1. OVERVIEW

The Flinders Ranges Council as part of its commitment under its Hazardous Work Policy, recognises its obligation to manage the health and safety risks associated with hot work.

This Procedure:

- Specifies the hazard management measures to be taken prior to, during and after hot work).
- Outlines the systems of work to be used for hot work apctivities.
- Outlines the process for identifying hazards, assessing the risks and where elimination is not possible, implementing control measures to ensure worker safety when hot work is undertaken at Council work places.
- Applies to all persons who supervise or undertake hot work.

SIGNED …… ……
Chief Executive Officer Acting Chairperson, WHS Committee

Date: 18 / 12 / 2014 Date: 18 / 12 / 2014

2. CORE COMPONENTS

The core components of our Hot Work Procedure are:

- Reasonably foreseeable hazards associated with hot work are identified and recorded on the Master Hazard Register.
- Identifying designated areas where hot work may be conducted without a permit and identifying these to relevant workers.
- Risk assessments and JSA/SWI are conducted prior to hot work being undertaken and controls are developed and communicated to relevant workers.
- Records of risk assessments/JSA/SWi are retained to demonstrate compliance with this procedure.
- Nominated person/s have been appointed to authorise and permit hot work.
- Consultation and cooperation with other duty holders takes place when other workers undertake hot work on Council premises or in shared workplaces.
- A Hot Work Permit is completed for hot work conducted outside designated hot work areas.
- Service and inspection (calibration) records are available for regulators, flashback arrestors, hose assemblies and blowpipes, mixers and attachments.

3. DEFINITIONS

Competent person:	In this Procedure means, a person who has acquired through training, qualification or experience and the knowledge and skills to carry out the task [as defined by the WHS Regulations 2012, Regulation 5].
Designated hot work area	Is a work area identified by Council that is specifically designed for hot work activities (such as engineering workshop welding bays).
Hazardous area	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. [as defined by AS 1647.1 Safety in Welding and Allied Processes – Part 1: Fire Precautions 1997, p. 5].

Hierarchy of Control	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: (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. (c) Implementing engineering controls. If a risk then remains, the duty holder must minimise the remaining risk, so far as is reasonably practicable, by implementing administrative controls. 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. [as defined by the Work Health and Safety Regulations 2012, Regulation 36]
Hot work	Any grinding, welding, thermal or oxygen cutting or heating and other related heat-producing or spark-producing operations. [as defined by AS 1647.1 Safety in Welding and Allied Processes – Part 1: Fire Precautions 1997, p. 6].
Hot work permit (HWP)	A written document that authorises the person identified on the HWP to carry out hot work.
Health and safety representative (HSR)	The HSR elected for the work group of which the worker is a member. [as defined in the WHS Act 2012 Section 4]
Job Safety Analysis (JSA)	A document prepared for work activities assessed as having a safety risk, including those activities that have been assessed to be of high risk in relation to hot work, eg angle grinding or oxy-cutting outdoors in hot, windy weather, electric welding.
Non-designated hot work area	Is any Council premises, area or location not specifically designed for hot work activities, or where workers may be required to undertake their work activities, eg council-owned bridges or other structures, storage areas, outdoor areas, fixed plant, railings, and signs.
PCBU	Person Conduction a Business or Undertaking [as defined in the WHS Act 2012 Section 5]
Personal Protective Equipment (PPE)	Anything used or worn by a person to minimize risk to the person's health and safety, including air supplied respiratory equipment [as defined in the WHS Regulations, 2012 Regulation 5]
Safe Operating Procedure (SOP)	A document that records the process to be followed to conduct an activity safely (may have alternate names, such as Safe Work Instruction or Safe Work Method Statement).

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 shall:

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.
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 the Hot Work permit issuer should 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.
d. Installing threaded pipe instead of welding or soldering.

4.2.2. If hot work cannot be avoided, hazards associated with hot work activities should be identified in accordance with the WHS 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 Council designated hot work areas.
b. Non-standard hot work tasks undertaken in Council designated hot work areas.
c. Hot work tasks undertaken by Council workers outside of Council designated hot work areas but on Council premises.
d. Hot work tasks undertaken by Council workers away from Council premises.
e. Hot work tasks undertaken by workers from another PCBU for Council related work.

4.3. Risk assessment

4.3.1. A risk assessment is to be undertaken for hot work activities in accordance with the WHS Hazard Management Procedure. (Refer to Appendix 3 of this Procedure for Risk Assessment template).

a. For routine hot work tasks undertaken in a designated hot work area, a generic risk assessment may be prepared and SWIs 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 supervisor / team leader should form a team to undertake the risk assessment. The team should consist of a competent person to lead the risk assessment / JSA 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 should be controlled by a permit system. Appendix 1 contains a sample Hot Work Permit.

4.4.2. Only persons authorised by the departmental managers as competent to issue a Hot Work Permit may issue Hot Work Permits. Permits must be issued prior to hot work commencing in accordance with this Procedure:
   a. A list of persons authorised to issue a Hot Work Permits should be maintained.
   b. The list of persons will include an Authorised Officer.
   c. A permit issuer must not issue a Hot Work Permit to themself.

4.4.3. A Hot Work Permit will:
   a. Clearly specify:
      a. The task to be done.
      b. Who the permit is issued to.
      c. A time limit for expiry or renewal.
      d. The area to which the work is limited.
      e. The identified hazards and implemented control measures applicable to the work.
   b. Require the recipient to sign the permit to show that they have both read and understood the hazards and control measure in the permit.
   c. Require a signature of the permit issuer when the job is complete.

4.4.4. A Hot Work Permit may be refused, cancelled or withdrawn by the 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.
   b. In the case of an emergency requiring Hot Work, an application for a Hot Work Permit to be issued on a Total Fire Ban Day may be made to an Authorised Officer of the Council.

4.4.5. All Hot work Permits must be available at the worksite during the hot work and then retained in line with Councils records management process.

4.5. Risk control

4.5.1. Controls should be implemented to:
   4.5.1.1. Eliminate identified risks to health or safety in so far as is reasonably practicable.
   4.5.1.2. If it is not possible to eliminate risks, risks must be minimised 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/or JSA should clearly indicate what control measures are to be used.

4.5.3. Control measures should:
   4.5.3.1. Address the specific control measures outlined below. (as required)
   4.5.3.2. Then address other situational specific controls are considered.

4.5.4. Specific control – fire and explosion
   a. The risk assessment team in conjunction with the permit issuer should 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 Procedure).

b. Control measures to control against the risk of fire and explosion include:
- Making safe the area (by the removal of combustible materials) within a radius of 15m, from the point of where hot work is to be undertaken, including the space above and below the work area.
- 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 monitoring the hot work area for the periods specified in the risk assessment including during the hot work and for specified periods after the hot work has been completed.
- Preventing vehicular traffic in and through hot work areas whilst hot work is in progress.
- Isolating fuel sources from ignition sources.
- 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.
- Using fire resistant barriers to prevent welding and grinding sparks accidently reaching flammable and combustible materials.
- Covering sewers or drains to prevent vapour escape.
- Checking work areas are well ventilated to prevent accumulation of flammable vapours in the work area.
- Checking the work area is free from rubbish, paper or dust that could be potential fuel sources or produce dust explosions.
- Not storing flammable and combustible materials near the hot work area.
- Keeping and maintaining fire fighting equipment near hot work area.

4.5.5. Specific control – airborne contaminants

If workers could be exposed to other fumes, dust, vapour and gases generated during welding processes or other hot work in concentrations of chemicals or mixtures that could exceed exposure standards and be hazardous, (in particular work involving lead), then:
- Air monitoring is carried out.
- Ventilation systems are installed and maintained to capture or remove airborne contaminants when results of testing indicate need.
- Appropriate respiratory protection is provided, fitted and maintained.
- Legislative obligations are met, including health monitoring where relevant.

4.5.6. Specific control – radiation

If workers and others could be exposed to radiation during welding processes or other hot work:
- Non-flammable screens and partitions are available and used to limit exposure.
- Signage is erected to warn that welding is occurring and entry into the work area is not permitted unless safeguards are used such as PPE.
- Appropriate PPE is provided, fitted, used and maintained, including filter shades for goggles and 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:
- RCD protection is installed.
- Electrical equipment is inspected and tested to check that it is in good condition prior to use, including power switches, terminals, connections, cables and insulation.

- In areas where welding is regularly undertaken, insulation and air-ventilation should be provided to prevent workers from perspiring as perspiration is a conductor of electricity.
- 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.
- Arc welding and allied process should be undertaken in conformance with AS 1674.2 Safety in welding and allied processes, Part 2: Electrical.

4.5.8. Specific control – compressed and liquefied gases

The department manager in conjunction with the permit issuer should 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:

- Cylinders are stored and handled appropriately. (For further guidance refer to AS 4332: The storage and handling of gases in cylinders).
- 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.
- Flashback arrestors are fitted at the blow pipe and at the regulator on oxygen and lines of oxy-fuel gas systems.
- Drain and purge equipment, such as gas hoses, and lock the gas 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 is to be:
   - Suitable to the nature of the work and any hazard associated with the work.
   - Of a suitable size and fit and be reasonably comfortable for the worker(s) performing the hot work.
   - Maintained (eg clean, hygienic and in good working order), repaired or replaced when required.
   - Used or worn by the worker(s) performing the hot work.

b. PPE for hot work will be identified as required by the risk assessment and may include but not be limited too
   - Eye, face and head protection (eg goggles, helmets, hand shields and protective filters).
   - Hearing protection (eg ear muffs and ear plugs).
   - Gloves and gauntlets.
   - Clothing (eg flame resistant, long sleeved shirt, long sleeved trousers, leather aprons and spats).
   - Foot protection (eg boots and shoes).
   - Screens.
   - Respiratory protective devices (eg face respirators and air supplied respirators).

c. If PPE is selected as:
   - A primary control measure, then workers should undergo fit testing for relevant PPE and be instructed in fit checking before use.
   - A supplementary control measure, then workers should be instructed in fit checking before use.

d. The department manager should provide workers 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 Permit, should 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 should be considered including but not limited to:
   - Compliance with the confined space and prevention of falls procedures when relevant.
   - Appropriate signage erected at the work areas.
   - Safe access is provided to the hot work area and pedestrian traffic is controlled.

4.5.11. Specific control – emergency response and plans.
- Appropriate fire protection and fire-fighting equipment is accessible, properly installed, tested and maintained for the hot work activities undertaken at the workplace.
- A dated record is kept of the latest testing results, along with maintenance logs until the next test is conducted.
- The Council emergency plan includes the first aid and response procedures for incidents arising from hot work.
- Risk assessments /JSAs contain the specific emergency response requirements for the task, eg fire extinguishers, fire watcher, first aid kit etc.

4.5.12. Specific control –SWMS required for high risk construction work (refer to Prevention of Falls procedure for more details).

When Council undertakes hot work during high risk construction work:
- A SWMS is to be prepared before the proposed work commences.
- The high risk construction work is to be carried out in accordance with the SWMS.
- A copy of the SWMS is to be given to the principal contractor before the work commences and is made readily accessible to any worker involved in the work.
- The SWMS is to be reviewed and revised as necessary.
- A copy of the SWMS is to be retained until the high risk construction work is completed, unless a notifiable incident occurs, in which case it should be kept for at least 2 years after the incident occurs.

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 should be transferred to the CAPA Register for further action and management.

4.6.2. Inform each person involved in a hot work activity about the control measures selected.

a. For routine hot work tasks undertaken in a designated hot work area, the department manager or delegate should inform all relevant persons about the control measures selected that have been implemented as a result of the hazard identification and risk assessment process for hot work. Department meeting minutes, training records and risk assessment /JSAs (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/JSA 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 supervisor / team leader should make sure the permit is issued prior to work commencing. The documented risk assessment/JSA should be attached to the Hot Work Permit.

4.6.4. When the risk assessment / JSA and Hot Work Permit identifies the need for a fire watcher, the supervisor / team leader or permit issuer should nominate a competent person whose role is to maintain constant vigilance and who has the delegated authority to ensure safe work practices are maintained.

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

4.6.5. Once all selected controls from the risk assessment JSA and Hot Work Permit are in place the supervisor or team leader and permit issuer should allow work to commence.

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

4.6.7. If a Hot Work Permit has been issued, the permit issuer should 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 department manager should:

a. Make sure other PCBUs comply with the Council Contractor Management Procedure or a Procedure 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 Council.

c. Consult and coordinate activities with other PCBUs who undertake hot work, so far as is reasonably practicable, 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/JSA and or Council emergency plan for any hot work incident.

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

4.8.2. If a notifiable incident occurs, namely

- The death or a person; or
- A serious injury or illness of a person; or
- A dangerous incident

a report must be made by the *WHS Coordinator* as follows:

a. SafeWork SA :
   - Report by the fastest available means. The report can be made by phone or in writing (such as by fax, email or other electronic means).
   - If the notification is by phone this must be followed up in writing within 48 hours if SafeWork SA requests it.
   - The 24 hour Emergency Telephone number is 1800 777 209.

b. Office of the Technical Regulator
   - All incidents involving electricity must be reported to the Office of the Technical Regulator by the electrical worker or the occupier of the premises where the incident occurs
   - Death must be reported immediately via telephone. Phone: (08) 8226 5500 - Business Hours (1800 558 811 After Hours)
   - Any accident where a person requires medical assistance must be reported within one working day.
   - All other accidents involving electricity must be reported to the Office of the Technical Regulator within 10 working days of the day of the accident.

4.8.3. The Incident Reporting & Investigation Procedure should be complied with, including the requirement that the site where the incident occurred is not disturbed until an inspector arrives at the site or any earlier time that an inspector directs.

4.9. Monitoring and evaluation

4.9.1. Review and revise any existing risk control measures related to hot work, using the same methods as the initial hazard identification process:

a. When the control measure does not minimise the risk so far as is reasonably practicable.
b. 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.
c. If a new hazard or risk is identified.
d. If the results of consultation indicate that a review is necessary.
e. If a health and safety representative requests a review in accordance with the WHS Hazard Management Procedure.

4.9.2. Department managers and contract / project managers should monitor hot work activities by periodically inspecting:

a. Hot work documentation (eg risk assessments, entry permits) to make sure they have been completed in accordance with this Procedure
b. Hot work tasks to check compliance with documented procedures.
c. Checking that training and competency requirements are maintained and effective.

4.9.3. The WHS Committee should 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. A report shall be presented to the Senior Leadership Team listing outstanding items requiring their direction or enforcement.

4.9.4. The Senior Leadership Team shall 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 confined space management procedure and direct action when required. Minutes shall record outcomes of discussion and actions undertaken.

4.9.5. The Hot Work Procedure shall be subject to audit and the audit findings shall be reported as part of the ongoing management review process.

4.9.6. The Senior Leadership Team may set, monitor and review objectives, targets and performance indicators for hot work, as relevant.

5. TRAINING

5.1. The Flinders Ranges Council training needs analysis shall identify the training needs for all persons undertaking hot work tasks.

5.2. Persons undertaking hot work activities shall be trained and/or assessed as competent. This includes, but is not limited to persons required to:

5.2.1. Lead the JSA/SWMS process.
5.2.2. Raise and authorise hot work permits.
5.2.3. Undertake the role of fire watcher.
5.2.4. Use, inspect and maintain hot work plant and equipment including PPE.
5.2.5. Provide first aid medical treatment.
5.2.6. Initiate and conduct emergency rescue (including emergency drills).
5.2.7. The requirements of this procedure.
5.2.8. Developing a risk assessment / JSA, when that is part of their job function.
5.2.9. The JSA / SWMS for the particular task, including

a. The type of control measures used.
b. Procedures for reporting hazards and incidents.
c. The correct selection, fitting, use, care, inspection, maintenance and storage of personal protective equipment.
d. The correct use of tools and equipment used in the work.
e. Control measures for other potential hazards (for example, electrical hazards).
f. The emergency response for the activity.

5.3. The department manager or supervisor should check that the risk assessment/JSA is explained to those persons involved in the activity and is signed by each person before any work commences.

6. RECORDS

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

6.1. Risk assessments /JSAs
6.2. Hot Work Permits and other permits eg confined space
6.3. SWMS must be kept until the high risk construction work to which it relates is completed or if a notifiable incident occurs, the SWMS must be kept for at least 2 years after the notifiable incident occurred.
6.4. Training and competency records
6.5. Plant and equipment registers
6.6. Emergency response plan
6.7. Health monitoring records
6.8. Air monitoring records
6.9. Inspection and test records for hot work plant and equipment
6.10. Plant and equipment maintenance records
6.11. Job inspection records
6.12. Statutory notifications
6.13. Any other records relating to legislative compliance.

All records should be retained in line with the current version of GDS20

7. RESPONSIBILITIES

7.1. The *Senior Leadership Team* is accountable for:
- 7.1.1. Capital expenditure for hot work control measures.
- 7.1.2. Verifying that legislative compliance is maintained.
- 7.1.3. Periodically checking that the identification, assessment and control of hazards associated with hot work is in place.
- 7.1.4. Setting objectives, targets and performance indicators for hot work, as relevant.
- 7.1.5. Making sure a Council 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.
- 7.1.6. Monitoring the CAPA Register, incident and accident reports; enforcing close out of items when required and directing action as required.
- 7.1.7. Reviewing the effectiveness of the Hot Work Procedure within the management review process.
- 7.1.8. Making sure managers and supervisors do not direct a worker to undertake hot work outside a designated hot work area unless a Hot Work Permit has been issued.

7.2. The *department manager* is accountable for:
- 7.2.1. Checking that a record is made in the Master Hazard Register of hot work activities likely to expose Council workers and others to health and safety risks.
- 7.2.2. Checking that a JSA/SWMS that includes emergency response is developed 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 actions 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 Flinders Ranges Council's Hazard Management Procedure.
7.2.10. Implementing any corrective or preventative actions required for hot work.
7.2.11. Consulting with other PCBUs, so far as is reasonably practicable, if their duty of care overlaps.

7.3. The *contract or project manager* is accountable for:
7.3.1. Managing the risks associated with any construction work.
7.3.2. Checking that a record is made in the Master Hazard Register of all construction activities, including high risk construction work.
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.
7.3.7. Making sure a copy of the SWMS is retained until the high risk construction work is completed, unless a notifiable incident occurs, in which case it should be kept for at least 2 years after the incident occurs.

7.4. *Any person responsible for issuing a Hot Work Permit* is accountable for:
7.4.1. Making sure that hot work does not occur unless a risk assessment/JSA has been undertaken and a Hot Work Permit has been issued, in accordance with this procedure.
7.4.2. When required by the risk assessment /JSA, 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.
7.4.3. Closing out the Hot Work Permit at the end of the hot work activity after an inspection has been conducted.
7.4.4. Making sure that all documentation is fully completed and records are retained, in accordance with this procedure.

7.5. *Any worker or others undertaking hot work* are accountable for:
7.5.1. Complying with the requirements of JSA/SWMS, Hot Work Permit (if relevant) and all relevant WHS policies and procedures whilst undertaking their tasks.
7.5.2. Attending training when required.
7.5.3. Following any reasonable instruction related to hot work activities.
7.5.4. Using any PPE and safety equipment provided.
7.5.5. Assisting in assessing risk, implementing control measures and evaluating them for effectiveness as required.
7.5.6. Seeking assistance to manage any identified hazards when required.

7.6. The *WHS Committee* is accountable for:
7.6.1. Facilitating co-operation between management and workers in matters relating to hot work activities.
7.6.2. Monitoring the CAPA Register and referring issues to The Flinders Ranges Council Senior Leadership Team that require management direction or enforcement.

7.7. *Health and safety representatives* may:
- 7.7.1. Facilitate consultation between department managers and workers in relation to any hot work activity that affects the workgroup they represent.
- *7.7.2.* 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 shall be reviewed by the WHS Committee, in consultation with workers and other or their representatives, every three (3) years or more frequently if legislation or Council/Prescribed body needs change. The review may include a review of:
- 8.1.1. Legislative compliance issues.
- 8.1.2. Audit findings.
- 8.1.3. Incident numbers, incident and hazard reports, air and health monitoring outcomes, claims costs and trends related to hot work.
- 8.1.4. Feedback from managers, workers and others.
- 8.1.5. 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 for Local Government
WorkCover *SA* Performance Standards for Self-Insurers

Code of Practice: Welding Processes July 2012
Code of Practice: Managing Electrical Risks at the Workplace, July 2012
Code of Practice: Managing the Risk of Falls at Workplaces, December 2011
Code of Practice: Confined Spaces, December 2011
Code of Practice: Managing the Risk of Hazardous Chemicals at Workplaces, July 2012
Code of Practice: Construction Work, July 2012
Code of Practice: Managing the Risk of Plant in the Workplace, July 2012

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, 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 & Reporting Procedure
WHS Corrective & Preventative Action Procedure
Workplace Inspection Procedure
Council Procedures

11. DOCUMENT HISTORY:

Version No:	Issue Date:	Description of Change:
1.0	June 2010	New Document
2.0	XX 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

12. APPENDICES

Appendix 1: Sample Hot Work Permit
Appendix 2: Examples of Hierarchy of Control Elements
Appendix 3: Hot Work Risk Assessment Template

Appendix 1: Sample Hot work permit

The Flinders Ranges Council	**HOT WORK PERMIT**	**Version No**	2.0
		Issued	18th Dec 2014
		Next Review	Dec 2017
		GDS	12.63.1.1

**** A Risk Assessment is required to be completed prior to the completion of the 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)	☐	☐	Fire extinguishers supplied by the workgroup/contractor are to be located immediately adjacent to the Hot Work area and within 15m of the work to be carried out (building/fixed location fire extinguishers are not to be relied upon)
	☐	☐	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
	☐	☐	Combustible and flammable materials or fuel sources (including vegetation where practicable) are required to be cleared from the area
	☐	☐	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)
	☐	☐	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):
	☐	☐	The worksite has been isolated and traffic/pedestrian movement restricted

Specific Hot Work Controls	Yes	NA	If Yes, document additional control details below:
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)	☐	☐	
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: *Works Manager* – Where a fire detection system is disabled, emergency services and the LGA Mutual Liability Scheme must be notified if practicable.	☐	☐	
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).	☐	☐	
The nature of the work requires specific respiratory protection to be worn.	☐	☐	
The hot work involves arc-welding whereby specific controls relating to ensuring electrical and radiation safety will be required.	☐	☐	

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)	☐	☐
Extraction fan inlet is to be located as close as practicable to the contamination source	☐	☐
Contaminants are to be expelled from the space (so that they cannot be recirculated and will not harm other workers)	☐	☐
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.	☐	☐
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	☐	☐
Working at Heights: (Location)	**Yes**	**NA**
The hot work activity is located at an elevated level which has the potential for a fall hazard	☐	☐
Fall protection equipment is required to perform the task safely.	☐	☐
The fall protection equipment is maintained in good condition and regularly inspected	☐	☐

List type of fall protection equipment:

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 details;
- 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

APPENDIX 2: EXAMPLES OF HIERARCHY OF CONTROL ELEMENTS

Elimination	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 • Completing cutting with a hand or electric saw, or pipe cutter. • Using a mechanical method to join items together with nuts and bolts, screwed fittings or couplings. • Hand-filing instead of grinding. • Installing threaded pipe instead of welding or soldering.
Substitution	Examples of substitution include: • Substituting a hazardous chemical with a less hazardous one • Substituting a less volatile material to control a vapour hazard may cost less than the installation and maintenance of a mechanical ventilation system\
Isolation	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: • Isolating fuel sources from ignition sources • Isolating the source of exposure to the hazardous chemical, for example, welding in isolation booths away from others
Engineering	Types of engineering controls include the following: • Using intrinsically safe electrical equipment in hazardous areas • Process designs that minimise the generation of dusts, fumes or vapours. • Installing ventilation systems to capture or remove airborne contaminants e.g. extraction systems attached to grinding machines • Install RCD protection
Administrative	Administrative means are safe work practices that require people to work in safer ways. Examples of safe work practices include: • Written policies and work procedures (for example safe work method statements, safe working practices that avoid worker exposure to extreme heat.) • Reducing the number of workers exposed to hot work or restricting worker access to certain areas • Use of warning signs and indicating by appropriate signage the necessary PPE for those entering • Regular cleaning and removing accumulations of waste • Providing means for safe storage and disposal of hazardous chemicals • Not storing flammable and combustible materials near welding area. • Maintaining fire fighting equipment near hot work areas • Prohibiting eating, drinking and smoking in contaminated areas • Undertaking air and health monitoring when required • Providing cool drinking water and scheduling regular rest breaks • Storing cylinders in an upright position to ensure the safety device functions correctly
Personal protective equipment	Where personal protective equipment is to be used Council should ensure that the following are carried out: • The PPE is properly selected for the individual and task in accordance with the relevant Australian Standards • Users are informed of any limitations of the PPE and trained in its use and fit testing undertaken when required • PPE is be maintained by appropriately trained workers in accordance with a personal protective equipment maintenance and servicing process • Items of PPE are readily available and/or replaced as frequently as necessary and are stored in a place provided for the purpose • The areas where PPE should be used are clearly identified

APPENDIX 3: Hot Work Risk Assessment Template

The Flinders Ranges Council	**HOT WORK RISK ASSESSMENT**	**Version No**	2.0
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		Next Review	Dec 2017
		GDS	12.63.1.1

Document the hazards and analyse the risks associated with the hot work activities to be undertaken.

Location of hot work:

Special access restrictions
(due to the task involving a specific welding type or the location being a hazardous area, confined space, etc):

Reason for hot work:

Work activity description:

Likely ignition source type(s):
☐ Flame (welding, soldering, brazing, etc) ☐ Spark or slag (grinding, cutting, friction tools, welding, etc)
☐ Hot object (metal surface, plate, etc) ☐ Other:

Hazard identification, risk analysis and control measure selection:

Add an additional page if the space below is insufficient.

Specific Hot Work Issues: (tick appropriate)	☐	The hot work is to be solely undertaken by a contracted party OR Council personnel and a detailed work method statement / risk assessment has been previously prepared, reviewed by Council and is attached to this Form.	**Attach documentation & proceed to Hot work Permit**
	☐	The hot work is to be solely undertaken by Council personnel as per the specific hot work issues detailed below.	**Complete the Risk Assessment below.**

Risk Assessment Guide

Step 1 – Consider Likelihood

What is the likelihood (below) of the hazard consequence in Step 1 occurring

Almost Certain	Is expected to occur in most circumstances
Likely	Will probably occur at least once
Possible	Event might occur at some time
Unlikely	Event not expected to occur
Rare	Only in exceptional circumstances

Step 2 – Consider Consequences

What are the consequences of this hazard occurring? Consider what is the most probable consequence (below) with respect to this work hazard.

Critical	Multiple fatalities or permanent injuries
Major	Single fatality or permanent injury
Moderate	Medical treatment or lost time injury
Minor	First aid treatment
Insignificant	Incident or near miss – no treatment

Step 3 – Calculate Risk

1. Take Step 1 rating and select the correct column.
2. Take Step 2 rating and select the correct line.
3. Use the risk score where the two ratings cross on the matrix below.

H = High, S = Serious, M = Medium, L = Low

Likelihood	Consequences: Ins	Min	Mod	Maj	Crit
Almost Certain	M	S	H	H	H
Likely	M	M	S	H	H
Possible	L	M	M	S	S
Unlikely / Rare	L	L	M	M	S

Hazard (List the hazards relating to the work)	**Controls** (List the controls to manage each of the hazards)	**Responsible Party** (List the role, contractor, competency &/or prescribed occupation responsible for implementing the controls)	**Risk Assessment** (With controls in place: High, Serious, Medium or Low)

Risk Assessment Personnel:

Risk Assessment Completed by:

Name: Employer: Date:

Name: Employer: Date:

Name: Employer: Date: