight of lead metal;

(e) melting or casting lead alloys containing more than 5% by weight of lead metal in which the temperature of the molten material exceeds 450° C;

(f) recovering lead from its ores, oxides or other compounds by thermal reduction process;

(g) dry machine grinding, discing, buffing or cutting by power tools alloys containing more than 5% by weight of lead metal;

(h) machine sanding or buffing surfaces coated with paint containing more than 1% by dry weight of lead;

(i) a process by which electric arc, oxyacetylene, oxy gas, plasma arc or a flame is applied for welding, cutting or cleaning, to the surface of metal coated with lead or paint containing more than 1% by dry weight of lead metal;

(j) radiator repairs that may cause exposure to lead dust or lead fumes;

(k) fire assays if lead, lead compounds or lead alloys are used;

(l) hand grinding and finishing lead or alloys containing more than 50% by dry weight of lead;

(m) spray painting with lead paint containing more than 1% by dry weight of lead;

(n) melting lead metal or alloys containing more than 50% by weight of lead metal if the exposed surface area of the molten material exceeds 0.1 square metre and the temperature of the molten material does not exceed 450° C;

(o) using a power tool, including abrasive blasting and high pressure water jets, to remove a surface coated with paint containing more than 1% by dry weight of lead and handling waste containing lead resulting from the removal;

(p) a process that exposes a person to lead dust or lead fumes arising from manufacturing or testing detonators or other explosives that contain lead;

(q) a process that exposes a person to lead dust or lead fumes arising from firing weapons at an indoor firing range;

(r) foundry processes involving:
(i) melting or casting lead alloys containing more than 1% by weight of lead metal in which the temperature of the molten material exceeds 450° C; or

(ii) dry machine grinding, discing, buffing or cutting by power tools lead alloys containing more than 1% by weight of lead metal;

(s) a process decided by the regulator to be a lead process under regulation 393.
Annex C

Work Health and Safety Regulations 2011

393 - Regulator may decide lead process

(1) The regulator may decide that a process to be carried out at a workplace is a lead process.

(2) The regulator must not decide that the process is a lead process unless the regulator is satisfied on reasonable grounds that the process creates a risk to the health of a worker at the workplace having regard to blood lead levels of workers, or airborne lead levels, at the workplace.

Note: A decision that a process is a lead process is a reviewable decision (see regulation 676).

(3) The regulator must, within 14 days after a decision is made under subregulation (1), give written notice of the decision to the person conducting a business or undertaking at the workplace.
Annex D
Work Health and Safety Regulations 2011

415 - Removal of worker from lead risk work

(1) A person conducting a business or undertaking for which a worker is carrying out work must immediately remove the worker from carrying out lead risk work if following health monitoring:

   (a) biological monitoring of the worker shows that the worker’s blood lead level is, or is more than:

      (i) for females not of reproductive capacity and males—50μg/dL (2.42μmol/L); or

      (ii) for females of reproductive capacity—20μg/dL (0.97μmol/L); or

      (iii) for females who are pregnant or breastfeeding—15μg/dL (0.72μmol/L); or

   (b) the registered medical practitioner who supervised the health monitoring recommends that the worker be removed from carrying out the lead risk work; or

   (c) there is an indication that a risk control measure has failed and, as a result, the worker’s blood lead level is likely to reach the relevant level for the worker referred to in paragraph (a).

Penalty:

   (a) In the case of an individual—$6 000.

   (b) In the case of a body corporate—$30 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

(2) The person must notify the regulator as soon as practicable if a worker is removed from carrying out lead risk work under subregulation (1).

Penalty:

   (a) In the case of an individual—$3 600.

   (b) In the case of a body corporate—$18 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.
Lead Exposure Management Procedure 01 - Management Of Lead In Indoor Firing Ranges

1. This procedure provides guidance on the management of lead in indoor firing ranges (small arms ranges) and relates to the SafetyMan – Lead Exposure Management Policy and Guidance.

2. The management of lead dust and fumes from the discharge of small arms is a hazard exacerbated when conducted in indoor ranges where dilution ventilation is not available. This procedure provides technical information to range management to ensure that lead exposure to workers is kept to a minimum, so far as is reasonably practicable, and that lead is managed in the workplace to prevent contamination spreading to living accommodation and/or homes.

3. It is useful to range operators, occupational hygienists, safety professionals and technicians in performing range evaluations, understanding conditions that require additional expertise and developing operation and maintenance procedures.

Management considerations

4. Meeting Defence work health and safety requirements is a multi-faceted effort and requires the coordination of occupational health personnel, facility managers, maintainers, trainers, and facility users to develop procedures to safely operate indoor firing ranges for training purposes and to conduct maintenance. All personnel involved with range operations must obtain a thorough understanding of the facilities and processes in order to identify potential health hazards.

5. Review and orientation with the Indoor firing range facilities should consider identifying locations and practices that increase the risk for exposures to health hazards, and to develop procedures and adjust practices to prevent exposures to, or the spread of lead and other toxic material contamination. Areas such as break rooms, offices, locker/change rooms, government vehicles, privately owned vehicles and housing should all be considered residue collection areas that increase risk to long term exposure and risk to others.

Indoor firing range classification

6. When assessing occupational exposure to lead, the indoor firing ranges must be characterised. Characterisation of the range is important as it allows prioritisation of surveillance and monitoring efforts to determine likely exposure-risk populations. Indoor firing ranges may be placed into three categories: high, moderate, and low occupational exposure facilities.

7. High occupational exposure facilities such as indoor firing ranges have one or more of the following conditions:

7.1. large volume of use either through number of personnel, number of rounds fired per practice (greater than 1000 per service member per day), type of training, number of practices per month (thirty or more), or number of training practices between cleanings;
7.2. exposure concerns due to non-existent or poorly designed ventilation systems; and
7.3. training areas and facilities without a proper, or having an inadequate, system of air circulation.

8. Moderate occupational exposure facilities have engineering or operational challenges that experience a high volume of use, but are utilised at a lower rate than high occupational exposure facilities. Moderate occupational exposure facilities include, but are not limited to:

8.1. Indoor firing ranges that do not fall into the high occupational exposure facility category;
8.2. range facilities that experience high volumes of fire (more than 500 but less than 1000 rounds per shooter per day) or large numbers of shooters operating in compressed spaces (eg less than one meter separation between shooters); and
8.3. long-use training facilities that have not experienced routine cleanings, unless demonstrated otherwise by sampling and analysis.

9. Low occupational exposure facilities are properly designed and operated and have either large volumes of air flow or low volume round counts. Low occupational exposure facilities include, but are not limited to outdoor firing ranges.

Indoor firing range physical features

10. The following physical features of the indoor firing ranges may impact control of exposure to environmental hazards and should be considered when assessing compliance with occupational exposure requirements:

10.1. building construction material and design;
10.2. the presence or absence of mechanical ventilation and/or local exhaust or supply ventilation;
10.3. interior configuration as it influences ventilation, the potential to accumulate particulates due to reduced air flow or the formation of turbulence and eddies;
10.4. provisions for regularly scheduled evaluation and maintenance of supply and exhaust ventilation if applicable;
10.5. the availability of electrical power to the facility;
10.6. the presence or absence of adequate lighting; and
10.7. type of construction material, coatings, and porous versus non-porous surfaces.

Indoor firing range procedures and compliance

11. The potential for exposure is related to the operations of range and ancillary facilities such as laundry, weapons cleaning and maintenance. Range procedures must document the following elements:

11.1. the description of work practices, eg what’s required, what’s recommended and what’s permissible;
11.2. requirement for posting of signage related to lead hazards;
11.3. cleaning and maintenance requirements;
11.4. if there are adjacent or associated facilities where lead contamination may spread, include cleaning requirements for those areas;
11.5. personal protective equipment requirements;
11.6. procedure for developing and approving training plans with lead exposure mitigation support requirements incorporated for exercises;

11.7. requirement to conduct lead exposure awareness and mitigation as part of the range safety briefing;

11.8. requirement to conduct lead and toxic material exposure awareness classes for instructors and high volume use personnel; and

11.9. document progress updates during safety reviews.

Indoor firing range ancillary facilities

12. A working knowledge of the location, design and potential risks associated with the use of all facilities that support the indoor firing ranges must be maintained including the following:

12.1. the presence or absence of hygiene facilities or change facilities and their location with reference to the indoor firing ranges and break/lunch rooms;

12.2. the provision of change rooms and the ability to segregate “dirty” and “clean” clothes;

12.3. laundry facilities and whether they provided and/or operated by contractors;

12.4. weapons cleaning and maintenance; and

12.5. classrooms and offices.

Personal protective equipment

13. Respiratory protection requirements are based on the overall exposure risk to personnel operating and utilising the range. Respiratory protection and controls are required for any personnel exposed to an eight hour time weighted average airborne lead concentration that reaches 50% of the workplace atmospheric exposure standard of 0.15 mg/m3 for an eight hour shift. This level is considered a significant risk to health and range procedures must be reviewed and ensure the following:

13.1. if 50% of the exposure standard is exceeded, instructors or high use personnel must wear respiratory protection when conducting range operations. Respiratory protection should be a minimum of a P2 respirator;

13.2. all personnel involved in cleaning/maintenance (including students/trainees) must utilise masks during clean up operations. Masks should be worn regardless of airborne lead level to prevent inhalation of deposited lead material;

13.3. masks that require fitting are properly fitted and maintained;

13.4. filters are replaced as required and expended filters properly disposed of; and

13.5. personnel using respirators are enrolled in the installation respiratory protection program.

14. Any personnel involved in cleaning of the range (ie daily wet wiping, high efficiency particulate air vacuum cleaning, disposal of spent range produce (eg casings)) are required to wear nitrile gloves, P2 respirator and Tyvek coveralls.

Indoor firing range cleaning regime

15. A cleaning regime and schedule for routine and comprehensive cleaning must be developed and will depend on the frequency and intensity of the indoor firing range use.
16. Examples of cleaning schedules include:
16.1. floors and workbenches, where practicable and according to the level of contamination, are cleaned daily;
16.2. washing and changing rooms and facilities for eating and drinking should be washed, cleaned at least once per day; and
16.3. the frequency of cleaning inside walls and ceilings will vary according to the degree of contamination. Overhead ledges and fixtures should be cleaned as frequently as necessary to prevent the accumulation of lead deposits.

17. Areas expected to be considered clean of lead contamination such as a lobby, offices or lunch rooms will require frequent cleaning. The transition areas between the clean and contaminated environment that are frequented, including the decontamination room and firing line, require frequent cleaning to reduce excess amounts of contamination, and maintain integrity of the clean and contaminated line.

18. Other areas that are considered to be lead contaminated but are not regularly accessible will require far less frequent cleaning, such as the wall, ceilings and floor down range.

19. Monitoring of contaminated waste bins every day when the facility is in use, and disposal of materials to avoid overflowing of bins.

20. The maintenance activities of removing bullets from the bullet trap and changing out filters in the ventilation system must be included in the cleaning regime. Filters should be changed by maintenance contractors/personnel with experience/certification in this area.

21. The cleaning regime must also take into account fire or explosion risks from un-burnt propellant build up.

Cleaning staff
22. Where contractors are engaged to undertake the cleaning, ensure the work statement clearly defines the cleaning requirements and acceptable procedures.

23. Contracted cleaners should have experience/knowledge in cleaning indoor firing range’s or other lead process/risk areas and trained in the operation and maintenance of high efficiency particulate air vacuum cleaners. Facility managers must establish a workplace procedure for cleaning and include the following:

23.1. a cleaning schedule;
23.2. surfaces to be cleaned;
23.3. testing of surfaces to verify the efficacy of the cleaning;
23.4. tools and equipment required (dry sweeping and the use of compressed air are prohibited);
23.5. maintenance of cleaning equipment and who is responsible (high efficiency particulate air vacuum cleaners may contain large amounts of lead particulate and should not be disposed of by range personnel as filters are considered lead contaminated waste); and
23.6. ensure waste streams are captured and disposed of in accordance with Commonwealth and State/Territory regulatory requirements.

24. Facility managers and maintainers should provide training on the following:

24.1. health effects of lead and lead exposure;
24.2. locations where lead accumulates in range operations;
24.3. regulations, and standards;
24.4. abatement and mitigation measures; and
24.5. clean-up, disposal, and clearance.

**Indoor firing range cleaning methods and techniques**

25. Only high efficiency particulate air vacuuming and wet cleaning methods as described below should be used. Dry sweeping, dry dusting, and the use of compressed air are prohibited.

26. All waste generated by cleaning, including wash or rinse water should be disposed of through hazardous waste specialists. Waste streams may be classified as hazardous waste depending on lead content.

27. Coordinate with occupational hygiene personnel to ensure that lead exposures are adequately monitored/controlled and that work practices are evaluated during cleaning tasks.

28. Comprehensive cleaning involves cleaning all surfaces by high efficiency particulate air vacuum followed by wet cleaning. An initial comprehensive clean should be carried out if one has not been done within the last twelve months.

29. Floors and horizontal surfaces should be cleaned on a regular basis. Floor and horizontal surfaces such as booth shelves or target retrieval systems may need daily cleaning if heavily used. Otherwise, cleaning should be performed once or twice a week.

30. Cleaning can be conducted either with a vacuum equipped with a high efficiency particulate air filter or wet methods. An explosion-proof high efficiency particulate air vacuum is necessary due to the possible build-up of unburned powder and should be dedicated to lead dust cleanup. The ventilation system must be on during cleanup operations.

31. Cleaning should start at the farthest point from the main entrance/exit and progress towards the main entrance/exit and finish there. Begin at the top of each room or space and work downward, finishing with the floor. Clean all surfaces in the space including bullet traps, target stands and any other furnishings. It is essential that there is a methodical sequence when cleaning to avoid passing through areas already cleaned.

32. Surfaces such as porous concrete, old porous hardwood floors and areas such as corners of rooms and window troughs pose especially difficult cleaning challenges. Porous concrete and corners of rooms normally require additional vacuuming to achieve an acceptable level of cleanliness.

33. Routine cleaning procedures should be used to clean lunch/break rooms and change areas daily and to clean other ancillary areas such as corridors, classrooms, and quarters that have been determined to be contaminated.

34. If a break (lunch) room is available, it shall have smooth, easily cleanable surfaces. It must be cleaned often enough to maintain surface dust loading less than 20 µg/100 cm2. An active range shall not be used as a storage or office area.

35. After the cleaning work is completed, the supervisor shall visually evaluate the entire work area to ensure that all work has been completed and all visible dust and debris have been removed. If the visual examination results are unsatisfactory, affected surfaces must be retreated and/or re-cleaned. If after passing the final visual examination, the space fails the clearance wipe dust tests, the high efficiency particulate air /wet wash/ high efficiency particulate air cleaning cycle shall be repeated. Re-cleaning shall be conducted under the
direct supervision of range supervisor. Care shall be exercised during the re-cleaning of failed surfaces or components to avoid re-contaminating cleared surfaces or components.

Range cleaning – brass recovery and recycling

36. Following range practices, spent bullet casings (ie brass) will need to be recovered for recycling. Brass will be contaminated with lead dust and should be considered contaminated. The cleanup of brass shall not involve the use of brooms, ie a wooden casino rake can be useful. The ventilation system will be turned on during cleanup operations. The following procedures are to be adopted for the management of brass recovery operations on indoor ranges:

36.1. cleaners are to wear appropriate personal protective equipment when collecting brass (when cooled) from the range including:
   36.1.1. P2 respirator;
   36.1.2. disposable overalls; and
   36.1.3. disposable gloves.

36.2. brass (spent/unspent/different calibres) on the range is to be gathered using a suitable raking system or high efficiency particulate air fitted vacuum cleaner and is not to involve the use of dry sweeping;

36.3. brass collected from the range, where no sorting is required, is to be placed in heavy duty clear plastic bags for transport to the recycling centre or return to the supplier, and all sorted bags are to be labelled as being lead contaminated; and/or

36.4. brass collected from the range, where sorting is required (spent/unspent/different calibres), is to be placed in heavy duty clear plastic bags, or heavy duty plastic buckets (with a dust cover or filled with water) for manual handling ease, for transport/relocation to the sorting area. Wet methods are to be used in the sorting of the casings as follows:
   36.4.1. empty the collected brass into a container of water and sort brass types into new heavy duty clear plastic bags for transfer to the recycling centre or return to the supplier;
   36.4.2. all sorted bags are to be labelled as being lead contaminated; and
   36.4.3. contaminated water is to be sent to industrial waste for disposal. Local procedures are to be developed for the collection, storage and removal of contaminated waste by an approved contractor under an industrial waste contract.

Range cleaning – waste disposal

37. Any debris shall be raked or high efficiency particulate air vacuumed and placed in single 6–mil or double 4–mil plastic bags, which shall then be sealed and stored along with other contaminated debris. The hazard control contractor and the disposal contractor will work together to establish formal procedures, specifying selected containers, storage areas and debris pickups to ensure that all relevant regulations are met.

Range cleaning – decontamination of workers, supplies and equipment

38. Decontamination is necessary to ensure that worker’s families, other workers, and subsequent properties do not become contaminated. Procedures are to be developed to ensure proper decontamination of equipment, tools, and materials prior to their removal from lead hazard control containment areas. Work clothing, work shoes, and tools shall not
be placed in a worker’s automobile unless they have been laundered or placed in sealed bags.

39. For operations where contamination is likely, workers shall vacuum off their clothing with a high efficiency particulate air vacuum before exiting the range. Vacuuming shall reduce the spread of lead dust contamination to other areas of the building or to personal vehicles or quarters.

40. All vacuums and tools that were used shall be wiped down using sponges or rags and detergent solutions. Consumable/disposable supplies, such as mop heads, sponges, and rags, shall be discarded after each space is completed and treated as contaminated waste.

41. Durable equipment, such as power and hand tools, generators, and vehicles shall be cleaned prior to their removal from the site. The cleaning shall consist of a thorough high efficiency particulate air vacuuming followed by washing.

42. Personal protective equipment clothing is to be maintained and available for workers who use the range, perform range maintenance or clean the range where contamination is likely. Laundry facilities shall be provided (if feasible) on site to further reduce the risk of spreading lead contamination. Clothing personal protective equipment which has been used in a lead risk area is to be bagged in a plastic container and moved to the laundry facility and washed using a specialist cleaning agent such as D-Lead™ washing powder.

43. Where the provision of on-site laundry facilities is not feasible, the range manager shall enter into an industrial cleaning contract to ensure clothing is laundered in an appropriate manner and not taken to the user’s home for laundering.

44. Personal equipment such as body armour, webbing and boots should be brushed in the range area while ventilation is in operation and an appropriate P2 rated face mask worn. This will reduce the risk of lead contamination being transferred to other areas. (Air curtains which do not focus compressed air onto clothing and equipment may be an alternative).

45. To limit contamination of objects, bags and clothing, only the weapon to be fired and the necessary ammunition shall be carried into the range. Coat racks or lockers external to the range are recommended. Range support and cleaning equipment shall be easily accessible, but in a separate storage closet.

Personal hygiene

46. Strict adherence to personal hygiene practices is critical to prevent hand-to-mouth lead ingestion. At a minimum, hand washing facilities or lead removal wipes which meet the criteria for dermal use (such as Hygenall™, D-Lead™, or LeadTech™) must be readily available to individuals working or training at the facility.

47. Shooters shall wash hands and face thoroughly before eating, drinking or smoking. Washroom facilities shall be provided with hot and cold water and soap or a powdered skin cleanser or a specialist cleansing agent, such as D-Lead™ soap. A change room must be provided with showers (if feasible) if workers are exposed above the occupational exposure standard.

Administrative controls

48. Administrative controls or range operational policies can be used to reduce exposures and should be included in the range’s standard operating procedures. Other lead exposures resulting from hobbies, off-duty shooting and other work duties such as soldering can contribute to the individual’s total lead exposure and should be considered in the maximum allowable exposure time.
49. Signs must be fixed to the entry to the indoor firing range indicating that it is a lead work area. Each sign is to be visible at all points of access. The written words LEAD WORK AREA should be printed on indoor firing range signs. All safety signs must comply with the requirements of Australian Standard 1319:1994 – Safety Signs for the Occupational Environment.

Exposure monitoring - evaluation overview
50. From a safety and health perspective, it is necessary to determine if an indoor range is operating properly. The range must be evaluated from two perspectives; the physical/mechanical and the operational, as below:
   50.1. physical/mechanical includes the facility design, construction and the mechanical systems used in the facility; and
   50.2. operational focuses on how the range is operated, ie the interaction of the occupants, weapons and ammunition with the facility.

51. The annual evaluation of mechanical ventilation systems will be conducted by a specialist ventilation engineer taking into consideration air movements where the operator creates flow disturbances which could result in contamination remaining in the operators breathing zone. All ADF indoor weapons ranges are to be reviewed annually.

Evaluation – air sampling
52. Air sampling in the personal breathing zone of shooters and range instructors is imperative in assessing exposures. A qualified occupational hygienist shall be used to undertake the air tests using a National Association of Testing Authorities approved laboratory to conduct the analyses. The following information shall be recorded in addition to the required data presented by occupational hygiene practice:
   52.1. the type of training being conducted;
   52.2. frequency of training;
   52.3. number of shooters;
   52.4. shooter placement (lane number);
   52.5. weapon type(s);
   52.6. calibre and manufacturer of the ammunition;
   52.7. jacketed or non-jacketed bullets;
   52.8. number of rounds expended; and
   52.9. other activity, such as weapons cleaning and brass recovery that would contribute to exposure.

53. Air monitoring is to be used:
   53.1. when there is uncertainty about the level of exposure;
   53.2. to indicate whether the exposure standards are being exceeded or approached; and
   53.3. to test the effectiveness of the control measures.

54. Results from air monitoring will indicate how effective control measures are, eg whether ventilation systems are operating as intended. If monitoring identifies that the exposure standard is being exceeded, the control measures must be reviewed and any necessary changes made.
55. Air monitoring cannot be used to determine a risk to health via skin contact of airborne chemicals.

56. Air monitoring must be undertaken where a risk assessment or lead management plan identifies a significant risk to range personnel/users health.

**Surface monitoring for lead**

57. Currently there are no quantitative occupational exposure limits for lead contamination of surfaces. Surfaces should be kept as free of lead contamination as is practicable. Wipe sampling is recommended for developing cleaning procedures, verifying their effectiveness and adequacy or to assist in determining sources of exposures. A site-specific internal performance standard must be developed by completing wipe sample measurements after a careful, well supervised cleaning procedure has been completed. The results of these samples can be used to periodically verify that cleaning procedures are being performed effectively. These site-specific cleaning performance standards will likely vary widely between different types of surfaces due to differences in roughness and porosity.

58. Wipe samples may also be used to examine levels in clean or ancillary areas. An active range shall not be used as a storage or office area.

59. Appropriate procedures are to be prepared by an occupational hygienist and a National Association of Testing Authorities approved laboratory is to be used to analyse the samples.

60. Estate and Infrastructure Group is to monitor the effectiveness of cleaning at indoor ranges through regular audit of the process. Quick sampling techniques are available and details can be obtained by contacting the Work Health and Safety Branch.

**Mechanical systems - ventilation**

61. A proper indoor firing range ventilation design will include a supply and exhaust air ventilation system that removes contaminated air and supplies fresh air. This prevents the accumulation of contaminated air and evenly distributes fresh air. If monitoring identifies exposures to lead above the exposure limit, consider opportunities to add improved ventilation so that air movement is enhanced.

62. The exhaust system releases contaminated air away from the range. The exhaust discharge must be separated from the supply air intake. If the range is part of a larger building or adjacent to other buildings, the range exhaust shall not be located where cross contamination can occur. Note: prevailing wind patterns or building projections that may cause turbulence or eddy currents which can affect ventilation effectiveness.

63. Filtration of the exhausted air is required on all indoor ranges to prevent contamination of the environment or cross contamination of other air inlets. Provisions for increasing fan size to handle increased static pressures must be considered if exhaust filtration is retrofitted. A pressure drop (magnehelic/incline manometer) gauge across the filter is recommended to indicate when filter changes are required.

64. The air shall be exhausted at or behind the bullet stop. Some ranges are designed to have multiple exhaust points down range.

65. The distribution of the supply air is critical in determining the effectiveness of the ventilation system. Supply air systems are designed to distribute air evenly across the width of the firing range (for laminar flow ventilation systems). If not evenly distributed, air flow at the firing line will be turbulent, causing lead and other contaminants to be carried back into the shooter’s breathing zone. Supply air shall be introduced as far up range as possible.
66. When a ceiling to floor and wall to wall supply distribution system is used, there shall be no obstructions (storage, shelves, tables etc.) to the air flow between the intake and the shooting station.

67. The system shall maintain laminar flow of 0.26 - 0.38 m/s over the cross sectional area at the firing line with a preference of 0.38 m/s.

68. The following measures must also be taken to ensure engineering controls are effectively protecting personnel:

   68.1. use smoke testing to identify spaces with stagnant air;
   68.2. identify locations where fans or grilles could be retrofitted to improve air distribution; and
   68.3. check that mechanical ventilation systems are operating (including whether fan belts are in place) and in good working order, with no debris blocking inlets or outlets.

69. Check for regular preventive maintenance of the ventilations systems including scheduled filter changes and flow tests.

Health monitoring for lead exposure

70. Health monitoring is used to assess an individual’s health to identify and prevent adverse health effects from exposure to lead. Health monitoring is not to be used as an alternative to the maintenance of control measures.

71. A workplace assessment of the indoor firing range must be undertaken in accordance with the Work Health and Safety Regulations, Regulation 402 – Identifying lead risk work (Annex A) and Work Health and Safety Act 2011, Section 12F – Interaction with Commonwealth criminal law (Annex B) to determine if a process is considered to be lead risk work and if health monitoring of personnel is required. Lead risk jobs within Defence may include:

   71.1. personnel who fire large numbers of rounds within an indoor firing range (this does not include personnel who only fire occasionally at indoor ranges, as they are not in lead-risk jobs and do not require health surveillance);
   71.2. personnel involved in the running, maintenance and cleaning of indoor firing ranges;
   71.3. armourers; and
   71.4. any other person with frequent lead exposures as defined by their commanding officer.

72. If a process is determined to be lead risk work, the Group or Service must refer the matter to the appropriate Director of Health for the services to request health monitoring by a registered medical professional with experience in health monitoring. ADF Members will receive health monitoring in accordance with the Defence Health Manual, Volume 2, Part 14, Chapter 8 – Health Surveillance of Inorganic Lead Exposure for Australian Defence Force Personnel.

73. For non-ADF members the Group or Service must refer the matter to the Senior Physician in Occupational and Environmental Medicine for advice regarding the health monitoring process.

74. Group Heads and Service Chiefs have the final authority as officers of the Person Conducting a Business or Undertaking to direct health monitoring to occur. In the event that Groups or Services decide to carry out health monitoring in contradiction to the
respective Surgeon General Australian Defence Force or Senior Physician in Occupational and Environmental Medicine for advice, the Groups and Services will be responsible for the cost of that health monitoring.

References and related documents
75. Work Health and Safety Act 2011
76. Work Health and Safety Regulations 2011

Annexes
A. Work Health and Safety Regulations 2011, Regulation 402 - Identifying lead risk work
B. Work Health and Safety Act 2011- 12 – Scope - 12F - Interaction with Commonwealth criminal law
Annex A

Work Health and Safety Regulations 2011

402 - Identifying lead risk work

(1) A person conducting a business or undertaking at a workplace must assess each lead process carried out by the business or undertaking at the workplace to determine if lead risk work is carried out in the process.

Penalty:

(a) In the case of an individual—$6 000.
(b) In the case of a body corporate—$30 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

(2) In assessing a lead process, the person must have regard to the following:

(a) past biological monitoring results of workers;
(b) airborne lead levels;
(c) the form of lead used;
(d) the tasks and processes required to be undertaken with lead;
(e) the likely duration and frequency of exposure to lead;
(f) possible routes of exposure to lead;
(g) any information about incidents, illnesses or diseases in relation to the use of lead at the workplace.

(3) In assessing a lead process, the person must not have regard to the effect of using personal protective equipment on the health and safety of workers at the workplace.

(4) If a person conducting a business or undertaking at a workplace is unable to determine whether lead risk work is carried out in a lead process at the workplace, the process is taken to include lead risk work until the person determines that lead risk work is not carried out in the process.
Work Health and Safety Act 2011

12 – Scope - 12F - Interaction with Commonwealth criminal law

(1) Section 4AB of the *Crimes Act 1914* does not apply to the provisions of this Act.

(2) Strict liability applies to each physical element of each offence under this Act, unless otherwise stated.

(3) Section 15.1 of the *Criminal Code* (extended geographical jurisdiction—category A) applies to an offence against this Act.
Management of Plant Policy

Policy statement
1. Defence will manage plant safely and will ensure, so far as is reasonably practicable, that it is without risks to the health and safety of workers. Plant covers a broad range of items, for example: machinery, equipment, a container, an implement or tool. This also includes anything fitted or connected to any of those things. Plant includes lifts, cranes, computers, machinery, conveyers, forklifts, vehicles, power tools and amusement devices. Refer to the SafetyMan Glossary of Work Health and Safety Terms for further information.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. General requirements for the management of plant include:
   4.1. it must be used, handled and stored safely, and maintained in accordance with manufacturer specifications and relevant technical standards;
   4.2. it must be managed through all stages of the plant’s life cycle, through the application of risk management during the upstream, in-service and out-of-service management stages, in line with the SafetyMan Capability Life Cycle Policy;
   4.3. risks associated with plant must be documented and routinely evaluated to ensure the safety of workers in accordance with Section 193 of the Work Health and Safety Regulations 2011;
   4.4. all workers who may be exposed to risk associated with plant must be appropriately consulted, informed, trained, instructed, supervised and licensed if required;
   4.5. ensure that all persons who are required to operate plant that requires the person to be licenced, holds the appropriate high risk licence. Refer to SafetyMan High Risk Policy and Work Health and Safety Regulations 2011;
   4.6. ensure that plant that requires design and registration in line with Schedule 5 and Section 243-263 of the Work Health and Safety Regulations 2011 has been authorised;
   4.7. plant registers (where mandated) must be maintained and accessible as required, including documentation related to design and alterations, testing, commissioning, decommissioning, dismantling, maintenance and assurance activities;
   4.8. all plant records relating to design, alteration, maintenance and testing must be kept for the period the plant is to be used;
   4.9. ensure that the design, installation and commissioning of plant is without risk to the health and safety of workers, as per Section 187 -204 of the Work Health and Safety Regulations 2011;
4.10. all issues, defects and/or events related to plant must be reported through all relevant Defence systems (eg Interim Business Intelligence System, Sentinel); and

4.11. plant must only be used for the purpose for which it was designed, unless it has been determined that the proposed use does not increase the risk to health and safety. A risk assessment must be conducted by a competent person to determine the level of risk for the proposed use as per Section 206 of the Work Health and Safety Regulations 2011.

Group responsibilities

5. Capability Acquisition and Sustainment Group is responsible for plant that is:
   5.1. defined as specialist military equipment and supports the lifecycle activities of specialist military equipment such as maintenance; and
   5.2. provided as government-furnished equipment or other equipment in support of specialist military equipment unless the responsibility is determined through contract or devolved through Service Level Agreement to other Groups or Services.

6. Defence Estate and Infrastructure Group is responsible for plant that is provided as government-furnished equipment unless a contract specifies responsibility lies elsewhere and it is regarded as being in support of specialist military equipment. In this case it becomes the responsibility of Capability Acquisition and Sustainment Group or is devolved through Service Level Agreements to other Groups or Services.

7. Groups and Services are responsible for plant management and maintenance oversight where:
   7.1. maintenance oversight has been specified under a Service Level Agreement from Capability Acquisition and Sustainment Group or Defence Estate and Infrastructure Group; or
   7.2. equipment is procured through Group or Service means and not provided by Capability Acquisition and Sustainment Group or Defence Estate and Infrastructure Group.

Roles and responsibilities

8. Group Heads and Service Chiefs (as officers of the Person Conducting a Business or Undertaking) are responsible for ensuring:
   8.1. allocation of sufficient resources to effectively manage plant-related risks;
   8.2. work involving plant is carried out in accordance with the Work Health and Safety Regulations 2011;
   8.3. the risks to workers health and safety are eliminated or minimised so far as is reasonably practicable for all work involving plant conducted in a workplace;
   8.4. communication and consultation with managers or supervisors in relation to safe management where plant-related work is being undertaken; and
   8.5. emergency and safety equipment such as personal protective equipment is made available.

9. Commanders/supervisors and managers must take all practicable steps to protect the health and safety of workers. They have a responsibility to:
   9.1. understand how work involving plant affects their workers and the work being performed;
   9.2. consult with workers to identify, assess and control plant-related hazards and risks;
9.3. ensure appropriate risk management is conducted for all plant-related activities;

9.4. implement improvements to reduce plant-related risks, so far as is reasonably practicable;

9.5. ensure that all health and safety features and warning devices (including guarding, operational controls, emergency stops and warning devices), are used in accordance with the plant instructions and Section 208-212 of Work Health and Safety Regulations 2011;

9.6. ensure that maintenance, inspection and, if necessary, testing of the plant is performed by a competent person; and

9.7. provide, maintain and ensure workers use personal protective equipment correctly.

10. All workers have a responsibility to:

10.1. inspect the plant and report any defects relating to plant (eg missing guards, faulty switch controls etc) in their work area to their supervisor as soon as is reasonably practicable;

10.2. not interfere with, misuse or render safety measures ineffective (eg remove guarding);

10.3. understand and follow established safe work practices and procedures, participate in appropriate training and hazard identification, and control risks arising from plant-related work in accordance with guidance;

10.4. advise supervisors of any perceived risk that could increase exposure to injury or illness; and

10.5. use personal protective equipment in accordance with the information, instruction and training provided. For further information refer to SafetyMan – Personal Protective Equipment Policy.

References and related documents

12. Work Health and Safety Regulations 2011, Chapter 5
13. SafetyMan – Capability Life Cycle Policy
15. SafetyMan – High Risk Licencing Policy and Guidance
17. Australian Radiation Protection and Nuclear Safety Regulations 1999
18. Code of Practice - Managing the risks of plant in the workplace
19. Work Health and Safety Management System
20. Defence Estate and Infrastructure Group Technical Instruction for Management of Registrable Plant
22. Capability Acquisition and Sustainment Group Policy (E&T) 12-8-001 - Materiel System Safety
23. **Joint Logistics Command (JLC) WHSMS: Procedure 28 – JLC High Risk Plant - Joint Special Licence**
24. **Defence Estate Quality Management System (DEQMS)**
25. **Military Integrated Logistics Information System (MILIS)**
26. **Sentinel**
27. **Air Force Safety Manual**

<table>
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<tr>
<th>Document reference</th>
<th>SafetyMan - Management of Plant Policy</th>
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<td><strong>Content owner</strong></td>
<td>Work Health and Safety Branch, Directorate of Strategy and Policy</td>
</tr>
<tr>
<td><strong>Date published</strong></td>
<td>19 Sept 2019</td>
</tr>
<tr>
<td><strong>Objective ID</strong></td>
<td>AB36411969</td>
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Management of Plant Procedure 01 – Workshop Tools

1. This procedure relates to SafetyMan - Management of Plant Policy and provides guidance on the safe operation and management of workshop tools.

Introduction

2. Workshop tools fall within the definition of plant under the Work Health and Safety Act 2011 Part 1, Division 3, Definitions. The definition of plant includes:
   2.1. any machinery, equipment, appliance, container, implement or tool; and
   2.2. any component of any of those things; and
   2.3. anything fitted or connected to any of those things.

3. The definition for plant covers small appliances, such as hand tools, powered and non-powered. The use of workshop tools must comply with the general duty of care and risk management requirements of the Work Health and Safety Act 2011 and the specific hazard management requirements of the Work Health and Safety Regulations 2011 relating to plant.

4. The design and construction of hand and power tools are to conform to the relevant Defence contractual agreement and Australian Standards, where they exist.

5. If any tool is found to be unsafe by nature of its design, function or intended use, the matter should be reported to the supervisor so that an investigation can be conducted.

6. Where Defence imports hand and power tools into Australia, the Work Health and Safety Act 2011 may deem Defence to be the manufacturer and/or supplier, which carries obligations as per Section 196 of the Work Health and Safety Regulations 2011 to ensure that the products are of a quality that will not cause risk to health and safety in the workplace.

7. All workers are to be trained in the correct operation of tools required to perform work safely. Training should also encompass inspection of tools to detect faults and maintenance requirements to prevent deterioration. Some potentially dangerous tools require the operator to undergo specialist training or hold specific competencies or licenses, eg operators of explosive-powered tools must receive instruction by registered training organisations. Refer to SafetyMan High Risk Work Licensing Policy.

8. Supervision must be provided to ensure tools are used correctly, that the appropriate tools are selected for the task being performed and that the tools are maintained in a safe condition and stowed safely when not in use. Supervisors are to ensure that when required, the appropriate personal protective equipment is worn. Where power tools are being used and the likelihood of injury exists, the presence of another person who can render assistance in case of an emergency is necessary.

9. Inspection of tools is the responsibility of both operators and supervisors. Maintenance and inspection is to be performed by a competent person as per Section 213 of the Work Health and Safety Regulation 2011. When tools are found to be defective they must be immediately removed from use, then either repaired, or scrapped and replaced. Electrical tools must be inspected and tested for earth leakage in accordance with Work Health and Safety Regulations 2011, Regulation 150 – Inspection and testing of electrical equipment.
and documented in an electrical equipment register (refer to SafetyMan - Electrical Safety Policy and Guidance).

10. Table 1 - Common Hand and Power Tools, contains general information on handling tools that are typically found in workshops:

<table>
<thead>
<tr>
<th>Table 1 – Common Hand and Power Tools</th>
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<tbody>
<tr>
<td><strong>Screwdrivers</strong></td>
</tr>
<tr>
<td>Screwdrivers are often misused as levers, chisels, scrapers and for other work for which they are not designed. In addition, screwdrivers are often not kept in a satisfactory, safe working condition. The wrong size or type of screwdriver for the job is often the cause of damage or breakdown.</td>
</tr>
<tr>
<td>A frequent cause of incidents is holding the work piece in the palm of the hand while tightening up screws; a slip can result in a serious injury with the blade penetrating the hand or wrist. The work piece is to be securely held in a vice or other firm support.</td>
</tr>
<tr>
<td>Screwdrivers are to be maintained by grinding the tip to fit the slot in the screw head or replaced. Handles must be securely attached. The handle surface should be smooth and free from cracks and burrs. Various type of cross tip screwdrivers such as ‘Phillips’ should be disposed of when the tip becomes burred or rounded.</td>
</tr>
<tr>
<td><strong>Metal working chisels</strong></td>
</tr>
<tr>
<td>Mushroom heads on chisels can produce flying chips or splinters which are dangerous, particularly to the eyes. A slight taper, ground around the periphery of the head helps reduce the formation of mushrooming. Cutting edges must always be kept sharp and at the correct angle for the material of the work piece.</td>
</tr>
<tr>
<td><strong>Files and rasps</strong></td>
</tr>
<tr>
<td>Files and rasps are not to be used without a handle. The sharp pointed tang can be driven into the hand if the file slips. Files are not to be used as punches, drifts or as a lever. The high tempered steel is brittle and may shatter.</td>
</tr>
<tr>
<td><strong>Edged tools</strong></td>
</tr>
<tr>
<td>Some tools require a sharp cutting edge to ensure efficiency and safety to the user. These are tools such as saws, chisels, axes, knives and planes. If tools of this description are not maintained with a good cutting edge, there is a greater tendency towards injury causing incidents owing to tools slipping. Handles of sharp-edged tools must be firmly attached. Appropriate storage of sharp-edge tools, when not in use, is particularly important.</td>
</tr>
<tr>
<td><strong>Power tools</strong></td>
</tr>
<tr>
<td>Power tools must be inspected each time they are used. Damaged equipment should be withdrawn from use immediately. Pneumatic tools should be tested and</td>
</tr>
</tbody>
</table>
Guards on angle grinders, power saws and similar equipment are not to be removed. The lower part of these guards is often pivoted and controlled by a spring to reduce exposure of the blade whilst not cutting. These guards are not to be interfered with or fastened in the open position.

Machine tools

11. Machine tools can present a number of hazards relating to the power and speed of moving parts. Nearly all moving parts driven by power are dangerous and personal contact with them often results in serious injury, sometimes death. Machine tools are to be guarded or isolated in such a way as to reduce the likelihood of an incident as per Section 208-209 of the Work Health and Safety Regulations 2011.

12. Machine hazards can consist of the following:
   12.1. thermal - dangerously hot or cold;
   12.2. electrical - potential for shock and/or burns;
   12.3. chemical - spillage, leak or splash;
   12.4. acoustic - noise, heavy vibration;
   12.5. radiation - ionising or non-ionising; and
   12.6. mechanical - in-running nips (such as between pulley and belt), cutting edges, rotating, reciprocating parts, punching, shearing and bending actions.

13. Local procedures must be developed for operators of machine tools for detecting, reporting and correcting deficiencies in new and existing equipment.

14. Inspection is the responsibility of both operators and supervisors. If machine tools are found to be defective they are to be clearly signposted and immediately isolated to prevent use until repairs have been made. Records are to be maintained and kept for any scheduled maintenance and pre-use inspections.

15. Any machine tool found to be unsafe by nature of its design, function or intended use is to be reported immediately to the supervisor and the relevant Group Safety Coordinator. This information may need to be reported to the Work Health and Safety Branch through Sentinel or as a Report on Defective or Unsatisfactory Materiel (RODUM), to enable safety information to be disseminated, for example through a Safety Alert.

16. All workers are to be trained in the use of machine tools prior to operation. Training should also encompass inspection of the machine prior to use to detect faults and the routine maintenance required to maintain the machine in safe working order. Workers are to hold any competencies or licences required by Schedule 4 of the Work Health and Safety Regulations 2011 to use or operate the machine or machine tools (if applicable).

17. Supervision must be provided to ensure that machine tools are being used correctly and that the correct tools have been selected for use with the machine. Supervisors are to ensure that the highest level of risk controls (from the hierarchy of controls) is used and personal protective equipment, if required, is appropriate. Machine tools are to only be used in the presence of another person who can render assistance in case of emergency.
18. As far as practicable, access to dangerous moving parts of machinery is to be prevented by an enclosure within the body of the machine or by the provision of guards. No machine tool is to be operated unless all guards are fixed in place and are in a serviceable condition.

References and related documents
20. Work Health and Safety Regulations 2011
21. SafetyMan - Electrical Safety Policy and Guidance
22. SafetyMan – Management of Plant Policy

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<td>Content owner</td>
<td>Work Health and Safety Branch, Directorate of Strategy and Policy</td>
</tr>
<tr>
<td>Date published</td>
<td>04 November 2019</td>
</tr>
<tr>
<td>Objective ID</td>
<td>AB36411957</td>
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Managing Personnel Exposure to Excessive Heat/Cold Policy and Guidance

Policy statement
1. Defence will manage exposures to adverse heat and cold temperatures to ensure that its personnel can carry out work without undue risk to their health or safety.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. Defence must identify all reasonably foreseeable exposure to excessive heat/cold.
5. Risk assessments must be undertaken when planning work activities that could involve exposure to excessive heat/cold.
6. The risk management process must be applied before conducting operations/training. Risks must continually be re-assessed as environmental hazard input changes.
7. Workplace procedural documents such as standard operating procedures must be developed to manage risks relating to worker exposure to excessive heat/cold. The risks are to be documented in workplace risk registers.
8. Workers who could be exposed to excessive heat/cold must be adequately trained and supervised so they can undertake tasks in accordance with procedural documents.
9. Casualty management procedures for exposure to heat/cold are to be included in workplace procedures and training.
10. ADF cadets require additional consideration in relation to the potential effects of exposure to excessive heat. Further information for managing ADF cadet exposure to excessive heat is in SafetyMan – Managing Personnel Exposure to Heat/Cold Procedure 01 - Managing ADF Cadet Exposure to Excessive Heat.
11. This policy relates to the following sections (identified in Annex A) of the Work Health and Safety Act 2011:
   11.1. Section 19 - Primary duty of care;
   11.2. Section 20 - Duty of persons conducting businesses or undertakings involving management or control of workplaces; and
   11.3. Section 27-29 - Duty of officers, workers or other persons.
Roles and responsibilities

12. Group Heads and Service Chiefs as officers of the Persons Conducting a Business or Undertaking are responsible for allocating resources to manage effectively the risks associated with potential exposure to excessive heat/cold.

13. Commanders, managers and supervisors must take all practicable steps to protect the health and safety of workers. They have a responsibility to:
   13.1. understand how excessive heat/cold could affect their workers and the work being performed;
   13.2. consult with workers to identify, assess and control hazards and risks associated with exposure to excessive heat/cold;
   13.3. ensure the appropriate risk management is conducted for all activities that could expose workers to excessive heat/cold;
   13.4. provide all workers with appropriate information, education, training and instruction about heat/cold-related hazards and risks, and supervision; and
   13.5. implement improvements to reduce the risk of exposure to excessive heat/cold, so far as is reasonably practicable.

14. All workers have a responsibility to:
   14.1. take all reasonably practical steps to safeguard their own health and safety and the safety of others in the workplace;
   14.2. understand and follow established safe work practices and procedures, participate in appropriate training and hazard identification, and control risks arising from potential exposure to excessive heat/cold in accordance with guidance;
   14.3. advise supervisors of any perceived heat/cold exposure risk that could increase the likelihood or consequence of injury or illness;
   14.4. monitor themselves and their fellow workers, and take action when they observe elevated risks to themselves or others; and
   14.5. report heat/cold exposure events that caused, or could have caused injury or illness.

References and related documents

15. Work Health and Safety Act 2011
16. Work Health and Safety Regulations 2011
17. All Defence commanders and managers, whose workers could be exposed to excessive cold, should consult the following reference in conjunction with this policy and guidance: Australian Army Land Warfare Procedures—General LWP–G 3-9-4 Operating in Cold Conditions, Chapter 1, Human Performance in Cold Environments
18. Additionally, Navy commanders/managers should consult the following reference if their workers could be exposed to excessive cold: Australian Book of Reference 2200, Navy Safety Systems Manual, Section 4, Chapter 13, ‘Hot and Cold Working Environments’
19. Air Force—Australian Air Publication 6730.001, Air Force Safety Manual, Part 2, Section 1, Chapter 3, Thermal Conditions
20. SafetyMan – Managing Personnel Exposure to Heat/Cold Procedure 01 - Managing ADF Cadet Exposure to Excessive Heat
22. Safe Work Australia – Potential hazards and risks of working in heat factsheet
23. Safe Work Australia – Working in heat infographic

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<td>Occupational Health and Hygiene Directorate</td>
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<tr>
<td>Date Published:</td>
<td>04-Feb-20</td>
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<td>Date of Next Review :</td>
<td>Apr-20</td>
</tr>
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<td>Objective ID:</td>
<td>AB36411958</td>
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Annex
24. A. Work Health and Safety Act 2011, Part 2 (Section 19, Section 20 and Sections 27-29)
Annex A

Work Health and Safety Act 2011

Part 2 Health and safety duties

Division 2 – Primary duty of care

Section 19 - Primary duty of care

(1) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of:

(a) workers engaged, or caused to be engaged by the person; and

(b) workers whose activities in carrying out work are influenced or directed by the person; while the workers are at work in the business or undertaking.

(2) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the business or undertaking.

(3) Without limiting subsections (1) and (2), a person conducting a business or undertaking must ensure, so far as is reasonably practicable:

(a) the provision and maintenance of a work environment without risks to health and safety; and

(b) the provision and maintenance of safe plant and structures; and

(c) the provision and maintenance of safe systems of work; and

(d) the safe use, handling and storage of plant, structures and substances; and

(e) the provision of adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities; and

(f) the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking; and

(g) that the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness or injury of workers arising from the conduct of the business or undertaking.

(4) If:

(a) a worker occupies accommodation that is owned by or under the management or control of the person conducting the business or undertaking; and

(b) the occupancy is necessary for the purposes of the worker’s engagement because other accommodation is not reasonably available;
the person conducting the business or undertaking must, so far as is reasonably practicable, maintain the premises so that the worker occupying the premises is not exposed to risks to health and safety.

(5) A self-employed person must ensure, so far as is reasonably practicable, his or her own health and safety while at work.

Note: A self-employed person is also a person conducting a business or undertaking for the purposes of this section.

Division 3 – Further duties of persons conducting businesses or undertakings

Section 20 - Duty of persons conducting businesses or undertakings involving management or control of workplaces

(1) In this section, **person with management or control of a workplace** means a person conducting a business or undertaking to the extent that the business or undertaking involves the management or control, in whole or in part, of the workplace but does not include:

(a) the occupier of a residence, unless the residence is occupied for the purposes of, or as part of, the conduct of a business or undertaking; or

(b) a prescribed person.

(2) The person with management or control of a workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace and anything arising from the workplace are without risks to the health and safety of any person.

Division 4 – Duty of officers, workers and other persons

Section 27 - Duty of officers

(1) If a person conducting a business or undertaking has a duty or obligation under this Act, an officer of the person conducting the business or undertaking must exercise due diligence to ensure that the person conducting the business or undertaking complies with that duty or obligation.

(2) Subject to subsection (3), the maximum penalty applicable under Division 5 of this Part for an offence relating to the duty of an officer under this section is the maximum penalty fixed for an officer of a person conducting a business or undertaking for that offence.

(3) Despite anything to the contrary in section 33, if the duty or obligation of a person conducting a business or undertaking was imposed under a provision other than a provision of Division 2 or 3 of this Part or this Division, the maximum penalty under section 33 for an offence by an officer under section 33 in relation to the duty or obligation is the maximum penalty fixed under the provision creating the duty or obligation for an individual who fails to comply with the duty or obligation.

(4) An officer of a person conducting a business or undertaking may be convicted or found guilty of an offence under this Act relating to a duty under this section whether or not the person
conducting the business or undertaking has been convicted or found guilty of an offence under this Act relating to the duty or obligation.

(5) In this section, due diligence includes taking reasonable steps:

(a) to acquire and keep up-to-date knowledge of work health and safety matters; and

(b) to gain an understanding of the nature of the operations of the business or undertaking of the person conducting the business or undertaking and generally of the hazards and risks associated with those operations; and

(c) to ensure that the person conducting the business or undertaking has available for use, and uses, appropriate resources and processes to eliminate or minimise risks to health and safety from work carried out as part of the conduct of the business or undertaking; and

(d) to ensure that the person conducting the business or undertaking has appropriate processes for receiving and considering information regarding incidents, hazards and risks and responding in a timely way to that information; and

(e) to ensure that the person conducting the business or undertaking has, and implements, processes for complying with any duty or obligation of the person conducting the business or undertaking under this Act; and

(f) to verify the provision and use of the resources and processes referred to in paragraphs (c) to (e).

Examples: For the purposes of paragraph (e), the duties or obligations under this Act of a person conducting a business or undertaking may include:

(a) reporting notifiable incidents;

(b) consulting with workers;

(c) ensuring compliance with notices issued under this Act;

(d) ensuring the provision of training and instruction to workers about work health and safety;

(e) ensuring that health and safety representatives receive their entitlements to training.

Section 28 - Duties of workers

While at work, a worker must:

(a) take reasonable care for his or her own health and safety; and

(b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons; and
(c) comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person to comply with this Act; and

(d) co-operate with any reasonable policy or procedure of the person conducting the business or undertaking relating to health or safety at the workplace that has been notified to workers.

Section 29 - Duties of other persons at the workplace

A person at a workplace (whether or not the person has another duty under this Part) must:

(a) take reasonable care for his or her own health and safety; and

(b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons; and

(c) comply, so far as the person is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person conducting the business or undertaking to comply with this Act.
Managing Personnel Exposure To Excessive Heat/Cold Procedure 01 -
Managing ADF Cadet Exposure To Excessive Heat

1. The following information is provided to assist Defence workers to administer, implement or apply the SafetyMan – Managing Personnel Exposure to Excessive Heat/Cold Policy and Guidance in relation to ADF cadet activities.

2. For managing ADF cadet’s exposure to excessive heat, the principles detailed in SafetyMan - Managing Personnel Exposure to Excessive Heat/Cold Procedure 02 - Managing Exposure to Excessive Heat Using the Wet Bulb Temperature and Civilian Work/Rest Table are to be applied. This procedure also provides additional requirements relating to cadets and cadet activities.

Age differences

3. Defence has an obligation under the Work Health and Safety Act 2011 to protect ADF cadets from harm to their health and safety at work. ADF cadets can be as young as 12 years of age. These children, along with adolescent cadets, do not adapt as effectively as adults when exposed to the combined stresses of exercise and heat so special consideration must be given to preventing and managing heat injury during cadet activities. The reasons for the difference in ability to adapt to the stresses of exercise and heat are that:

3.1. children have a greater surface area to body mass ratio than adults, which causes greater heat gain from the environment;

3.2. children produce more metabolic heat per kilogram than adults during physical activities;

3.3. sweating capacity is considerably lower in children than adults—which reduces their ability to dissipate body heat by evaporation of sweat;

3.4. children take longer than adults to acclimatise;

3.5. children frequently do not feel the need to drink enough to replenish fluid loss during prolonged exercise; and

3.6. children’s core body temperature rises faster than adult’s during exercise.

Heat risk factors

4. The heat risk factors detailed in SafetyMan - Managing Personnel Exposure to Excessive Heat/Cold Procedure 02 - Managing Exposure to Excessive Heat Using the Wet Bulb Temperature and Civilian Work/Rest Table must be considered when planning/conducting ADF cadet activities. The following factors also must be considered when planning and conducting ADF cadet activities:

4.1. Cadets may be inadequately prepared for activity in the heat and may have a greater need (than adults) to acclimatise in preparation for the activity. Further, children lose their acclimatisation quicker than adults; hence, ongoing effort to maintain an adequate level of acclimatisation may be required.
4.2. Cadets who lack physical fitness for an activity may over-exert themselves to succeed. Children are affected by excessive physical exertion with insufficient rest/recovery time between bouts of high-intensity exercise (e.g., repeat sprints). Hence frequent rest/recovery should be planned in the activity.

4.3. Children require ready access to fluids to maintain required hydration levels.

**Heat injury prevention strategies**

5. The following heat injury prevention strategies are recommended for activities involving ADF cadets:

5.1. Implement an acclimatisation program. The intensity and duration of physical activities should be increased gradually over a period of 10 to 14 days to allow cadets to acclimatise to heat and humidity. Note that short periods of time in air-conditioned buildings can lead to a rapid loss of heat acclimatisation.

5.2. Implement awareness programs. Commanders and managers (instructors of cadets) should promote awareness of heat risk management strategies among cadets and instructors of cadets.

5.3. Provide first aid training. Workers trained to recognise the early symptoms and to treat heat injuries should be readily available during cadet physical activities.

5.4. Make cool water readily available. Further, the means to cool workers quickly (e.g., fans, ice packs) must be available always.

5.5. Educate cadets about the importance of proper preparation, adequate hydration, recovery and rest as well as the ability to recognise the symptoms of heat injury in themselves and in others, and the importance of honest reporting of injury so action can be taken to prevent future injuries.

5.6. Ensure cadets remain adequately hydrated—through supervision, recognising the symptoms of inadequate hydration and ensuring water is readily available.

5.7. Assuming adequate pre-hydration, 12 year olds should drink 100 to 250 ml of liquids every 20 minutes, with this increasing up to 1.0 to 1.5 litres of fluid per hour for adolescents during heavy exercise.

5.8. Cool water is usually sufficient to maintain hydration. However, if the activity is prolonged or repeated, electrolyte supplemented fluids should be considered, particularly during very high temperatures and/or humidity. Salt tablets should not be consumed.

5.9. Modify activities. If the temperature and/or humidity levels are very high, consideration should be given to modifying planned activities by:

5.9.1. reducing the duration;
5.9.2. lowering the intensity;
5.9.3. rescheduling the activity to a different day, or time of day;
5.9.4. increasing the frequency of breaks or rest periods; and/or
5.9.5. moving the activity to a shaded/cooler place.

5.10. Develop an action management plan for any cadet with chronic or acute medical conditions. Cadets should avoid or limit physical activities if they are ill or recently have been ill.

5.11. To facilitate the evaporation of sweat, in hot or humid conditions limit clothing to one layer of absorbent material.
6. Specific guidance for Australian Army Cadets (AAC) is available via the *Australian Army Cadets Standing Orders Volume 3, Chapter 3 HOT - Heat Management Paragraph 6.9.*

**References and related documents**


8. *Australian Army Cadets Standing Orders Volume 3, Chapter 3 HOT - Heat Management Paragraph 6.9*

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</tr>
</thead>
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<td>Occupational Health and Hygiene</td>
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<tr>
<td>Date Published:</td>
<td>12-Jul-18</td>
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<tr>
<td>Date of Next Review:</td>
<td>Apr-20</td>
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<tr>
<td>Objective ID:</td>
<td>AB36411966</td>
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<td>Version:</td>
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Managing Personnel Exposure To Excessive Heat/Cold Procedure 02 - Managing Exposure To Excessive Heat Using The Wet Bulb Globe Temperature And Civilian Work/Rest Table

1. The following information is provided to assist Defence personnel to administer, implement or apply the SafetyMan – Managing Personnel Exposure to Excessive Heat/Cold Policy and Guidance.

2. Defence personnel shall use the wet bulb globe temperature to assess the level of environmental risk.

Wet bulb globe temperature

3. The wet bulb globe temperature is expressed in degrees Celsius (°C). The wet bulb globe temperature differs from the ambient temperature (which is also expressed in °C) because the wet bulb globe temperature incorporates the effect of relative humidity, air flow, radiant heat from the sun and nearby equipment and the temperature in the shade. Hence, the wet bulb globe temperature is based on three measurements.

4. The measurements are: the wet bulb temperature (TWB) which represents the effect of relative humidity and air flow; the black globe temperature (TBG) which represents the effect of radiant heat; and the dry bulb temperature (TDB) which is the ambient temperature in the shade. These measurements are used to calculate the wet bulb globe temperature—a heat stress index—which can be used to set work rates and work/rest times so workers do not suffer heat injuries.

5. Note, the wet bulb globe temperature is not effective in certain environments (e.g. humid/tropical environments). The following Service/Group policies provide guidance on application in these environments:

   5.1. Australian Army Cadets Standing Orders Volume 3, Chapter 3 HOT - Heat Management Paragraph 6.9;

   5.2. Australian Book of Reference 6303, Navy Safety Systems Manual, Section 4, Chapter 13, Hot and Cold Working Environments; and

   5.3. Australian Air Publication 6730.001, Air Force Safety Manual, Part 2, Section 1, Chapter 3, Thermal Conditions.

Using the wet bulb globe temperature

6. Heat-related risk can be managed effectively by controlling the duration and intensity of work to minimise the probability that the workers’ core body temperatures will be sustained above 38°C (ie by controlling the workers’ rates of heat production). Managers and supervisors must set the work rate and work/rest cycles for their workers to ensure they are not injured by heat stress.

7. Once measured, wet bulb globe temperatures can be used in conjunction with the table in paragraph 16 to set appropriate work/rest times. Note, however, that the wet bulb globe
temperature should be adjusted to suit the clothing worn by workers (refer to paragraph 12–13) and to suit the work rate (refer to paragraph 14).

Estimating the wet bulb globe temperature

8. If a wet bulb globe temperature measuring device is unavailable, an estimate of wet bulb globe temperature may be used. A table of estimates is available through the Bureau of Meteorology website which also provides nation-wide real-time forecasts and observations.

9. The approximations on the Bureau of Meteorology website are not always sufficiently accurate and may lead to incorrect estimates of heat stress—refer to the following examples—hence, use of the approximations must be supplemented by a risk assessment:
   
   9.1. example 1—in cloudy and windy conditions, the approximation may lead to an over-estimation of heat stress;
   
   9.2. example 2—in windless and humid conditions, the approximation is likely to lead to an under estimation of heat stress; and
   
   9.3. example 3—at night time or early in the morning, when the sun is low/below the horizon, approximation can lead to an over estimation of heat stress.

Civilian work/rest tables

10. Using the wet bulb globe temperatures, managers and supervisors must set work rates and work/rest cycles for their workers to ensure they are not injured by heat stress.

11. The tables in this procedure are to be used to determine appropriate regimes of work and rest breaks to prevent heat injury. The tables are based on an un-trained, unacclimatised civilian workforce with a low level of fitness and with pre-existing medical conditions.

Clothing adjustments

12. Although clothing provides protection from the physical environment, clothing usually worsens heat stress when operating in hot environments. Consequently, the wet bulb globe temperature should be adjusted to accommodate the clothing being worn, so the work rate and work/rest times can be adjusted accordingly.

13. The following table shows common types of clothing workers may be wearing in a hot environment and the suggested adjustment to the wet bulb globe temperature reading. The table specifies the additional °C that should be added to the wet bulb globe temperature.

<table>
<thead>
<tr>
<th>Clothing type</th>
<th>Addition to wet bulb globe temperatures (°C) action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work clothes (long sleeve shirt and long trousers)</td>
<td>0</td>
</tr>
<tr>
<td>Summer work uniform</td>
<td>0</td>
</tr>
<tr>
<td>Cotton coveralls</td>
<td>0</td>
</tr>
<tr>
<td>Cloth (woven material) coveralls</td>
<td>0</td>
</tr>
<tr>
<td>Polypropylene coveralls</td>
<td>0.5</td>
</tr>
<tr>
<td>Limited use vapour barrier coveralls</td>
<td>1.1</td>
</tr>
<tr>
<td>Limited use light splash protection overalls (eg</td>
<td>10</td>
</tr>
</tbody>
</table>
Note:

13.1. Adjustments for coveralls assume that only modesty clothing is worn underneath, not a second layer of clothing.

13.2. Wet bulb globe thermometer adjustments cannot be added together for multiple layers.

13.3. These values should not be used for encapsulating suits or wearing Nuclear Biological Chemical Defence clothing at Mission Oriented Protection Posture 4.

**Work rate categories**

14. The following table provides examples illustrating the work rate categories used in the civilian work/rest table in paragraph 15.

<table>
<thead>
<tr>
<th>Work rate category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>Sitting with moderate arm and leg movements</td>
</tr>
<tr>
<td></td>
<td>Standing with light work at machine or bench while using mostly arms</td>
</tr>
<tr>
<td></td>
<td>Driving</td>
</tr>
<tr>
<td>Moderate</td>
<td>Using a table saw</td>
</tr>
<tr>
<td></td>
<td>Standing with light or moderate work at machine or bench and some walking</td>
</tr>
<tr>
<td></td>
<td>Scrubbing in a standing position</td>
</tr>
<tr>
<td></td>
<td>Walking about with moderate lifting or pushing</td>
</tr>
<tr>
<td>Heavy</td>
<td>Walking on level at 6km/hr while carrying 3kg weight load</td>
</tr>
<tr>
<td></td>
<td>Carpenter sawing by hand</td>
</tr>
<tr>
<td></td>
<td>Shovelling dry sand</td>
</tr>
<tr>
<td>Very heavy</td>
<td>Heavy assembly work on a non-continuous basis</td>
</tr>
<tr>
<td></td>
<td>Intermittent heavy lifting with pushing or pulling (e.g. pick and shovel work)</td>
</tr>
<tr>
<td></td>
<td>Shovelling wet sand</td>
</tr>
</tbody>
</table>

**Civilian work/rest table**

15. The following table details work/rest regimes for civilians working at various work rates and at various wet bulb globe temperature values (°C) which have been adjusted for clothing.
<table>
<thead>
<tr>
<th>Work rate (wet bulb globe temperature values in °C)</th>
<th>Work/rest per hour %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acclimatised worker</td>
<td>Unacclimatised worker</td>
</tr>
<tr>
<td>Light</td>
<td>Moderate</td>
</tr>
<tr>
<td>29.5C</td>
<td>27.5C</td>
</tr>
<tr>
<td>30.5C</td>
<td>28.5C</td>
</tr>
<tr>
<td>31.5C</td>
<td>29.5C</td>
</tr>
<tr>
<td>32.5C</td>
<td>31C</td>
</tr>
</tbody>
</table>

Note:

15.1. Values in this table assume eight-hour workdays and five-day working weeks with conventional breaks.

15.2. Table adapted from *American Conference of Government Industrial Hygienists (ACGIH) 2006 - Threshold Limit Values (TLVs®) and Biological Exposure Indices (BEIs®)*. Current tables may be obtained by requesting the updated publication via the *Defence Library Service*.

**References and related documents**


17. *Australian Book of Reference 6303, Navy Safety Systems Manual*, Section 4, Chapter 13, Hot and Cold Working Environments; and


<table>
<thead>
<tr>
<th>Document Reference:</th>
<th>Managing Personnel Exposure to Excessive Heat/Cold Procedure 02 – Managing Exposure to Excessive Heat Using the Wet Bulb Globe Temperature and Civilian Work/Rest Table</th>
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</thead>
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<td>Occupational Health and Hygiene Directorate</td>
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<td>AB36411977</td>
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<td>Version:</td>
<td>1.1</td>
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</table>
Remote or Isolated Work Policy and Guidance

Policy statement
1. Defence must provide a safe working environment for workers that work remotely or in isolation. This may include land or sea activities within Australia or overseas.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. The Work Health and Safety Regulations 2011, Regulation 48 - Remote or Isolated Work (Annex A) requires Defence to manage risks arising from remote or isolated work. Defence must provide a system of work that includes effective communication with the worker.
5. Remote or isolated work is defined as work that is isolated from the assistance of other persons because of the location, time or nature of work.
6. Remote work may involve work activities undertaken at a location removed from an office environment where there are few people and where communications and travel are difficult.
7. Isolated work may involve work activities undertaken in an isolated area on or off site, for example home based work, either during or outside normal working hours.
8. Defence must consult with workers about remote or isolated work. If potential hazards are identified in the workplace, appropriate control measures must be used to eliminate or minimise exposure to these hazards.
9. This policy does not set down a minimum time that a person has to be on their own for the person to be considered remote or isolated. Each situation should be assessed on its merits, taking account of what may present a significant risk to the worker.
10. A risk assessment must be undertaken when planning remote or isolated work.
11. External work environment (such as geographical terrain or climate), psychosocial and personal risk factors must be considered in the assessment of remote or isolated risk.

Roles and responsibilities
12. Group Heads and Service Chiefs as officers of the Person Conducting a Business or Undertaking are responsible for allocating sufficient resources to effectively manage remote or isolated work.
13. Commanders/managers and supervisors must take all practicable steps to protect the health and safety of workers. They have a responsibility to:

13.1. ensure risk assessments are completed for all remote or isolated work and that adequate control measures are implemented before work is approved. Comcare’s *Guide to Remote or Isolated Work* can assist with completing the risk assessment;

13.2. provide appropriate communication devices for workers performing work remotely or in isolation;

13.3. provide and maintain remote premises/accommodation (office, plant and equipment);

13.4. provide advice, information, training, instruction or supervision necessary to protect workers from risks to their health and safety arising from remote or isolated work;

13.5. ensure the workplace is monitored, eg establish a process whereby workers are required to check in at nominated times;

13.6. ensure Defence workers are consulted when determining effective controls;

13.7. ensure compliance with safe systems of work for remote or isolated work;

13.8. monitor implementation of risk assessment requirements for any work in line with the risk; and

13.9. ensure appropriate rest breaks are taken between long periods of isolated work.

14. All workers have a responsibility to:

14.1. consult with commanders/managers and supervisors in relation to developing appropriate measures to control any risk associated with remote or isolated work;

14.2. ensure regular contact and communication is maintained with their commander/manager/supervisor;

14.3. maintain movement records if traveling in or between remote areas;

14.4. ensure they receive adequate training, especially if they are working in isolation with specialist equipment;

14.5. participate in, and contribute to, any risk assessment in relation to remote or isolated work;

14.6. report any hazards and/or incidents as a result of working alone;

14.7. comply with all instructions provided, including the information in this policy and guidance;

14.8. participate in the development of standard operating procedures, emergency procedures and contact arrangements; and

14.9. ensure that work is undertaken in compliance with approved standard operating procedures.

**Monitoring and communication**

15. Communication plans need to be tailored to each particular remote or isolated work situation ensuring a safe working environment is provided for the worker.

16. When developing the communication strategy the following considerations should be included:
16.1. recording name and contact details in an after-hours log book held in a guard security office;
16.2. informing the relevant supervisor of work location and estimated time of return;
16.3. regular checks by other workers or security staff;
16.4. call-in system where the onus is placed on the worker to call a reception area or base at regular intervals;
16.5. personal alarm system which signals a base if a person falls or does not move for a period;
16.6. provision of a mobile phone or mobile radio; and
16.7. provision of a satellite phone or emergency position indicating radio beacon.

17. Systems for communication and equipment used must be checked and maintained to ensure reliability and effectiveness should an emergency occur.

Authorisation and approval

18. After completing a risk assessment and before starting work remotely or in isolation, the worker must seek approval from their approving authority, direct manager or supervisor. A Remote or Isolated Work Authorisation Form can be accessed via the Defence Work Health and Safety home page.
19. The approving authority, manager or supervisor must determine that the worker undertaking work in isolation is able to safely perform the work, with the assessment documented on the authorisation.
20. Workers must have completed induction training, including emergency evacuation and other necessary emergency procedures if required, before approval is given for working remotely or in isolation.

Home based work

21. Defence is committed to the use of home based work as an employment option. It may be approved in cases where acceptable safety and other workplace provisions meet agreed standards. Workers have a responsibility to carry out instructions and use equipment in a safe manner and not do anything that will increase their risk of accident or injury.
22. The provisions of the Work Health and Safety Act 2011 and Work Health and Safety Regulations 2011 also apply in the case of home based work. Commanders, managers and supervisors need to ensure that legislative obligations are fulfilled and that workers work safely.

ADF members

23. For ADF members wishing to undertake home based work or alternative location work, the Military Personnel Policy Manual (MILPERSMAN), Part 7, Chapter 1 – Flexible Work Arrangements for Members of the Australian Defence Force and web form AE406 - ADF Application for Flexible Work offer guidance.

APS employees

24. The APS People Policy and Policy Guidance – Telework contains guidelines for APS employees on how to design, apply for and conduct home based work.
25. A work health and safety assessment of the home based site will need to be conducted prior to any agreement for home based work. A Work from Home Self-Assessment Checklist can be accessed via the Defence Work Health and Safety home page.

26. Where the work health and safety assessment is to be conducted by an external provider, Groups and Services are responsible for arranging and paying for the assessment using the simple procurement process.

Remote or isolated work outdoors

27. Where remote or isolated work also involves working outdoors, the following will need to be considered:

27.1. additional policies and procedures relevant to the type of work being conducted;

27.2. access to shelter to protect workers from adverse weather conditions and to accommodate breaks; and

27.3. protection against solar ultraviolet exposure which may include:

27.3.1. re-organising outdoor work so that workers carry out alternative tasks or work in shade when the sun is most intense - between 1000 hours and 1400 hours (1100 hours and 1500 hours in daylight saving); and

27.3.2. providing personal protective clothing, ie wide brim hat, long-sleeved collared shirt, long pants, sunglasses and sunscreen.

References and related documents

29. Work Health and Safety Regulations 2011
30. APS People Policy – Telework (previously home based work)
31. Code of Practice - Managing the Work Environment and Facilities
32. Code of Practice - First Aid in the Workplace
33. Comcare’s Guide to Remote or Isolated Work
34. Defence Work Health and Safety – Home Based/Remote or Isolated Work
35. Home Based Work – Work Health and Safety Checklist
36. Remote or Isolated Work – Authorisation Form
37. Web Form AE 406 - ADF Application for Flexible Work
38. Web Form AE 788 - Telework Agreement
Annex
A  Work Health and Safety Regulations 2011, Regulation 48 – Remote or Isolated Work
Annex A

Work Health and Safety Regulations 2011

Regulation 48 – Remote or Isolated Work

(1) A person conducting a business or undertaking must manage risks to the health and safety of a worker associated with remote or isolated work, in accordance with Part 3.1.

Note: WHS Act—section 19 (see regulation 9).

(2) In minimising risks to the health and safety of a worker associated with remote or isolated work, a person conducting a business or undertaking must provide a system of work that includes effective communication with the worker.

Penalty:

(a) In the case of an individual—$6 000.

(b) In the case of a body corporate—$30 000.

Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

(3) In this regulation:

- *assistance* includes rescue, medical assistance and the attendance of emergency service workers.

- *remote or isolated work*, in relation to a worker, means work that is isolated from the assistance of other persons because of location, time or the nature of the work.
Slips, Trips And Falls Policy And Guidance

Policy statement
1. Defence will eliminate or minimise so far as reasonably practicable the risks of slips, trips and falls in the workplace by identifying hazards and applying safety risk management processes.

Scope
2. This policy applies to all Defence workers, including ADF members, APS employees, ADF cadets, contractors and other persons.
3. The application of this policy to contractors and sub-contractors is dependent on the degree of control and influence that Defence has over the undertaking and will be defined within the relevant contractual arrangements.

Policy – core elements
4. This policy includes falls at level and falls from one level to another.
5. Any work which involves the risk of a fall must be carried out on the ground or on a solid construction.
6. Hazard management including identification, assessment, control and control review must, as a minimum, consider the information contained in relevant publications identified in this Policy.

Roles and responsibilities
7. Groups and Services, responsible for sourcing and sustaining Defence materiel, are required to comply with Work Health and Safety Regulations, Chapter 4, Part 4.4 - Falls (Annex A) and SafetyMan - Slips, Trips and Falls Policy and Guidance where applicable to their activities as designers, manufacturers, importers and suppliers.
8. Group Heads and Service Chiefs as officers of the Person Conducting a Business or Undertaking are responsible for allocating sufficient resources to effectively manage slips, trips and fall related risks.
9. Commanders/managers and supervisors must take all practicable steps to reduce the likelihood of slips, trips and falls of workers. They have a responsibility to:
   9.1. understand how slips, trips and falls affect their workers and the risks involved in the work being performed;
   9.2. consult with workers to identify, assess and control the slip, trip and fall hazards and risks;
   9.3. ensure the appropriate risk management is conducted for slips, trips and falls for all activities;
   9.4. provide all workers with appropriate information, education, training, instruction and supervision on slips, trips and falls;
9.5. implement improvements to reduce slips, trips and fall related risks; and
9.6. report and record slips, trips and falls into Sentinel and review for continuous improvement.

10. All workers have a responsibility to:
10.1. take all reasonably practical steps to safeguard their own health and safety and the safety of others in the workplace in relation to slips, trips and falls;
10.2. understand and follow established safe work practices and procedures, participate in appropriate training and hazard identification, and control risks arising from slips, trips and fall hazards in accordance with guidance;
10.3. advise supervisors of any possible slips, trips and fall risks that could increase exposure to injury or illness;
10.4. monitor themselves and their fellow workers, and take action when they observe elevated risks to themselves; and
10.5. report events of injury or illness in Sentinel.

References and related documents
12. Work Health and Safety Regulations 2011
14. Code of Practice – Managing the Risk of Falls at Workplaces
15. Code of Practice - Preventing Falls in Housing Construction
16. Australian Standards
   16.1. AS 1353.2 - 1997 Flat Synthetic-Webbing Slings part 2: Care and Use
   16.2. AS/NZS 1418.10:2011 Cranes, Hoists and Winches Part 10: Mobile Elevating Work Platforms
   16.3. AS 1418.13 Cranes (including Hoists and Winches) – Building Maintenance Units
   16.4. AS/NZS 1576 Scaffolding Series
   16.5. AS 1577: 1993 – Scaffold Planks
   16.8. AS/NZS 1891.1 Industrial Fall-Arrest Systems and Devices—Harnesses and Ancillary Equipment
   16.9. AS/NZS 1891.2 supp:1-2001 Industrial Fall-Arrest Systems and Devices—Horizontal Lifeline and Rail Systems—Prescribed Configurations for Horizontal Lifelines (Supplement to AS/NZS 1891.2:2001)
   16.10. AS/NZS 1891.3 Industrial Fall-Arrest Systems and Devices—Fall-Arrest Devices
   16.11. AS/NZS 1891.4:2009 – Industrial Fall-Arrest Systems and Devices – Selection, Use and Maintenance
   16.12. AS/NZS 1892.1/2/3 – Portable Ladders – Metal, Timber, Plastic
16.15. AS 2550 Series – Cranes, Hoists and Winches
16.17. AS 4142 series – Working and Safety Ropes
16.18. AS/NZS 4142.3 Fibre Ropes—Man-made Fibre Rope for Static Life Rescue Lines
16.19. AS/NZS 4389 Safety Mesh
16.21. AS/NZS 4488.2 Industrial Rope Access Systems—Selection, Use and Maintenance
16.23. AS 2550.16 Cranes—Safe Use—Mast Climbing Work Platforms
16.24. AS/NZS 4994 Temporary Edge Protection Series

<table>
<thead>
<tr>
<th>Document Reference:</th>
<th>Slips, Trips and Falls Policy And Guidance</th>
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<td>Work Health and Safety Strategy and Policy Directorate</td>
</tr>
<tr>
<td>Date Published:</td>
<td>1-May-19</td>
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<td>Date of Next Review:</td>
<td>May-20</td>
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</table>

Annex
A. Work Health and Safety Regulations 2011, Chapter 4, Part 4.4 - Falls
Annex A

Work Health and Safety Regulations 2011

Chapter 4, Part 4.4 – Falls

78 Management of risk of fall

17. (1) A person conducting a business or undertaking at a workplace must manage, in accordance with Part 3.1, risks to health and safety associated with a fall by a person from one level to another that is reasonably likely to cause injury to the person or any other person.

18. Note: WHS Act—section 19 (see regulation 9).

19. (2) Subregulation (1) includes the risk of a fall:

20. (a) in or on an elevated workplace from which a person could fall; or

21. (b) in the vicinity of an opening through which a person could fall; or

22. (c) in the vicinity of an edge over which a person could fall; or

23. (d) on a surface through which a person could fall; or

24. (e) in any other place from which a person could fall.

25. (3) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that any work that involves the risk of a fall to which subregulation (1) applies is carried out on the ground or on a solid construction.

26. Penalty:

27. (a) In the case of an individual—$6 000.

28. (b) In the case of a body corporate—$30 000.

29. Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

30. (4) A person conducting a business or undertaking must provide safe means of access to and exit from:

31. (a) the workplace; and

32. (b) any area within the workplace referred to in subregulation (2).

33. Penalty:

34. (a) In the case of an individual—$6 000.

35. (b) In the case of a body corporate—$30 000.

36. Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

37. (5) In this regulation, solid construction means an area that has:

38. (a) a surface that is structurally capable of supporting all persons and things that may be located or placed on it; and

39. (b) barriers around its perimeter and any openings to prevent a fall; and

40. (c) an even and readily negotiable surface and gradient; and
(d) a safe means of entry and exit.

79 Specific requirements to minimise risk of fall

41. (1) This regulation applies if it is not reasonably practicable for the person conducting a business or undertaking at a workplace to eliminate the risk of a fall to which regulation 78 applies.

42. (2) The person must minimise the risk of a fall by providing adequate protection against the risk in accordance with this regulation.

43. Penalty:

44. (a) In the case of an individual—$6 000.

45. (b) In the case of a body corporate—$30 000.

46. Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

47. (3) The person provides adequate protection against the risk if the person provides and maintains a safe system of work, including by:

48. (a) providing a fall prevention device if it is reasonably practicable to do so; or

49. (b) if it is not reasonably practicable to provide a fall prevention device, providing a work positioning system; or

50. (c) if it is not reasonably practicable to comply with either paragraph (a) or (b), providing a fall arrest system, so far as is reasonably practicable.

51. Examples: A safe system of work could include:

52. 1 Providing temporary work platforms.

53. 2 Providing training in relation to the risks involved in working at the workplace.

54. 3 Providing safe work procedures, safe sequencing of work, safe use of ladders, permit systems and appropriate signs.

55. Note: A combination of the controls set out in this subregulation may be used to minimise risks so far as is practicable if a single control is not sufficient for the purpose.

56. (4) This regulation does not apply in relation to the following work:

57. (a) the performance of stunt work;

58. (b) the performance of acrobatics;

59. (c) a theatrical performance;

60. (d) a sporting or athletic activity;

61. (e) horse riding.

62. Note: Regulation 36 applies to the management of risk in relation to this work.

63. (5) In this regulation, fall prevention device includes:

64. (a) a secure fence; and

65. (b) edge protection; and

66. (c) working platforms; and

67. (d) covers.
68. Note: See subregulation 5(1) for definitions of \textit{fall arrest system} and \textit{work positioning system}.

80 \textbf{Emergency and rescue procedures}

69. 1) This regulation applies if a person conducting a business or undertaking provides a fall arrest system as a control measure.

70. (2) Without limiting regulation 79, the person must establish emergency procedures, including rescue procedures, in relation to the use of the fall arrest system.

71. Penalty:

72. (a) In the case of an individual—$6 000.

73. (b) In the case of a body corporate—$30 000.

74. Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

75. (3) The person must ensure that the emergency procedures are tested so that they are effective.

76. Penalty:

77. (a) In the case of an individual—$6 000.

78. (b) In the case of a body corporate—$30 000.

79. Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

80. (4) The person must provide relevant workers with suitable and adequate information, training and instruction in relation to the emergency procedures.

81. Penalty:

82. (a) In the case of an individual—$6 000.

83. (b) In the case of a body corporate—$30 000.

84. Note: Section 12F of the Act provides that strict liability applies to each physical element of each offence under the Act, unless otherwise stated. The reference in section 12F of the Act includes these Regulations.

85. (5) In this regulation, \textit{relevant worker} means:

86. (a) a worker who, in carrying out work in the business or undertaking, uses or is to use a fall arrest system; and

87. (b) a worker who may be involved in initiating or implementing the emergency procedures.