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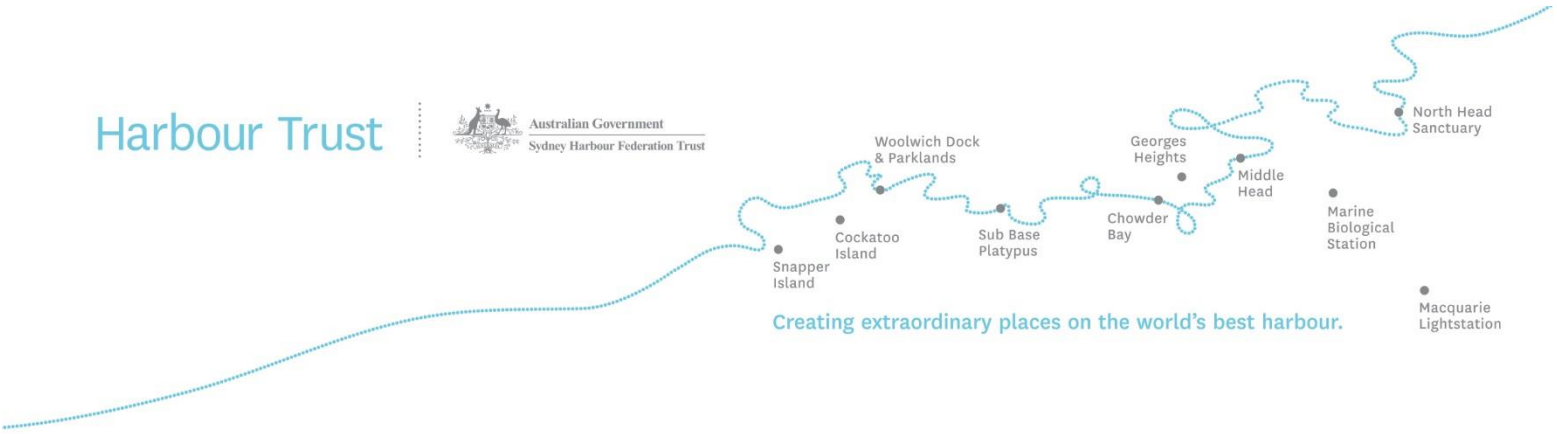

WHS-PRO-025
Confined Spaces Management Procedure

WHS-PRO-025 Confined Spaces Management Procedure					
Version	Author	Reviewer/Approver	Date	Amendments	Expiry Date
02	Various	Mary Darwell (CEO)	May 2019	Full review and update of system	May 2020
01	Benchmark OHS Consulting	SHFT Executive	August 2017	Original Version	

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PURPOSE

The purpose of this procedure is to eliminate or minimise the need to enter confined spaces; and provide for the health and safety of all persons who need to enter or work in confined spaces by preventing exposure to hazards which may otherwise be experienced when working in a confined space, and thereby prevent collapse, injury, illness or death arising from exposure to those hazards.

SCOPE

Applies to Sydney Harbour Federation Trust employees and contractors to meet the need for requirements and procedures with persons entering and working in a confined space and sets out the processes for meeting our commitments under confined spaces legislation and requirements of AS/NZS 2865 Safe Working in a Confined Space.

REFERENCES

- AS/NZS 4801:2001 Occupational Health and Safety Management Systems – 4.3.1 Planning identification of hazards, hazard/risk assessment and control of hazards/risks, 4.4.6 Hazard identification, hazard/risk assessment and control of hazards
- WHS Regulation 2011 – Chapter 4 Hazardous work, Part 4.3 Confined Spaces
- Safe Work Australia - Code of Practice – Confined Spaces
- AS/NZS 2865 Safe Working in a Confined Space

DEFINITIONS

Confined Space

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.

Confined Space Supervisor

A person assigned to oversee and maintain overall responsibility for any entry to, and work conducted, in a confined space. The Confined Space Supervisor must possess all necessary training and accreditation for their role (i.e. be 'ticketed') and ensure that it is current.

Confined Space Permit Controller

A person responsible for controlling, authorising, issuing, and monitoring compliance of Confined Space Entry Permits and Hot Work Permits. The Confined Space Permit Controller must possess all necessary training and accreditation for their role (i.e. be 'ticketed') and ensure that it is current.

Confined Space Worker
A person assigned to enter and/or occupy the confined space. The Confined Space Worker must possess all necessary training and accreditation for their role (i.e. be 'ticketed') and ensure that it is current.

Manager
For the purposes of this procedure, the term 'manager' refers to either the Building and Site Services Manager, Projects Manager, or the Volunteer Manager. The manager responsible will be dependent on the site on which the works are being undertaken

Stand-by Person
A person assigned to continually monitor the well-being of those inside the confined space, if practicable observe the work being carried out and initiate appropriate emergency procedures when necessary. The Stand-by Person must possess all necessary training and accreditation for their role (i.e. be 'ticketed') and ensure that it is current.

Safe Work Method Statements (SWMS)
A Safe Work Method Statement (SWMS) is a document that outlines the construction work activities to be carried out at a workplace, the hazards that may arise from these activities, and the measures to be put in place to control the risks.

WHS Co-ordinator
A person assigned to co-ordinate workplace health and safety operations and compliance across the Sydney Harbour Federation Trust's sites.

FORMS

Forms

- WHS-FOR-025.1 Confined Space Identification and Assessment Checklist
- WHS-FOR-025.2 Site Confined Space Register
- WHS-FOR-025.3 Confined Space Entry Permit
- WHS-FOR-25.4 Hot Work Permit

ACTIONS AND RESPONSIBILITIES

WHS Regulatory Requirements

- The WHS Regulations 2011 include specific duties for Sydney Harbour Federation Trust to manage the risks to health and safety associated with confined spaces.
- The duties include:
    a) Manage, eliminate or minimise risks to health and safety
    b) Issuance of a confined space entry permit
    c) Ensure appropriate signage is present
    d) Ensure continuous communication and safety monitoring of workers in a confined space
    e) Isolation and control of connected plant and services

f) Ensure the safety of the confined space atmosphere, including limiting the presence of flammable gases and vapours
g) Ensure that an ignition source is not introduced to a confined space if there is a possibility of causing a fire or explosion
h) Provision and availability of fire protection, firefighting equipment, emergency procedures and safety equipment
i) Provision of information, training, instruction and supervision to employees
j) Ensure the confined space entry permit and risk assessment are kept

An overview of the Hazardous Substances duties listed above is as follows.

a) Manage, Eliminate or Minimise Risks to Health and Safety

Identify and Assess

- When potential confined spaces are encountered in the workplace, the Confined Space Supervisor shall be notified, and a risk assessment is to be carried out to define the hazards, associated risk rating, controls that can be implemented to eliminate or minimise the risks.
- The Confined Space Supervisor is to identify and assess confined spaces and their particular hazards and for existing premises, plant and equipment:
  - identify all confined spaces using the ***WHS-FOR-025.1 Confined Space Identification and Assessment Checklist***, and
  - record their location in a ***WHS-FOR-025.2 Site Confined Space Register***.
- If there is doubt about whether an area is a confined space, it should be treated initially as a confined space and the following actions taken:
  - do not enter
  - obtain further guidance from safety professionals competent in confined spaces.

Safe Work Method Statements

- Prior to any work taking place in or on a confined space, the Confined Space Supervisor is to ensure that Safe Work Method Statements (SWMS) are developed and the author is to:
  - review the ***WHS-FOR-025.2 Site Confined Space Register*** and ***WHS-FOR-025.1 Confined Space Identification and Assessment Checklist*** for the particular confined space to make sure identified hazards, risks and controls are addressed in the SWMS
  - specify the controls for the work to be performed in or on the confined space
  - specify the emergency and rescue procedures to be used, including any necessary equipment and specific training requirements for the rescue team.

Minimise the Need for Entry

- Before any work commences in or on a confined space, consider alternatives to sending a Confined Space Worker into the confined space.
- These may include:
  - use of intrinsically safe closed-circuit television (CCTV) cameras to inspect the inside of the space if the atmosphere is unknown
  - use of remote control equipment, such as drills, hammers and saws once the atmosphere has been declared safe from an explosive gas source

- use of automated cleaning systems that may involve an initial need to enter the space but may reduce the frequency of entry.

Cleaning

- Wherever practical, a confined space is to be cleaned to remove any hazardous substances prior to employees entering it; these cleaning operations are to occur from outside wherever practicable.
- Any chemicals used are to be assessed as part of the SWMS development process to make sure they do not introduce additional hazards. Consult the Safety Data Sheet (SDS) for additional information.
- Where high pressure water or steam cleaning is used the following control measures are to be applied:
  - employees to be trained in the use of the equipment and in confined space work
  - warning signs to be placed in accordance with AS/NZS 1319 Safety signs for the occupational environment
  - area to be barricaded
  - make sure there is direct visual or audible contact between nozzle operators and the pump operators
  - hoses and fittings are to comply with AS/NZS 2283 – 1990 and AS/NZS 4433.1 – 1999
  - high pressure hoses to be tagged indicate working pressure and age.

b) Confined Space Entry Permit

Use of Entry Permits

- Entry into a confined space is not permitted without written authorisation of the Confined Space Permit Controller that is documented on the ***WHS-FOR-025.3 Confined Space Entry Permit***.
- The information and control measures listed on the ***WHS-FOR-025.3 Confined Space Entry Permit*** is to be updated whenever it becomes obvious that the work being undertaken involves one of the following:
  - change of the person responsible for the direct control of the work
  - significant stoppage of the work or break in work continuity, such as change of shift
  - significant change in risk, such as atmosphere or work to be performed.
- The ***WHS-FOR-025.3 Confined Space Entry Permit*** is to be displayed or immediately available for employees to sign in and sign out.

c) Signage

Prevent Unauthorised Access

- Personnel are to be protected against unauthorised access where practicable to confined spaces and have warning signs placed at each entry point.
- This is particularly important where a confined space is identified as containing an atmospheric contaminant or an oxygen level of less than 19.5%.
- Signage is to conform to the requirements of AS/NZS 1319. Other safety signs such as those that denote the presence of a particular hazard or need for PPE may also be required to be placed at the entry point of the confined space.

d) Communications and Safety Monitoring

Stand-by Persons

- The Confined Space Supervisor shall ensure a Stand-by Person is to be used when a Confined Space Worker is inside a confined space.
- Stand-by Persons are to be trained and competent in:
    - confined space entry and first aid
    - remain outside and in close proximity
    - be in continuous communication with those inside,
    - be capable of operating any monitoring equipment used to make sure continued safety inside the confined space
    - be capable of initiating emergency procedures, including rescue procedures if required
    - have communication and first aid equipment available.

Equipment

- Sydney Harbour Federation Trust equipment used to test and/or monitor the conditions of the confined space, or used in the undertaking of works, must be tested for accuracy and suitability, and tagged as approved equipment if the requirements are met.
- Where contractor equipment is relied upon, proof of calibration, regular testing and overall suitability is required.

e) Isolation and Control of Services

- The Confined Space Supervisor is to make sure that prior to entry into a confined space that:
    - steps have been taken to prevent accidental introduction of materials into the confined space through equipment such as piping, ducts, vents, drains, conveyors, service pipes or fire protection equipment
    - machinery, including stored energy, has been de energised, and/or locked-out or tagged-out at each isolation point for each person
    - other energy sources that may be external to, but are still capable of adversely affecting the confined space have been isolated.

f) Confined Space Atmosphere

Safety of Atmosphere

- The Confined Space Supervisor is to make sure no one enters a confined space until the atmosphere has been tested to make sure:
    - it contains a safe level of oxygen
    - atmospheric contaminants have been removed
    - temperature extremes have been controlled
    - concentration of flammable gases is below 5%LEL.
- Atmospheric testing and monitoring is to be carried out to make sure levels of contaminants do not exceed the appropriate national exposure standards.
- Where natural ventilation is insufficient to provide a continuous supply of fresh air and remove contaminants from the atmosphere, the confined space is to be artificially ventilated.

- A forced draft fan or air blower is to be supplied for general ventilation of a confined space, or to prevent a space (such as a trench under construction) becoming a confined space.
- If a safe atmosphere cannot be provided, employees may only enter the space if equipped with and suitably trained in the use of PPE, including air supplied breathing apparatus.
- Hazardous substances introduced by the work should be identified and controlled accordingly.

g) Ignition Sources

Hot Work

- Hot work can increase the risk of work in confined spaces as it can deplete the oxygen levels and produce hazardous substances/fumes.
- To reduce the risk, the following precautions are to be taken:
    - remove all combustible materials not required for the task
    - protect combustible materials that cannot be removed with a suitable flame retardant covering
    - place portable hand-held water or dry chemical powder fire extinguishers in the space
    - switch off the power to arc welding equipment at source and if practical remove it from the space during rest breaks or overnight
    - remove and depressurise torches and hoses from the confined space if welding or thermal cutting using gases is suspended during meal breaks or overnight
    - identify and remove any flammable coatings on a surface being welded or cut before the hot work begins
    - use exhaust ventilation to extract fumes from the confined space
    - make sure the Stand-by Person checks the area for fire 30 minutes after the work has completed (the person checking for fire is not to enter the space to do so)
    - keep gas cylinders outside the confined space.
- These controls and any others deemed necessary are to be incorporated into the SWMS for the task.
- A ***WHS-FOR-25.4 Hot Work Permit*** is also to be issued by the Confined Space Permit Controller prior to commencement of related work.

h) Fire Protection, Firefighting, Safety Procedures and Emergency Equipment

- Emergency, safety and personal protective equipment, including fire protection, firefighting, rescue and first aid equipment, is to be available in close proximity to where the confined space work is carried out.
- It is not considered sufficient to rely upon the emergency services to make a rescue where time is a critical factor in the rescue.
- Rehearsals of emergency/rescue and first aid procedures are to be carried out which may range from a simple walk through by employees before entry for lower risk spaces or work, or scheduled drills involving air supplied breathing apparatus, fall arrest equipment, stretchers and the involvement of the emergency services for higher risk spaces.
- The factors that determine the complexity, frequency and formality of rehearsals are:
    - frequency of confined space work
    - number of persons who may require rescue

  - ease of entry into the confined space
  - distance from the entry of the employees inside the space
  - risk to those undertaking the rescue
- Before work begins, the Confined Space Supervisor shall ensure personnel are briefed in safety and emergency procedures. At a minimum, the following should be covered:
  - previously rehearsed emergency routines including availability and access to emergency equipment
  - hazards that could not be eliminated and the controls that are in place
  - SWMS relevant to the work space or type of work.

i) Information, Training, Instruction and Supervision to Employees

- In relation to confined spaces, appropriate training is mandatory for all:
  - Employees including contractors required to work in a confined space (Confined Space Workers).
  - Confined Space Permit Controllers or delegates required to issue entry and hot work permits.
  - Confined Space Supervisors and employees required to supervise work in a confined space.
  - Persons required to undertake a risk assessment.
- The Confined Space Supervisor shall ensure that training is provided by a recognised training provider in compliance with the National Standard for Working in a Confined Space.
- Information should include the nature of the hazards, risks to health, and the controls in place to manage and mitigate them.

j) Compliance and Maintaining Records

Compliance and Audit

- Periodically, an audit should be undertaken to assess compliance with the Confined Spaces Management Procedures.
- Any learnings, observations and improvements highlighted through the audit process should be implemented in future undertakings.

Record Maintenance

- Confined space entry permits, hot works permits and risk assessment documentation must be kept on record after the completion of works.

APPENDIX 1 – CONFINED SPACE MANAGEMENT PROCEDURE - OVERVIEW

STEP 1 - PLANNING		
STEP	**DESCRIPTION**	**RESPONSIBLE**
1.1	Ensure key confined space hazards and controls are included in the workplace induction	WHS Co-ordinator
1.2	Conduct a confined space evaluation to determine whether the identified areas meet the definition of a confined space using ***WHS-FOR-025.1 Confined Space Identification and Assessment Checklist***	Confined Space (CS) Supervisor
1.3	Ensure all entries into confined spaces display appropriate signage	CS Supervisor
1.4	Develop the Safe Work Method Statements (SWMS) in consultation with the work crew to ensure risks associated with confined space work are identified, assessed and documented	CS Supervisor
1.5	Ensure the Stand-by Person and those entering a confined space have received accredited training to do so	WHS Co-ordinator
1.6	Identify, procure and ensure correct calibration and/or compliance with standards of equipment needed for confined space entry and work (e.g. air monitoring, rescue equipment, specialised PPE, etc.)	Manager
1.7	Submit a confined space entry permit to the permit controller for approval using ***WHS-FOR-025.3 Confined Space Entry Permit***	CS Supervisor
1.8	If appropriate, issue a confined space entry permit and ensure that all control measures are in place prior to entry	CS Permit Controller
1.9	Ensure confined space rescue plans are developed and communicated to Stand-by Person and rescue team	CS Supervisor
1.10	Ensure work crew involved has reviewed, read and understood the entry permit requirements and signed on to the permit	CS Supervisor
1.11	Develop a confined space register outlining the details of all confined spaces using ***WHS-FOR-025.2 Site Confined Space Register***	WHS Co-ordinator

STEP 2 – CONDUCT WORK		
STEP	**DESCRIPTION**	**RESPONSIBLE**
2.1	Ensure all energy sources are isolated	CS Supervisor
2.2	Install signage and barricading around access points to the confined space to prevent unauthorised entry	CS Supervisor
2.3	Display the confined space entry permit at the main access and egress location, along with a copy of the SWMS	CS Supervisor
2.4	Ensure the Stand-by Person is in position at the entry point of the confined space	CS Supervisor
2.5	Prior to the Confined Space Worker(s) entering the confined space, ensure a trained person conducts atmospheric testing to determine whether the atmosphere within the space is safe	CS Supervisor
2.6	Re-test atmospheric conditions if personnel are absent for 1 hour or more, or if the environment conditions have changed	CS Worker
2.7	If required, ventilate the confined space to establish and maintain a safe atmosphere	CS Supervisor
2.8	If undertaking Hot Works in a confined space, assess the environment for additional risks and hazards. Before hot works commence, an authorised Hot Work permit must be obtained using the ***WHS-FOR-25.4 Hot Work Permit***	CS Supervisor & CS Permit Controller
2.9	Conduct confined space work in accordance with the Confined Space Code of Practice, training received and relevant procedures	CS Worker

2.10	Ensure the confined space is left in a clear and safe state. Return the confined space permit to the Permit Controller at the completion of the activity or expiration of the permit (whichever occurs first)	CS Worker
2.11	Retain all training records for a period of 2 years, and all confined space documentation for 28 days (minimum) after project completion. If there has been an incident related to the confined space works, documentation must be kept for a minimum of 2 years.	WHS Co-ordinator

STEP 3 - CHECK		
STEP	**DESCRIPTION**	**RESPONSIBLE**
3.1	Ensure confined space rescue drills are periodically conducted to determine potential improvements	Manager
3.2	Conduct audits of confined space activities for compliance	WHS Co-ordinator

STEP 4 - IMPROVE		
STEP	**DESCRIPTION**	**RESPONSIBLE**
4.1	Ensure corrective actions from audits, inspections and investigations are implemented and monitored for effectiveness	Manager
4.2	Where necessary, organise refresher training for workers undertaking regular confined space work	WHS Co-ordinator