

HEALTH AND SAFETY

SAFETY POLICY & ARRANGEMENTS



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Subject: Confined Spaces

Introduction

This document forms part of the National Ice Centre's organisational written safety policy arrangements.

Departments, services or teams may consider it appropriate to develop additional guidance and systems of work on specific work related activities.

Where proposals, additional guidance or changes to systems of work will have an impact on health, safety and welfare, this will be discussed and agreed at the Health & Safety Committee.

If you have any questions or require further information or support on the contents of this document, please contact the NIC Health & Safety Advisor or Corporate Safety Advice.

Overview Of Management & Colleague Responsibilities

Manager Responsibilities

Below is an overview of the responsibilities which is intended to support managers in identifying their key duties that need to be taken to comply with the requirements of this document and the safety management systems of the National Ice Centre.

- Managers need to ensure that colleagues or others are required to enter a confined space, this must be done under a completed and where necessary, formalised 'Permit to Work'.
- Managers must ensure that any person entering a confined space is suitably competent and trained to enter that location.
- Manager must ensure that appropriate controls are in place and where necessary, a formalised rescue plan has been developed in the event of an emergency.

Employee Responsibilities

The Health & Safety at Work Act 1974 section 7 requires all employees to consider their own health & safety and the safety of others.

As an employee of the National Ice Centre, if you have concerns in relation to health & safety that is likely to cause you or someone else, injury or ill health then you must ensure that the concern is communicated to your manager immediately.

You are also required to co-operate with the management of the National Ice Centre to ensure compliance with the health & safety arrangements, policies and procedures and work to the requirements identified within this document.

Definition Of A Confined Space

A confined space is identified by the Health & Safety Executive (HSE) as 'any space of an enclosed nature where there is a risk of serious injury or death from dangerous conditions or hazardous substances'.

Some confined spaces, by their very nature, are easily identifiable and may include:

- Storage tanks.

- Enclosed drains.
- Sewers.
- Tunnels.

These types of confined space are likely to fall into a 'high-risk' category.

Other types of confined space environments may be less obvious but can still present a risk because of the nature of activity which may take place. These locations can include:

- Service ducts.
- Open-topped chambers.
- Cellars.
- Caves or other types of underground chambers.
- Roof spaces.
- Any unventilated or poorly ventilated room/space.

Dangers From Entry Into A Confined Space

Although rare, entry into a confined space is responsible for a number of fatalities each year.

In addition to the fatalities, a number of other workers suffer serious injuries and ill health because of the confined space that they are working within.

It is not only those who are working within a confined space who are killed or injured, but those who are then tasked with trying to rescue them without proper have the necessary training and equipment to do so safely.

Hazards Present Within A High Risk Confined Space

As the manager of a person entering a confined space, you must be aware of all potential hazards that may already be present within that location prior to the commencement of any work activity and could include:

- A lack of oxygen;
- An explosive atmosphere;
- A toxic atmosphere;
- Noxious gases, liquids or solids.

These hazards can be present in the more easily identifiable confined spaces such as storage tanks, enclosed drains, sewers, inspection chambers and tunnels.

As a manager, you must ensure that any work within your control where a colleague enters a confined space is subject to an effective testing regime using a suitable gas detector which is correctly calibrated in completed by a competent person prior to any entry.

'Natural' Hazards That May Be Introduced Into Confined Space

Whilst working within a confined space, it is also possible that naturally occurring hazards may be present which may also present a significant risk to any worker operating within that location.

These hazards may include:

- Noxious gases which may not be present in the atmosphere until agitated by a person entering the space i.e. disturbing sludge residue underfoot producing methane;
- Noxious gas leaks into trenches and pits in contaminated land, such as old refuse tips and old gas works;
- Noxious gases entering tanks or vessels from connecting pipes;
- Flooding from deep, fast-flowing water including rapid rise of water level;
- Hot conditions leading to a dangerous increase in body temperature;
- The importance of continuous detection / inspection in the higher risk categories of confined space is essential as hazards can be introduced into the space after initial detection / inspection has taken place;

- Exposure to biological hazards such leptospirosis and alveolitis from contact with rats urine or bird droppings

Additional Hazards That May Be Present Within A Confined Space

Whilst working within a confined space, it is also a possibility that the tasks being undertaken may present an additional hazard may create a significant risk to the workers working within the confined space.

These hazards may include:

- Use of machinery, such as grinders which may introduce dust etc.
- Gas, fumes or vapours may be introduced, for example, during welding, or use of generators that could fill the space with diesel fumes;
- Chemical use may expose persons to the risk of inhaling hazardous concentrations, oxygen depletion, or the risk of explosion;
- Electrical equipment must be suitably protected to prevent both the risk of ignition in potentially flammable atmospheres and the risk of electric shock is prevented;
- Slippery, uneven or fragile conditions underfoot;
- Restricted headroom or width;
- Contact with needles and other sharps.

As with other risks, these additional hazards need to be considered within the risk assessment process and identified controls will need to be implemented.

Confined Space Risk Assessment & Permit To Work

Working in confined spaces presents a specific hazard / risk which means that lone working is not an acceptable practice.

Supporting documentation will need to include method statements, risk assessments, both generic and site specific and 'Permits to Work' and each document must consider the number of personnel involved both within the confined space and external support and assistance that is needed.

The risk assessment **must** be supported by a completion of an appropriate 'Permit to Work' which will identify the specific people, dates and authorisation on who will be involved.

Guidance on completion of permits to work can be found within the safety manual within Guidance and Information sheet' Permits to Work'

Prior to the entry into a confined space, the risk assessment that is undertaken will need to consider the following:

- The task;
- The working environment;
- Working materials and tools;
- The suitability of those carrying out the task;
- Arrangements for emergency rescue.

If risk assessment identifies risks of serious injury from work in confined spaces then the following key duties must be followed:

- Avoid entry to high-risk spaces if practicable, e.g. by doing the work from the outside;
- If entry to a confined space is unavoidable, follow a safe system of work;
- Put in place adequate emergency arrangements before the work starts.

Controls For Entry Into Confined Spaces

Avoid entry into high risk areas

Management must where practicable plan work in confined spaces so that entry is avoided, particularly where the risk is high.

Some suggestions for entry avoidance are:

- Modify the confined space so that entry is not necessary – e.g. relocating equipment to outside of the confined space, opening up the space so that it is no longer considered to be a confined space;
- Have the work done from the outside - e.g. inspections, sampling and cleaning operations can be carried out using appropriate equipment and tools.

Where entry is unavoidable

As a manager, any work where entry into a confined space is unavoidable, a safe system of work must be prepared and put into practice.

A check list considering a number of different elements to include preparation for a safe system of work is in place to support managers and must be referred to prior to entry.

In each case, the checklist, risk assessment and Permit to Work should be in place to identify the necessary information / precautions to reduce the risk of injury and may include some or all of the following controls:

Permit to Work

In the event of any entry into any high-risk confined space, a 'Permit to Work' system must be completed by a suitably competent person.

A 'Permit to Work' is a formalised checking system specific to the tasks being undertaken which ensures that all hazards have been considered and that communication has taken place between managers, supervisors, and those carrying out the work.

The benefits of a formalised 'Permit to Work' are that it will record:

- Clear identification as to who may authorise jobs;
- Clear identification as to who is responsible for carrying out precautionary measures;
- The inclusion of contractors, so as to monitor their activities;
- Ensures controls are in place for the duration of time spent in the space.

Emergency Procedures

Emergency arrangements will depend on the risks that are present within the confined space.

If the risk assessment identifies a requirement for suitable arrangements, management must consider:

Communication Systems

- Who does what;
- Who raises the alarm;
- How will the alarm be raised.

Rescue and resuscitation equipment

- Is equipment available;
- Have rescuers been trained;
- Is equipment appropriate.

Capabilities of rescuers

- Are rescuers sufficiently fit;
- Can they use all equipment;
- Do they understand the risks to themselves.

Shut down

- Is it necessary to shut down any plant / equipment / process before rescue can commence.

First-Aid procedures

- Does the permit to work / risk assessment identify specific first aid requirements;
- Are trained first aiders available;
- Is suitable first-aid equipment available;
- Will resuscitation equipment be required as part of the first aid provision.

Local emergency services

- How are local emergency services alerted;
- Where will the emergency services be met;
- Who will deal with them upon arrival.

‘IF IN DOUBT – DO NOT ENTER’

Management and colleagues must work together to ensure that all the identified required controls and precautions are in place.

Where this is not the case, work must not take place until the concerns have been addressed.

References & Further Information

The following information and reference material is in place to assist managers to understand their responsibilities and duties.

NIC Documentation

- Confined Space – Permit to Work
- Confined Space Checklist

External References

- L101 – ‘Safe Work in Confined Spaces’ (HSE)
- INDG 258 - ‘Safe Work in Confined Spaces’ (HSE)