

Confined Spaces Policy

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Contents

1. Introduction	3
2. Definitions	3
3. Roles and Responsibilities:	3
3.1 Managers	4
3.3 Health and Safety Team	4
4. Risk Assessment.....	4
4.1 Avoid entering confined spaces	5
4.2 Safe systems of work	5
4.3 Emergency procedures	8
5. References.....	8

1. Introduction

This Policy applies to any work activities involving entry into substantially enclosed places where inadequate ventilation could result in certain hazardous situations arising and are therefore subject to the Confined Spaces Regulations 1997.

A confined space is somewhere which is substantially enclosed (so that one couldn't escape easily), and where there is a possibility of serious injury by asphyxiation, poisoning or drowning. Some activities may render any enclosed space into a confined space.

2. Definitions

A confined space means “any place including any chamber, tank, vat, silo, pit, trench, pipe, sewer, flue, well or any other similar place in which, by virtue of its enclosed nature, there arises a reasonably foreseeable specified risk”.

A specified risk means a risk of –

- a. Injury from fire or explosion, e.g. ignition of a build-up of flammable gas/vapour or oxygen enrichment.
- b. Loss of consciousness; from increased body temp e.g. heat stress from a hot workplace (such as from entry into a furnace which has not cooled down fully) or from the effect of the amount of protective clothing needed to be worn.
- c. Loss of consciousness or asphyxiation arising from gas, fume, vapour, or lack of oxygen.
- d. Drowning as a result of an increase in the level of liquid, e.g. the filling of a vat as could occur if the supply pipes had not been properly isolated.
- e. Asphyxiation arising from a free flowing solid (such as flour, grain, sugar, or sand) or from being prevented from reaching a respirable atmosphere by entrapment by a free flowing solid

As well as work in a lift shaft, or welding inside a tank as obvious examples, simpler situations such as the use of cleaning fluids in an enclosed poorly ventilated space must be considered.

Confined Spaces may be a permanent aspect of the Estate infrastructure but may also be temporary due to the nature of the work taking place, temporary changes with introduce limitations to the Estate and also temporary structures (including art projects).

3. Roles and Responsibilities:

As employer, the University bears primary responsibility for compliance with the substantive requirements of the Regulations.

The University delegates the following duties to Dean and Directors within whose area of responsibility confined space work is carried on to ensure that such activities are planned and managed in compliance with the Confined Spaces Regulations 1997, with prior approval from H&S team and following Permit to Work process.

3.1 Managers

Those with responsibilities for staff working in confined spaces must

1. Assess the work to see if entry can be avoided e.g. by adopting different working arrangements.
2. If it is not reasonably practical to avoid entry, then the precautions need to be identified in a written risk assessment. A written safe system of work must be produced, and entry must be in accordance with a "Permit to Work". A prior consultation with an Appointed Person will be required which may involve additional costs and time (see sub-section "Permit to Work" in section 4.2)
3. Emergency arrangements for rescue and resuscitation, raising the alarm etc. are required.
4. There are also provisions relating to access opening sizes, breathing apparatus or other respiratory protective equipment, ropes and harnesses and training.

3.2 Individuals carrying out works in confined spaces.

Individuals who plan, organise, or lead research or maintenance which may involve entry into a confined space must ensure that they follow all the necessary arrangements within this policy and conform to the safety instructions issued to them.

3.3 Health and Safety Team

Support those with undertaking their duties as above and in accordance with the relevant HSE guidance, including review of relevant risk assessments.

4. Risk Assessment

A suitable and sufficient assessment of the risks for all work activities is required for the purpose of deciding what measures are necessary for safety (**The Management of Health and Safety at Work Regulations 1999, regulation 3**).

For work in confined spaces this means identifying the hazards present, assessing the risks, and determining what precautions to take. In most cases the assessment will include consideration of:

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

HSE's [Five steps to risk assessment](#) and [London Met Risk Assessment Policy](#) will help you further. Any assessment must be undertaken by somebody competent to do so and support is available from the Health & Safety Team.

If your assessment identifies risks of serious injury from work in confined spaces, such as the dangers highlighted above, the [Confined Spaces Regulations 1997](#) apply. These regulations contain the following key duties:

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

These duties, and what you need to do, are further described in this document.

4.1 Avoid entering confined spaces

You need to check if the work can be done another way so that entry or work in confined spaces is avoided. Better work planning or a different approach can reduce the need for confined space working. Ask yourself if the intended work is really necessary, or could you:

- Modify the confined space itself so that entry is not necessary.
- Have the work done from outside, for example:
- Inspection, sampling, and cleaning operations can often be done from outside the space using appropriate equipment and tools.
- Remote cameras can be used for internal inspection of vessels.

4.2 Safe systems of work

If you cannot avoid entry into a confined space, make sure you have developed and applied a safe system for working inside the space. This is a documented procedure which outlines each step of the process you are going to undertake with the necessary precautions to reduce the risk of injury. Use the results of your risk assessment to help identify the risk and precautions. These will depend on the nature of the confined space, the associated risk and the work involved.

The following checklist is not intended to be exhaustive but includes many of the essential elements to help prepare a safe system of work:

Appointment of a supervisor

Supervisors should be given responsibility to ensure that the necessary precautions are taken, to check safety at each stage and may need to remain present while work is underway.

Are persons suitable for the work?

Do they have sufficient experience of the type of work to be carried out, and what training have they received? Where risk assessment highlights exceptional constraints as a result of the physical layout, are individuals of suitable build?

The competent person may need to consider other factors, e.g. concerning claustrophobia or fitness to wear breathing apparatus, and medical advice on an individual's suitability may be needed.

Isolation

Mechanical and electrical isolation of equipment is essential if it could otherwise operate, or be operated, inadvertently. If gas, fume, or vapour could enter the confined space, physical isolation of pipework etc needs to be made. In all cases a check should be made to ensure isolation is effective.

Cleaning before entry

Ensure the area is clean and free from hazardous substances, fumes and gasses should be ventilated before entry.

Check the size of the entrance

Is it big enough to allow workers wearing all the necessary equipment to climb in and out easily, and provide ready access and egress in an emergency?

For example, the size of the opening may mean choosing airline breathing apparatus in place of self-contained equipment which is bulkier and therefore likely to restrict ready passage.

Provision of ventilation

You may be able to increase the number of openings and therefore improve ventilation.

Mechanical ventilation may be necessary to ensure an adequate supply of fresh air. This is essential where portable gas cylinders and diesel-fuelled equipment are used inside the space because of the dangers from build-up of engine exhaust. Warning: carbon monoxide in the exhaust from petrol-fuelled engines is so dangerous that use of such equipment in confined spaces should never be allowed.

Testing the air

This may be necessary to check that it is free from both toxic and flammable vapours and that it is fit to breathe. Testing should be carried out by a competent person using a suitable gas detector which is correctly calibrated. Where the risk assessment indicates that conditions may change, or as a further precaution, continuous monitoring of the air may be necessary.

Provision of special tools and lighting

Non-sparking tools and specially protected lighting are essential where flammable or potentially explosive atmospheres are likely. In certain confined spaces (e.g. inside metal tanks) suitable precautions to prevent electric shock include use of extra low voltage equipment (typically less than 25 V) and, where necessary, residual current devices.

Provision of breathing apparatus

This is essential if the air inside the space cannot be made fit to breathe because of gas, fume or vapour present, or lack of oxygen. Never try to 'sweeten' the air in a confined space with oxygen as this can greatly increase the risk of a fire or explosion.

Preparation of emergency arrangements

This will need to cover the necessary equipment, training, and practice drills.

Provision of rescue harnesses

Lifelines attached to harnesses should run back to a point outside the confined space.

Communications

An adequate communications system is needed to enable communication between people inside and outside the confined space and to summon help in an emergency.

Check how the alarm is raised

Is it necessary to station someone outside to keep watch and to communicate with anyone inside, raise the alarm quickly in an emergency, and take charge of the rescue procedures?

Apply for a 'Permit to Work'

Permit to Work (PtW) is mandatory for all operations in confined spaces at London Met. Permit to work must be requested from Londonmetpermits@cbre.com at least 10 working days in advance.

A Permit to Work ensures a formal check is undertaken to ensure all the elements of a safe system of work are in place before people are allowed to enter or work in the confined space. It is also a means of communication between site management, supervisors, and those carrying out the hazardous work.

Essential features of a Permit to Work are:

- Clear identification of who may authorise particular jobs (and any limits to their authority) and who is responsible for specifying the necessary precautions (e.g. isolation, air testing, emergency arrangements etc).
- Provision for ensuring that contractors engaged to carry out work are included.
- Training and instruction in the issue of permits.
- Monitoring and auditing to ensure that the system works as intended.

In order for the PTW to be issued and works in confined spaces to proceed, a designated appointed person should be present on site. This Appointed Person (Confined Spaces) will review the following:

- Risk Assessment Method Statement (Follow the [Control of Works Policy](#) for risk assessment method statement timelines requirements)
- Bump test for all equipment
- The competencies of the individual(s) who will be undertaking works in confined spaces.
- Physical fitness of individuals carrying out the work in confined spaces
- Demonstrated capability and familiarity with the equipment being used (e.g. the ability to carry out functional tests on any atmosphere monitoring equipment if required);
- Suitable escape and rescue plan
- All calibration records for equipment being used for entry or to achieve the rescue plan.

- If any chemicals being used, the providers environmental policy and (Control of Substances Hazardous to Health (COSHH) assessment.

Where the Authorised Person (Confined Spaces) is not satisfied that the individuals carrying out the work in confined spaces are not suitably competent, the work will not proceed further and a Permit to Work will not be issued.

A Permit to Work shall only be issued only at the point of entry and at the time of the work. A Permit to Work shall not be issued for a period longer than eight hours or beyond the end of a working shift, whichever is the shortest.

4.3 Emergency procedures

When things go wrong, people may be exposed to serious and immediate danger. Effective arrangements for raising the alarm and carrying out rescue operations in an emergency are essential.

Contingency plans will depend on the nature of the confined space, the risks identified and consequently the likely nature of an emergency rescue.

Emergency arrangements will depend on the risks. You should consider:

- ***Communications***

How can an emergency be communicated from inside the confined space to people outside so that rescue procedures can start? Do not forget night and shift work, weekends, and times when the premises are closed, e.g. holidays. Also, consider what might happen and how the alarm can be raised.

- ***Rescue and resuscitation equipment***

Provision of suitable rescue and resuscitation equipment will depend on the likely emergencies identified. Where such equipment is provided for use by rescuers, training in correct operation is essential.

- ***Capabilities of rescuers***

They need to be properly trained people, sufficiently fit to carry out their task, ready at hand, and capable of using any equipment provided for rescue, e.g. breathing apparatus, lifelines, and fire-fighting equipment. Rescuers also need to be protected against the cause of the emergency.

- ***Shut down***

It may be necessary to shut down adjacent plant before attempting emergency rescue.

- ***First-aid procedures***

Trained first aiders need to be available to make proper use of any necessary first-aid equipment provided.

- ***Local emergency services***

How are the local emergency services (e.g., fire brigade) made aware of an incident? What information about the particular dangers in the confined space is given to them on their arrival?

5. References

Safe work in confined spaces (HSE): <http://www.hse.gov.uk/pubns/books/l101.htm>