Working in confined spaces must be avoided wherever possible. Alternative systems that allow work to be done remotely or from outside, or in a different manner that avoids the risk of a confined space being created, must be adopted where it is reasonably practical to do so.

All work in a confined space must be risk assessed. There must be a safe system of work which gives priority to:

- eliminating any danger
- having competent persons to supervise and carry out the work, who are trained in confined space working
- adequate communications
- emergency procedures.

Atmosphere monitoring, isolation systems, permit to work systems, personal protective equipment (PPE) and other specialist equipment may be required.

It provides guidance that will be particularly relevant to Facilities Management Directorate (FMD) and the University Farm, but also those Schools/Directorates which have restricted access spaces within the buildings that they occupy.

It provides information to enable Schools/ Directorates/Units to comply with the Confined Spaces Regulations 1997 and the Management of Health and Safety at Work Regulations 1999.

The scope of areas covered by this document is particularly wide, given the diversity of university operations. Some examples of university areas covered by this guide are:

- Steam ducts
- Boilers
- Roof spaces
- Effluent tanks
- Silage pits
- Interceptors
- Elevator shaft pits
- Inspection pits for underground services
- Test and experimental facilities with large quantities of asphyxiating gases
- Building undercrofts and basements

The following are not covered by this guide: excavations (see Safety Guide 47); vehicles, aircraft or ships spaces; sporting activities such as caving.

A restricted access space is:

"An area where access and or egress is difficult or there is restricted working space which presents a hazard, or other risks or reasons that require the University to control access."

Typical examples within university premises include:

- plant rooms, where the controls and engineering plant for a building are housed;
- electrical distribution substations and cupboards;
- roof spaces over fragile ceilings or with narrow walkways or where building tanked water is stored;
- areas that contain asbestos that may present a risk to health if correct access or work procedures are not followed;
- basement areas where in the event of an injury or illness an individual will be out of view and unable to summon help;
- laboratory areas where delicate or technical experiments are being undertaken and deliberate or unintended interference could harm the experiment of the individual.

A confined space is...

.... a place which is substantially enclosed (though not always entirely), and where death serious injury can occur from hazardous substances or conditions within the space or nearby (e.g. lack of oxygen).

The specific risks likely to lead to death or serious injury in a confined space include:

- Fire or explosion
- Loss of consciousness or asphyxiation arising from gas, fume, vapour or lack of oxygen;
- Loss of consciousness arising from an increase in body temperature;
- Drowning in liquid or a free flowing solid (e.g. grain).

In addition, other hazards such as electricity, mechanical equipment, noise, dust, and limited working space may be encountered.

Heads of Schools/Directorates and other unit managers must ensure that:

- all confined spaces under their control are identified and there are systems in place to manage them;
- all confined and restricted access spaces are secured against unauthorised access;
- where entry is required, there is the correct equipment to permit safe access and egress in both normal and emergency conditions;
- all staff who need to enter confined spaces are trained to do so;
- that all confined spaces have a formal risk assessment that covers normal and emergency conditions;
- a Safe System of Work (SSOW) for confined spaces is formally agreed with Health and Safety Services (H&SS);
- for restricted access spaces, the level of controls is proportionate to the hazard and risks (advice on suitable measures can be obtained from H&SS);
- all restricted access and confined spaces must have adequate signage indicating the hazard, the responsible manager and contact telephone details;
- where the University intends to use a contractor in a confined or restricted access area, that this Safety Guide is brought to their attention and the specific Safe System of Work/risk assessment is shared with the contractor;

excessive heat and cold;
oxygen deficiency;
toxic gases;
the presence of liquids or flooding;
solid materials that can flow such as sand, grain or powders;
flammable substances including any substances that may have been brought in to do work in the confined space i.e. welding gases;
sources of toxic gas such as carbon monoxide from the exhaust fumes of plant and machines operating in the general vicinity of the confined space, or from the decay of organic matter in soil;
the presence of chemical residues or scale, rust or sludge.

options to reduce the hazard that eliminate it being a confined space, such as such as passive ventilation systems or emptying of the contents before entry;

Confined space access needs to be practiced in order for staff to remain competent. Records of work and training should be kept to provide evidence of effective management and worker competency.

All work in a confined space must

The HSE document ACOP L101, Safe Work in Confined Spaces recommends that all confined spaces are subject to permits to work. However, industry best practice often expands the area subject to a permit to cover the exterior area of a confined space as well.

Records of inspections of the confined space and permits to work must be kept by the department for a year and be available on site for inspection.

Weather can have a significant effect on confined space working. Issues such as heat can further reduce the working time of staff in the confined space. Wind and rain can create hazards to working in the space due to ingress of water etc. or damage to support equipment outside the space.

Certain types of equipment will require specialist training, including refresher training e.g. self contained breathing apparatus (SCBA), gas monitors, communication equipment and evacuation equipment such as man hoists.

Equipment must be suitable for the intended use, subject to an appropriate maintenance regime, and checked before use. Some categories of equipment, such as SCBA or lifting equipment, may require a thorough examination, testing or visual inspection – consult H&SS for more information on this aspect.

Where mobile work or plant equipment is required for the task in the confined space it should be secured so as to not pose a hazard to those inside and support staff outside.

Ensure the noise of any operating plant will not effect communications or be a hazard.

The location of any petrol or diesel engine plant needs to take account of the exhaust fume and refilling of the machine so the fuel or fuel vapour cannot spill into the confined space.

Lighting units, transformers and power tools must be safe for use within the confined space.

The requirements of the Manual Handling Regulations 1992 must be taken into account when moving equipment into the confined space.

Guidance:

See Safety Guide 47 for information on work in excavations, and the requirements for safe use of equipment that would prevent an excavation becoming a confined space.

Demolition works require special skills to ensure that the structure does not collapse, trapping workers inside. Before any demolition takes place the structure must be assessed by a structural engineer to confirm the need (or not) of supports.

