SESLHD PROCEDURE COVER SHEET

Health
South Eastern Sydney
Local Health District

NAME OF DOCUMENT	Confined Spaces Risk Management
TYPE OF DOCUMENT	Procedure
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LEVEL OF EVIDENCE	National Safety and Quality Health Service Standard: Standard 1 – Clinical Governance NSW Health - Work Health and Safety : Better Practice Procedures PDR2018_013 – Section 4.5 Risk Management ISO 45001:2018 – 6.1.2 Hazard Identification and assessment of risks and opportunities
REVIEW DATE	August 2023
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FUNCTIONAL GROUP(S)	Health Safety and Wellbeing
KEY TERMS	Confined Space, Confined Spaces; Permit to Work; Critical risk;
SUMMARY	To inform managers and workers of how to identify and manage the risks associated with working in confined spaces.

1. POLICY STATEMENT

This procedure applies to the planning, managing and maintaining of safe entry and work within confined spaces. All SESLHD facility managers, engineering/maintenance managers and workers are required to follow this procedure and manage the risks associated with working in confined spaces.

All entry or work in a confined spaces is categorised as a critical and high risk activity. There is a requirement for specific planning, risk assessment, management and implementation of controls in to minimise the risk to as far as reasonably practicable. Where possible the need to enter or work in a confined space must be avoided.

2. BACKGROUND

Effective and safe systems of work must be implemented and followed for critical and high risk activity. The Model Code of Practice - Confined Spaces, and AS/NZS 2865:2001 Safe Working in a Confined Space are underpinning this procedure. It is a standard practice to use external contractors for working in confined spaces.

This procedure covers:

a) Determining competent persons
b) Identifying confined spaces
c) A Confined Spaces Register
d) Completion of Risk Assessments
e) Completion of Safe Work Method Statement
f) Issuing of Confined Spaces Entry Permit
g) Developing and implementing Risk Controls
h) Developing and implementing Emergency Procedures.

3. DEFINITIONS

Refer to Appendix A – Definitions

4. RESPONSIBILITIES

4.1 Chief Executive:

- Ensure effective systems and processes are in place to identify, manage and minimise health safety and wellbeing risks to as low as reasonably practicable.

4.2 Facility Managers:

- Providing adequate resources to manage, implement, monitor and maintain this procedure and effectively manage any associated risks.
- Maintain a comprehensive understanding of this procedure, the Model Code of Practice Confined Spaces, and AS/NZS 2865:2001 Safe Working in a Confined Space
- Report all incidents, injuries, risks, issues and concerns related to working in confined spaces, in the IMS+ reporting system and to their manager.

4.3 Engineering/Maintenance Managers:

- Consultation with workers who are involved in carrying out work in or near a confined space during the process of identifying hazards, assessing risks and implementing control measures.
- Emergency procedures including first aid and communication systems are in place prior to work commencing in or around the confined space
- A confined space register is in place for the facility and is up to date
- Ensuring all confined spaces are adequately signposted
- Complete in writing and issue Confined Spaces Entry Permits
- Risk assessment, safe work methods and emergency plans are completed before issuing an entry permit
- All workers who carry out work in confined spaces are provided with training from a Registered Training Organisation
- Refresher training is provided to workers every two years. Records of all training provided to workers in relation to confined space work must be kept according to the Health Safety and Wellbeing record keeping requirements
- Personal protective equipment (PPE) provided for confined space work, first aid or emergency rescue are maintained in good working order
- Maintain comprehensive understanding of this document and the Model Code of Practice Confined Spaces, and AS/NZS 2865:2001 Safe working in a Confined Space
- Report all incidents, injuries, risks, issues and concerns related to working in confined spaces, in the IMS+ reporting system and to their manager.

4.4 Relevant Workers comply Health Safety and Wellbeing procedures and ensure:

- They do not enter a confined space, until an entry permit and its listed controls are in place
- That they comply with the agreed entry permit and follow all safety instructions.
- That they undertake Nationally Recognized Training for working in confined spaces to be deemed a competent person
- They are aware of local arrangements for first aid and emergency procedures before commencing work in and around a confined space
- Report all incidents, injuries, risks, issues and concerns related to working in confined spaces, in the IMS+ reporting system and to their manager.

4.5 Other Persons Conducting a Business or Undertaking (PCBU):

- Prior to the commencement of work, provide the engineering/maintenance manager with evidence that they have completed the Nationally Recognized Training for working in confined spaces, including enter and work in a confined space, work in accordance with an issued work permit, conduct hazard analysis, gas test atmospheres
- Where relevant also demonstrate evidence of training in firefighting equipment, performing cardiopulmonary resuscitation, operating breathing apparatus, and undertaking confined space rescue

- Provide a copy of work specific risk assessment, safe work methods and emergency plans to the engineering/maintenance manager prior to entry to a confined space
- They do not enter a confined space, until an entry permit and its listed controls are in place
- On completion of work, ensuring any confined space entrance is tidy, clean, locked, all personnel accounted for and the key is returned to the engineering service/maintenance service
- All personal protective equipment that is required to undertake work and that could be used in emergency situation to be brought onsite and be available before entering into confined space
- Have a comprehensive understanding of this document and the Model Code of Practice Confined Spaces, and AS/NZS 2865:2001 Safe working in a Confined Space
- Report all incidents, injuries, risks, issues and concerns related to working in confined spaces, in the IMS+ reporting system or to their manager.

5. PROCEDURE

The general steps

a) Determining competent persons
b) Identifying confined spaces
c) A Confined Spaces Register
d) Completion of Risk Assessments
e) Completion of Safe Work Method Statement
f) Barricades and Signage
g) Issuing of Confined Spaces Entry Permit
h) Developing and implementing Risk Controls
i) Developing and implementing Emergency Procedures.

5.1 Competent persons

All workers with work activities related to confined spaces must be trained in confined space entry in order to be deemed a competent person and competent to perform those activities.

The training must be from a Registered Training Organisation (RTO) accredited to deliver the below specific units of competency:

- RIIWHS202E - Enter and work in a confined space
- MSMPER205 - Enter confined space
- MSMPER200 - Work in accordance with an issued permit
- MSMWHS201 - Conduct hazard analysis
- MSMWHS217 - Gas test atmospheres
- MSMPER300 - Issue work permits
- HLTAID009 - Perform cardiopulmonary resuscitation
- MSMWHS216 - Operate breathing apparatus
- PUASAR025 - Undertake confined space rescue

- MSMPER202 - Observe permit work

Engineering manager and maintenance manager must complete the following additional units of competency:

- MSMPER300 - Issue work permits

5.2 Identifying confined spaces

Based on Appendix B – How to determine a Confined Space, the definition of a confined space, the engineering manager/maintenance manager is to ensure all confined spaces are identified by engaging an external qualified provider. Confined spaces are determined in accordance with Appendix B – How to determine a Confined Space and not because work is performed in a small space.

To assist with identifying confined spaces, listed below, are common work areas that may meet the definition of confined spaces based on known risks:

- Vats,
- Tanks,
- Pipes,
- Flues,
- Chimneys,
- Silos,
- Containers,
- Pressure vessels,
- Underground sewers,
- Wet or Dry Wells,
- Shafts, Ducts
- Trenches, Tunnels, Pits or
- Other Similar Enclosed or Partially Enclosed Structures.

Refer to: Model Code of Practice Confined Spaces, and AS/NZS 2865:2001 Safe working in a Confined Space

5.3 A Confined Spaces Register

A confined space register will be maintained by engineering/maintenance manager and include the following requirements as a minimum:

a) Inspect each area under the control of the facility to identify confined spaces
b) Identify the potential hazards that workers may be exposed to when entering those confined spaces
c) Conduct a risk assessment on each type of confined space and recommend the controls
d) Emergency procedure for confined spaces

e) Listing all control measures in an action plan format for reviewing effectiveness of control measures including the personal protective equipment inspections

The register must be reviewed annually by engineering manager/maintenance manager and updated as required with any addition, alteration, removal or change of environment, change to legislative requirements or as recommended by external qualified provider. The facility must ensure the register is accessible to the workers at the site.

5.4 Completing Risk Assessments

The engineering/maintenance manager is responsible to ensure all identified Confined Spaces have a risk assessment conducted by a competent person. The risk assessment must be completed for a particular job the workers are going to carry out prior to commencing work in or near a confined space.

The risk assessment must be kept for 28 days, or if a notifiable incident occurs in connection with the work to which the assessment relates, for 2 years after the notifiable incident occurs.

5.5 Completing Safe Work Method Statement

The engineering/maintenance manager is responsible to ensure all identified confined spaces have a Safe Work Method Statement documented by a competent person prior to work commencing in or around the confined space.

A copy of the Safe Work Method Statement must be retained for the duration of the work. If a notifiable incident occurs, the Safe Work Method Statement must be kept for at least two years from the date of the notifiable incident.

5.6 Barricades and Signage

Entry points to a Confined Space shall be clearly signed or, in the case of pits, marked around the pit opening.

Confined Spaces shall be identified in accordance with **Figure 1: Confined Spaces Identification** and display signage in accordance with the requirements of AS 1319 Safety Signs for the Occupational Environment.

Areas where it is not practicable to display and maintain signage as below will be identified with stencilled signage displaying **"DANGER CONFINED SPACE ENTRY BY PERMIT ONLY"**.

Figure 1

5.7 Issuing of Confined Spaces Entry Permit

Before workers can enter a confined space, an entry permit must be issued for the confined space and can only be issued by engineering /maintenance manager. The entry permit will record the communication and consultation between site management, supervisors and those carrying out the work. The entry permit will record the agreed risk controls and safety instruction and all persons listed on the permit for entry must be made aware of the permits risk controls by their manager or supervisor before commencing the work.

Refer to: Appendix D – Confined Spaces Entry Permit

5.7.1 Rules to issuing Entry permit

- Only issued by engineering /maintenance manager
- Must be issued for each entry into the confined space.
- Each permit only applies to one confined space and allows one or more workers to enter that space.
- The permit must be kept until the work is completed, or if a notifiable incident occurs, for at least 2 years after the confined space work to which the permit relates is completed.

5.8 Developing and implementing Risk Controls

There are a range of risk controls that can be implemented to reduce the risk to workers and others in relation to confined spaces. When conducting Risk Assessments and completing a Confined Spaces Entry Permits, the Confined Spaces Control Guide is to be used to help identify appropriate controls for the identified risks.

Refer: Appendix C - Confined Spaces Control Guide

Some risk controls are mandatory and must be implemented:

- Entry Permits (issued by engineering/maintenance manager)
- Isolation / lock out (all potentially hazardous services isolated prior to any person entering the confined space.)
- Safe atmosphere/safe oxygen level (airborne contaminants below their exposure standard, flammable gas or vapour is below 5% of its Lower Exposure Limit).
- Entry and exit procedures (to identify when workers are in the confined space)
- Safe Work Method Statement

- Signs and barricades (to restrict access to unauthorized persons)

5.8.1 Information, instruction and training

All competent persons must undertake appropriate National Recognised training. Refer to: 5.1 competent persons.

5.8.2 Maintenance and inspection of personal protective equipment

Personal Protective Equipment (PPE) should be maintained in accordance with manufacture's requirements. PPE should be inspected prior to use and scheduled inspection in accordance with manufacture's requirements.

5.9 Restricted Access to Confined Spaces (Security)

Coordinators/Supervisors will ensure that confined spaces are secured, as far as is reasonably practicable, to prevent unauthorised or inadvertent access. Confined space access points shall be fitted with lids or covers that are locked or secured with devices requiring tools to remove, or through their physical size or weight can only be removed by authorised persons. Devices used to secure confined spaces should not introduce additional hazards.

5.10 Developing and implementing Emergency Procedures

Emergency and communication procedures must be in place as part of the conditions of issuing a Confined Space Entry Permit. The emergency procedures need to be completed each time a Confined Space Entry Permit is issued.

The engineering/maintenance manager is responsible for consulting with workers in regard to the Confined Space Emergency Procedures and the Emergency Procedure template is used to record the emergency plan for that specific task and entry.

Refer: Appendix E – Confined Space – Emergency Procedure Template

6. AUDIT

Compliance with this procedure is audited through the Health Safety and Wellbeing Audit Program every two years.

7. REFERENCES

External

AS/NZS 2865:2001 Safe working in a Confined Space

Code of Practice - Confined Spaces (August 2019)

Code of Practice - Construction (August 2019)

Model Code of Practice Confined Spaces

Work Health and Safety Act 2011 No 10

Work Health and Safety Regulation 2017

Internal

F126 - Health Safety and Wellbeing Record Keeping Matrix

PD2018_013 - Work Health and Safety: Better Practice Procedures

WHS Definition Dictionary

8. REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
Jan 2013	1	Updated by Peter Kuszelyk to reflect new WHS Act, Regulations and Code of Practice.
Sept 2013	2	Revised by Peter Kuszelyk
Oct 2013	2	Approved by DET
Aug 2017	3	Desktop Revision and Links Update - John Parkinson, WHS Consultant
Dec 2017	3	Processed by Executive Services prior to publishing
April 2018	4	Document title changed – Catherine Johnson, WHS Consultant
July 2020	5	Updated by Jen Hartley and Pao-Chi Huang to reflect the current practice in line with WHS Act, Regulations, Code of Practice and MoH WHS audit.
Jul 2021	6	Minor review by Ian Beard. Updated hyperlinks, definitions and terminology. Reformatted new appendices.
August 2021	6	Approved by Executive Sponsor.

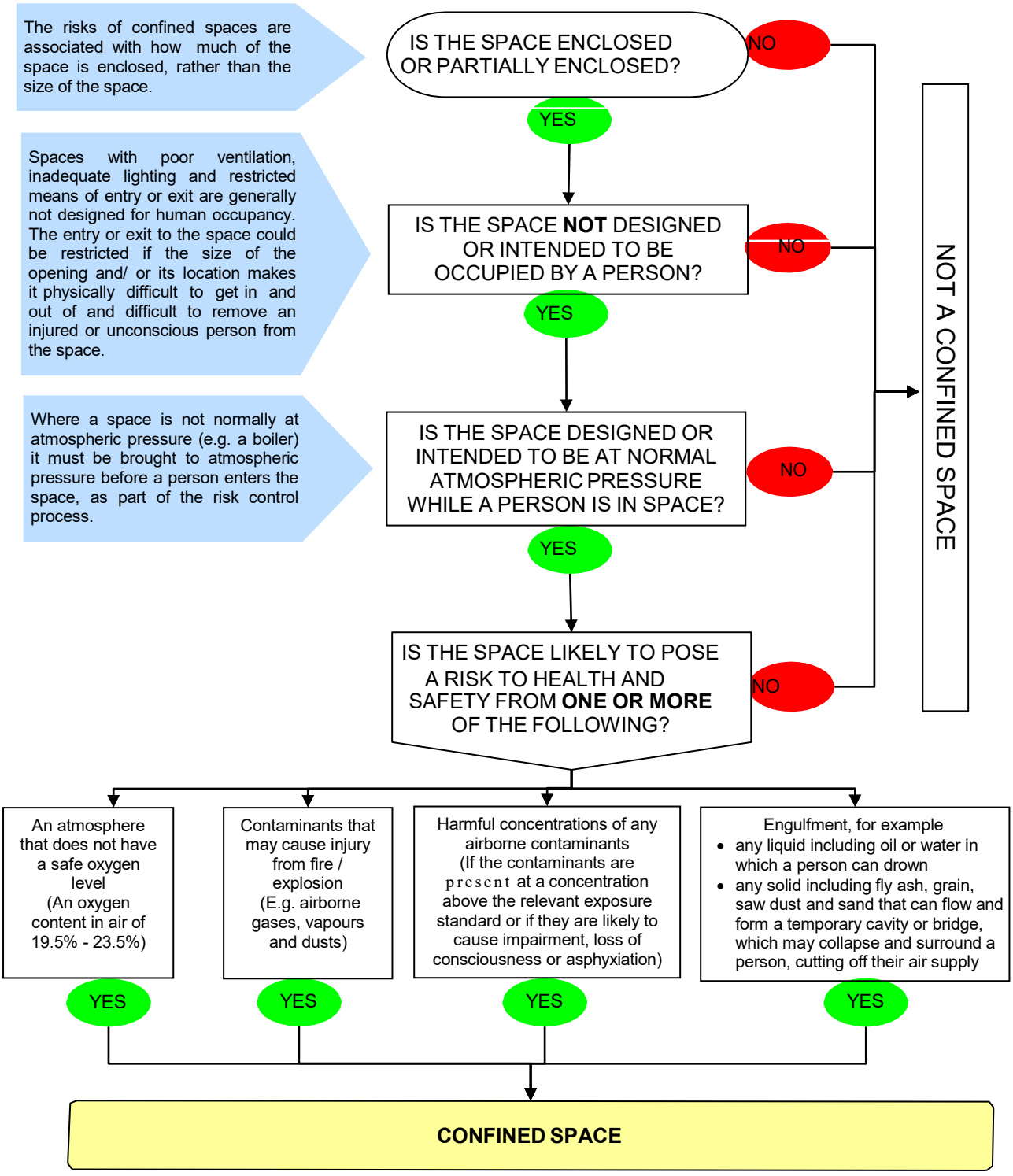
Appendix A - Definitions

Key Term	Definition
Atmospheric Monitoring:	Means the continuous monitoring of oxygen levels for any variation and for presence of atmospheric contaminants (combustible or toxic).
Breathing Apparatus:	Means a device that supplies breathable air for use in areas with high levels of airborne contaminants or irrespirable atmospheres (Self-contained breathing apparatus or self-rescuer)
Confined Space:	Means an enclosed or partially enclosed space that: • is not designed or intended primarily to be occupied by a person; and • is, or is designed or intended to be, at normal atmospheric pressure while any person is in the space; and • is or is likely to be a risk to health and safety from: • an atmosphere that does not have a safe oxygen level, or • contaminants, including airborne gases, vapours and dusts, that may cause injury from fire or explosion, or • harmful concentrations of any airborne contaminants, or • engulfment
Competent Person:	A person who has acquired through training, qualification or experience the knowledge and skills to carry out the task
Lower Exposure Limit (LEL):	In relation to a flammable gas, vapour or mist, means the concentration of the gas, vapour or mist in air below which the propagation of a flame does not occur on contact with an ignition source.
Relevant Workers:	Means a worker who could enter or work in a confined space, or other workers who are not required to enter the confined space but could carry out related functions or emergency procedures.

Appendix B - How to determine a C*onfined Space*

(Adapted from the Model Code of Practice '*Confined Spaces*' Safe Work Australia)

Understanding the nature of a *confined space* and identifying it as such requires an ongoing appraisal of its **structure** and of **circumstances** when entering it. The same structure may or may not be a confined space and a space may **become** '*confined space*' during work, for example when work activities can generate harmful concentrations of airborne concentrations. This potential should always be considered in risk assessments.



APPENDIX C - Confined Spaces Control Guide

EXAMPLES OF HIERARCHY OF CONTROL			
Safety Measure	**Explanation**	**Current Control**	**Required Control**
Elimination: Eliminate the source or task	Work carried out from outside the confined space by:		
	installing fixed or temporary cleaning devices for example spray balls using high-pressure hoses inserted through an access hatch to clean the inside of a tank		
	using remote cameras or a mirror attached to a probe for internal inspection of vessels		
	using remotely operated rotating flail devices, vibrators or air purges to clear blockages in silos		
	Using a hook, long-handled clasp or magnet on a string to retrieve an object dropped into a confined space.		
Substitution: Use a safer way of doing the task	**Undertake work away from the confined space :** Can the time working in the confined space be reduced by performing some of the task away from the confined space		
	Review of tasks, tools and equipment to be used in the confined space. I.e. Not welding in an area with flammable gas vapours.		
Isolation: Separate people or property from the confined space	**Controlled access** Has area been restricted so unauthorised persons cannot enter, i.e. locks, fencing		
	Lock out system / Isolate Must be in place if the work includes any of the following potentially hazardous services : • the introduction of contaminants or conditions through piping, ducts, vents, drains, conveyors, service pipes and fire protection equipment • the activation or energising of machinery in the confined space • the activation of plant or services outside the confined space that could adversely affect the space (for example heating or refrigerating methods) • the release of any stored or potential energy in plant • the inadvertent use of electrical equipment • If liquids, gases or vapours could enter the confined		

EXAMPLES OF HIERARCHY OF CONTROL			
Safety Measure	**Explanation**	**Current Control**	**Required Control**
Engineering: Use physical controls (such as plant /equipment) that eliminate or reduce the likelihood consequences occurring within confined spaces	Testing system for oxygen levels and airborne contaminants		
	Ventilation system to allow oxygen levels to remain between 9.5% — 23.5% by volume exposure to liquids, gases or vapours below 5% of its lower explosive limit (LEL)		
	Exhaust extraction system		
	Oxygen Alarms		
	Purging systems		
	Entry and exit – large enough for : people wearing the necessary protective clothing and equipment rescue of all people who may enter the confined space		
	safe means of access - fixed ladders, platforms, walkways etc.		
	Bridges and walkways to reduce risk of engulfing.		
Administration: Use safe work practices, systems and training.	Confined space entry permit Confined space entry training Confined space emergency procedures Confined Spaces Authorising Officers Safety signage, Warning Signs Confined space risk assessments Confined spaces register Restricted access Effective Communication System Supervision Safe Work Procedure Emergency and Rescue Procedures Fire Fighting Equipment Training in emergency procedures for workers.		
Personal Protective Equipment (PPE): Provide protective clothing and equipment for employees, supervisors and visitors. NB: items must be appropriate for the task/equipment being undertaken or operated.	Respiratory protective equipment Helmets, Gloves, Eye Protection, Footwear, Torch, etc.		

APPENDIX D - Confined Space Entry Permit

General

Location of work _____

Description of work _____

_____

_____

Control measures

Isolation

Space needs to be isolated from: _____

	Location/method
Water/gas/steam/chemicals	
Mechanical/electrical drives	
Auto fire extinguishing systems	
Hydraulic/electric/gas/power	
Sludge/deposits/wastes	

Locks and/or tags have been affixed to isolation points Yes ❑ No ❑

Atmosphere:

The atmosphere in the confined space has been tested:

Result of tests:

Oxygen _____ %

Flammable gases _____ % LEL

_____ % LEL

Other gases

_____ ppm (less than ppm)

_____ ppm (less than ppm)

Other airborne contaminants: _____

_____

_____

The conditions for entry are as marked below:

1. With supplied air breathing apparatus Yes ❑ No ❑
2. Without respiratory protection Yes ❑ No ❑
3. With escape unit Yes ❑ No ❑

Hot work

Area clear of all combustibles including atmosphere — Yes ❑ No ❑

Type of appropriate fire prevention equipment available: _____

Suitable access and exit — Yes ❑ No ❑

Hot work is permitted — Yes ❑ No ❑

Personal protective equipment

The following safety equipment must be worn:

	Type
Respiratory protection	
Harness/lifelines	
Eye protection	
Hand protection	
Footwear	
Protective clothing	
Hearing protectors	
Safety helmet	
Communication equipment	
Other	

Other precautions

Warning notices/barricades — Yes ❑ No ❑

All persons have been trained — Yes ❑ No ❑

Is continual air monitoring required — Yes ❑ No ❑

Emergency response

Procedures/Equipment

Standby person

Standby personnel requirements:

Authority to enter

The control measures and precautions appropriate for the safe entry and execution of the work in the confined space have been implemented and persons required to work in the confined space have been advised of and understand the requirements of this written authority.

Signed (*person in direct control*): _____

Date: _____ Time: _____

This written authority is valid until: _____

Date: _____ Time: _____

Persons authorised to enter confined space

I have been advised of and understand the control measures and precautions to be observed with the entry and work in the confined space.

Entry			***Exit***		
Name	***Date***	***Time***	***Name***	***Date***	***Time***

Withdrawal of written authority

All persons and equipment accounted for Yes ❑ No ❑

Equipment checked and stored correctly Yes ❑ No ❑

Signed (*person in direct control*): _____

Date: _____ Time: _____

Remarks or comments about the work: _____

APPENDIX E - Confined Space - Emergency Procedure Template

This local emergency plan for confined spaces will need to link in the facilities internal emergency procedures. The Facility Incident Controller is to be notified and consulted regarding the emergency plan along with all workers.

Emergency Information

Location of Confined Space (as per confided space register) - _____

Date: _____ **Date of last risk assessment** - _____

Notes (comments from Risk Assessment) _____

Communication method for raising alarm or seeking assistance for workers in the confined space is - _____ Standby person is _____

Emergency access to the location (consider what resources can access the area and how)

Resources	Access	Instruction's
Vehicle	*☑ Yes ☐ No ☐ N/a*	*EXAMPLE ONLY- The closest entrance for vehicles is approx. 1kilometre away, via Glover Street carpark.*
Vehicle	☐ Yes ☐ No ☐ N/a	
Stretcher	☐ Yes ☐ No ☐ N/a	
Recovery equipment	☐ Yes ☐ No ☐ N/a	

Distance to emergency medical treatment - ☐ On a Health Care Facility or ____ Km away.

First Aid

Equipment Available	First Aid Provider/s	Training in use of equipment

Local Emergency Services (e.g. fire brigade)

Consulted prior to activity	How will they be notified, By who?	Availability and equipment	Expected response time

Rescue and Recovery Team members (details) - _____

_____

Emergency and Rescue Equipment

Select	Possible Emergency	Emergency/ Rescue equipment (list)	Rescuers training in use of equipment (list)
	Cuts / Sprains		
	Fire / Explosion		
	Lack of oxygen		
	Exposure to vapours/gas		
	Exposure to chemicals		
	Cardiac Arrest		
	Other -		
	Other -		

Emergency Roles

Worker in confined space

- ☐ Confirm communication method works once in confined space, before commencing work
- ☐ Use communication method to notify Standby Person of an emergency
- ☐ Relay clear information to the Standby Person
- ☐ Await feedback from Standby Person regarding action that is being taken
- ☐ Attempt to implement first aid or emergency information relayed by Standby Person, Manager or Emergency Services.

Standby Person

- ☐ Confirm communication method works once in confined space, before commencing work
- ☐ Upon receipt of emergency alarm raised, or failure of worker in confined space to check in at nominated time, Notify Manager of the emergency and await feedback and instruction
- ☐ Record the time Manager is notified of the emergency. _____ Time
- ☐ Relay clear information to the Worker in confined space
- ☐ Provide instruction to any person that may require the use of the emergency communication method or equipment prior to handing over communication. i.e. Manager, Emergency Services.

Manager

- ☐ Upon receipt of emergency alarm raised, or failure of worker in confined space to check in at nominated time, implement Emergency Information.
- ☐ Notify Facility Manager of emergency.
- ☐ Record the time Facility Manager notified of emergency. _____ Time
- ☐ Arrange for alarm to be raised -
  - ☐ First Aid
  - ☐ Emergency Services
  - ☐ Other
- ☐ Relay clear information to the Standby Person and/or Worker in confined space
- ☐ Receive instruction on use of the emergency communication method or equipment prior to taking over any communication
- ☐ Provide briefing and Confined Space Entry Permit to any Response teams or Emergency Services
- ☐ Notify Facility Manger of outcome (Post incident)
- ☐ Complete reports and notifications (Post incident)

First Aider

- ☐ Upon receipt of emergency alarm, respond to agreed location.
- ☐ Receive briefing on arrival, including any safety advice.
- ☐ Fit or use recommended PPE
- ☐ Provide first aid, or first aid instruction when safe to do so.
- ☐ Record details of first aid provided (Post incident)