QUICK GUIDE

SAFETY Everyone. Everywhere. Every day

CONFINED SPACE

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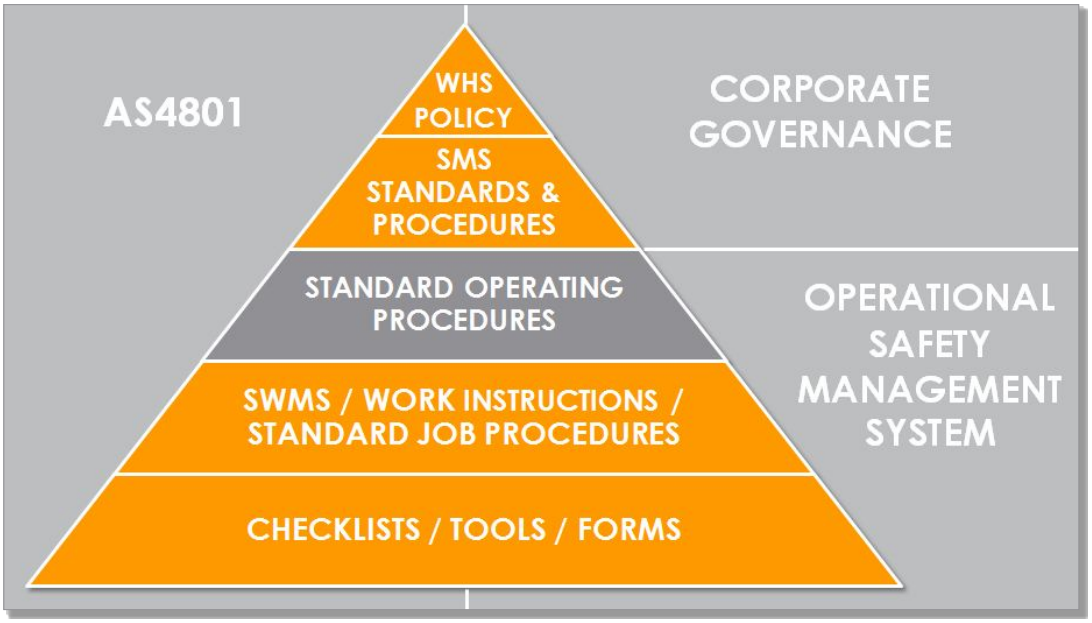
1. SMS DOCUMENT HIERARCHY



2. PURPOSE

This Quick Guide documents Queensland Urban Utilities (QUU) approach to the management of confined space. The aim is to ensure that that risks associated with confined spaces are adequately managed in order to minimise the risk of injury or harm to workers.

This Quick Guide has been developed as an information and planning resource only and is not to be used as a WHS inspection or audit tool. WHS audits and inspections must be undertaken using the relevant WHS audit or inspection tool as outlined in ***WHS Audit and Inspection Procedure (PRO366)***.

3. RELATED DOCUMENTS

- WHS Hazard and Risk Management Procedure (PRO363)
- WHS Incident Reporting, Investigation and Escalation Procedure (PRO364)
- WHS Emergency Response and Preparedness Procedure (PRO365)
- Ground Disturbance SOP (PRO419)
- Personal Protective Equipment SOP (PRO424)
- Health Management Procedure (PRO367)
- Hazardous Chemicals SOP (PRO377)
- WHS Hygiene Maintenance Standard Operating Procedure (PRO448)

- Lock Out Tag Out Procedure (PRO379)
- SWMS2 – Confined Space Entry
- SWMS47 – Restricted Work Area
- FOR336 - QUU Confined Space Entry Permit
- SWMS3 - Working at Heights
- Emergency Rescue Plan (CER91)

4. FURTHER INFORMATION

For further information, contact your Health and Safety Representative or the QUU Safety Team.

5. PROCESS ACTIONS TO ACHIEVE COMPLIANCE

AT ALL TIMES	REFERENCE
1. OVERVIEW	
(a) To manage confined space risks, QUU will: • Identify confined spaces and restricted spaces; • Conduct confined space risk assessments to identify risks and hazards; • Only permit competent workers to enter confined spaces; • Maintain equipment in accordance with manufacturer's requirements by competent workers and retain maintenance history; • Undertake Permit, SWMS and WRAPs; and • Implement LOTO when isolating infrastructure.	Section 7.1 (PRO444)
(b) Where QUU shares a workplace or site with a third party contractor or other business operator, QUU will ensure the required level of consultation occurs to ensure all required confined space arrangements and requirements are in place and effective.	
2. MEDICAL ASSESSMENTS	
(a) All QUU employees and other persons on QUU-controlled worksites who are required to enter into and work in a confined space/restricted work area must undergo a Confined Space Medical Assessment to determine their suitability for the task.	Section 7.2 (PRO444)
(b) Subsequent Medical Assessments must take place every 24 months at a minimum, or more frequently if directed by a physician.	
(c) All QUU employees and other persons on QUU-controlled worksites who are required to enter a confined space/restricted work area must meet the minimum QUU medical requirements.	
(d) *Immunisation:* • Immunisation required for employees and other persons on QUU-controlled worksites who work in confined space/restricted work areas will be determined by assessing the risks associated with the work and the particular workplace. • Employees and other persons on QUU-controlled STPs or who may come into contact with sewage or wastewater must show proof of immunisation for Hepatitis A, Hepatitis B and Tetanus. • For training and medical requirements for non-QUU workers on non-	

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QUU work sites, refer to the table in Appendix C of the Confined Space SOP.	
3. WHAT IS A CONFINED SPACE	
(a) Confined space is determined by the hazards associated with a set of specific circumstances and not just because work is performed in a small space.	Section 7.3 (PRO444)
(b) A confined space means a space that: • Is enclosed or partially enclosed; • Is not designed or intended primarily to be occupied by a person; • Is, or is designed or intended to be, at normal atmospheric pressure while any person is in the space; and • Presents a risk from one or more of the following: o Harmful airborne, flammable contaminants; o An unsafe oxygen level; or o Engulfment.	
(c) Trenches are not considered confined spaces based on the risk of structural collapse alone, but will be confined spaces if they potentially contain concentrations of airborne contaminants that may cause impairment, loss of consciousness or asphyxiation.	
4. DETERMINING WHETHER A SPACE IS A CONFINED SPACE	
(a) A confined space is determined by the structure and a specific set of circumstances. That same structure may or may not be a confined space depending on the circumstances when the space is entered.	Section 7.4 (PRO444)
(b) Entry to a confined space is considered to have occurred when a person's head or upper body enters the space.	
(c) Control measures such as providing temporary ventilation or achieving a satisfactory pre-entry gas test will not change the classification of a confined space.	
5. CONFINED SPACE HAZARDS	
(a) At QUU the following risks/hazards must be identified prior to confined space entry: • Atmospheric hazards and engulfment hazards, including, but not limited to: a. the presence of contaminants within the confined space; b. hazardous services connected to the confined space; and c. the presence of free-flowing liquid stored in, or which could potentially enter, the confined space. • Task-related hazards and other occupational hazards, including, but not limited to: a. a reduction in oxygen concentration in the atmosphere of the confined space below 19.5 per cent by volume or an enrichment of oxygen above 23.5 per cent by volume; b. the presence of airborne contaminants such as dust or fibres; c. an inability to maintain communications; d. noise;	Section 7.5 (PRO444)

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e. high or low temperatures resulting from the occupational environment or weather conditions; f. radiation from x-rays, non-destructive testing (NDT), gauges, lasers and/or welders; g. the need for manual handling; h. unsafe entry and exit, or unsafe surfaces; i. restrictions on entry or exit; j. poor lighting; k. whether openings are obstructed by fittings or equipment, with the potential to impede rescue; l. the risk of being caught in or on moving equipment; m. the risk of being overcome by fumes or other contaminants introduced as a result of performing the task; and n. exposure to potentially damaging energy sources such as electricity. • Consideration must also be given to the interface implications of other tasks being conducted in the near vicinity of the confined space.	
6. CONFINED SPACE WRAP	
(a) A WRAP must be conducted by the work team before the commencement of any tasks associated with the confined space.	Section 7.6 (PRO444)
(b) The WRAP must take into account: • the hazards of the confined space; • the tasks to be conducted, including the need to enter the confined space; • the range of methods by which the tasks can be conducted; • the hazards and associated risks involved with the method of work selected and the equipment to be used; • emergency response procedures; and • the competence of the persons conducting the tasks.	
(c) The Confined Space Entry Permit and the Confined Space SWMS must be attached to the completed WRAP and adhered to for all activities associated with the confined space.	
(d) The WRAP must be reviewed and revised whenever there is evidence to indicate that the level of risk has changed or that hazards are not controlled by the current controls.	
7. ISOLATION	
(a) Methods of isolation must be prepared and developed by the appointed authorised person, and verified and reviewed by the permit issuer/PICOW.	Section 7.6.1 (PRO444)
8. PURGING	
(a) Where necessary, the confined space must be cleared of contaminants by using a suitable purging agent.	Section 7.6.2 (PRO444)
(b) The purging agent or any gas used for ventilation purposes must not be pure oxygen or a gas mixture with an oxygen concentration of less than 19.5 per cent or more than 23.5 per cent.	
(c) Exclusion zones must be considered as part of the risk assessment and	

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consideration should be given to the erection of signage and barriers around vents and openings.	
(d) The following processes, activities, equipment or conditions that may exist in confined spaces require risk assessment and must be managed in accordance with the Confined Space Entry Permit System: • cleaning a confined space; • the location of contaminants; • flammable contaminants; • static electricity; • ventilation; • combustion engines; • the location of exhausts; • the control of mechanical ventilation equipment; and • operations causing the generation of contaminants.	
9. ATMOSPHERIC TESTING AND MONITORING	
(a) Atmospheric testing and monitoring must be conducted in a manner consistent with the hazards identified in the Confined Space Risk Assessment.	Section 7.6.3 (PRO444)
(b) Only competent and authorised gas testers must monitor or test gaseous atmospheres. No person must enter a confined space to conduct atmospheric testing or monitoring.	
(c) Approved Confined Space Entry Permits for the purposes of atmospheric testing must comply with the risk control measures identified as necessary for safe testing. Records of the test results must be recorded on the Confined Space Entry Permit.	
(d) Atmospheric tests must include testing of: • Oxygen concentration; • Concentration of flammable airborne contaminants (i.e. flammable/explosive gases) ; and • Concentration of other harmful airborne contaminants (i.e. toxic gases or vapours), such as carbon monoxide, carbon dioxide and hydrogen sulphide.	
(e) Where known flammable contaminants are present, testing must be continuous and the selected monitoring device must have a visual and audible alarm sequence. This alarm must activate at a concentration of airborne contaminants no greater than 5 per cent of the lower explosive limit.	
(f) Upper explosive limits (UEL) and lower explosive limits (LEL) of known flammable contaminants can be obtained through Australian Standard 60079 Explosive Atmospheres.	
(g) The monitoring device must be maintained and serviced as per the manufacturer's requirements.	
(h) The serial number of the device and the date of the next calibration must be recorded on the Confined Space Entry Permit.	
The required frequency of re-testing or continuous monitoring must be determined by way of a risk assessment. Re-testing or continuous monitoring must be considered when a risk assessment identifies potential variations in oxygen concentration or the potential release of	

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airborne contaminants.	
10. CONFINED SPACE ENTRY (INCLUDING PERMITS)	
(a) Prior to entry of a confined space, the following must occur: • Complete WRAP (as detailed in section 7.6 above); • A Confined Space Entry Permit must be issued by the authorised permit issuer. The Permit identifies the conditions for confined space entry, and outlines the following details; o Atmospheric testing; o Purging; o Isolation, Lock Out Tag Out; and o Serviceability of all PPE used, including respiratory protective devices. • Adhere to Confined Space SWMS.	Section 7.7 (PRO444)
11. RESCUE FROM A CONFINED SPACE	
(a) Rescue procedures must be practiced in conjunction with the refresher training every 2 years to ensure that they are efficient and effective;	Section 7.8.1 (PRO444)
(b) An Emergency Rescue Plan must be completed, practiced and understood by all members of the team prior to entry to the space (refer to CER91 for further details); and	
(c) Refer to the instructions in QUU Safe Work Method Statement Confined Space Entry (SWMS2).	
12. RESCUE FROM A RESTRICTED WORK AREA	
(a) Rescue procedures must be practiced in conjunction with the refresher training every 2 years to ensure that they are efficient and effective;	Section 7.8.2 (PRO444)
(b) An Emergency Rescue Plan must be completed, practiced and understood by all members of the team prior to entry to the space; and	
(c) Refer to the instructions in QUU Safe Work Method Statement - Restricted Work Area (SWMS47).	
13. CONFINED SPACE SIGNAGE	
(a) The mandatory danger sign must be clearly and prominently displayed for the purpose of identifying confined spaces and to notify persons that they must not enter unless authorised under a Confined Space Entry Permit or other Permit to Work.	Section 7.9 (PRO444)
(b) For QUU fixed sites (e.g. Sewage Treatment Plants, housed pump stations etc.), all confined spaces must be permanently signposted.	
(c) For QUU Water and Sewerage reticulation and trunk infrastructure, where it is not practicable for the confined space to be permanently signposted (e.g. maintenance hole/valve pit etc. in a road reservation), temporary confined space signage must be erected at the worksite while works are being undertaken.	
14. TRAINING AND COMPETENCY	
(a) All employees and other persons on QUU-controlled worksites who will enter, or supervise work in a confined space/restricted work area, must be trained and assessed to meet the required Australian Standards.	Section 7.10 (PRO444)
(b) QUU requires that QUU employees and other persons on QUU-	

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controlled worksites have their confined space and working at heights competencies reassessed within 2 years.	
(c) Refresher training on a more frequent basis than 2 years should be provided if confined space activities are conducted infrequently, such as twice a year.	
(d) Records of employees who are trained and deemed competent will be recorded in the QUU Training Management System.	
(e) Proof of 'Recognised Training', issued by a Registered Training Organisation, must be provided by contractors who: • Enter or work in confined spaces; • Undertake hazard identification or risk assessment in relation to a confined space; • Implement risk control measures; • Issue and complete entry permits; • Manage or supervise employees and other persons working in confined spaces; • Act as a stand-by person or communicate with workers in a confined space; • Monitor conditions while work is being carried out; and • Design or lay out a work area that includes a confined space.	
(f) In order to perform certain tasks, such as completing entry permits and acting as stand-by persons, QUU workers must also provide evidence that they are a 'QUU Authorised Person' with regards to confined space entry. This means that they have: • Thorough training and/or experience acquired the knowledge and skills required to perform confined space tasks competently; • Up-to-date confined space entry certifications, as outlined in the table in Appendix C; • Completed 5 certified QUU Confined Space Entries (10 for apprentices/trainees); • Been issued with, and have on their person to be sighted at any time, a QUU Authorised Person card; and • Their current 'Authorised Person' card available for presentation prior to the commencement of a Confined Entry Task.	
15. DOCUMENTATION AND RECORD KEEPING	
(a) The following records must be kept on site (and in TRIM) for all confined space entries in a manner easily accessible for audit and review: • Completed Confined Space Entry Permits; • Confined space work training records; • Risk Assessment Reports; and • Confined Space Medical Assessments.	Section 7.11 (PRO444)

6. REVIEW PROCESS

This document is to be reviewed every 2 years or earlier if:

- there is an identified risk to business;
- a significant safety event occurs;

- incident investigation or audit results show that application of the Quick Guide fails to deliver the required outcomes;
- there are changes in associated legislation; or
- there is evidence that the Quick Guide is not having a positive impact on safety-related KPIs.