

HOT WORK PROCEDURE

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Fire Danger Season	<p>A period defined under the Fire and Emergency Services Act 2005 which may be declared by the CFS Chief Officer for the prohibition and restriction on the use of fire and prescribed equipment in the open. The dates generally fall between the 1st of November and the 30th of April.</p> <p>[as defined by SACFS Use of Metal Cutting Tools and Welders Code of Practice]</p>
Hazardous area	<p>An area in which flammable liquids, vapours or gases, combustible liquids or other flammable or explosive substances may be present. A normally safe area, into which a tank, container or equipment containing flammable or combustible liquids, gases or vapours has been brought, may become a hazardous area.</p> <p>[as defined by Australian Standard 1647.1 Safety in welding and allied processes – Section 1.3.2]</p>
Hierarchy of Control	<p>If it is not reasonably practicable for risks to health and safety to be eliminated, risks must be minimised, so far as is reasonably practicable, by doing 1 or more of the following:</p> <ul style="list-style-type: none"> (a) Substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk; (b) Isolating the hazard from any person exposed to it; and/or (c) Implementing engineering controls. <p>If a risk then remains, the duty holder must minimise the remaining risk, so far as is reasonably practicable, by implementing administrative controls.</p> <p>If a risk then remains the duty holder must minimise the remaining risk, so far as is reasonably practicable, by ensuring the provision and use of suitable personal protective equipment.</p> <p>[as defined by the Work Health and Safety Regulations 2012, Regulation 36]</p>
High Risk Construction Work	<p>Means construction work that:</p> <ul style="list-style-type: none"> (a) Involves a risk of a person falling more than 3 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: <ul style="list-style-type: none"> 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

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	<p>movement of powered mobile plant; or</p> <p>(p) Is carried out in an area in which there are artificial extremes of temperature; or</p> <p>(q) Is carried out in or near water or other liquid that involves a risk of drowning; or</p> <p>(r) Involves diving work.</p> <p>[as defined by the Work Health and Safety Regulations 2012, Regulation 291]</p>
Hot work	<p>Grinding, welding, thermal or oxygen cutting or heating and other related heat-producing or spark-producing operations.</p> <p>[as defined by Australian Standard 1647.1 Safety in welding and allied processes – Section 1.3.3]</p>
Hot Work Permit	<p>A written document that authorises the person identified on the Hot Work Permit to carry out hot work and includes the information set out in 4.4.3.</p> <p>Note: during the Fire Danger Season, a Schedule 9 Permit must also be obtained from an Authorised Officer before hot work is undertaken outside.</p> <p>[as required by the Fire and Emergency Services Regulation (SA) 2005, Regulations 32A and 33]</p>
Health and safety representative (HSR)	<p>A health and safety representative elected under Part 5 of the Work Health and Safety Act 2012 for the work group of which he or she is a member.</p> <p>[As defined by the Work Health and Safety Act 2012, Section 4]</p>
Non-designated hot work area	<p>Is any premises, area or location not specifically designed for hot work activities, or where workers may be required to undertake their work activities eg bridges or other structures, storage areas, outdoor areas, fixed plant, railings and signs.</p>
Permit Issuer	<p>A person authorised by the Works Supervisor as competent to issue a Hot Work Permit. This person may also be an Authorised Officer.</p>
Person Conducting a Business or Undertaking (PCBU)	<p>A person who conducts a business or undertaking –</p> <p>(a) Whether the person conducts the business or undertaking alone or with others; and</p> <p>(b) Whether or not the business or undertaking is conducted for profit or gain.</p> <p>[as defined by the Work Health and Safety Act 2012]</p>
Personal Protective Equipment (PPE)	<p>Anything used or worn by a person to minimize risk to the person's health and safety, including air supplied respiratory equipment</p> <p>[as defined by the Work Health and Safety Regulations 2012, Regulation 5]</p>
Prescribed Appliance	<p>An electric welder, a mechanical cutting tool, a gas appliance, an angle grinder or other mechanical grinding tool</p> <p>[as defined by the Fire and Emergency Services Regulations 2005, Regulation 41(a)]</p>
Safe Work Procedure (SWP)	<p>A document that records the process to be followed to conduct an activity safely.</p>
Schedule 9 Permit	<p>A permit authorising a person to light or maintain a fire in the open during the fire danger season (but not contrary to the terms of a total fire ban)</p> <p>[as defined by the Fire and Emergency Services Regulations 2005, Regulation 33(2)]</p>

Schedule 10 Permit	<p>A permit authorising a person to light or maintain a fire in the open air—</p> <p>(a) contrary to the terms of a total fire ban; or</p> <p>(b) during the fire danger season and contrary to the terms of a total fire ban,</p> <p>in the form set out in Schedule 10 of the Fire and Emergency Services Regulations 2005</p> <p>(Note: These are in addition to the Hot Work Permit)</p> <p>[as defined by the Fire and Emergency Services Regulations 2005, Regulation 33(3)]</p>
Total Fire Ban	<p>A ban imposed by the Chief Officer of the South Australian Country Fire Service on the lighting or maintaining of fires in the open air for any purpose on a specified day or days, or during any specified part or parts of a day or days, throughout the whole State, or any specified part of the State.</p> <p>[Fire and Emergency Services Act (SA) 2006, Section 80]</p>

4. PROCEDURE

4.1. Pre-Work Requirements - identification of designated hot work areas

4.1.1. Identify and document designated hot work areas where hot work can be undertaken without the issue of a Hot Work Permit.

4.1.2. Designated hot work areas will:

- (a) Be isolated using appropriate screens and warning barriers;
- (b) Be free from flammable and combustible materials;
- (c) Be free from water and damp conditions; and
- (d) Have adequate natural or mechanical ventilation.

4.1.3. If hot work is to be undertaken outside designated hot work areas, a Hot Work Permit is required.

4.2. Hazard identification

4.2.1. Before undertaking any hot work activity, the department manager and permit issuer will consider whether a method other than hot work can be utilised. For example, the work may be able to be completed some other way, such as:

- (a) Completing cutting with a hand or electric saw or pipe cutter;
- (b) Using a mechanical method to join items together with nuts and bolts, screwed fittings or couplings;
- (c) Hand-filing instead of grinding; or
- (d) Installing threaded pipe instead of welding or soldering.

4.2.2. If hot work cannot be avoided, hazards associated with hot work activities will be identified in accordance with the Hazard Management Procedure in consultation with workers and/or their representatives. This includes, but is not limited to, identification of hazards associated with:

- (a) Routine hot work tasks undertaken in designated hot work areas;
- (b) Non-standard hot work tasks undertaken in designated hot work areas;
- (c) Hot work tasks undertaken by workers outside of designated hot work areas but within the organisation's premises;
- (d) Hot work tasks undertaken by workers away from the organisation's premises; and
- (e) Hot work tasks undertaken by workers from another PCBU for the organisation.

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4.3. Risk assessment

4.3.1. A risk assessment is to be undertaken for hot work activities in accordance with the Hazard Management Procedure.

- (a) For routine hot work tasks undertaken in a designated hot work area, a generic risk assessment may be prepared and SOPs developed as required.
- (b) For all other hot work (eg hot work undertaken outside a designated hot work area and non-standard tasks undertaken within a designated hot work area):
 - i. A risk assessment is to be undertaken before each hot work task commences.
 - ii. The Works Supervisor should form a team to undertake the risk assessment. The team should consist of a competent person to lead the risk assessment process, workers who are involved in the hot work activity to be assessed, a HSR (where one exists) and other stakeholders or experts, where relevant.

4.3.2. Risk assessments should consider matters, including but not limited to the:

- (a) Type of hot work to be undertaken;
- (b) The location in which it is to be done;
- (c) The equipment to be used;
- (d) The potential for fire and explosion, radiation burns, electric shock, eye injury caused by exposure to radiation and foreign matter, inhalation of toxic fumes or gases; and
- (e) Other hazards as identified on the risk assessment and Hot Work Permit.

4.4. Hot Work Permits

4.4.1. Hot work undertaken outside of a designated hot work area will be controlled by a permit system.

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APPENDIX 1 contains a sample Hot Work Permit.

- 4.4.2. Only persons authorised by the Chief Executive Officer and Manager of Corporate & Community Services as competent to issue a Hot Work Permit may issue Hot Work Permits. Permits will be issued prior to hot work commencing in accordance with this Procedure.
- (a) A list of persons authorised to issue a Hot Work Permits will be maintained.
 - (b) The list of persons may include an Authorised Officer (eg Fire Prevention officer).
 - (c) A permit issuer must not issue a Hot Work Permit to themselves.
- 4.4.3. A Hot Work Permit will:
- (a) Include the following information:
 - i. Permit identification number;
 - ii. The task to be done;
 - iii. Who the permit is issued to;
 - iv. Date of issue of the permit and a time limit for expiry or renewal (which is not to exceed 8 hours);
 - v. The area to which the work is limited;
 - vi. The identified hazards and implemented control measures applicable to the work (eg equipment to be used, checks to be made and precautions to be taken); and
 - vii. Name of the fire watcher, where required;
 - (b) Require the recipient and fire watcher (where required) to sign the permit to show that they have both read and understood the hazards and control measures in the permit; and
 - (c) Require a signature of the permit issuer when the job is complete.

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- 4.4.4. A Hot Work Permit may be refused, cancelled or withdrawn by the permit issuer or management representative if weather conditions are considered extreme and/or hazardous to any person or property during a hot work activity.
- (a) Hot Work Permits will not generally be issued for any external hot work activity to be undertaken on a Total Fire Ban Day. However:
- a. In the case of an emergency requiring Hot Work (and the work cannot be postponed or reprogrammed) an application for a Hot Work Permit to be issued on a Total Fire Ban Day may be made but must be accompanied by a Schedule 10 Permit;
 - b. A Schedule 10 Permit application for carrying out hot work on a Total Fire Ban Day will be made to an Authorised Officer.
- 4.4.5. All Hot Work Permits will be available at the worksite during the hot work and retained in line with the organisation's records management process.

4.5. Risk control

4.5.1. Controls should be implemented to:

- (a) Eliminate identified risks to health or safety in so far as is reasonably practicable; or
- (b) If it is not possible to eliminate risks, minimize risks so far as reasonably practicable by selecting controls in descending order from the Hierarchy of Control (see APPENDIX 2 for examples).

4.5.2. The risk assessment and Hot Work Permit will clearly indicate what control measures are to be used.

4.5.3. Control measures should address:

- (a) Specific control measures outlined below (as required); and
- (b) Other situational specific controls.

4.5.4. Specific control – fire and explosion

- (a) The risk assessment team, in conjunction with the permit issuer, will take all reasonably practicable steps to make sure the work area does not contain a hazardous atmosphere, uncontrolled ignition sources or accumulations of flammable or combustible materials, by the most appropriate means for the circumstances. For general outdoor work, this may be a walk through inspection. For work in more complex areas (such as confined spaces), more specialist processes (such as air sampling) may be needed. Refer to Confined Space Management Procedure.
- (b) Control measures to control against the risk of fire and explosion include:
 - i. Making safe the area by the removal of:
 - flammable or combustible liquids, gases, vapours or substances within a radius of 15 metres from the point of where hot work is to be undertaken, including the space above and below the work area; and
 - Flammable materials (including all vegetation, bush, grasses, paper, cardboard and domestic wastes) with a clearance area of 4 metres from where the furthestmost spark from the hot work activity will be thrown.
 - ii. Assigning a worker fire watch responsibilities (when required by the risk assessment) to monitor that no condition arises or action is taken that will lead to a hazardous situation during hot work activities. This includes:
 - Being alert for any fire outbreak or hazard;
 - Taking immediate action to combat any outbreak of fire that may occur (if it is safe to do so);
 - Not allowing hot work to proceed outside the area specified on the Hot Work Permit;
 - Immediately stopping the work and withdrawing the Hot Work Permit if a hazardous condition is observed;
 - Monitoring changes in wind direction;
 - Being aware of the need to use eye protection to protect eyes against flashes where hot work involves arc welding, cutting or arc gouging;

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- Having available for use a fire extinguisher or fire hose or both; and
- Not leaving the job unless properly relieved by an authorised person (or if it is unsafe to remain in the area);
- iii. Preventing vehicular traffic in and through hot work areas whilst hot work is in progress;
- iv. Isolating fuel sources from ignition sources;
- v. Purging all traces of flammable or combustible materials from drums, vessels and tanks which are to be welded prior to hot work, and preferably fill with an inert substance such as nitrogen gas or water;
- vi. Using fire resistant barriers to prevent welding and grinding sparks accidentally reaching flammable and combustible materials;
- vii. Covering sewers or drains to prevent vapour escape;
- viii. Checking work areas are well ventilated to prevent accumulation of flammable vapours in the work area;
- ix. Checking the work area is free from rubbish, paper or dust that could be potential fuel sources or produce dust explosions;
- x. Not storing flammable and combustible materials near the hot work area; and
- xi. Keeping and maintaining firefighting equipment near the hot work area.

4.5.5. Specific control – airborne contaminants

If workers could be exposed to other fumes, dust, vapour and/or gases generated during welding processes or other hot work in concentrations of chemicals or mixtures that may exceed exposure standards and be hazardous (in particular, work involving lead), then:

- (a) Air monitoring will be carried out;
- (b) Ventilation systems will be installed and maintained to capture or remove airborne contaminants when results of testing indicate need;
- (c) Appropriate respiratory protection will be provided, fitted and maintained; and
- (d) Legislative obligations will be met, including health monitoring, where relevant.

4.5.6. Specific control – radiation

If workers and/or others could be exposed to radiation during welding processes or other hot work:

- (a) Non-flammable screens and partitions will be available and used to limit exposure;
- (b) Signage will be erected to warn that welding is occurring and entry into the work area is not permitted unless safeguards are used (such as PPE); and
- (c) Appropriate PPE will be provided, fitted, used and maintained, including filter shades for goggles, face shields to protect the eyes from radiation and gloves and other protective clothing to cover exposed skin.

4.5.7. Specific control – electrical safety

If workers and others could be exposed to electrical hazards during welding processes or other hot work:

- (a) Residual Current Device (**RCD**) protection will be installed;
- (b) Electrical equipment will be inspected and tested to check that it is in good condition prior to use, including power switches, terminals, connections, cables and insulation:
 - i. For transportable equipment, at least once every 3 months; and
 - ii. For fixed equipment, at least once every 12 months;
- (c) In areas where welding is regularly undertaken, insulation and air-ventilation will be provided (if reasonably practicable) to prevent workers from perspiring (as perspiration is a conductor of electricity);
- (d) Check that the working area does not have any potentially live structures, components or wet areas or that electrical work is not carried out in an environment that is damp humid or wet or where a worker may be exposed to rain; and

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- (e) Arc welding and allied process will be undertaken in conformance with Australian Standard 1674.2 Safety in welding and allied processes, Part 2: Electrical.
- 4.5.8. Specific control – compressed and liquefied gases
The departmental managers, in conjunction with the permit issuer, will make sure that when compressed and liquefied gases are used as fuel, a source of oxygen or as shielding gases in certain types of welding:
- (a) Cylinders are stored and handled appropriately (for further guidance refer to Australian Standard 4332: The storage and handling of gases in cylinders);
 - (b) Cylinders are maintained free from leaks or dents, are stored in an upright position to ensure the safety device functions correctly and secured to prevent dislodgement;
 - (c) Flashback arrestors are fitted at the blow pipe and at the regulator on oxygen and lines of oxy-fuel gas systems; and
 - (d) Equipment, such as gas hoses, is drained and purged and the gas is locked off at the valve immediately after use.
- 4.5.9. Specific control – PPE
- (a) If PPE has been selected as a control measure then it will be:
 - i. Suitable to the nature of the work and any hazard associated with the work;
 - ii. Of a suitable size and fit and be reasonably comfortable for the worker(s) performing the hot work;
 - iii. Maintained (eg clean, hygienic and in good working order), repaired or replaced, when required; and
 - iv. Used or worn by the worker(s) performing the hot work, which is the responsibility of the worker(s) and is to be monitored by departmental managers.
 - (b) PPE for hot work will be identified by the risk assessment and may include but not be limited to:
 - i. Eye, face and head protection (eg goggles, helmets, hand shields and protective filters);
 - ii. Hearing protection (eg ear muffs and ear plugs);
 - iii. Gloves and gauntlets;
 - iv. Clothing (eg flame resistant, long sleeved shirt, long sleeved trousers, leather aprons and spats);
 - v. Foot protection (eg boots and shoes);
 - vi. Screens; and
 - vii. Respiratory protective devices (eg face respirators and air supplied respirators).
 - (c) The departmental manager will ensure that workers are provided with information, training and instruction in the proper use, wearing, storage and maintenance of PPE.
- 4.5.10. Controls to be considered
- (a) The permit issuer, before issuing the Hot Work Permit, will check that relevant hot work control measures have been considered and, where reasonably practicable, selected.
 - (b) Controls for other non-hot work aspects of the activity will be considered, including but not limited to:
 - i. Compliance with the confined space and prevention of falls procedures, when relevant;
 - ii. Whether appropriate signage is erected at the work areas; and
 - iii. Whether safe access is provided to the hot work area and pedestrian traffic is controlled.
- 4.5.11. Specific control – emergency response and plans
- (a) Appropriate fire protection and fire-fighting equipment will be accessible, properly installed, tested and maintained for the hot work activities undertaken at the workplace;

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- (b) A dated record will be kept of the latest testing results, along with maintenance logs, until the next test is conducted;
- (c) The organisation's emergency plan will include the first aid and response procedures for incidents arising from hot work; and
- (d) Risk assessments and Hot Work Permits will contain the specific emergency response requirements for the task eg fire extinguishers, fire watcher, first aid kit etc.

4.5.12. Specific control – Safe Work Method Statement (**SWMS**) required for High Risk Construction Work

(Refer to LGAWCS Model WHS Construction Activities Guidance Checklist for further details.)

When the organisation or another PCBU undertakes hot work during High Risk Construction Work:

- (a) A SWMS will be prepared before the proposed work commences;
- (b) The High Risk Construction Work will be carried out in accordance with the SWMS;
- (c) A copy of the SWMS will be given to the principal contractor before the work commences and will be made readily accessible to any worker involved in the work;
- (d) The SWMS will be reviewed and revised as necessary;
- (e) A copy of the SWMS will be retained in line with General Disposal Schedule 20 for Local Government Records.

4.6. Implement the controls and undertake the hot work task.

4.6.1. Hazards that are unable to be immediately controlled within the risk assessment process will be transferred to the Corrective Action Register for further action and management.

4.6.2. Each person involved in a hot work activity will be informed of the control measures selected.

- (a) For routine hot work tasks undertaken in a designated hot work area, the departmental manager will inform all relevant persons about the control measures that have been implemented as a result of the hazard identification and risk assessment process. Department meeting minutes, training records and risk assessments (where relevant) should demonstrate that this has occurred.
- (b) For all other hot work, each person involved in the job should sign their acknowledgement of the risk assessment prior to work commencing and comply with all required risk controls, including those of any required Hot Work Permit.

4.6.3. When a Hot Work Permit is required, the Works Supervisor will make sure the permit is issued prior to work commencing.

- (a) The documented risk assessment should be attached to the Hot Work Permit; and
- (b) During the Fire Danger Season, a Schedule 9 permit will be sought from an Authorised Officer and attached to the Hot Work Permit.

4.6.4. When the risk assessment and Hot Work Permit identifies the need for a fire watcher, the Works Supervisor or permit issuer will nominate a competent person whose role is to maintain constant vigilance and who has the authority to ensure safe work practices are maintained.

4.6.5. The risk assessment and Hot Work permit will include any specified monitoring periods for fire hazards during and after the hot work activity has been completed.

4.6.6. Once all selected controls from the risk assessment and Hot Work Permit are in place, the Works Supervisor and permit issuer may allow work to commence.

4.6.7. The permit issuer will make sure the Hot Work Permit is prominently displayed at the work site where hot work is being undertaken.

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4.6.8. If a Hot Work Permit has been issued, the permit issuer will inspect the hot work area at the end of the task/fire watch period (to make sure no ignition hazards are present) and only then close out the permit.

4.7. Contractor management

4.7.1. The departmental manager/[project manager will take all reasonably practicable steps to:

- (a) Make sure other PCBUs comply with the organisation's Contractor Management and hazardous work procedures (or procedures of an equivalent standard);
- (b) Make sure PCBUs and their workers understand that this Hot Work Procedure is the minimum standard to be applied for hot work activities that are undertaken for the organisation; and
- (c) Consult and coordinate activities with other PCBUs who undertake hot work if their duty of care overlaps.

4.8. Incidents resulting from hot work

4.8.1. A rescuer or first aid officer should follow the control measures documented in the risk assessment and/or the organisation's emergency plan for any hot work incident.

4.8.2. Any person suspected of receiving an electrical shock during hot work will be taken for medical assessment regardless of how well they feel.

4.8.1. The incident will be reported in line with the organisation's Incident Reporting and Investigation Procedure.

4.8.2. A notifiable incident will be reported to [SafeWork SA](#) by the fastest possible means (telephone 1800 777 209 - 24 hours a day) immediately after becoming aware that a notifiable incident has occurred.

4.8.3. Any incident occurring that involves electricity or an electric shock, gas or plumbing will be reported to the [Office of the Technical Regulator](#) (telephone: 8226 5518; Business Hours or 1800 558 811 After Hours):

- (a) In the case of a death resulting from the incident - immediately by telephone
- (b) In the case of a person requiring medical assistance resulting from the incident - within one working day of the incident
- (c) In any other case that involves electricity - within ten working days of the incident
- (d) Gas incidents resulting in damage to property of \$5,000 or more – within ten working days of the incident
- (e) Gas incidents involving a gas infrastructure pipeline (operating above 1050 kPa) resulting in any injury or damage to property, or incidents requiring the attendance of a fire brigade – within one month from the date of the incident.
- (f) In the case of Water or Sewerage system incidents:
 - iii. For Priority type 1 incidents – Verbal notification immediately and written notification within 24 hours
 - iv. For Type 1 incidents - Verbal notification within 3 hours and written notification within 24 hours
 - v. For Type 2 incidents - Verbal notification not required and written notification within 10 working days.

4.8.4. Whenever any statutory reports have been made, the Manager of Corporate & Community Services will ensure that the LGAWCS has been notified.

4.8.5. Any claim for worker's compensation should be reported in accordance with the Workplace Return to Work Procedure.

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4.9. Monitoring and evaluation

- 4.9.1. It will be necessary to review and revise any existing risk control measures related to hot work, using the same methods as the initial hazard identification process:
- When the control measure does not minimise the risk so far as is reasonably practicable;
 - Before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control;
 - If a new hazard or risk is identified;
 - If the results of consultation indicate that a review is necessary; or
 - If a health and safety representative requests a review.
- 4.9.2. The Departmental manager/project manager will monitor hot work activities by:
- Periodically inspecting:
 - Hot work documentation (eg: risk assessments, Hot Work Permits) to make sure they have been completed in accordance with this procedure; and
 - Hot work tasks to check compliance with documented procedures; and
 - Checking that training and competency requirements are maintained and effective.
- 4.9.3. The Health and Safety Committee will monitor and review hot work activity at least annually during its meetings, including any outcomes from legislatively required activities related to air monitoring and health monitoring.
- 4.9.4. The management team will review hazard and incident statistics related to hot work, audit results, air monitoring and health monitoring outcomes, legislative changes and other information relating to the Hot Work Procedure and direct action when required. Minutes will record outcomes of discussion and actions undertaken.
- 4.9.5. The Hot Work Procedure will be subject to audit and the audit findings will be reported as part of the ongoing management review process.
- 4.9.6. The management team may set, monitor and review objectives, targets and performance indicators for hot work, as relevant.

5. TRAINING

- 5.1. The organisation's training needs analysis will identify the training needs for those persons who:
- Lead or participate in the risk assessment process;
 - Raise and issue Hot Work Permits;
 - Undertake the role of fire watcher;
 - Use, inspect and maintain hot work plant and equipment, including PPE;
 - Provide first aid treatment;
 - Initiate and conduct emergency rescue (including emergency drills);
 - Develop (or are required to follow) a SWMS; and/or
 - Are a Fire Prevention Officer/Authorised Officer.
- 5.2. The departmental manager or Works Supervisor should check that the risk assessment, SWP or SWMS (as relevant) is explained to those persons involved in a hot work activity and is signed by each person before any work commences.

6. RECORDS

Hot work records will be maintained. The list includes, but is not limited to:

- Risk assessments
- Hot Work Permits and other necessary permits (eg Confined Space, Schedule 9 or 10 Permits)
- SWMS
- Training and competency records
- Plant and equipment registers and maintenance records
- Emergency plans

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- 6.7. Health monitoring records
- 6.8. Air monitoring records
- 6.9. Inspection and test records for hot work plant and equipment
- 6.10. Job inspection records
- 6.11. Statutory notifications
- 6.12. Any other records relating to legislative compliance

All records will be managed in line with the current version of General Disposal Schedule 20 for Local Government Records.

7. RESPONSIBILITIES

7.1. The *management team* is accountable for:

- 7.1.1. Checking that the organisation manages hot work activities in accordance with legislative requirements;
- 7.1.2. Approving reasonably practicable expenditure necessary for hot work control measures upon receipt of expenditure requests;
- 7.1.3. Setting objectives, targets and performance indicators for hot work, as relevant;
- 7.1.4. Checking that consultation, cooperation and coordination of the management of WHS risks occurs with all other PCBUs who have a WHS duty in relation to hot work (eg contractors);
- 7.1.5. Checking that a permit system is in place and operating according to this procedure;
- 7.1.6. Making sure an emergency plan is in place, which includes the first aid and rescue procedures to be followed in a hot work emergency, and that the regular testing of those procedures occurs.
- 7.1.7. Making sure that all required training for hot work is identified, implemented, managed and monitored;
- 7.1.8. Monitoring the Corrective Action Register and enforcing close out of action items;
- 7.1.9. Reviewing the effectiveness of the Hot Work Procedure; and
- 7.1.10. Including hot work within the management review process.

7.2. The *departmental manager* is accountable for:

- 7.2.1. Checking that a record is made in the Corrective Action Register of hot work activities likely to expose the organisation's workers and/or others to health and safety risks;
- 7.2.2. Checking that a Hot Work Permit and emergency plan are in place and documented before hot work is commenced;
- 7.2.3. Reviewing and revising risk assessments, when required;
- 7.2.4. Implementing control measures for the safety of workers undertaking hot work;
- 7.2.5. Checking that workers undertaking hot work activities have been trained and, where relevant, assessed as competent in accordance with legislative requirements;
- 7.2.6. Monitoring that plant and PPE required for the work is fit for purpose, inspected prior to use and maintained by competent persons;
- 7.2.7. Making sure air and health monitoring is undertaken, when required;
- 7.2.8. Undertaking inspections of work being conducted and taking appropriate action where non-compliance is identified;
- 7.2.9. Checking that hazards identified or incidents that occur when undertaking hot work activities are reported, investigated and control measures are implemented in accordance with the Incident Reporting and Investigation and Hazard Management procedures;
- 7.2.10. Implementing corrective or preventative actions required for hot work; and
- 7.2.11. Consulting with other PCBUs, so far as is reasonably practicable, if their duty of care overlaps.

7.3. The *departmental manager/project manager* is accountable for:

- 7.3.1. Managing the risks associated with construction work;
- 7.3.2. Checking that a record is made in the Corrective Action Register of all construction activities, including High Risk Construction Work;

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- 7.3.3. Checking that a SWMS that includes emergency response is developed and documented before any High Risk Construction Work is commenced;
 - 7.3.4. Making sure a copy of the SWMS is given to the principal contractor before the work commences, the SWMS is available for inspection and is made readily accessible to any worker involved in the work;
 - 7.3.5. Making sure arrangements are in place to check that work is conducted in accordance with the SWMS and, if this is not the case, making sure that the work:
 - (a) Is immediately stopped or stopped as soon as it is safe to do so, and
 - (b) Resumed only in accordance with the SWMS;
 - 7.3.6. Reviewing and revising SWMS' when required; and
 - 7.3.7. Making sure a copy of the SWMS is retained in line with the organisation's records management process.
- 7.4. The *Works Supervisor* is accountable for:
- 7.4.1. Making sure the Hot Work Permit is issued prior to work commencing, when required;
 - 7.4.2. Making sure a risk assessment has been completed prior to commencement of hot work activities;
 - 7.4.3. Nominating a competent person to act as fire watcher, when required; and
 - 7.4.4. Checking that the risk assessment, SOP or SWMS (as relevant) is explained to those persons involved in hot work activity and is signed by each person before any work commences.
- 7.5. The *Permit Issuer* is accountable for:
- 7.5.1. Making sure that hot work does not occur unless a risk assessment has been undertaken and a Hot Work Permit has been issued, if required;
 - 7.5.2. Making sure that, during the Fire Danger Season, the relevant permit (Schedule 9 or Schedule 10) has been obtained;
 - 7.5.3. When required by the risk assessment, confirming a competent person will undertake the role of fire watcher for the period specified in the risk assessment during and after the hot work activity;
 - 7.5.4. Closing out the Hot Work Permit at the end of the hot work activity after an inspection has been conducted; and
 - 7.5.5. Making sure that all documentation is fully completed and records are retained in accordance with this procedure.
- 7.6. Any *worker* undertaking hot work is accountable for:
- 7.6.1. Maintaining training and competence in relation to hot work, control measures, PPE and Hot Work Permits;
 - 7.6.2. Complying with the requirements of risk assessment, Hot Work Permit (if relevant), SWMS (if relevant) and all relevant Work Health and Safety policies and procedures whilst undertaking their tasks;
 - 7.6.3. Following any reasonable instruction related to hot work activities;
 - 7.6.4. Using PPE and safety equipment provided;
 - 7.6.5. Assisting in assessing risk, implementing control measures and evaluating them for effectiveness, when required;
 - 7.6.6. Seeking assistance to manage any identified hazards, when required; and
 - 7.6.7. Taking reasonable care of their own health and safety and that their work does not adversely affect the health and safety of other persons.
- 7.7. The *Health and Safety Committee* is accountable for:
- 7.7.1. Facilitating co-operation between management and workers in matters relating to hot work activities; and
 - 7.7.2. Monitoring the Corrective Action Register and referring issues to the management team that require management direction or enforcement.

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7.8. *Health and Safety Representatives* may:

- 7.8.1. Facilitate consultation between departmental managers and workers in relation to any hot work activity that affects the workgroup they represent; and
- 7.8.2. Request and assist in the review and revision, where necessary, of risk control measures related to hot work activities.

8. REVIEW

- 8.1. The Hot Work Procedure will be reviewed by the WHS Committee, in consultation with workers or their representatives, every three (3) years or more frequently if legislation or organisational needs change. This will include a review of:
 - 8.1.1. Feedback form managers, workers, HSRs, HSC, contractors or others;
 - 8.1.2. Legislative compliance;
 - 8.1.3. Performance Standards for Self Insurers;
 - 8.1.4. LGAWCS guidance;
 - 8.1.5. Internal or external audit findings;
 - 8.1.6. Incident and hazard reports, claims costs and trends; and
 - 8.1.7. Other relevant information.
- 8.2. Results of reviews may result in preventative and/or corrective actions being implemented and revision of this document.

9. REFERENCES

- [Work Health and Safety Act 2012](#)
- [Work Health and Safety Regulations 2012](#)
- [General Disposal Schedule 20 for Local Government](#)
- [ReturnToWorkSA's Performance Standards for Self-Insurers](#)
- [Water and Sewerage Infrastructure Incident Notification and Communication Protocol](#)
- [Fire and Emergency Services Act 2005](#)
- [Fire and Emergency Services Regulations 2005](#)
- [Use of Metal Cutting Tools and Welders Code of Practice, South Australian Country Fire Services, April 2015](#)
- [Code of Practice: Welding Processes](#)
- [Code of Practice: Managing Electrical Risks at the Workplace](#)
- [Code of Practice: Managing the Risk of Falls at Workplaces](#)
- [Code of Practice: Confined Spaces](#)
- [Code of Practice: Managing the Risk of Hazardous Chemicals at Workplaces](#)
- [Code of Practice: Construction Work](#)
- [Code of Practice: Managing the Risk of Plant in the Workplace](#)
- Welding Electrical Safety, WTIA Technical Note No. 7, published by the Welding Technology Institute of Australia
- Welding Electrical Safety, WTIA Technical Note No. 22, published by the Welding Technology Institute of Australia
- AS 1335 Hose and hose assemblies for welding, cutting and allied processes
- AS 1657 Fixed platforms, walkways, stairways and ladders - Design, construction and installation
- AS 1674.1 Safety in welding and allied processes – Fire Precautions
- AS 1674.2 Safety in welding and allied processes – Electrical
- AS 1891 Industrial fall-arrest systems and devices – Harnesses and Ancillary Equipment
- AS 1940 The storage and handling of flammable and combustible liquids
- AS 2865 Confined spaces
- AS 4289 Oxygen and acetylene gas reticulation systems
- AS 4332 The storage and handling of gases in cylinders
- AS 4603 Flashback arresters - Safety devices for use with fuel gases and oxygen or compressed air
- AS 4839: The safe use of portable and mobile oxy-fuel gas systems for welding, cutting,

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heating and allied processes

AS/NZS 60079: (series) Explosive atmospheres

AS 60974.1 Arc welding equipment – Welding power sources (Section 11 and 13 for hazard reducing devices)

AS/NZS 61241.10: Electrical apparatus for use in the presence of combustible dust – classification of areas where combustible dusts are or may be present.

[WTIA Guidance Note 8: Recommended Oxy-Fuel Gas Daily Inspection and Pre-Start Check List](#)

[WTIA Guidance Note 7: Recommended Welding Machine Daily Inspection and Pre-Start Check List](#)

NOTE: this is not an exhaustive list of approved codes of practice and other documents may need to be referenced depending on the nature and hazards of the work being undertaken and the respective work environment.

10. RELATED DOCUMENTS

Hazard Management procedure

Emergency management procedure

Confined Space procedure

Prevention of falls procedure

Incident investigation and reporting procedure

Corrective and preventative action procedure

Workplace inspection procedure

Contractor management procedure

Corrective Action Register

Procurement procedures

Hot Work Permit

Emergency Plan

11. DOCUMENT HISTORY:

Version No:	Issue Date:	Description of Change:
1.0	Oct 2009	New Document
2.0	5/8/2014	Format update to 'One system' structure – inclusion of core components. Expansion of Risk control section to include specific controls from appropriate COP's. Terminology changes to reflect 2012 WHS Act, Regulations and Codes of Practice. Examples of changes include: OHS to WHS and employee to worker where appropriate
3.0	30/4/2018	Replace references to WHS Committee with Health & Safety Committee for consistency with WHS Act & Regs; Inclusion of references to Schedule 9 & 10 Permits in definitions, 4.4.4, 4.6.3, 6 & 7.5.2; Addition/modification of definitions relating to Fire and Emergency Services Act; Additional information at 4.4.3 (from AS1674.1), 4.5.4.b (from AS1674.1 & SACFS), 4.5.7.b (from AS1674.2); 4.8 mandatory reporting provisions replaced to match with Incident Reporting & Investigation procedure; 7.4 Addition of supervisor/team leader accountabilities; formatting and language.



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APPENDIX 1 – HOT WORK PERMIT

HOT WORK PERMIT: DISPLAY AT WORKSITE	Hot Work Permit Number:
Worksite	Permit valid from am/pm / / to am/pm / /
Task	Date

As per the method of Hot Work and location described in the Risk Assessment, identify control requirements in the relevant parts below

General Hot Work Controls

	Yes	NA	Controls
	Identify those general hot work and ignition controls required to be undertaken as part of the Hot Work: (identify as Yes or NA - Not Applicable)	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		<input type="checkbox"/>	Catch mats or boards are to be positioned over grid-mesh, flooring or grates to catch sparks, slag or other hot debris. Spark and flash screens are in place
<input type="checkbox"/>		<input type="checkbox"/>	Combustible and flammable materials or fuel sources (including vegetation where practicable) are required to be cleared from the area (consider a 15m area around the hot work where practicable and include surfaces below & above the work area)
<input type="checkbox"/>		<input type="checkbox"/>	Drains, cable racks, electrical cables and other heat/fire sensitive items are to be covered (consider a 15m area and use fireproof blankets, catch boards and approved covers as applicable)
<input type="checkbox"/>		<input type="checkbox"/>	A fire watcher is required to watch the area during and/or post-work to monitor fire risk, sparks, slag, hot objects (consider for work that is arc welding, oxy-cutting or likely to present an ignition hazard post-work, and for work in hazardous areas, in confined spaces, outdoors and in windy conditions): <input type="checkbox"/> During Work, and/or <input type="checkbox"/> Post Work for a time period of ___ minutes
<input type="checkbox"/>		<input type="checkbox"/>	The worksite has been isolated and traffic/pedestrian movement restricted

	Yes	NA	If Yes, document additional control details below:
Specific Hot Work Controls			
The Hot Work is to be undertaken on or adjacent to plant and utilities that will require isolation (such as services, pipes, tanks, pressure vessels, valves)	<input type="checkbox"/>	<input type="checkbox"/>	
A fixed fire protection or detection system may need to be isolated (approval is required for the impairment and must be documented including the date, time the circuit is isolated and the time the circuit is re-established. Approval to be sought from: CEO or MCCS – Where a fire detection system is disabled, emergency services and the LGA Mutual Liability Scheme must be notified if practicable.	<input type="checkbox"/>	<input type="checkbox"/>	
The work area will require specific cleaning, stripping, surface preparation, purging, ventilating or pre-work atmospheric monitoring (due to flammable/explosive vapours, dusts, liquids or solid residues in the work area/location, or as a result of surfaces/coatings that may create harmful emissions when heated or cut).	<input type="checkbox"/>	<input type="checkbox"/>	
The nature of the work requires specific respiratory protection to be worn.	<input type="checkbox"/>	<input type="checkbox"/>	
The hot work involves arc-welding whereby specific controls relating to ensuring electrical and radiation safety will be required.	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Controls:

NA (Not Applicable)

Confined Space: (Confined Space Permit to be used in conjunction with Hot Work Permit)	Yes	NA
Locate Hot Work equipment outside the space where practicable (such as gas cylinders, hoses, etc unless involved with respiratory devices)	<input type="checkbox"/>	<input type="checkbox"/>
Extraction fan inlet is to be located as close as practicable to the contamination source	<input type="checkbox"/>	<input type="checkbox"/>
Contaminants are to be expelled from the space (so that they cannot be recirculated and will not harm other workers)	<input type="checkbox"/>	<input type="checkbox"/>
If arc-welding activities are to be suspended for substantial periods, power sources will need to be de-energised, electrodes removed from holders and holders placed so that accidental contact or arcing cannot occur.	<input type="checkbox"/>	<input type="checkbox"/>
If gas welding/cutting activities are to be suspended for substantial periods, torch and cylinder valves are to be closed, with the torch and hose connections removed from the space and depressurised	<input type="checkbox"/>	<input type="checkbox"/>
Working at Heights: (Location)	Yes	NA
The hot work activity is located at an elevated level which has the potential for a fall hazard	<input type="checkbox"/>	<input type="checkbox"/>
Fall protection equipment is required to perform the task safely.	<input type="checkbox"/>	<input type="checkbox"/>
The fall protection equipment is maintained in good condition and regularly inspected	<input type="checkbox"/>	<input type="checkbox"/>
List type of fall protection equipment:		



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Permit Requestor: As the person requesting this permit, I certify that:

I am competent to coordinate this Hot Work in accordance with the Hot Work Procedure, Risk Assessment and this Permit;
I undertake to implement all required controls to ensure safe Hot Work methods, and will display this permit at the worksite; and
I shall monitor the Hot Work hazards and control methods throughout the duration of the Hot Work.

Name: _____ Signature: _____ Date: _____ Time: _____

Name: _____ Signature: _____ Date: _____ Time: _____

Authorisation to work: This (Council) authorisation signifies that the Risk Assessment and Hot Work Permit have been completed and the Hot Work is authorised to commence in accordance with the Permit Request. This permit is to be displayed at the worksite

Name: _____ Position: _____ Signature: _____ Date: _____ Time: _____

Permit Cancellation: The worksite has been inspected by me at the expiry/cancellation of this hot work permit and declared safe for normal operations to resume

Name: _____ Position: _____ Signature: _____ Date: _____ Time: _____

DISPLAY THIS COMPLETED PERMIT PROMINENTLY AT THE WORKSITE

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APPENDIX 2: EXAMPLES OF HIERARCHY OF CONTROL ELEMENTS

Elimination	<p>Consider whether a method other than hot work can be utilised. for example, the work may be able to be completed some other way, such as</p> <ul style="list-style-type: none"> (a) Completing cutting with a hand or electric saw, or pipe cutter; (b) Using a mechanical method to join items together with nuts and bolts, screwed fittings or couplings; (c) Hand-filing instead of grinding; or (d) Installing threaded pipe instead of welding or soldering.
Substitution	<p>Examples of substitution include:</p> <ul style="list-style-type: none"> (a) Substituting a hazardous chemical with a less hazardous one; and (b) Substituting a less volatile material to control a vapour hazard may cost less than the installation and maintenance of a mechanical ventilation system.
Isolation	<p>Isolation involves separation of the process from people by distance or the use of barriers, to prevent exposure and contamination of the working environment. Examples are:</p> <ul style="list-style-type: none"> (a) Isolating fuel sources from ignition sources; and (b) Isolating the source of exposure to the hazardous chemical, for example, welding in isolation booths away from others.
Engineering	<p>Types of engineering controls include the following:</p> <ul style="list-style-type: none"> (a) Using intrinsically safe electrical equipment in hazardous areas; (b) Process designs that minimise the generation of dusts, fumes or vapours; (c) Installing ventilation systems to capture or remove airborne contaminants eg extraction systems attached to grinding machines; and (d) Install RCD protection
Administrative	<p>Administrative means are safe work practices that require people to work in safer ways. Examples of safe work practices include:</p> <ul style="list-style-type: none"> (a) Written policies and work procedures (for example safe work method statements, safe working practices that avoid worker exposure to extreme heat); (b) Reducing the number of workers exposed to hot work or restricting worker access to certain areas; (c) Use of warning signs and indicating by appropriate signage the necessary PPE for those entering; (d) Regular cleaning and removing accumulations of waste; (e) Providing means for safe storage and disposal of hazardous chemicals; (f) Not storing flammable and combustible materials near welding area; (g) Maintaining fire fighting equipment near hot work areas; (h) Prohibiting eating, drinking and smoking in contaminated areas; (i) Undertaking air and health monitoring when required; (j) Providing cool drinking water and scheduling regular rest breaks; and (k) Storing cylinders in an upright position to ensure the safety device functions correctly
Personal protective equipment	<p>Where personal protective equipment is to be used, the following must occur:</p> <ul style="list-style-type: none"> (a) The PPE is properly selected for the individual and task in accordance with the relevant Australian Standards; (b) Users are informed of any limitations of the PPE and trained in its use and fit testing undertaken when required; (c) PPE is be maintained by appropriately trained workers in accordance with a personal protective equipment maintenance and servicing process ; (d) Items of PPE are readily available and/or replaced as frequently as necessary and are stored in a place provided for the purpose; and (e) The areas where PPE should be used are clearly identified