

# Business Procedure

## Confined Space

### Document Number – OHS-PROC-18

This document applies to the following sites:

Brisbane Office	<input checked="" type="checkbox"/>	CQ Hydrogen	<input checked="" type="checkbox"/>	FEITH	<input checked="" type="checkbox"/>
Iron Flow Battery SPS	<input checked="" type="checkbox"/>	Meandu Mine	<input type="checkbox"/>	Non-Operational Land	<input checked="" type="checkbox"/>
SAMCo	<input checked="" type="checkbox"/>	Stanwell Battery	<input checked="" type="checkbox"/>	Stanwell PS	<input checked="" type="checkbox"/>
Tarong Battery	<input checked="" type="checkbox"/>	Tarong Site	<input checked="" type="checkbox"/>	Wambo Wind Farm	<input checked="" type="checkbox"/>
Wivenhoe Pipeline	<input checked="" type="checkbox"/>				

### Table of Contents

1.0	Purpose.....	2
2.0	Scope.....	2
3.0	Actions .....	2
4.0	Design .....	2
5.0	Confined Space Classification and Declassification .....	3
6.0	Safe System of Work Requirements .....	4
6.1	Risk Management.....	4
6.2	Authorisation .....	4
6.3	Emergency Response .....	5
7.0	Work Environment Requirements.....	5
7.1	Atmospheric Testing and Monitoring.....	5
7.2	Ventilation.....	6
7.3	Purging .....	6
8.0	Safe Work Practice Requirements.....	6
8.1	Isolation .....	6
8.2	Respiratory Protective Equipment .....	6
8.3	Entry and Exit .....	7
8.4	Signage and Barricading.....	7
8.5	Standby Persons.....	7
9.0	Monitor and Review Work .....	8
10.0	Training and Competence Requirements.....	8
11.0	Review, Consultation and Communication .....	8
12.0	References (Including Information Services).....	8
13.0	Definitions .....	9
14.0	Revision History .....	9
15.0	Appendices.....	10
15.1	Appendix A: Confined Space Document Flowchart .....	10
15.2	Appendix B: Confined Space Definition Flowchart.....	11

## 1.0 Purpose

This Business Procedure describes Stanwell's minimum requirements for designing, constructing, classifying, entering, working in, on, or near confined spaces, and the risk of inadvertent entry. It describes the systems and controls that are required to safely manage the risks associated with confined spaces.

This procedure applies to all situations where a person is entering or working in a confined space.

A confined space is 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.

But does not include a mine shaft or the workings of a mine.

## 2.0 Scope

This Business Procedure applies throughout Stanwell, all its sites and all activities under Stanwell's control. It applies to all Stanwell employees and contractors, including visitors to Stanwell workplaces.

## 3.0 Actions

Sites must ensure:

- the requirement for personnel to work in confined spaces is eliminated where reasonably practicable;
- the risk of unauthorised or inadvertent entry into a confined space is eliminated so far as is reasonably practicable;
- all confined space entry is planned;
- all equipment used in confined space entry is fit for use;
- personnel involved in confined space entry are trained, competent and authorised;
- confined space entry is risk assessed to identify potential hazards and ensure suitable risk control measures are implemented; and
- emergency procedures and communication processes are established.

## 4.0 Design

Sites must ensure, where practicable, plant or structures which include a space that is intended or is likely to become a confined space is designed, installed, constructed and/or temporarily bought onto a Stanwell site eliminates the need for any person to enter a confined space or the risk of inadvertent entry.

If it is not reasonably practicable to eliminate the need to enter or the risk of inadvertent entry:

- the need or risk is minimised as far as is reasonably practicable;
- the space is designed with a safe means of access and egress, including for rescue personnel;
- appropriate signage is erected at each entry point in accordance with *Queensland Work Health and Safety Regulation 2011*; and

- the risk to health and safety of any person who enters the space is eliminated or minimised as reasonably practicable.

Safety in design processes must be followed during the design of any potential confined space, refer to AS 2865:2009 *Confined spaces* for specific obligations of designers.

## 5.0 Confined Space Classification and Declassification

Sites must ensure a competent person classifies and declassifies confined spaces using *Stanwell Form: Confined Space Classification (T-2670)*.

To declassify a confined space permanently or temporarily, sites must ensure a risk assessment has determined it no longer meets the confined space definition.

For a confined space to be declassified as a non-confined space, it needs to have undergone sufficient changes in structure and use in order to eliminate **all** inherent hazards that defined a confined space. Temporary control measures such as providing temporary ventilation or achieving a satisfactory pre-entry gas test is not sufficient to allow a confined space to be declassified.

The Stanwell confined space declassification process addresses each element of the *Confined Spaces Code of Practice 2021* as demonstrated in Table 1 below.

**Table 1.** Stanwell confined space declassification requirements.

Code of Practice Element	Requirement	Meaning
Sufficient Changes	Controls implemented to eliminate all inherent hazards that define a confined space.	All criteria items of the Confined Space Declassification Assessment within the <i>Stanwell Form: Confined Space Classification (T-2670)</i> must have controls implemented and documented to enable declassification.
Changes in Structure	The space can remain enclosed or partially enclosed, but controls must be implemented to ensure the space is intended to be occupied by a person.	Example controls may include but are not limited to; the provision of accessible means of entry and exit (large access doors); scaffold installed for safe access within the space; lighting installed; or adequate ventilation (natural, extraction and/or forced).
Changes in Use	Controls implemented to ensure the space is at normal atmospheric pressure and has: <ul style="list-style-type: none"> <li>- an atmosphere with a safe oxygen level;</li> <li>- no contaminants, including airborne gases, vapours, and dusts, that may cause injury from fire or explosion;</li> <li>- no harmful concentrations of any airborne contaminants; and</li> <li>- no risk of engulfment.</li> </ul>	Example controls may include but are not limited to; verified isolation; purging; atmospheric testing; plant rundown and cooling; or removal and cleaning of process by-products (fly ash, coal, clinkers etc.).

The relevant Site First Response Team are to be informed of any change in the classification status of a confined space on each site i.e. classified or declassified, to ensure the most appropriate emergency response can occur.

Refer to *Stanwell Business Procedure: Safe Work System – Confined Space Entry Certificate (OHS-PROC-146)* for Safe Work System requirements applicable to confined space work.

## 6.0 Safe System of Work Requirements

### 6.1 Risk Management

Sites must manage health and safety risks associated with a confined space, including risks when entering, working in, on or near a confined space, as well as the potential for inadvertent entry.

Confined space risks must be controlled through the application of the hierarchy of controls to achieve the highest level of protection that is reasonably practicable in the circumstances.

The *Stanwell Form: Confined Space Classification (T-2670)* is to be utilised to risk assess the inherent hazards associated with each confined space.

Prior to a person entering a confined space, a *Hazard Identification Risk Assessment (HIRA)* or *Safe Work Method Statement (SWMS)* must be conducted by a competent person to assess the health and safety risks associated with the confined space.

As a minimum, the HIRA or SWMS must assess the risks associated with:

- isolating and reinstating the confined space;
- all hazards listed in the completed *Stanwell Form: Confined Space Classification (T-2670)*;
- task-specific risks associated with the scope of work; and
- simultaneous operations, where applicable.

For specific details regarding SWMS, refer to *Stanwell Business Procedure: Hazard Management (OHS-PROC-33)*.

Where a worker feels that their psychosocial safety may be compromised by working inside a confined space (i.e. confined space phobia), the worker is to report this to their supervisor or manager to ensure adequate controls are implemented.

Risk assessments must be kept for at least 28 days after the work is completed, or if a notifiable incident occurs in connection with the work, for at least two years after the incident occurred.

### 6.2 Authorisation

Sites must not direct or allow any person to enter a confined space unless there is a written confined space permit authorised by a competent person and all safe work requirements have been complied with. As a minimum, this permit must include the following:

- the specific confined space the permit is for;
- the names of persons permitted to enter the space;
- the permitted duration of work to be carried out; and
- the required risk controls based on the confined space classification risk assessment and the HIRA/SWMS.

Sites must ensure that:

- the permit is displayed near the entrance to the confined space; and
- when the work is completed and as part of the confined space close up process, a competent person must acknowledge on the permit that all persons and equipment have been accounted for and the confined space has been systematically closed up and restored correctly/safely.

Sites must ensure the confined space permit is reauthorised and approved for any re-entry into a confined space following the suspension of work.

The permit must be kept until the work is completed, or if a notifiable incident occurs, for at least two years after the confined space work to which the permit relates is completed.

Refer to *Stanwell Business Procedure: Safe Work System - Confined Space Entry Certificate (OHS-PROC-146)*.

## 6.3 Emergency Response

Sites must:

- develop a written rescue plan for each confined space entry in accordance with *Stanwell Business Procedure: Emergency Response Framework (OHS-PROC-213)*. This plan must:
  - demonstrate how personnel can be rescued in a timeframe appropriate to the hazards present;
  - identify the emergency response capabilities to perform an efficient and effective rescue; and
  - be attached to the confined space entry permit.
- ensure openings for entry and exit are of sufficient size to allow emergency access and egress, and openings are not obstructed.
- ensure all plant, equipment, and personal protective equipment (PPE) provided for emergency rescue or first aid are maintained, fit for use and ready to be deployed in the work area as required.
- ensure persons involved in confined space emergency response must be competent in the relevant training for the role they are performing in the emergency.

Refer to *Stanwell Business Procedure: Emergency Response Framework (OHS-PROC-312)* for further information regarding emergency response.

## 7.0 Work Environment Requirements

### 7.1 Atmospheric Testing and Monitoring

Personnel must not enter a confined space until a trained and competent person has tested the atmosphere. As a minimum, this testing:

- must include:
  - oxygen content;
  - concentration of flammable airborne contaminants [i.e. lower explosive limit (LEL)];
  - concentration of potentially harmful airborne contaminants;
  - any other contaminants identified in the risk assessment;
- must be representative of the entire atmosphere of the space; and
- must be performed with a calibrated, direct-reading instrument.

It is preferred that the space is tested from an external position (using items such as extension probes etc.). If it is necessary to enter the space to test remote regions, then air-supplied respiratory equipment should be worn, where this is not practicable, sites must ensure a risk assessment identifies the method by which the testing can be carried out safely.

The atmospheric concentration of a flammable gas, vapour or mist in a confined space must be less than 5% of its LEL prior to and while work is being undertaken. When this cannot be achieved:

- remove workers from the space unless a suitably calibrated, continuous-monitoring flammable gas detector is used when the atmospheric concentration of flammable gas, vapour or mist is equal to or greater than 5% but less than 10% of its LEL; or
- remove workers immediately from the space if the atmospheric concentration of a flammable gas, vapour or mist is equal to or greater than 10% of its LEL.

Atmospheric tests must be repeated:

- at a frequency determined by the risk assessment and permit; and
- following any confined space evacuation.

Sites must record and maintain atmospheric tests on the relevant template/ log.

## 7.2 Ventilation

Confined spaces must be ventilated to provide and maintain a safe atmosphere for as long as anyone is in the confined space.

Sites must ensure:

- the method and quantity of ventilation is appropriate to the space and the activities to be performed;
- the ventilation air is not contaminated, and controls are in place to prevent interruptions of supply;
- fans are used to prevent stagnant pockets in the space; and
- exhaust air from the space is directed to a location which presents no further risk.

## 7.3 Purging

Where a risk assessment identifies the potential for unacceptable levels of contaminants, sites must ensure confined spaces are purged before any person enters the space.

Purging must:

- be performed using either inert gas, steam, or water;
- **not** use any gas mixtures containing greater than 21% oxygen volume;
- be performed from outside the space wherever possible;
- be conducted such that the structural integrity of the confined space is not compromised; and
- remove contaminants to a location where they present no further risk.

Refer to further guidance on purging in *AS 2865:2009 Confined spaces*.

## 8.0 Safe Work Practice Requirements

### 8.1 Isolation

Personnel must not enter a confined space unless all potentially hazardous services or energy sources inside and connected to the space have been isolated. As a minimum, this must include:

- inadvertent release of hazardous gases, liquids, and solids;
- inadvertent energising of any electrical equipment;
- nucleonic measuring devices; and
- sources of hazardous levels of noise and heat.

Static electricity must be discharged safely until the confined space can be confirmed free of flammable gas or material.

Physical isolations must not be removed until a competent person signs an acknowledgement on the permit that the work has been completed and all people have left the space.

Refer to further guidance on isolation requirements in *AS 2865:2009 Confined spaces* and *Stanwell Business Procedure: Safe Work System – Isolation (OHS-PROC-147)*.

### 8.2 Respiratory Protective Equipment

Where a safe oxygen level or safe levels of airborne contaminants are not achievable, a risk management process must be applied to determine the most suitable air-supplied respiratory equipment (RPE) and relevant competencies of users.

Refer to further guidance provided in *AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment*.

### 8.3 Entry and Exit

Sites must ensure there are procedures in place to indicate when any worker is in the confined space, for example by using tags, a system of signing in and out on the entry permit and/or having a standby person record who is in the space.

### 8.4 Signage and Barricading

Sites must ensure signs are erected in a clear and prominent location next to each entry into a confined space that identify the space and inform workers that they must not enter without an authorised permit.

The relevant signage must also be erected:

- while work is being done in preparation for work in the space;
- immediately before entry into the space;
- while the work is being carried out; and
- while the work is being completed.

Signage alone should not be relied on to prevent unauthorised entry to a potential confined space.

To prevent the risk of unauthorised or inadvertent entry into a confined space, Sites must ensure the following:

- For open access point(s) to confined spaces where no standby person is present, soft barricading in the form of 'Restricted Access / Danger tape' is required and must:
  - physically delineate and prevent access to the confined space; and
  - be placed across the access point in a configuration that will ensure that the physical removal of the tape is required to gain access to the space. For example, a cross pattern.
- Where there remains a risk of exposure to falls between levels or falling objects (e.g. vertical confined space entrances, identified voids etc.), the following additional controls are required:
  - hard barricading suitable for managing the risks associated with the confined space work being performed applied at the access point;
  - hard barricading shall be assessed to ensure it remains suitable to manage the confined space hazards, consideration shall be given to the need for continuous ventilation (porous material); emergency egress (easily removable from within the space); and protection from falls / falling objects (penetration strength).

Note: Ventilation points and other gaps that do not meet the definition of an access point are not required to have barricading to manage the risk of inadvertent access. Where there is the potential of a fall, from one level to another and injury is likely, or where there is the potential for falling objects, ventilation points and other gaps must be managed in accordance with the *Stanwell Business Procedure: Work at Height (OHS-PROC-100)*.

Refer to *Stanwell Business Procedure: Barricading and Signage (OHS-PROC-134)*.

### 8.5 Standby Persons

A stand-by person is required prior to, and for the duration of, any confined space entry. An appointed standby person must never enter the confined space or leave the entry point while personnel are inside, even during an emergency.

The standby person must:

- be trained and competent;
- be provided with information on the confined space, rescue plan and persons entering the confined space;
- dedicated to continuously monitor the confined space; and
- establish a communication system that enables communication between persons inside and outside the confined space, preferably visual contact, and to summon help in an emergency.



## 9.0 Monitor and Review Work

Sites must monitor work in, on or near confined spaces to make sure personnel are working in accordance with the safe system of work including the implementation of control measures that are suitable, correctly installed, in use and maintained. Monitoring should include consultation with the workers involved in the confined space work.

The risk management process must be reviewed to ensure the ongoing effectiveness of controls.

## 10.0 Training and Competence Requirements

Sites must ensure all personnel involved in confined space entry have been trained and assessed as competent in accordance with the *RIIWH5202 – Enter and Work in Confined Spaces* certification from a Registered Training Organisation.

Stanwell employees will maintain competency through a three-year refresher cycle administered via the Stanwell Learning Management System (LMS). Contractors are responsible for identifying and implementing an appropriate refresher training interval process for their personnel in accordance with legislative requirements.

A competent person who directs and supervises confined space work is to be nominated and authorised to complete a confined space permit in accordance with the appropriate roles defined by the Safe Work System.

Sites must obtain and maintain evidence of all training and competency in relation to confined space work for a minimum of two years.

## 11.0 Review, Consultation and Communication

### Review:

This Document is required to be reviewed, as a minimum, every 5 year/s.

### Consultation:

Personnel consulted during the review of this document include the General Manager Health, Safety and Environment as well as any other personnel who have an interest in the process.

### Communication/Requirements after Update:

This Business Procedure will be available on the Stanwell Intranet.

## 12.0 References (Including Information Services)

Source	Reference
<b>Legislation</b>	<ul style="list-style-type: none"> <li>Queensland Work Health and Safety Regulation 2011, Part 4.3</li> <li>Queensland Confined Spaces Code of Practice 2021</li> </ul>
<b>Australian Standard</b>	<ul style="list-style-type: none"> <li>AS 2865:2009 Confined spaces</li> <li>AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment</li> </ul>
<b>Business Procedures</b>	<ul style="list-style-type: none"> <li>Emergency Response Framework – OHS-PROC-312</li> <li>Hazard Management – OHS-PROC-33</li> <li>Safe Work System – Confined Space Entry Certificate – OHS-PROC-146</li> <li>Safe Work System – Isolation – OHS-PROC-147</li> <li>Barricading and Signage – OHS-PROC-134</li> <li>Work at Height – OHS-PROC-100</li> </ul>
<b>Tools</b>	<ul style="list-style-type: none"> <li>Confined Space Classification – T-2670</li> </ul>



## 13.0 Definitions

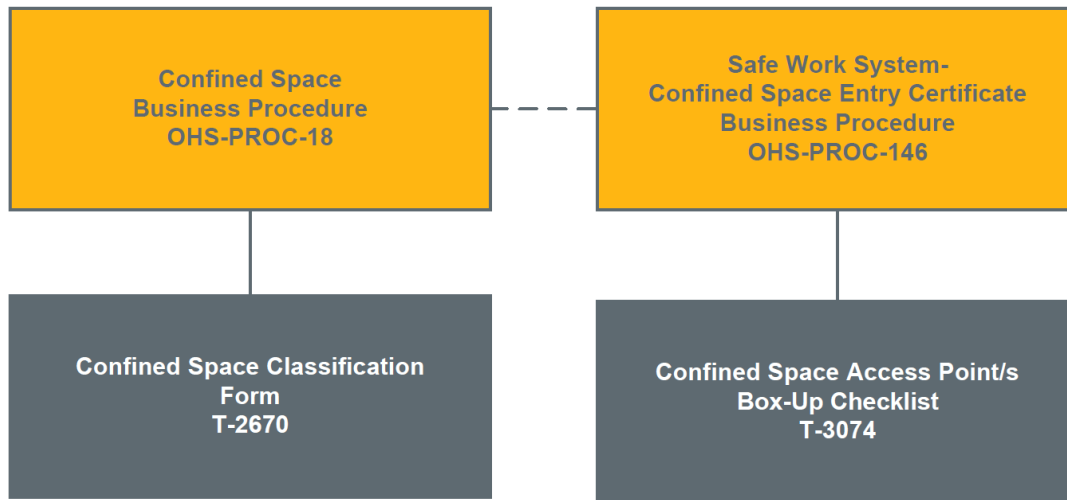
Term	Meaning
<b>Access Point</b>	An 'Access Point' refers to a point on the perimeter of a confined space large enough to allow people wearing the necessary protective clothing and equipment to pass through, and to permit the rescue of all people who may enter the confined space.
<b>Competent Person</b>	A person who has acquired through training, qualification or experience the knowledge and skills to carry out the task
<b>Confined Space Entry</b>	Entry to a confined space is considered to have occurred when a person's head or upper body enters the space.
<b>Contaminate</b>	Any dust, fume, mist, vapour, biological matter, gas, or other substance in liquid or solid form, the presence of which may be harmful to persons.
<b>Flammable Airborne Contaminant</b>	Any dust, fume, mist, vapour, or gas present in the air at concentrations that can propagate a flame on contact with an ignition source.
<b>Lower Explosive Limit (LEL)</b>	The concentration of a flammable contaminant in air below which the propagation of a flame does not occur on contact with an ignition source.
<b>Purging</b>	The method used to displace any contaminant from a confined space.
<b>Ventilation</b>	The movement of fresh air by natural, forced, or mechanical means.
<b>Standby Person</b>	A competent person assigned to remain on the outside of, and in close proximity to, the confined space capable of being in continuous communication with and, if practical, observing those inside. In addition, where necessary, the competent person may operate and monitor equipment for the safety of personnel in the confined space and initiate emergency response.

## 14.0 Revision History

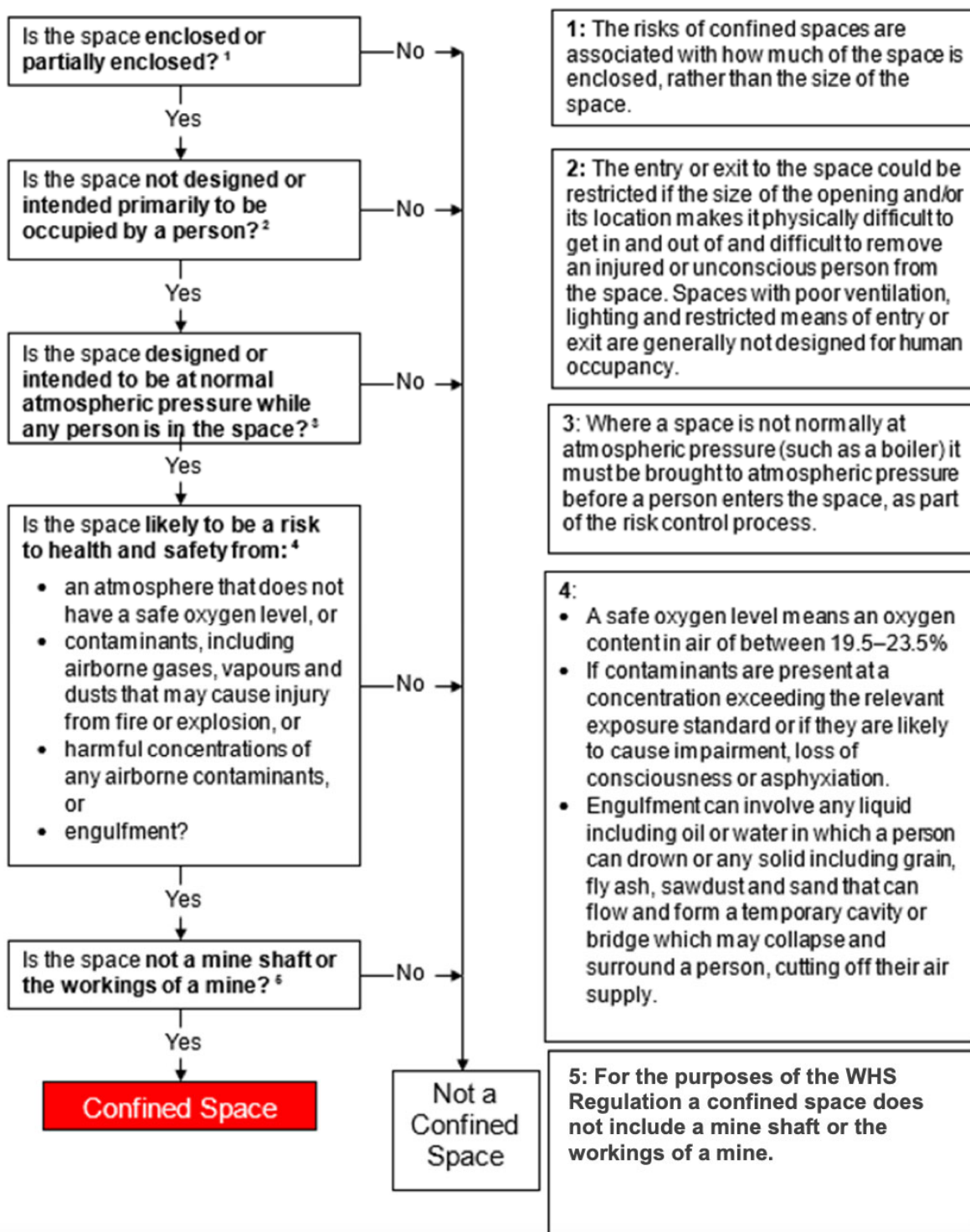
Rev. No.	Rev. Date	Revision Description	Written by	Endorse/Check	Approved by
		<b>Replaces all previous versions of OHS-PROC-18</b>			
5	17.03.2014	Document written to reflect consolidated Stanwell Corporation process and requirements .	J. Paull	M. Joy	T. Hooper
	09.06.2023	<b>Review Due Date Extended:</b> <i>Document review due date extended from 31.01.2023 to 01.06.2024 as this document will require a gap analysis with the 2021 Code of Practice and will require consultation across both sites outside of outage periods. Refer email request 23/65494.</i>	Requested by Carl Rothman.  Actioned by Shannon Scott.		
6	07.06.2024	Document updated to reflect the Confined Spaces Code of Practice 2021, including refining the criteria to enable confined space declassification. Other updates included inserting additional barricading and signage requirements, removing the requirement to maintain a confined space register, and outlining training/competency expectations. Refer to <i>HSE Advice 20204011A</i> for further details of amendments.	Jayde Smith	Carel Rothman	Kriss Ussher

## 15.0 Appendices

### 15.1 Appendix A: Confined Space Document Flowchart



## 15.2 Appendix B: Confined Space Definition Flowchart



Source: Confined Spaces Code of Practice 2021