

HEALTH AND SAFETY

SAFETY POLICY & ARRANGEMENTS



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Subject: Permit to Work systems (PTW)

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 must ensure that when you oversee any work which requires a 'Permit to Work', before that work is started, the 'Permit to Work' is in place.
- Managers must sign and date The 'Permit to Work' and any colleagues or contractors involved in the work will need to be identified and are also required to sign the document.
- Managers must ensure the completed 'Permit to Work' is retained for a period of no less than 3 years in its signed state (PDF copy is acceptable)

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.

Statutory Definition Of A Permit To Work System

The NIC has a statutory duty to provide and maintain a safe place of work, plant and systems of work that are, so far as is reasonably practicable, safe and without risk to health.

For certain high risk activities, this may involve a requirement to complete a 'Permit to Work'.

A Permit to Work system is a formally recorded process that must be used in the circumstances identified within this document and is in place to control certain work activities which are identified as potentially hazardous.

These hazards may affect Colleagues, visitors, Contractors, members of the public or Council property.

A 'Permit to Work' is also a method of communication between site management and those who are undertaking the potentially hazardous works.

Any 'Permit to Work' is considered as a binding document between the person(s) undertaking the work (normally a contractor) and the National Ice Centre.

The purpose of the document is to identify (and agree), what work is being undertaken, where it is restricted to, the duration of the work and identifies, the hazards presented by the work and the control measures required to mitigate the risk.

A 'Method Statement' must also be in place to support a Permit to Work and will identify what equipment is to be used, how access is to be gained to the working area, what substances or equipment is to be utilised and, where applicable, a Rescue Plan and the equipment needed for the rescue.

All Permits to Work **must** be signed and dated prior to the commencement of any work and also at the completion stage for it to be considered an NIC compliant document.

All Completed Permits to Work **must** be retained on site for the duration of the work and for a period of no less than 3 years after the completion of the work.

A further copy of the completed document may be requested by the contractor which must be provided.

Types Of Permit To Work

Currently there are 5 types of Permits to Work that are required by NIC. These are:

- Working in a Confined Space
- Hot Working
- Working on a live Electrical Supply
- Working at Height
- Working on Gas Supply

The Permit to Work **must** be completed in all circumstances where the above activities are likely to cause injury to the person completing the work or any other person who is likely to be affected by the activity.

This should be clearly identified within the associated method statement or risk assessment that has been completed

A further permission to work document is also available that can support the permit to work system and highlights the people involved and a simple set of controls for consideration as a signed formalised document.

Work In Confined Spaces

Premises Management **must** ensure that a 'Permit to Work' is in place for all confined spaces work.

Confined spaces, by their very nature, can be difficult to access or egress.

In the event of an incident it may not be possible for anyone working in these conditions to 'self-evacuate' to a place of safety.

It is, therefore, extremely important to ensure that working in these environments is strictly controlled and has a 'system' that identifies procedures needed before work can commence and emergency evacuations.

Examples of confined spaces

- Sewers
- Silos
- Large tanks
- Loft spaces
- Lift shafts
- Swimming Pool balance tanks



Hazards That May Be Present in a Confined Space

The air in confined spaces may, due to a lack of circulation, may be low in oxygen content, high in carbon dioxide levels or contaminated by other gases (i.e. Methane) which occur naturally.

Fungal spores and slippery surfaces may also be present where the environment is substantially high in moisture presence.

Controls

- Confined space working should not be undertaken by 'Lone Workers'
- Atmospheric testing should be completed before entering potentially gaseous spaces
- A means of communication between the confined space worker and a second person must be available and used
- On-site monitoring to ensure work is carried out in accordance with the Permit to Work and the Method Statement
- A 'rescue plan' is developed and the appropriate resources provided to facilitate this plan.

Hot Work

Premises Management **must** ensure that a 'Permit to Work' is in place for all hot work activities.

Hot Work comprises work activities that involve the application or generation of heat during their execution. Such activities include cutting, welding, brazing, soldering and the use of blow-lamps.

Hot Work, in the main, is associated with the application of heat either directly to, or adjacent to plant, tanks, vessels, pipes etc, that contain or have contained any explosive, flammable or toxic substance.

However, for completeness, due to the fire risks intrinsic to any Hot Work Activity, and the risk of personal injuries due to hot debris, toxic fumes etc. permits to work are required for the following activities;

Examples of hot work

Grinding of metal using hand held appliances with abrasive wheels

- Soldering, using blow lamps
- Cutting, using Oxyacetylene
- Working with bitumen boilers
- Welding (electrical or gaseous)
- Any other equipment producing flame, intense heat or sparks



Hazards

The hazards arising from hot work comprise:

- The ignition of flammable vapour within a confined space can produce pressures well above the safe working pressure of most types of tank used for liquid storage. Even tanks designed to be pressure vessels are not normally designed to withstand shock pressures generated by an internal explosion. An explosion within a tank is therefore liable to cause violent failure of the vessel. Parts of the tank may be propelled as missiles, and a flame front, hot gases and burning liquid may be expelled.
- The risk to the building or surroundings as a result of work activities that generate sparks and heat, such as Grinding, Burning and Welding etc., in areas containing combustible and flammable materials.
- Risk of eye injury including ultra-violet damage (i.e. "arc-eye"), burns and heat exhaustion.
- Asphyxiation by gases and vapours and/or asphyxiation or poisoning by toxic fumes.

Controls

- Hot work **must** only be carried out by a competent person
- Area must be checked to identify potential flammable substances and surfaces before work can commence
- Where present, the above substances must either be removed, suitably covered or 'damped down'
- Person undertaking the hot work must have received 'Fire Awareness' training
- A suitable fire extinguisher must be to hand
- Work area to be inspected 60 minutes after completion of work to ensure the area has 'cooled down' and presents no combustion risk

Electrical Systems

Premises Management **must** ensure that a 'Permit to Work' is in place for all live electrical work.

The Electricity at Work Regulations, 1989, applies wherever the Health and Safety at Work Act, 1974 applies and wherever electricity may be encountered.

The Regulations are primarily concerned with the prevention of danger from electric shock, electric burns, electrical explosion or arcing, or from fire explosion initiated by electrical energy.

The Regulations are supported by a Memorandum of Guidance (ISBN 0 11 883963 2) and Planning Units where the use of electrical systems and electrical equipment forms a major part of the work of the Planning Unit (area) should have a copy of the Memorandum available, for relevant staff to consult.

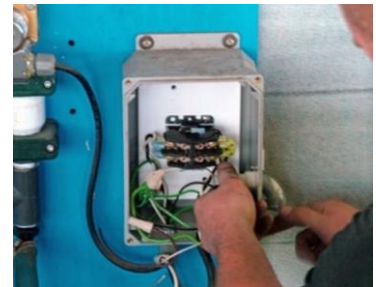
The Regulation does not distinguish between systems of different voltages; they apply equally at all voltages, including batteries and are constrained only by what might be appropriate to prevent danger or injury.

Every work activity, including operation, use and maintenance of a system and work near a system, shall be carried out in such a manner as not to give rise, so far as is reasonably practicable, to danger.

Hazards

The hazards from with electrical systems/appliance comprise:

- Electric shocks
- Burns
- Explosions
- Fires
- Disruption of IT Systems



Controls

- Electrical work shall only be carried out by a competent person. General guidelines for competence are set out below:
 - Practical experience in working with electricity and an adequate knowledge of hazards.
 - Knowledge of current safety standards and a clear understanding of the precautions required to avoid danger.
 - The ability to recognise whether it is safe for work to continue, particularly in respect of unfamiliar equipment and unfamiliar locations.
- Adequate precautions shall be taken to prevent electrical equipment, which has been made dead, from becoming electrically charged during that work.
- Once the circuit or equipment to be worked on or near has been identified it shall be disconnected from every source of electrical energy.

Working At Height

Premises Management **must** ensure that a 'Permit to Work' is in place for any work at height where there is a significant risk of injury to either colleagues or others.

The Working at Height Regulations 2005 require that, 'every employer shall ensure that work is not carried out at height where it is reasonably practicable to carry out the work safely otherwise than at height'.

There will be occasions where this is not practicable and in cases where work is carried out at height, every employer shall take suitable and sufficient measures to prevent, so far as is reasonably practicable, any person falling a distance liable to cause personal injury.

As well as a permit to work, all work at height will be supported by a risk assessment. A method statement will also be required where the work is complex, very high risk or of long duration.

Hazards

Falls of persons from height

- Falls of materials from height
- Unauthorised access to a place of work at height
- Safe access and egress
- Rescue of injured persons

Controls

- Permit to work where applicable
- Fall prevention measures
- Netting/segregation
- Removal of access equipment when not in use
- A suitable, secure means of access and egress
- A rescue plan



Gas Appliance / Installation

Premises Management **must** ensure that a 'Permit to Work' is in place for all Gas work.

Gas safety is extremely important and any work to either gas installations or pipe work must be controlled. To support this, **all** gas related work within the National Ice Centre must be done under a Permit to Work and only done by a suitably qualified and competent person.

Examples of Gas Appliances / Installation

- Replacement of a fixed gas installation (boiler / cooker etc)
- Connection of any new gas installation
- Alterations to any gas supply or pipe work



Hazards That May Be Present from Gas

Work where gas may be present increases the risk of fires / explosion, both during the work itself and post completion of the activity.

Controls

- Power tools used on any gas related activity must be non sparking where a potentially explosive atmosphere could exist
- The working area must be adequately signed to prevent unauthorised access to the working environment
- The person completing the work must hold a valid 'Gas Safe' registration card.
- Post works leak testing needs to be completed by the engineer on any new gas pipe installation or components where a leak may be present.
- In all cases where a leak test fails, the item must be identified, isolated and locked off from the main supply until the issue is remedied

Further Information & References

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

NIC Documentation

Safe Work in Confined Spaces

- Fire Management and Precautions
- Electricity at Work including Maintenance of PAT
- Working at Height

External References

- HSG250 – Guidance on Permit to Work Systems' (HSE)