

## Permit to Work (PTW) Procedure

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### BACKGROUND:

The Permit to Work (PTW) system is a critical component of our Health and Safety Management System. It is designed to ensure that all work activities, especially those that pose significant risks, are carried out safely and in compliance with regulatory requirements. The PTW system helps to identify specific work activities, assess potential risks, and implement necessary control measures to mitigate those risks. The primary objective of the PTW system is to prevent incidents by ensuring that all necessary precautions are taken before work begins. The permit itself does not make the work, task, or activity safe.

### PURPOSE:

The purpose of this procedure is to;

- Exercise control and coordination of permitted activities.
- Safeguard workers, others, and property.
- Ensure that all workers and site supervisors have suitable procedures to control high to critical risk work or non-routine work.
- Ensure that proper management steps are in place for all possible hazards and risks associated with the work, and
- Assess and control concurrent or conflicting works.

### SCOPE:

This Permit to Work (PTW) system must followed by all workers; this includes, but is not limited to, consultants, contractors, and sub-contractors working on all CCC assets under the Control, Influence or Management of the Council except projects that are operating under the contractor's Permit to Work System, in which case, the Procedure of the higher standard will be applied. Permit to work activities primarily involve.

- Any works requiring an isolation (Lockout Tagout),
- Any work requiring Working at Height,
- Any work requiring Confined Space Entry,
- Any work requiring Hot Work,
- Any work requiring Excavations,
- Any work requiring Cranage,
- Any Transfer of Control,
- Any work requiring Critical Safety Systems (impeded)

### DEPARTURE:

There are no departures from this procedure except for an emergency situation that requires immediate action to render assistance (if it is safe to do so) and/or to make a situation safe.

**REFERENCE DOCUMENTS:**

Site Specific Induction	<a href="#">AS/NZ 2865 Confined Space Work</a>	<a href="#">Best Practice Guidelines for Working at Heights</a>	<a href="#">Good Practice Guidelines for Mobile Elevating Work Platforms</a>
Lockout Tagout Procedure GEN_HSE_0002	<a href="#">Approved Code of Practice for Management and Removal of Asbestos</a>	<a href="#">Best Practice Guidelines for Working on Roofs</a>	<a href="#">Guide for Safety with Underground Services</a>
Process and Instrument Diagrams	Approved Code of Practice for Management of Substances Hazardous to Health in the Workplace	<a href="#">Best Practice Guideline for Scaffolding in NZ</a>	<a href="#">Health &amp; Safety in Welding</a>
Operations Manuals and Standard Operating Procedures	<a href="#">Approved Code of Practice for Boilers</a>	<a href="#">Best Practice Guideline for Demolition in NZ</a>	
	<a href="#">Approved Code of Practice for Cranes</a>	<a href="#">Good Practice Guidelines for Excavation Safety</a>	

## 1. Permit to Work

The Permit to Work is split into three sections:

- The main Permit to Work
- The Job Safety Analysis
- The Special Permits for any activity requiring special safety requirements

### Definitions

Confined Space	An enclosed or partially enclosed space that is not intended or designed primarily for human occupancy and has restricted means of entry or exit and is liable at any time to have – - An atmosphere that contains potentially harmful levels of contaminants; or - An unsafe level of oxygen (deficiency or excess); or - Cause engulfment (where workers can be trapped or buried by bulk materials such as grain, sand, flour, fertiliser, sawdust or liquid)
Craneage	Any appliance equipped with a mechanical, hydraulic, pneumatic, or electrical means for raising and lowering a load by ropes or chains and transporting a load while suspended.
Excavations	Any job involving trenching, excavation, shafts, drives, demolition, or the risk of penetrations requires excavation certification.
Hot Work	Any work involving (a) The application of heat, a naked flame or an open heat source, or work that produces sparks (b) The use of gas, welding, arc welding, oxyacetylene welding equipment, including cutting with such equipment (c) Cutting involving the use of rotary disc or grinding equipment, soldering, brazing or the use of heat guns
Isolation Point	Point of energy supply to equipment that can be isolated to prevent injury i.e. valves, circuit breakers, etc
Lockout / Tagout	This means isolating, locking and tagging any equipment at the source of energy supply to prevent its operation or an accident associated with its energy sources.
Routine Activities	A routine task is any commonplace task or duty that is undertaken regularly on demand or at specified intervals (more than once a year).
Working at Height	Any works with the potential for a fall of two metres or more, using any mobile elevated work platforms, scaffold or rope access works.
Transfer of Control	When the responsibility for managing the safety controls for a work zone (or project) are transferred to a third party. This special certificate is only issued when an entire asset is handed over for the purposes of control and management during the project. E.g. an entire site undergoing full refurbishment.
Critical Safety Systems	Safety Systems includes, but is not limited to any work relating to Critical systems e.g. Fire Alarms, Suppression systems, communication systems

## 2. Permit to Work Assessment

The initial step of undertaking any activity is to assess the task and associated risks and determine if a Permit to Work is required. The process flow below summarises the steps of this assessment process.

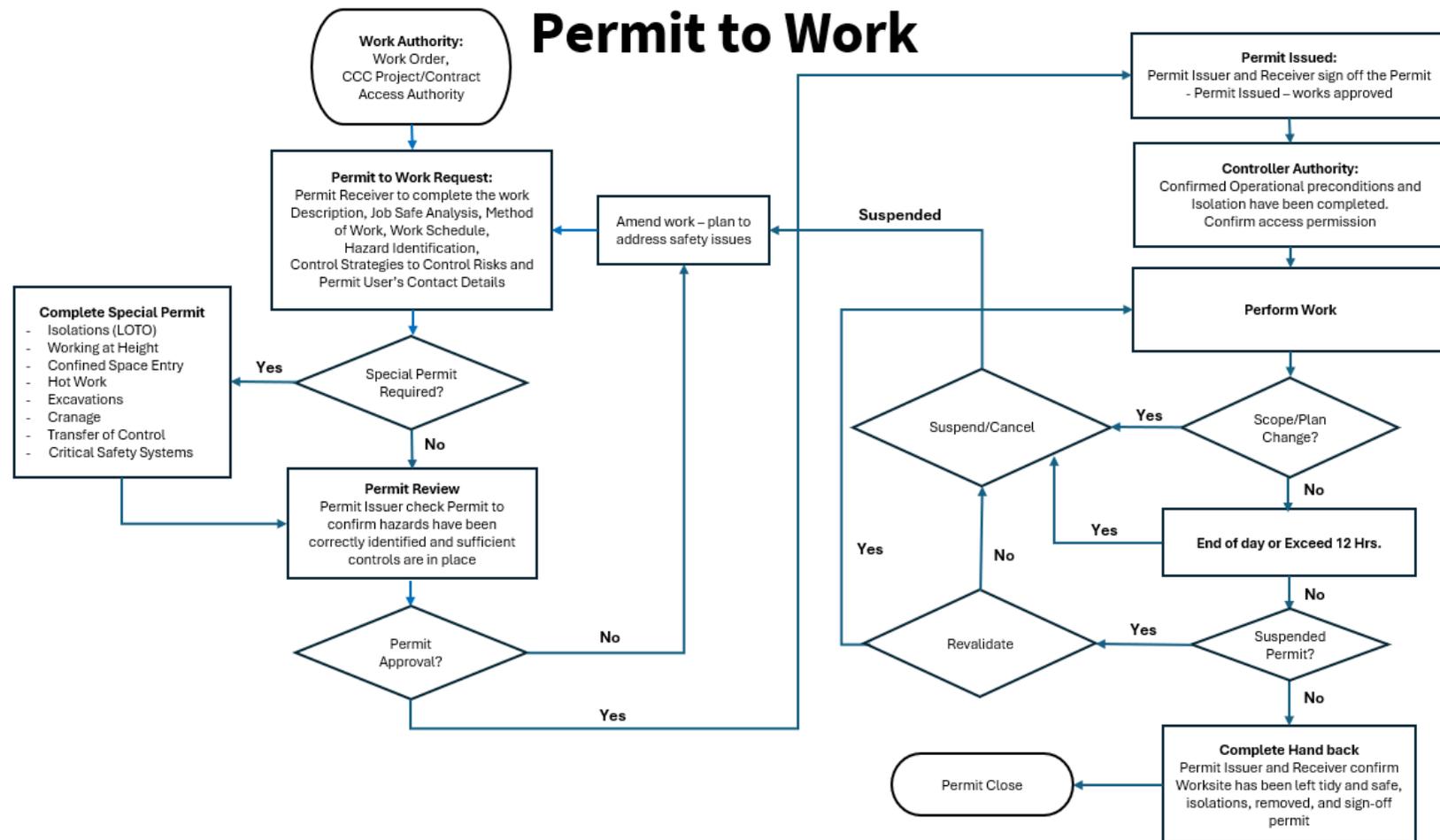


Figure 1. Permit to Work Assessment Process

### 3. Permit Responsibilities

The Permit to Work Procedure has two key roles with specific responsibilities –A Permit Issuer and a Permit Receiver.

The Permit Issuer cannot be the Permit Receiver i.e cannot self-issue Permits

Position	Responsibility
Head of Service	Overall responsibility for the procedure and its implementation.
People Leaders	<p>To ensure staff and contractors understand the importance and requirements of this procedure.</p> <p>To ensure staff and contractors comply with the requirements of this procedure.</p> <p>To ensure appropriate resources are in place to support the effective implementation of this procedure.</p> <p>To investigate and implement effective corrective actions if there are breaches of this procedure.</p>
All workers (includes staff, and contractors)	<p>Comply with the requirements of this procedure.</p> <p>Must hold the relevant training and competencies for the work undertaken.</p> <p>To raise non-conformance notifications (i.e. incident reports) if/when there are breaches of this procedure.</p> <p>Stop work if conditions are healthy or unsafe.</p>
Permit Issuer <b>Must Hold:</b> Unit Standard 17590 – Issue worksite-specific work permits	<p>Authorise and issue permits, ensuring all safety protocols are followed.</p> <p>Permit issuers must consult with a subject matter expert where a special certificate is required, or advice is required to ensure safe work activities. e.g. cranes, working at height, confined space.</p>
Permit Receiver	Receive and acknowledge permits, ensuring understanding of all safety requirements before commencing work.
Safety Observer	Monitor and ensure the safety of all personnel entering and working within confined spaces.

#### 4. Permit Issuers

The Permit Issuer must be competent and experienced with the specific plant/equipment/site, the permit issuing process, and the safety control requirements.

##### Permit Issuers Responsibilities

The Permit Issuer is responsible for reviewing the scope of work, job safety analysis, and confirming with the Permit Receiver that the hazards to personnel, environment, or operations have been identified and are either eliminated, isolated, mitigated or sufficiently low risk to accept.

- Noting any work requiring formal notification to the WorkSafe New Zealand and confirm as a prerequisite with the Permit Receiver.
- Confirm that any necessary Special Permits (eg, hot work, confined space, etc) are attached and completed.
- Confirm that additional “sign-offs” have been completed.
- Coordinating all operational aspects of the Permit and JSA i.e. draining and flushing lines / vessels, etc.
- Coordinating isolations and lockouts as per Lockout Tagout (LOTO) Procedure
- Ensuring permits issued and/or changed are reported and communicated across shifts the PTW register.

A Permit Issuer may reject/postpone any work if there is insufficient proof that the work will not adversely impact on the effective operation of any asset, cannot be performed safely, or will adversely affect other works.

## 5. Permit Receivers

The Permit Receiver must be competent and experienced to undertake and/or coordinate the work specified within the Permit. The Permit Receiver must be a principal contractor or, in some circumstances, a Council Employee. Permits must never be issued to a sub-contractor.

### Permit Receiver Responsibilities

- The Permit Receiver is responsible for planning and executing the job and completes most of the Permit to Work form (non-grey sections) on behalf of the Permit Users.
- For planned project work, the Permit Receiver must aim to apply for a Permit to Work at least five working days before the intended start date.
- Must notify WorkSafe New Zealand of any notifiable work at least 24 hours before starting work.
- Ensures all Permit Users (Work Party) have completed relevant Induction Processes.
- Agrees to the conditions of the Permit to Work and ensures full compliance with them by:
  - Clearly communicating Permit-to-work requirements to all Permit Users before starting work.
  - Ensuring that Work Site preparation and all job steps are performed in accordance with Permit conditions.
  - Keeping everybody on the Work Site fully briefed as to the known hazards on site and the control methods and rescue plans in place.
- Responsibility for the safe behaviour and good housekeeping practices on the work site.
- Work site team meeting by the Permit Receiver should at a minimum:
  - Involve all the people involved with the job.
  - Clarify the job – objectives, plans, and procedures.
  - Identify individual responsibilities.
  - Focus on the hazards associated with the job.
  - Outline all hazard controls and emergency plans in place.
  - If there is a change to the agreed work procedure for the day, the job should be stopped and discussed with the team. Concerns from staff should be raised and corrective actions agreed upon.
- Notify the Permit Issuer whenever the person identified as Permit Receiver or Person in Charge of the Work Site changes. This must be recorded on the Permit.
- Ensures all Permit Users understand the Lockout Procedure and install their own personal locks on all control points before commencing work.
- Have copies of Safety Data Sheets (SDS's) for any hazardous substances used, handled or stored.
- If the scope of work or work plan changes in any way that changes the risks and/or safety controls associated with the work, then work must be suspended until the JSA has been updated and the Permit has been reviewed and re-issued by the Permit Issuer.
- Immediately notify the Permit Issuer if an accident, near miss, or harm incident occurs within the work site.
- Any hazards discovered during the work and not listed in the JSA must also be reported and reviewed by the permit issuer.
- Ensures the work site has been left in a safe and tidy state upon completion or suspension of work.
- Ensures that the permit is closed and signed off once the job has been completed.

## 6. Safety Observers

The Safety Observer's role is to ensure the health, safety and wellbeing of all personnel involved in high-risk activities. The primary purpose of the Safety Observer is to monitor and oversee work activities, particularly those that involve significant hazards such as confined spaces, hot work, and working at heights.

The Safety Observer helps to identify and mitigate potential risks, ensuring that all safety protocols are strictly followed. The safety observer shall not participate in any of the tasks and shall not undertake any task outside of that of the safety observer.

Where the safety observer must leave for any reason, an appropriate substitute must be in place before their departure, or works are suspended until their return.

### Safety Observer Responsibilities

- Immediately notify the Permit Issuer if an accident, near miss, or harm incident occurs within the work site.
- Any hazards discovered during the work and not listed in the JSA must also be reported and reviewed by the permit issuer.
- Ensures the work site has been left in a safe and tidy state upon completion or suspension of work.
- Whenever a person is working on 'live' equipment, a trained and competent Safety Observer must be appointed and present.
- Whenever Hot Work is being undertaken a trained and competent Safety Observer (Fire Watch) must be in place.
  - The Safety Observer must be trained in handheld fire extinguishers.
  - A safety watch will be in place for at least 60 minutes after the work has ceased.
- Whenever a person is working in a harness or fall restraint system, a competent Safety Observer must be in place.

## **7. Permit Suspension and Revalidation**

Permits to Work can remain open for several weeks, however, special permit certificates require constant monitoring and re-evaluation as the job conditions can change on a day-to-day basis.

Therefore, no special certificate may remain open for longer than 12 hours or beyond the end of the shift.

Special Permit Certificates can be re-validated for up to six shifts before a new Permit Certificate is required.

Except for Hot Works, which the safety observer must suspend, permit certificates may be suspended by the site lead, permit issuer, or permit receiver upon confirmation that the worksite has been left in a safe condition.

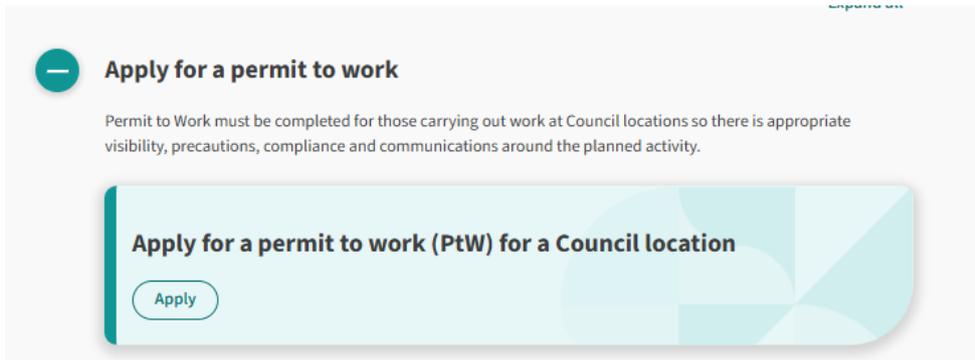
Only a permit issuer may re-validate a permit certificate.

## 8. Permit to Work Form

The Permit Receiver, being the principal contractor, must complete all required sections on the Permit to Work form. After the work has been completed, the Permit must be signed off to state that the job has been completed and the worksite is left in a safe and tidy manner.

## 9. How to apply for a permit to work

Go to the Christchurch City Council website via link [Health safety and wellbeing: Christchurch City Council](#), and apply for a permit to work



## 9. Audit

Auditing is an integral part of managing the PTW system. It verifies that the requirements of the system:

- Have been established,
- Have been documented,
- Are effective and being adhered to,
- If not effective initiates corrective actions

Permit to Work audit checks for compliance and non-compliance with the PTW System.

### LEVEL 3:

Fortnightly monitoring (minimum of 10%) of new permits audited for compliance. A competent person can carry this out if they are not the Permit Issuer. A permit issuer cannot audit their own permits.

Content guide:

- i. Hazard ID and Control (JSEA) is of adequate quality?
- ii. Permits authorised and endorsed by correct permit signatories?
- iii. Is the specified safety equipment available and functional at the worksite (PPE, gas detectors, rescue equipment etc)

### LEVEL 2:

Quarterly checks are performed to ensure compliance with the PTW Management System. Carried out by at least 2 persons. A permit issuer cannot audit their own permits.

A Health, Safety & Wellbeing Advisor must participate in at least one of these audits per site per year. Starting with the corrective actions from the previous audit.

Content guide:

- i. Have fortnightly audits been carried out and corrective actions implemented?
- ii. Have the corrective actions from the previous quarterly audits been implemented?
- iii. Is documentation current and available at the control locations?
- iv. Are all management systems associated with the PTW system functioning effectively?
- v. Are all management systems associated with the PTW functioning effectively?

### LEVEL 1:

The audit is carried out annually at each site by either the Health, Safety & Wellbeing Team or an independent party. These audits are to ensure compliance with the PTW System and consistent application across all sites.

Content guide:

- i. Are the management systems being applied consistently at the site?
- ii. Training
- iii. Auditing and documentation
- iv. Permit coordination facilities
- v. Safe work practices.

All Level 1 Audits will be collated and compared by the Senior Health & Safety Advisor Team to ensure consistent application across all sites within CCC.

CCC must record findings and corrective actions relating to recent audits and demonstrate completion of action items.

## 10. General Permit Requirements

### **Work at Heights Certificate**

Any work with the potential for a fall of two metres or more requires Work at Heights Certification. The Permit Issuer may require a Work at Heights Certificate with a potential for a fall of less than three metres at their discretion.

Construction work with a risk of falling five metres or more must be notified to WorkSafe New Zealand by the Permit Receiver before a Permit to Work is issued.

Where there is a potential for a fall of three metres or more:

- Suitable means must be provided to prevent a person from falling.
- Details of the type of fall protection to be used must be made in the Job Safety Task Analysis.
- PPE and other Safety Equipment specified must be summarised in the summary section of the Permit to Work.

Any fall protection equipment must meet the requirements of AS/NZS1891 (or equivalent) and be checked before each use and shown to function correctly.

### **Training Requirements:**

Workers conducting work at height must hold the relevant NZQA unit standards as follows:

- US17600: Explain safe work practices for working at height
- US23229: Use a safety harness for personal fall prevention when working at height.
- plus one of either:
  - US15757: Use, install and disestablish proprietary fall arrest systems when working at height or
  - US25045: Employ height safety equipment in the workplace.
- Tools and equipment liable to fall shall be suitably constrained or restrained.
- Barriers and signs must be erected to prevent the passage of other personnel into the area.
- A Rescue Plan must be documented on the Permit to Work form when Working at Heights is required.
  - All possible circumstances that would require a rescue should be considered.
  - Specific PPE, standby rescue equipment and first aid equipment should be documented.
  - How medical help can reach an injured worker, and how the injured worker can be removed to medical help must be documented.
  - The means to communicate safety information to emergency services personnel must be documented. This includes clear statements of what they will be told and how to get to the work site.

Issue of a Permit to Work is subject to the condition that work will not commence until the named Safety Observer has completed the Work at Heights Certificate checklist and signed off that the required precautions are in place.

### **Power-Operated Elevated Work Platforms:**

Power-Operated Elevated Work Platforms must be appropriate for the job, and set up and used by a trained and competent person. Any person operating Elevated Work Platforms requires US:23966. Describe types of Elevating Work Platforms (EWPs) and legislative requirements for their use. Other specific training for devices is required.

EWPs includes, but is not restricted to:

- **Cherry Pickers** (Unit Standard required: US23962 Assess the worksite, prepare and operate a self-propelled boom lift)
- **Scissor Hoists** (Unit Standard required: US23960 Assess the worksite, prepare and operate a scissor lift)

The Power-Operated Elevated Work Platform must have valid certification.

Safety Harnesses / Lanyards must be used with all Cherry Pickers / Knuckle booms or equivalent.

#### **Forklifts or Similar with Safety Cages:**

Work Platforms/Safety Cages should only be used on forklifts when designed specifically for the purpose.

- The Safety Cage shall have current certification and be attached securely to the forklift.
- The tilt lever on the forklift must be locked out.
  - If the model does not have a tilt lever, another means of ensuring the safety cage cannot be tilted may be employed, e.g. turning the forklift motor off.
- The forklift driver shall remain seated in the forklift at all times when a worker is inside the safety cage, even if the motor is switched off.
- A safety harness is compulsory for the worker in the safety cage for the purposes of fall restraint.
- The forklift may not be moved while a worker is in the safety cage. This applies in both the raised and lowered positions.

#### **Scaffolding:**

- Scaffolding must be designed and erected to suit the type of work to be carried out, the site conditions and the anticipated workload.
- The erection or dismantling of scaffolding from which any person may fall 5 metres or more is Notifiable Work and the Permit Receiver must notify the WorkSafe New Zealand before a Permit to Work being issued.
- **A person erecting scaffolding to a height of two metres or more must be a registered and competent scaffolder.**
- The scaffolding must be tagged as being safe before it may be accessed by workers.
- If working around live equipment, all equipment must be protected from falling objects or suitably safeguarded to prevent damage. No loose items should be left unsecured.
- Ground stability must be checked before erecting a scaffold.
- Safety harnesses are compulsory for the purpose of fall restraint for persons erecting the scaffold, when not within the confines of the scaffold.

#### **Ladders:**

- Except for Scaffold Ladders and permanent fixed-rung ladders, Only platform ladders are permitted for use.
- Only one person shall use a ladder at any one time.
- Check that the ladder is in a safe condition to use.
- Use the ladder at a safe angle
- Secure the ladder at the top and bottom, allowing at least one-metre extension above the step-off point.

**Work from a Fixed Work Platform:**

Fixed Work Platforms are solid construction designed to AS/NZ Standard 1657:1992 and built to provide a work environment where the likelihood of a fall is minimised.

Fixed work platforms are:

- Permanent structures that have safe access and egress.
- Structurally capable of supporting workers, material and any other loads it has been designed for.
- Provided with barriers around the perimeter and around any openings from or through which a person could fall.

Temporary openings (e.g. removed grating plate) in fixed platforms must be made safe immediately after creation. Adequate signage should be used. If a cover is used as a control measure, it must be made of material that is strong enough to prevent a person from falling through and must be securely fixed. Fall protection PPE is not required (unless determined by risk assessment) when working from fixed work platforms.

### **Confined Space Entry Certificate**

All work in Confined Space must be completed in accordance with AS2865:2009 (or later) Confined spaces and WorkSafe New Zealand guidance on [Confined Spaces: planning entry and working safely in a confined space](#)

There are two parts to the definition of a Confined Space:

A Confined space is an enclosed or partially enclosed space and

- is not intended or designed primarily for human occupancy and
- may present a risk from one or more of the following at any time:
  - unsafe concentration of harmful airborne contaminants
  - unsafe concentration of flammable substances
  - unsafe levels of oxygen
  - substances that can cause engulfment.

Examples include: storage tanks, tank cars, process vessels, boilers, silos, pits, pipes, sewers, shafts, ducts and shipboard spaces.

### **Training Requirements:**

Workers conducting confined space work must hold the relevant NZQA unit standards as follows:

- US17599: Plan a confined space entry
- US18426: Demonstrate knowledge of hazards associated with confined spaces
- US25510: Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely

Frequently accessed Confined Spaces are clearly identified at their entry points as being confined spaces.

Not all confined spaces are identified/labelled. A restricted or previously unidentified space can be classified as a Confined Space at the Permit Issuer's discretion. This may depend on the task being carried out in the space.

An atmosphere is considered safe for entry when concentrations are:

- Oxygen: 19.5 – 23.5% vol
- Flammables: < 5% LEL (lower explosive limit)
- Toxic Substances: < 50% workplace exposure standard. WorkSafe New Zealand sets workplace exposure limits in its publication 'Workplace Exposure Standards', effective from 2002. The publication has detailed information on how the standards are set and how they should be used.

A Confined Space Entry Certificate must be completed and the pre-work checklist signed off by the Safety Observer prior to entering any identified Confined Space.

The following rules apply to working in a Confined Space:

- All Confined Space entries require a competent Safety Observer to be present at the entry point while Permit Users are inside the Confined Space.

The Safety Observer:

- Never enter the Confined Space.
- Never leave the entrant unattended
- May not fulfil any other duties that interfere with the role of Safety Observer.

- Controls the entry/exit point and records the names and times of all Permit Users who enter and exit the Confined Space, verifying at the end of the day and at breaks, that no one remains inside the Confined Space (without themselves entering the Confined Space)
- Maintains constant communication with and regularly verifies the status of those working in the Confined Space. (This could be by voice, radio or pull line)
- Maintains a means of communication with the emergency services.
- Maintains continuous monitoring of the atmosphere inside the Confined Space for oxygen and flammables using calibrated atmospheric test equipment. The atmospheric conditions should be read from the continuous monitoring instrument and recorded on the Confined Space Entry Certificate at intervals not exceeding than 30 minutes.
- Withdraws Permit Users from the Confined Space if the atmosphere deteriorates below the acceptable levels for entry.
- Initiates the planned rescue procedure if communication with those inside the Confined Space is lost, or if communications indicate that assisted withdrawal is necessary.

No Hot Work is permitted in a Confined Space where the atmosphere contains flammable contaminants over 0% of the Lower Explosive Limit (LEL).

All hazardous (flammable or toxic) liquids and residues will be removed from the Confined Space prior to work commencing. Appropriate PPE will be worn or work procedures used to protect Permit Users from residues inside the Confined Space. All physical hazards in the Confined Space must be identified and controlled. All vessels will be isolated from process pipework in such a manner as to allow for natural ventilation and the free draining of all liquids. Internal and external access ways shall always remain clear.

Before entry, vessels shall be purged either by natural or forced ventilation until the atmosphere is confirmed as safe.

- Acceptable methods of forced ventilation are venturi or air-driven fans placed as far as practical from the entrance to the confined space.
- Care should be taken to position diesel generators or similar equipment used to power the ventilation system so that fumes do not enter the Confined Space.

A Rescue Plan must be documented on the Permit To Work form when Confined Space entry is required.

- All possible circumstances that would require a rescue should be considered.
- Specific PPE, standby rescue equipment and first aid equipment should be documented.
- The means by which medical help can reach an injured worker, and how the injured worker can be removed to medical help must be documented.
- The means to communicate safety information to emergency services personnel must be documented.
- This includes clear statements of what they will be told and how to get to the work site.

Issue of a Permit to Work is subject to the condition that work will not commence until the named Safety Observer has completed the Confined Space Entry Certificate checklist and signed off that the required precautions are in place.

On completion of work, the Safety Observer must sign the Confined Space Entry Certificate to confirm that all Permit Users authorised to enter have vacated the Confined Space before the Permit Issuer may close the work permit.

### **Hot Work Certificate**

A Hot Work Certificate is required if the work to be carried out involves a source or potential source of ignition.

The term “Hot Work” include (but not limited to):

- Gas cutting
- Welding
- Rotary disc cutting and grinding
- Soldering
- Paint stripping (hot air and flame gun)
- Roof repair (bitumen boilers)
- Any other operation that uses flames or produces sparks.

A Responsible Team Leader / Manager must co-sign all Permits to Work requiring Hot Work Certification.

The following rules apply to the execution of Hot Work:

- Hot Work shall not take place under a verbal permit.
- Hot Work should not take place concurrently with work that requires the fire protection system for that same work area to be disabled.
- If hot work must occur when the fire protection system is disabled, additional permits are required.

Safety Observer may be assigned as a control measure where otherwise the Risk Rating would be above ‘Low.’ The Permit Issuer may require a Safety Observer to be assigned to other Hot Work jobs at his/her discretion.

- The Safety Observer shall maintain a continuous watch throughout the work and remain at the work site continuously for 60 minutes after completion of the work.
- All escape routes must be confirmed to be clear before work commences.
- Portable hand-held fire extinguishers of the appropriate type are required for carrying out Hot Work and must be available at the working site. Minimum requirements for fire extinguishers are:
  - 2 x 2.0 kg CO2 extinguishers for Hot Work inside buildings OR
  - 2 x 4.5 kg multipurpose dry powder extinguishers for any outside Hot Work.
- Fire extinguishers used for protection during Hot Work shall be in addition to those provided for normal building protection and shall not be relocated from other site locations.
- Any discharged extinguisher must be replaced prior to work continuing. Partially discharged cylinders shall not be left in the workplace.

The location of hose reels within the immediate area must be identified, and where available, run out to the working area during Hot Work.

The construction of the building in the immediate area of work should be investigated prior to starting work. Look for:

- Cavities
- Cable runs
- Pipework
- Polystyrene sandwich panels (Polypanel).

There shall be no direct welding or hot cutting onto any Polypanel cladding as this represents a significant fire risk.

Ensure:

- a safe and stable working platform (where applicable).
- scaffolding boards (if in use) are not in contact with a heat source.
- adequate lighting is available in the work area.

When using grinding machines under fluorescent lighting, additional precautions are required to prevent a strobe effect.

Ensure pipework and vessels that have contained flammable liquids or gases have been made inert and have been certified 'gas free' by a competent person. All combustible materials must be removed or made safe.

- Steam clean and then fill with an inert gas such as carbon dioxide or nitrogen OR
- Fill with water, leaving a small vented space at the point where the repair is to be made (allow for expansion of water in small bore pipes)

Keep the area of operations clean, free of combustible materials and where possible, dampened down.

Cover areas of flammable materials that cannot be cleared with a fire-resistant blanket.

All sparks must be contained using fire blankets or other means to prevent transfer into unprotected areas.

- Ensure the appropriate controls (screens etc.) are put in place to safeguard others from exposure to arc flash where applicable.
  - Ensure barriers are in place to prohibit passage of other personnel within the work area.
  - Isolate sensitive electronic equipment (eg flow meters) from welding current or conducted heat.
  - Ensure the Hot Work area is ventilated sufficiently to remove any toxic fumes generated.
  - Ensure correct controls are identified and followed when using any chemicals (eg pickling paste). Refer to the Safety Data Sheet (SDS) where appropriate.
- The Permit Receiver or Person in Charge shall have a copy of any applicable SDS available on the work site at all times.

Equipment must be in good condition and fit for purpose:

- Ensure all rotary cutting and grinding discs are in good condition and suitable for the grinder and work to be conducted.

Ensure all gas-cutting equipment is in good condition and suitable for the work. Gas-cutting equipment should have:

- Hoses kept in good condition.
- Have anti-flash devices fitted to valve set.
- Have the valve key attached to the valve set and readily available.
- Have gas cylinders secured in the upright position, both in use and in storage.
- All the equipment shall be in accordance with the relevant New Zealand Standards.

Issue of a Permit to Work is subject to the condition that work will not commence until the Safety Observer has completed the Hot Work Certificate checklist and signed off that the required precautions are in place.

When the work is complete, the Safety Observer must maintain a continuous close watch **for at least 60 minutes after work has ceased.**

The Safety Observer must sign the Hot Work Certificate to confirm that the fire watch is completed before the Permit Issuer may close the Permit to Work.

### **Excavation Certificate**

- Any job involving trenching, excavation, shafts, drives, demolition, or the risk of penetrations requires excavation certification.
- Trenches are defined as long narrow excavations where the horizontal width at ground level is less than the vertical depth of the deeper side.
- Excavations are defined as greater than 500mm deep and are wider than trenches.
- Digging of foundations on a building site is considered to be an excavation.
- Shafts are defined as vertical excavations of variable depth of section.
- Drives are defined as small tunnels cut in to the sides of trenches or shafts.
- Demolition is defined as the dismantling, wrecking, pulling down or knocking down of any building or structure or part thereof.
- Demolition does not include work of a minor nature that does not involve structural alterations.
- There is a risk of Penetration when work has the potential to break through into a wall cavity or through the wall thickness.

The following rules apply when undertaking an excavation:

The Permit Receiver must notify the WorkSafe New Zealand at least 24 hours prior to commencement of any excavation activity that meets any of the following criteria:

- Any trenching or shaft more than 1.5m deep and which has a depth greater than the horizontal width at the top.
- Any excavation in which workers must work with a ground cover overhead.
- Any excavation in which any face has a vertical height of more than 5 metres and an average slope steeper than a ratio of 1 horizontal to 2 vertical.
- The Permit Issuer will not issue the Permit to Work until notification to the WorkSafe New Zealand has been made.

An Excavation Certificate is required when breaking ground of a depth greater than 500 mm

- **Exception:** No Excavation Certificate is required for digging in designated garden areas where the work is carried out using hand tools and depth of the work activity does not exceed 500 mm.

A Safety Observer must continually check the excavation face during periods of mechanical digging.

All excavations left unattended must be barricaded or securely covered. Portable flashing warning lights must be erected during hours of darkness in any area that is otherwise unlit.

An Excavation Certificate DOES NOT allow entry into, or allow other work to occur in the excavation. It only permits the activity of the excavation work itself.

- A Confined Space Entry Certificate must be obtained in addition to the Excavation Certificate where any excavation greater than 1.5 m deep requires entry by personnel.

Access and egress to excavations must be via secure ladders, steps or scaffolding.

The Permit Receiver must clearly mark a copy of the underground services drawing with the position of the intended excavation.

The Permit Issuer may require services to be identified with detection equipment and/or positively identified by hand digging where there is doubt as to the accuracy of the drawing.

- Excavation within 500 mm in any direction of positively identified (visual) underground services must be carried out by hand.
- Excavation within 2 m in any direction of indicatively identified (on drawings or by locator) underground services must be carried out by hand.
- If unidentified services are located, work must cease until the Permit Receiver or Person in Charge has notified the Permit Issuer and an investigation has indicated it is safe to continue.
- The Permit Issuer or Maintenance Team Leader may require that further excavation within 500 mm of the unidentified service is carried out by hand.

Issue of a Permit to Work is subject to the condition that work will not commence until the Safety Observer has completed the Excavation Certificate checklist and signed off that the required precautions are in place.

**Recommended Training Requirements**

Excavation Safety	US 06472 – Carry Out Manual Excavation for Infrastructure Works US 30533 - Position, Excavate, and Backfill Excavations and Trenches for Plumbing, Gas Fitting, or Drain Laying US 10543 – Plan, Identify and Protect Underground Services During Excavation and Reinstatement US 27501 – Demonstrate Knowledge of Protection and Support Systems for Excavation on an Infrastructure Works site
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### **Craneage Certificate**

A crane (including a Hiab or equivalent) is defined as any appliance equipped with a mechanical, hydraulic, pneumatic, or electrical means for raising and lowering a load by ropes or chains and for transporting a load while suspended. All tackle used in the operation of a crane is included in the definition.

The following rules apply when operating cranes and lifting appliances:

- Cranes and lifting appliances provided and used by contractors must be regularly maintained safely. This equipment must comply with the requirements of the Health and Safety in Employment regulations and have a current inspection certificate to confirm this.
  - The Permit Issuer may request copies of inspection certificates before issuing a Permit to Work, or at any other time.
  - The Safety Observer is required to confirm that all equipment in use has valid certification before signing the pre-work checklist to allow work to commence.
- All lifting equipment, including chains, slings, wire ropes, shackles, etc., shall be inspected annually by an approved authority and tagged to show this. The appropriate test and examination certificates shall be available as proof.
- The Permit Issuer may request copies of the appropriate test and examination certificates before issuing a Permit to Work, or at any other time.

The Safety Observer is required to confirm that all equipment in use has valid certification before signing the pre-work checklist to allow work to commence.

- Any equipment damaged or suspected of being damaged must be removed from active use immediately and labelled clearly to avoid accidental use.
- Strong wind, rain, poor visibility and other weather or environmental conditions that could compromise safety shall be considered before any lifts are undertaken.
- The Safety observer must confirm that weather conditions suit executing a lift before signing the Craneage Certificate checklist to allow work to commence.
- No craneage will be carried out within four metres of any overhead powerlines without a close approach permit from the electricity supply authority
- The Safety Observer must confirm that the crane and load will be clear of overhead power lines by at least four metres at all lift stages before signing the Craneage Certificate checklist to allow work to commence.

Underground services plans shall be checked before a crane is set up on-site to ensure that no weight-bearing outriggers are positioned over stormwater drains, tunnels, or other potential subsidence circumstances.

- The Safety Observer must confirm that the crane's position has been reviewed against the underground services drawing before signing the Craneage Certificate checklist to allow work to commence.

Where practical, tag lines shall be used on all loads and an exclusion zone with physical barriers must be positioned to prevent the passage of others into the lifting area while the lift is in progress.

Where the capacity of a crane is over 75% of its working capacity, a lifting plan shall be attached to the Permit to Work. The lifting plan is made up of the following information:

- A copy of the underground service drawings clearly marked with the position of the crane and its outriggers.
- The crane's load chart shows the crane's capacity at the intended lifting radius.

- The weight of the load to be lifted considering all rigging.
- A plan showing the direction of the lifting slew and the area to be taped off and controlled.

Issue of a Permit to Work is subject to the condition that work will not commence until the named Safety Observer has completed the Craneage Certificate checklist and signed off that the required precautions are in place.

### **Transfer of Control**

Transfer of Control is when the responsibility for managing the safety controls for a work zone (or project) are transferred to a third party. This special certificate is only issued when an entire asset is handed over for control and management during the project. E.g. an entire site undergoing full refurbishment.

A Transfer of Control certificate is issued with the Health and Safety Management System of the Principal Contractor being accepted by the Council and that system being the controlling authority.

- The Permit Issuer must ensure the following is in place before control is transferred and work commences:
- A formal contract for the works is in place being a 3910, 3916 or Demolition Contract.
- The Engineer to Contract, Contractor Representative and Project Manager have been identified.
- The transfer of control is to an organisation and "responsible person" with the appropriate systems/procedures and competencies to effectively manage the health and safety risks within the scope of work and the controlled work zone.
- The person receiving control clearly understands their personal responsibilities and the organisation's responsibilities when accepting control.
- The physical boundaries of the transferred control zone are clearly defined and controlled.
- The isolation points between any operational plant/services and the control zone are itemised within this PTW's isolation schedule
- Operational plant and services within the control zone have been clearly identified.
- The demarcations between any operational plant/services and the transfer of control are clearly defined and controlled.
- The Transfer of Control is authorised by the Permit Issuer, Asset Owner and Health and Safety Advisor

The permit must also stipulate any limitations/restrictions on the Transfer of Control.

The transfer of control certificate does not remove any liability of the Council under the Health and Safety at Work Act 2015.

**Critical Safety Systems**

Critical Systems are designed to protect processes, sites, buildings or premises from harm or other damage because of an emergency event such as a fire or chemical leak.

Systems are often automated and may be linked to an alarm monitoring agent or emergency services. Critical systems may be mandatory requirements for certain industries, and their impairment may affect a company's insurance coverage.

Critical Systems maintenance includes any activity that could lead to the interference of emergency systems such as alarms, suppression systems or communication systems.

