Permit to Work Manual

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Manual Content Authorised by: Health and Safety Manager

Signature: .....

Date: 06/03/2025

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CONFIDENTIALITY

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1. Introduction

1.1 Objective

The objective of this manual is to define a system that protects the following from adverse effects:

- People
- Environment
- Product
- Assets

This will be achieved through ensuring work activities are performed in a controlled, planned, and safe manner.

1.2 Scope

This system and its procedures apply to all employees and contractors when working on sites under the control of Oceania Dairy Ltd. This system does not cover any routine tasks that are managed via an SOP or different process. Generally, the Permit to Work system applies to non- routine tasks such as maintenance or project construction activities.

The system covers the following key areas:

- Permit application
- Responsibilities and authorisation
- Permit forms
- Hazard management
- Revalidation
- Closure
- Training, auditing and monitoring

1.3 Amendments

All amendments shall be actioned by the ODL Health and Safety Team.

Potential reasons for an amendment to a section of this document are:

- Internal requirements
- Improvement suggestions and feedback
- Legal requirements

AMENDMENT RECORD

Date	Section & Page No	Amendment Details
08/07/2020	Section 1.4 Page 5	Added amendment record.
13/11/2019	Section 7.7 Page 29	New isolation process and version updated to 3.
13/11/2019	Section 6 Page 20	Addition into PAS table for Safety Watch based on isolation process and Managers approval for live work section 7.7.10.
15/09/2020	Section 5 Page 12 - 20	Replaced PAS information with updated version.
	Section 8.2 Page 41	Update to US for work at heights reflecting current ODL practice.
13/09/2021	Section 3.3.1	Changed requirements for Safety Watch related WAH tasks.
	Section 7.3	New WAH requirements – complete review of all WAH tasks and rules.
	Section 7.8	New section Worksite Barrier Tape.
09/06/2022	Section 3.3	New section for Permit Audits.
	Section 3.1.1	Removed; now covered in Permit Audit section.
	Section 3.4	Updated requirements for Safety Watch.
	Section 7.1	Updated requirements for Hot Work.
	Section 7.2	Updated requirements for Confined Spaces and new definition and requirements for Restricted Spaces.
	Section 8	Updated to reflect current training requirements.
21/12/2022	Section 7.4 and 7.5	Added new sections for Excavations and Penetrations.
18/01/2024	All sections	Reformat of document, general tidy up, changes to some section heading numbers.
06/03/2025	Section 7.1.3, 7.2.2, 8.1, 12	Updated PAS scoring. Added clarification for manager's authorization. Added Hazardous Substance section.

2. Permit Process

The permit to work system documents an agreement **between the permit issuer and the permit receiver**. It specifies the work to be carried out, its location, the hazards associated with the work or the environment, and the required methods of control. It authorizes only the specified work to be carried out.

Breaches of the permit to work system will be viewed seriously and may involve a disciplinary process. For instance, interference with isolations will generally be considered amongst the most serious type of misconduct and may result in summary dismissal.

Note: the issue of a permit does not by itself make a job safe, it is still up to everyone involved to take 5 and identify and control risks that may arise.

A permit specifies:

- The work to be carried out (in job steps).
- The location of the work.
- The hazards associated with the work and the environment.
- The required methods of control.
- The stakeholders effected by works carried out.
- The equipment/ plant to be worked on.
- Additional high-risk certificates that may be required.

The scope of the work needs to be clear and specific enough that any other person can understand exactly what the work is including any equipment or tools to be used.

2.1 Contractors

A contractor or subcontractor is required to work under the Oceania Dairy Ltd. (ODL) permit to work system when they are doing work on the ODL site. This applies even when a contractor or subcontractor has their own existing permit to work system or JSA. If a contractors JSA is deemed to be at a high standard then it may be substituted for the ODL hazard control section and attached to the ODL permit.

The only exception to using the ODL permit system is where this has been agreed in writing that a different process will be followed to manage the risks. For example, this may be the case for a large project where an area is formally handed over to a contractor to manage following their own processes. However, any such agreement must not result in any of the controls for high-risk activities that ODL would observe not being followed.

2.2 Verbal Permit vs Written Permit

A verbal permit is a low-risk job issued to a receiver when the PAS score is 4 or less, for example an inspection at ground level. A verbal permit must be recorded on the daily permit register.

When a verbal permit is being issued the receiver and issuer must hold a conversation about the risks of the task and how these will be controlled.

When the PAS score is 5 or more a written permit to work is required.

3. Responsibilities

3.1 Permit Issuer

Key responsibilities of the permit issuer are:

- Determining the area score in consultation with the permit receiver.
- Being involved with the analysis of hazards and determination of controls to be implemented.
- Ensuring the receiver understands the scope and location of the work to be undertaken.
- Entering the correct details into the permit register.
- Reissuing permits at each shift changeover and/or if the receiver or issuer change.
- Checking the work area before the job starts with the receiver to ensure all hazards have been identified.
- Checking the work area when reissuing the permit to ensure no conditions have changed and having regular worksite inspections during work in progress.
- Checking the work area at the end of the job and closing off the job and signing off the permits
- Informing/discussing work permit conditions with all relevant stakeholders.
- Ensuring adequate isolations are applied and maintained or responsibility given to the permit issuer designate.
- The issuer may request the receiver to appoint a safety watch.
- Identifying and arranging immediate actions for non-compliance issues (related or unrelated to permit to work).
- Ensuring the permit to work station is always kept stocked and tidy.
- Perform PTW audits.

The issuer may at any time suspend or decline to issue permits if they feel that circumstances, may compromise the safety of plant, process, people or environment.

There will be sufficient permit issuer(s) to manage the number of permits required for the work taking place at any time.

Where there is more than one person carrying out the permit issuer role then the permit issuer(s) shall co-ordinate to ensure each permit issuer has sufficient current information to enable them to be able to authorize or decline permits.

There will also be a handover between permit issuers at shift changes and when responsibility for reissuing of existing permit changes.

3.2 Permit Receiver

The Permit receiver applies for the permit to work and is responsible for:

- Carrying out task analysis for the work activity.
- Being involved with the analysis of hazards and determination of controls to be implemented.
- Inspecting the work area with the permit issuer or permit issuer designate.
- Consulting with permit issuer on appropriate hazard controls.
- Ensuring all permit users they are in charge of are properly inducted.
- Checking the work site and revalidating work permits at each shift changeover or in the case of a change of Issuer or Receiver.
- Communicating permit requirements to all permit users, in a manner that they understand.
- Following all permit conditions.
- Applying their receiver’s isolation in conjunction with the issuer’s isolation.

- Ensuring the hand back and permit closure is carried out correctly.
- Holding a copy of any rescue plans required.
- Updating the permit/ hazard ID information and permit issuer, if a change in the work scope arises.
- Notifying the permit issuer if a hazardous condition occurs/arises.
- Ensuring the workplace has been left in a safe and tidy state upon completion or suspension of work.
- Holds a copy of PTW at the worksite.

4. Permit Audits

Permit audits are important to ensure that people have identified all hazards and are following the agreed hazard controls, they are also important to ensure the quality of the permits remains strong. Audits at ODL will be completed in two ways:

4.1 Worksite Audit

- A permit issuer who issues a permit on a given day, should audit at least one live permit during that day unless this is not practical. The audit will be recorded in the Permit Register in the column titled Worksite Audit.
- The purpose of this audit is to confirm that the receiver and work crew are meeting the agreed conditions of their permit including scope, tools in use, location of work and hazard controls.
- This audit should occur at the work location and include a check for any additional hazards at that time.
- Please note that the highest rated PAS score permits in a department should receive more audits than low risk tasks, meaning that some higher risk tasks may receive multiple audits per day and other low risk or short duration tasks may not be audited at all.

4.2 Periodic Quality Review Audits

- Each department must maintain a process to perform quality review audits of their permits each month.
- This will be recorded using the ODL Permit Audit Form and may be completed in the field while the permit is live or offline on a completed permit.
- Records will be stored by each department.
- Higher PAS score permits should be targeted.
- Feedback should be provided to those involved in the permit where practical.
- These audits can be carried out by Managers and the Quality Team.

5. Safety Watch

The safety watch is responsible for monitoring hazardous work, stopping work if a dangerous situation arises, and initiating rescue/emergency/containment procedures if required.

The safety watch **must not leave** the work site while work is in progress.

The safety watch is responsible for:

- Constantly monitoring the work and adjacent areas.
- Ensuring that any hazards that arise because of the work or changes in the area environment are immediately communicated to other stakeholders.

- Ensuring that a means of communication with the stakeholders e.g. radio is in his/her possession and in full working order for the term of work.
- Ensuring that all safety requirements specified on the permit or task analysis are in place, both before work proceeds and throughout the job.
- Stopping work if it becomes notifiable.

The safety watch cannot have another job that interferes with the above tasks at the same time as being a safety watch.

5.1 Working at Heights Requirements – Safety Watch

A safety watch is required to be present when a person is performing working at heights such as:

- Operating an EWP over 2 metres in height.
- Anyone is using a fall arrest harness system.
- Use of a forklift man cage (the forklift driver may act as safety watch).
- Use of a crane personnel lift platform (the crane driver may act as safety watch).

5.2 Hot Work Requirements – Fire Watch

Fire watch means a person continuously patrolling the entire hot work area during work and for the stated time after hot work task has been completed. Their job is to monitor the hot work area and the surrounding area for fire, fire damage, or potential for fire. The fire watch can perform other duties during this time, but they must not interfere with their fire watch responsibilities outlined here.

5.3 Confined Space Requirements – Safety Watch

In addition, task specific requirements for a safety watch for confined spaces are:

- Testing of atmosphere before the initial entry takes place.
- To maintain contact with entrants for confined spaces.
- To promptly react to confined space entry incidents. Having control of the entry and exit of a confined space.
- Carrying out field calibrations of atmospheric test equipment, in particular prior to the start of work.
- Authorising and controlling those entering and leaving the confined space.
- Ensuring, without entering the vessel, that no personnel remain in the confined space at the conclusion of the day's work.
- Regularly verifying the status of those working in the confined space.
- Recognising and responding to abnormal conditions inside and outside the confined space and raising the alarm if required.
- Evacuating the confined space if the emergency alarm sounds (except for planned routine test).
- Barring the entry point during breaks and at the end of the work period.
- Displaying the permit and confined space entry certificate at the point of entry.
- Countersigning the Confined Space Entry Certificate and agreeing to ensure that all those inside the space understand and abide by its requirements.
- Stopping work and evacuating personnel from confined space, if atmospheric test results are outside the prescribed limits.
- Re-testing the atmosphere after breaks.
- Recording the atmosphere conditions for oxygen and flammables using approved calibrated atmospheric test equipment at intervals of 30 minutes.
- Understanding what the rescue plan is and assisting in its execution.

Under no circumstances shall the safety watch enter the confined space.

The safety watch shall never leave their post whilst an entry is in progress.

6. Permit Status

There are three permit states – open, suspended and closed.

Open:
A permit is open (or "live") once it has been authorised or revalidated and work is taking place.

Suspended:
When a permit is suspended, no work activity, as defined in the permit, may take place until the permit is revalidated e.g. when work is not complete at the end of the working day.
Permits are automatically suspended in the case of an emergency alarm (including evacuation drills). Permits MUST be brought back by the receiver to be suspended at the permit to workstation.

Closed:
A permit is closed when the scope of work has been completed; all required checks made, and all signatories have signed it off as closed. In the case of a major change in the scope of the work, the permit must be closed, and a new permit issued.

A permit must be closed and rewritten after it has been open for more than one month.

7. Permit Assessment Score (PAS)

The scope of the work shall be allocated a PAS score in accordance with this Permit to Work Manual.

The PAS score is the area score multiplied by the task score.

The PAS score shall be allocated after an assessment of the following:

- Score of the area where the task is to be carried out.
- The maximum task score for the scope of works.
- Existing activities being carried out in the area of the task being considered.
- The period the work is being authorised for.

When this score is 5 or over then a permit is required for the task.
When this score is 4 or under then the task can be completed under a verbal (see section 2.3 for more info on **verbal vs full permits**).

This PAS score shall be recorded on the sign on sheet and on the permit if a permit is required.

Any activities that are known to be planned in the area shall also be considered. This may require measures such as allocating a higher PAS score to the task or limiting the authorisation period for the task.

The permit issuer shall determine the most practicable approach to cover this situation of known future work.

The permit issuer determines the PAS score of a task in consultation with the permit receiver.

7.1 Area Score

A score shall be allocated to an area in accordance with this permit procedure. The Manager of each department shall ensure:

- Information on the current area score is available at the permit desk and endeavor to correct when a deviation is noted.
- Monitoring of conditions that affect the area score takes place.

7.1.1 Guidelines to Determine Area Score

- The area score will be determined by the permit issuer with guidelines from the receiver undertaking the work.
- The score of an area can change over the duration of a job. This will be noted on the area map at the permit station.
- The area score will be reviewed regularly and can be changed at any time to reflect a change in circumstances or conditions.
- The area allocated a score will be able to be clearly defined and have physical boundaries. This boundary may include fences, guardrails or walls.
- It is possible to have several “ring fenced construction areas” of differing scores within a project zone.
- The status of any services present in an area will be considered and whether the services can be isolated and de-energized to provide a safer working environment and a reduced area score.
- The existing restriction of 3 meters distance from the exposed polystyrene core of insulated panel for hot work remains.
- Conditions may be placed on an area in order to maintain an area at the set score level.

7.1.2 Guidelines to Determine Combustibles

- The material must be present within the area under consideration.
- “Combustibles” are material(s) that are likely to catch fire if exposed to an ignition source.
- Examples of combustibles are – plastic wrap, cardboard, paper, polystyrene waste textile materials, wooden pallets.
- Examples of non-combustibles are – concrete walls and floors, cured installed sure shield flooring, steel pipework and valves, fire/welding blankets.

This determination will need some ongoing review during the job and some task-by-task assessment.

7.1.3 Determination of Area Score

Area	Score
• Area 5: Extreme Hazards • Zone 20 Hazardous Area • Work inside concentrate (≥30%) caustic and acid tank bunds • Work inside Chlorine room	**5**
• Area 4: High Hazard • High voltage compound • Zone 21 hazardous area • Work within 5 metres of hazardous substance storage container (shipping container type) • CIP Kitchen • UHT IBC storage area • Confined space • Any area where there is exposed insulated panel (polystyrene) core material **within 3 metres of hot work** • Coal bunker if hotwork is taking place • Work on a roof without edge protection in place around entire work area • Any area where the fire suppression systems have been isolated • Any area where fire detection systems, in the absence of fire suppression systems, have been isolated • Forklift only operating area e.g. warehouse bulk stacking/container loading/UHT racking areas off walkways. • Straddle crane operating pad area • Inside UHT racking system • Inside Ammonia Plant room • Work around water with risk of falling in E.g. ponds, sumps, tanks without handrails/fencing in place. • Redline High Care Hygiene Area • Electrical MCC room (with exposed terminals)	**4**
• Area 3: Moderate Hazard • Zone 22 Hazardous areas • Other redline area • Area with overhead crane above • UHT areas in and around pipe bridge between airlock and UHT • Electrical MCC room (without exposed terminals)	**3**
• Area 2: Medium Hazard • Other operational area inside – non-redline • Milk silos and reception areas • Designated and controlled welding area – inside maintenance workshop • Irrigation paddocks • Coal bunker if no hotwork • Work in roadway	**2**
• Area 1: Low Hazard • Lawn area, gardens, boundary fence, open spaces on exterior of plant e.g. graveled areas behind C+B not near equipment.	**1**

7.2 Task Score

The task score is based on the potential consequence of the task using the examples given in these tables.

7.2.1 Task Potential Consequences

Use this table to determine score for a task not listed in work examples above.

Task Potential Consequences	Score
Critical Single or multiple fatalities Plant or major product loss Major environmental impact	**5**
Major Major plant damage Major fire/explosion Serious injury, permanent disability Significant environmental impact	**4**
Moderate Major equipment damage Lost time injury Environmental impact	**3**
Minor Reduced production Equipment damage Medical treatment or restricted work injury Environmental incident	**2**
Insignificant Minor equipment damage First aid Minor environmental incident	**1**

7.2.2 Task Score Examples

Task Score Examples - GENERAL	TASK CONSEQUENCE No.
>5000 psi water blasting/ cutting	**5**
3000<4999 psi water blasting/ cutting	**4**
<3000 psi water blasting/ cutting	**3**
Work involving opening the containment of systems/equipment containing hazardous substances: • High concentrate (≥30%) Corrosives (Class 8) • High concentrate (≥30%) Toxics (Class 6) • Oxidiser (Class 5) • 40 bar steam • Hydrogen • Chlorine • Ammonia	**5**
Work involving opening the containment of systems / equipment containing hazardous substances (i.e. non-purged equipment) such as: • Lower concentrate (<1% - <30%) Corrosives (Class 8) • Lower concentrate (<1% - <30%) Toxics (Class 6) • Carbon dioxide/nitrogen • 10 bar steam	**4**
Electrical Work: • High Voltage ≥1000 V AC/≥1500 V DC • Low Voltage 999 V AC/1500 V DC - 50 V AC/120 V DC • Extra Low Voltage ≤50 V AC/≤120 V DC	**5** **4** **2**
Using HF (hydrofluoric) acid (pickling paste) in: • Operational plant Controlled area in maintenance	**5** **4**
All excavations	**5**
Confined space entry	**4**
Commissioning of new plant on product	**4**
High risk crane lifts (tandem lifts, personnel lifts, lifting over occupied areas, lift and carry) Other crane lift	**5** **4**
Work on any live equipment with a safety device removed/ deactivated/ overridden e.g. guard removed from machine, safety interlock bypassed. (Carrying out work on live or operational equipment (MAJOR) see section 15.15)	**5**
Work that directly affects the operation of safety and/or emergency systems – electrical or mechanical (Disabling a safety device or emergency system)	**5**

Use of certified personnel work baskets/man cages	**5**
Working at height within the confines of guardrails (e.g. fixed scaffolds, guardrail edge protection, permanent or temporary platforms with guardrails) Note – accessing the platform must be considered and cannot expose them to a fall from height.	**2**
Working on a roof without edge protection barriers or handrails	**4**
Use of safety harnesses in a fall arrest situation Use of safety harnesses in a fall restraint situation	**5** **4**
Work involving rope access (abseiling)	**5**
Use of mobile vehicle - forklifts, hi-abs, excavators etc. if pedestrians (incl spotters and work crew): • Can maintain a distance of 5m or barrier If 5m distance or barrier cannot be maintained	 **2** **5**
Erection, alteration or dismantling of suspended and engineered • (special) scaffolds	**5**
Erection or dismantling of any scaffolding	**4**
Operating an EWP	**4**
Handling of hazardous substances, such as radioactive sources, toxic chemicals, paints, resins (e.g. sure shield), pesticides, manmade mineral fibres (MMMF) (e.g. fibreglass) including their disposal and removal from site	**4**
Work to modify or repair fixed racking systems	**5**
Use of gantry cranes	**4**
Spray applications e.g. spray painting/ weed spraying	**4**
Sandblasting	**5**
High voltage switching	**4**
Pressure testing of plant and equipment.	**3**
Using electrically and battery powered hand-tools; (drills, saws, sanders, heat shrink blowers etc.)	**2**
Use of internal combustion engines; generators, mowers, compressors, in: • Area 3 or lower Area 4 or greater	 **2** **4**
Non-destructive testing/examination (excl. radiography) using IS • equipment, e.g. vibration monitoring, ultrasonic thickness checking.	**1**
Non-intrusive inspection of equipment in D1 CIP kitchen- entry into the CIP kitchen	**3**

Task Score Examples – HOT WORK	**TASK CONSEQUENCE No.**
Welding – Arc, Spot, Mig and Plasma Cutting	5
Tig Welding – All areas	5
Grinding, abrasive disc cutting: • Area 4 or greater • All other areas	 5 4
Working with naked flame (e.g. gas cutting, heating torch)	5
Opening explosion proof (Exd) junction boxes	4
Electrically and battery powered hand-tools; (e.g. drills, saws, sanders, heat shrink blowers, soldering irons, rotary disc cutters used to cut PIR insulation panel and fibre cement sheet, etc: • Area 4 or greater • All other areas (not hot work)	 4 2
Internal combustion engines; generators, mowers, cranes, compressors, petrol powered pulse fogging: • Area 4 or greater • All other areas (not hot work)	 4 2
Use of air or hydraulic powered metal cutting, chipping, needle guns and wire buffs: • Area 4 or greater • All other areas (not hot work)	 4 2
Sand (grit) blasting: • Area 4 or greater • All other areas (not hot work)	 4 2
Use of non-intrinsically safe electrical equipment (including, meters, test instruments, etc.): • Area 4 • All other areas (not hot work)	 4 2
Manual de-scaling (hammer & chisel): • Area 4 or greater • All other areas (not hot work)	 4 2

8. Supervision, Authorisation and Workload Considerations

Depending on the nature of the work, its location and hazard potential, the requirement for the frequency and duration of presence at the work site of the Permit Receiver will differ.

8.1 Manager's Authorisation

Manager's authorisation is required for all permits with:

- PAS of ≥16
- Hot work with a PAS of ≥10
- Work with hazardous substances with a PAS of ≥12

A manager's authorisation must be a department manager, process manager or on call manager. The permit must be shared with the manager to ensure understanding and agreeance on the job steps, hazard analysis and control implementation. In the case of out of normal hours jobs, the permit must be shared with the manager and approval achieved through a review process.

Carrying out work on live or operational equipment (MAJOR) will require Department Manager (or higher) authorisation. See section 16.12.

Disabling or overriding safety devices requires General Manager (or his delegate) approval.

<table>
<tr><th>PAS</th><th>25-16</th><th>15-10</th><th>9-5</th><th>4-1</th></tr>
<tr><td rowspan="2">Required action / Controls</td><td>- Full permit
- Issuer to consider alternatives
- Managers sign off required
- Safety watch required for hot works</td><td>- Full permit
- Managers sign off required for hot works
- Safety Watch required for hot works</td><td>- Full permit</td><td rowspan="2">- Verbal permit
- Full permit if isolations are required or if requested by the permit issuer</td></tr>
<tr><td colspan="3">Carrying out work on live or operational equipment (MAJOR) requires Safety Watch</td></tr>
<tr><td>Receiver work supervision</td><td>A
Continuous attendance of the permit receiver.</td><td colspan="2">B
Work may continue during short absences of the permit receiver, at the issuer's discretion.</td><td>C
Permit receiver is to set the initial worksite and conditions, and is then required to make periodic appearances to the work site. The permit receiver can be responsible for several (C) jobs simultaneously.</td></tr>
</table>

Issuer Workload	Consideration shall be given by both the issuer and the department manager as to the workload for issuers. Consideration needs to include complexity of tasks underway, PAS, location of tasks, issuer's ability to visit work sites and any other responsibilities the issuer may have at that time or be expected to complete. Care needs to be taken that the issuers' workload is always reasonable so that duties can be completed to a high standard. Issuers will at any time refuse to issue further permits if they feel the workload is unmanageable and this shall be raised with the department manager. Department managers are jointly responsible to ensure that suitable Issuer resources are available for the workload.

9. Hot Work

9.1 Definition

Hot work is any work that generates a source of ignition, this could be through a flame, heat, or a spark, directly or indirectly. Any permitted work that requires hot work requires a Hot Work Certificate.

Examples of hot work include gas cutting and welding, abrasive disc cutting and grinding, soldering, paint stripping (hot air and flame gun), battery powered drill in a powder environment, roof repair (bitumen boilers) and any other operation that uses naked flames or produces sparks.

It also includes the use of non-intrinsically safe or flameproof equipment in potentially flammable atmospheres.

Separate to the use of PAS scores, we have created an ODL-specific risk matrix created in conjunction with our insurer, FM Global. This does not replace PAS scores but rather provides minimum requirements for the Fire Watch and Fire Monitor period required for each job based upon its risk factors.

It is worth noting that the most effective way of reducing the risk of hot work; is by substituting with alternative methods of work. For example, instead of drilling through a surface you could use a cold chisel and a hammer to puncture a hole.

If you must do hot work, it is essential that you consider a few factors:

- Hazardous areas.
- Flammable contents.
- Flammable construction materials.
- The task to be carried out.
- The safety of other people in the area.

For fire suppression, ODL requires a minimum of 2 x 4.5kg extinguishers to be present at each job. Ideally, use an ODL Hot Work Kit, otherwise these extinguishers can be replaced by a fixed fire hose that is unspooled at the job site and ready to be used.

For the use of the Risk Matrix, Polypanel within the main plant (i.e production departments & drystores) is considered a non-combustible. In all other areas of the site (i.e., portacoms, and utilities) it is considered a combustible.

9.2 Risk Matrix & Minimum Control Measures

Task Factors			Construction Factors					
			Non-combustible construction (i.e pipe, concrete, steel) outside hazardous area zones No combustible or flammable contents within 5 meters.		Combustible construction (eg timber, ceiling panels) **OR** Flammable / combustible contents (furniture, powder, flammable substances, pallets, packaging, cardboard etc.), **AND** Fire suppression system installed		Combustible construction (eg timber, ceiling panels) **OR** Flammable / combustible contents (furniture, powder, flammable substances, pallets, packaging, cardboard etc.), **AND** **NO** fire suppression system installed	
			Fire Watch	Fire Monitor	Fire Watch	Fire Monitor	Fire Watch	Fire Monitor
	Low Risk	Examples: • Heat gun • Polishing • Drilling • Sabre saw	Fire Watch / Monitor not required.		30 minutes	30 minutes	30 minutes	1 hours
	Medium Risk	Examples: • TIG/MIG welding • Grinding/cutting with grinder	30 minutes	1 hour	30 minutes	1 hours	30 minutes	2 hours
	High Risk	Examples: •All open flame work •Oxyacetylene • Plasma cutting • Hot air blower	30 minutes	1 hour	30 minutes	2 hours	30 minutes	5 hours

9.3 Fire Watch (Defined in Section 5.2)

- Fire watch means a person continuously patrolling the entire hot work area during work and for the stated time after hot work task has been completed.
- Their job is to monitor the hot work area and the surrounding area for fire, fire damage, or potential for fire.
- The fire watch can perform other duties during this time, but they must not interfere with their fire watch responsibilities outlined here.

9.4 Fire Monitor

After the fire watch period has been completed the hot work area should be monitored for fire by one of the following methods:

- Automatic smoke detection that is likely to alert someone and a fire suppression system.
- Individuals continuously present in the area have been advised of the work that needs to be monitored, and how to respond should a fire or smoke be discovered.
- An intermittent patrol of the area at a minimum of 15-minute intervals.
- An intermittent check on CCTV that has a reasonably clear view of the work area.

10. Confined Space

10.1 Definitions

Confined Space:
A **confined space** is defined in the Australian/New Zealand Standard (AS/NZS 2865:2009) as:

An enclosed or partially enclosed space that is not intended or designed primarily for human occupancy, within which there is a risk of one of more of the following:

a. An oxygen concentration outside the safe oxygen range.
b. A concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation.
c. A concentration of flammable airborne contaminant that may cause injury from fire or explosion.
d. Engulfment in a stored free-flowing solid or a rising level or liquid that may cause suffocation or drowning.

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

Restricted Space:
A **restricted space** has no definition under AS 2865-2009; however, these are defined by ODL as:

A space that is not classified as confined, and is not intended or designed primarily for human occupancy, within which there is a risk of one of more of the following:

a. Restricted, limited or impeded means of entry or exit due to its construction.
b. An atmosphere with the potential to become hazardous with certain types of work (e.g hot work).

Examples include ceiling cavities, crawl spaces, HVAC, areas underneath a silo.

Atmospheric Standard:
A space is considered safe for entry when concentrations are:

- Oxygen: 19.5 – 23.5% vol
- Flammables: 0% LEL (lower explosive limit)

- Toxic: < 50% WES (workplace exposure standard) or the company standard, whichever is lower.

If you suspect the presence of any harmful gases, please contact the Health and Safety Team for advice.

ODL Atmospheric Toxicity Standards:
Readings must be at or below these levels prior to entry.

- Carbon Monoxide: <25ppm
- Hydrogen Sulphide: 0ppm
- Ammonia: <25ppm

10.2 Hazard controls

Confined Spaces

- All confined space entries require a competent safety watch to be present at the entry point while personnel are inside the confined space.
- Anyone entering, carrying out safety watch, or receiving a permit that includes confined space work, must hold Unit Standard 17599 and 3058.
- The safety watch is to record the names and times of all people who enter and exit the confined space as well as the results of atmospheric monitoring.
- People in the confined space must be withdrawn if the atmosphere is outside the limits described above.
- Continuous atmospheric monitoring of the confined space must take place while there is a person inside.
- Hot work in a confined space presents particular risks. Under no circumstances is it permitted where there may be flammable residues or where the atmosphere exceeds 0% of the LEL (Lower Explosive Limit).
- For hot work, you should also consider any fumes or smoke that may be created from your work.
- No entry is to take place if the atmosphere is outside the limits described above.
- A rescue plan must be developed for each confined space entry. This should detail the methods of getting people out of the confined space safely.
- If you leave a confined space unattended – you must place control measures in place to reduce the risk of unauthorised entry.

- Place a person on safety watch to guard the entrance into the space to prevent access, OR
- Close or secure the opening with existing methods, OR
- If neither of these are possible; complete and display a confined space DANGER sign across the opening when it is unattended (provided at permit stations).

Restricted Spaces

- All restricted space entries require the person entering the space to notify and/or seek a verbal permit from the relevant department.
- If undertaking work that would increase the risk of the atmosphere becoming hazardous, consider treating the space as confined. I.e., hot work in a duct that could easily fill with fumes.
- If carrying out work under the silos in the chemical recovery bund, consider the risk of chemical exposure.

Register & Signage

- ODL Health and Safety Team maintains a register that clearly identifies confined and restricted spaces. Refer to document ODL Confined & Restricted Space Register.
- Each confined and restricted space shall be clearly labelled.
- The restricted space sign shall read “Danger – Restricted Space – Notify Department of Entry”
- The confined space sign shall read “Danger – Confined Space – Entry by Permit Only”.

11. Work at Height

11.1 Definition

Term	Definition
Work at Heights (WAH)	Working in a place where a person could be injured if they fell from one level to another. This can be above or below ground level.
Fall Arrest	Work where you could fall from an edge and be suspended in the harness. E.g., work on a roof edge where you could fall off and be suspended in the harness.
Fall Restraint	Where the harness holds you back from an edge so you cannot fall or keeps you within the confines of guard rails, so a fall is not possible. E.g., harness and short lanyard within an EWP basket so you cannot fall over the guard rail.
Elevated Work Platform (EWP)	Elevated work platforms such as scissor lifts, cherry pickers, boom lifts and other mechanised height access equipment.

11.2 Controlling Work at Heights

NZ H&S legislation requires that if there is a potential for a person at work to fall from any height, reasonable and practicable steps must be taken to prevent harm from resulting.

Many falls from height are caused by a failure to plan and organise work properly. At ODL, our expectation is that any permitted work which includes a risk of falling will be well planned and this risk suitably mitigated in line with requirements in this manual which is based off the WorkSafe Best practice guidelines for working at height in New Zealand.

You can access the NZ Work at Heights best practice document at:
https://www.worksafe.govt.nz/topic-and-industry/working-at-height/

As per the definition of Work at Heights any work where this risk exists must be controlled in a practicable manner given the situation and level of risk. Normally this will be considered in the work permit as a hazard with controls stated. Some higher risk tasks will require additional controls, and this will be in the form of a Work at Heights Certificate.

Tasks that require a Work at Heights Certificate to be filled in are:

- Use of a harness in a fall arrest or fall restraint situation.
- Use of an EWP over 2 metres in height.
- Erecting or dismantling scaffold over 2 metres (work that is conducted from within compliant handrails 100% of the time is not considered work at heights).
- Use of a man cage fitted to a forklift or crane.
- Access to any roof.
- Using a portable ladder (platform ladders are excluded) where there is a risk of falling 2 metres or more.

Whatever the task you need to complete the first step must be to consider the risk and select an appropriate means of access. To do this you must consider the hierarchy of controls, the level of risk and the duration of the planned task.

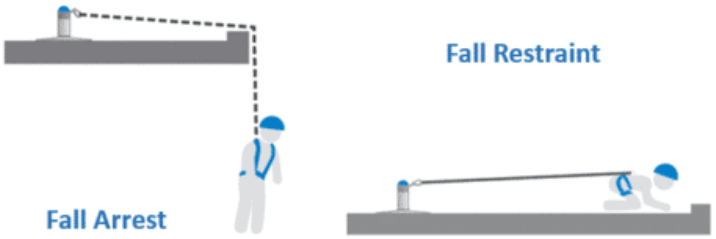
1. Can the job be done without exposing persons to the hazard (**eliminate**)? This is the best way.

2. If elimination is not practicable then steps should be taken to **isolate** people from the hazard. This can be achieved using guardrail systems, edge protection, scaffolding, elevated work platforms (EWP's) or barriers to restrict access. Is this practical and reasonable for the task?

3. If neither elimination nor isolation are practicable then steps should be taken to **minimise** the likelihood of any harm resulting. This means considering the use of fall restraint systems or lastly fall arrest systems.

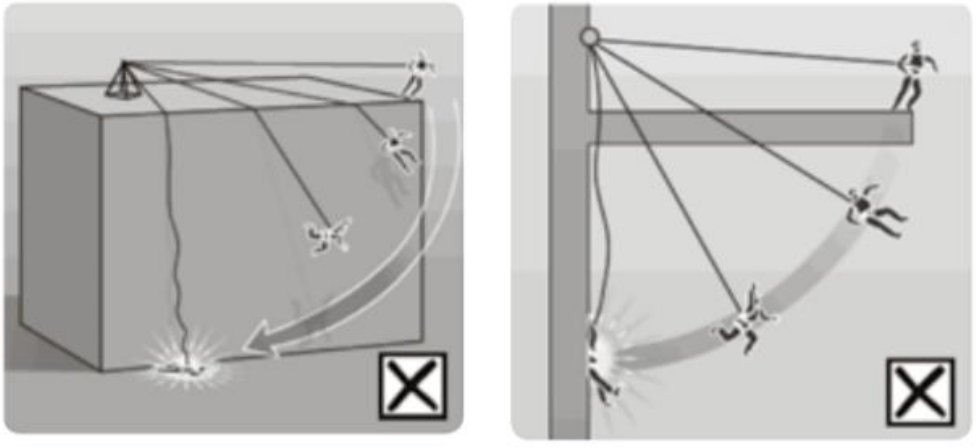
11.3 Use of a Harness

A harness can be worn for either **Fall Restraint** situation (where the harness holds you back from an edge so you cannot fall) or a **Fall Arrest** Situation (where you could fall from an edge and be suspended in the harness).



All fall arrest work requires a detailed rescue plan and safety watch, but this is not required for fall restraint work as there is no risk of someone falling and being suspended. However, there must always be a second person present for any use of a WAH harness.

When completing fall arrest work a shock absorber must always be part of the arrangement and an appropriate safety helmet worn. Consider where a person would swing if they fell (pendulum effect) when selecting anchor points and what hazards are within this area, many injuries are sustained by falling and swinging into other equipment.



11.4 Certification of Harnesses and Equipment

All harnesses and components must be compliant with AS/NZS 1891 they must be within the lifespan of the equipment (normally 10 years but this should be marked) and have been inspected within the last 6 months.

Permanent anchor points must also be inspected and certified every 12 months – this should be marked at the anchor point.

11.5 Training Required to Use Harnesses

ODL staff will receive Unit standards:

23229 - Use a safety harness for personal fall prevention when working at height.
15757 - Use, install and disestablish proprietary fall arrest systems when working at height.

Contractors will be expected to hold at least US 23229 in order to use a harness for fall restraint or fall arrest.

11.6 Mobile Elevating Work Platforms

Common forms of EWP's include:

- Scissor lifts
- Boom type platforms such as a cherry picker (self-propelled or trailer mounted)

Key safety requirements (regardless of type):

- The right machine must be selected for the task – unless it is a suitable all terrain EWP then it must only be used on hard flat even ground.
- Consideration must be given to units with internal combustion engines – these should not be used in small areas without adequate ventilation.
- EWP's must be marked with rated lifting capacity and care must be taken to remain within these limits considering all tools/equipment and activities to be undertaken.
- EWP's must have been inspected within the past 6 months and this displayed on the unit.
- You must always check for any overhead services that could be contacted such as power lines.
- Never operate an EWP near power lines.
- For EWPs that have a boom consider where this may swing – what is around or behind the unit?
- Workers should always stay within the handrails and never overreach; the soles of both feet should stay on the platform.

11.7 Scissor Lift

A harness connected to a certified anchor point should be worn on a scissor lift at all times unless there is a very good reason why this is not practical.

A safety watch and rescue plan are required for use of a scissor lift at more than 2 metres in height.

11.8 Cherry Pickers

Operators in a boom style EWP must wear a harness at all times. The harness and lanyard must be connected to a certified anchor point and a shock absorber must be incorporated. Consideration should be given to keeping this lanyard and shock absorber as short as possible, ideally this will be just long enough to provide free movement within the EWP.

A safety watch and rescue plan are required for use of a boom lift.

11.9 Training Required to Operate an EWP

Compulsory for any type of EWP:
23966 Level 3 – This unit standard is compulsory when doing the elevated work platform training. This covers the theory by describing types of elevated work platforms and legislative requirements for their use.

Plus, specific training for the type of EWP to be used:

For use of scissor lift: 23960 Level 3 – Prepare the worksite and operate a scissor lift elevating work platform.

For use of boom lift: 23962 Level 4 – Assess worksite, prepare and operate a self-propelled boom lift elevating work platform.

For use of truck mounted EWP: 23961 Level 3 - Prepare the worksite and operate a truck-mounted EWP.

11.10 Erecting/ Dismantling Scaffold

There are 3 types of scaffold to consider:

- Portable scaffold type (must be below 5 metres)
- Fixed scaffold type (below 5 metres)
- Fixed scaffold type (above 5 metres)

It is expected that all fixed type scaffold erected will comply with the Good Practice Guidelines for scaffolding in NZ issued by Worksafe and SARNZ.

https://www.sarnz.co.nz/wp-content/uploads/2018/09/GPG-2016.pdf

11.11 Scaffold Training Requirements

Generally fixed type scaffold will be installed by skilled contractors who are competent and experienced with the type of scaffold being used. This means someone who has the knowledge and skills to carry out a particular task. Skills and knowledge may be acquired through training, qualification, or experience, or a combination of these. NZQA registered unit standards may assist in fulfilling the qualification requirement.

UNIT STANDARD	TITLE
9184	Erect and dismantle non-notifiable prefabricated frame scaffolding up to five metres in height
13016	Demonstrate knowledge of the erection and dismantling of scaffolding up to five metres in height
13053	Erect and dismantle scaffolding up to five metres in height

(Taken from https://www.sarnz.co.nz/good-practice-guidelines/)

Anyone who carries out scaffolding work including erection, alteration, repair or dismantling of a scaffold of which any part is 5 metres or more above the ground, must hold the appropriate class of certificate of competence issued by SARNZ (Scaffolding, Access and Rigging Association of New Zealand). A trainee (worker) who does not yet hold a certificate of competence but is training to do so can be involved in scaffolding work as long as they are under the direct supervision of someone who holds a certificate of competence of the relevant type.

The person assembling portable scaffold must be familiar with the type of scaffold being used and must follow manufacturer's instructions for assembly and use.

11.12 Scaffold Safety Tags

Fixed type scaffold shall have a tag fitted displaying that it is safe for use along with safe working loads and date for reinspection. No scaffold should be accessed that does not have a tag or where the tag has expired. In the case of an expired tag the scaffolders shall be contacted to reinspect the scaffold and update the tag. The scaffold shall also be reinspected if the scaffold is modified in any way. Inspections shall only be completed by competent scaffolders.

11.13 Assembling Scaffold over 5 Metres

Any work erecting or dismantling scaffolding with a risk of falling 5 metres or more must be notified to Worksafe.

Notify Worksafe here: https://forms.worksafe.govt.nz/hazardous-work-notification

Refer to scaffold training requirements for all work erecting or dismantling scaffold over 5 metres high above.

11.14 Portable Scaffold

Portable scaffold must be assembled according to the manufacturer's instructions on stable level ground. Under no circumstances may this be assembled higher than 5 metres.

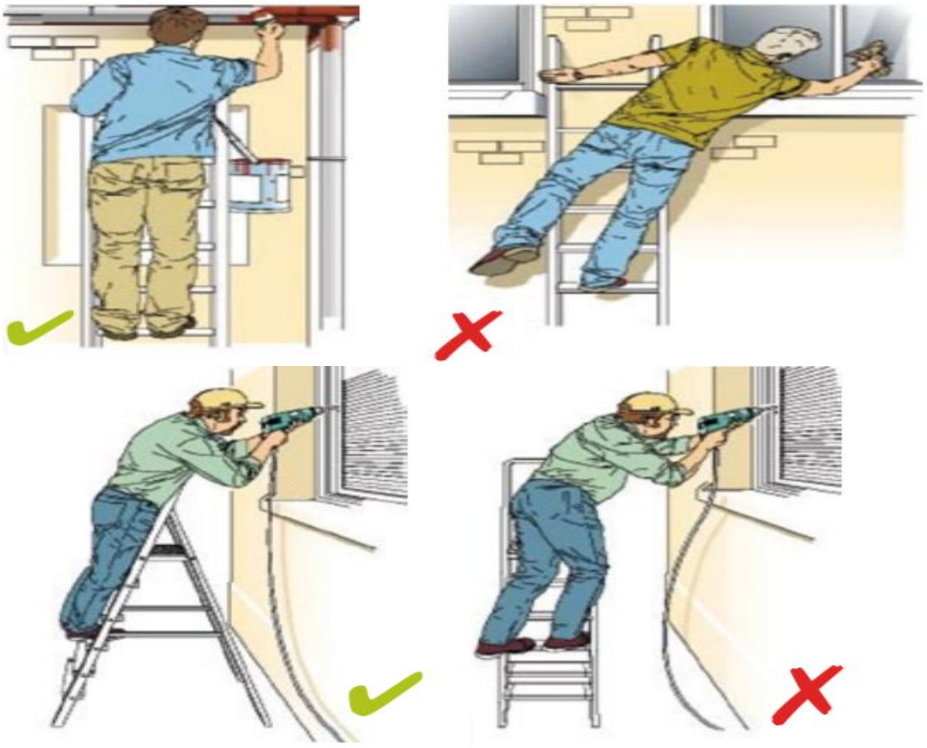
Further considerations:

- Consideration must be given on how to safely access the scaffold platform.
- Portable scaffold must be kept at least one metre from open floor edges and openings unless the edge is protected to prevent the scaffold tipping.
- Portable scaffold must never be accessed until all the castors are locked to prevent movement.
- Portable scaffold must never be moved while anyone is on it.
- The height to the top-most platform not greater than three times the minimum base dimension.

11.15 Portable Ladders

Ladders are for short duration work only (minutes) or access to platforms, if the task will take longer than minutes, reconsider and use a more suitable access method. If you do use a ladder, it is important to select the correct type for the task, ensure it is high enough that you have a handhold at the top and never stand on the top 2 rungs. Platform ladders are often a better option than A frame type ladders. Ladders and stepladders should be of trade or industrial standard and be rated at not less than 120 kg. In New Zealand, industrial-use ladders should be compliant with the AS/NZS 1892 standard.

To avoid tipping, setup your ladder facing the work instead of sideways and never lean out or away from the ladder.



It is good practice to use three points of contact while on a ladder, especially while ascending or descending. Also consider the task to be performed off the ladder, consider tasks that may require significant leverage that could move the ladder and manage this risk.

11.16 Forklift Man Cages

Requirements for Man Cage (Platform) Operation:

The platform must be certified in accordance with Australian Standard AS 2359.1. and be fitted with guardrails, mid rails and kickboards.

The platform must have the safe working load displayed in a prominent position.

The platform must have a two metre high guard at the back that is sufficiently wide to prevent any contact with the forklift.

The platform must be secured to the forks in a way that it cannot tilt, slide or be displaced.

People within the cage must wear a harness with a fall restraint arrangement.

The tilt lever should be secured or protected to avoid unexpected tilt operation.

The forklift driver must be trained and familiar with the ODL Forklift Man Cage Procedure, generally the driver will not exit the forklift while the cage is suspended

11.17 Crane Personnel Lift

A crane-lifted work platform is the piece of equipment, from which personnel carry out their work, which is either attached to the crane's hook or the head of the crane's boom.

Requirements for Crane Personnel Lift Operation:

- The crane work platform must be certified with evidence of inspection. The safe working load should also be displayed.
- Cranes with work platforms shall operate at not more than 75% of their safe working load.
- When a crane lifted work platform is in use, the crane operator shall be in attendance at all times and shall operate the crane within the manufacturer's recommendations.
- The work platform must be fitted with guard rails at a height of at least 1 metre, along with a mid-rail and toe board.
- When operating suspended work platforms from the hook, all hook safety latches shall be fully operational.
- The crane operator shall carry out appropriate inspections of equipment daily before use.
- Persons working on the platform shall wear an appropriate full body safety harness at all times suitably attached via a lanyard, this may be fall restraint where possible. In the case of a platform suspended from the hook, all harnesses shall be independently attached to the hook. Where the platform has a roof or cover, or the design otherwise precludes direct attachment of the harness lanyard to the hook there shall be an appropriate number of harness anchor points incorporated in the structure.

For further information go to: https://www.worksafe.govt.nz/dmsdocument/410-approved-code-of-practice-for-cranes

11.18 Roof Work

There are many factors to consider when accessing or working on a roof such as:

- Pitch of the roof.
- Weather conditions.
- Means of access onto and off the roof.
- Stability of the roof – could someone fall through?
- Skylights – could someone fall through a skylight?

11.19 2 Metre Rule

While accessing or working on a roof a person must never be within 2 metres of an exposed edge without suitable controls like guard rails or a fall arrest harness system. You must also consider the roof pitch – if someone could fall over and then slide off the roof then this is a risk that must be controlled and negates the 2 m rule.
The basis of this rule is that it makes an allowance that a person might trip and fall, and they will still not fall off the edge of the roof.

When this rule is being used and a person is on a roof without additional controls such as a harness in place, then it must be very clearly explained to all people working on the roof and documented clearly in the permit hazard controls. No one may ever be within 2 metres of an unguarded edge.

Likewise gaining access to the roof must observe the same 2 metre rule. If you are within 2 metres of an unguarded edge while gaining access to the roof, then this must be controlled in some way such use of fall arrest harness and suitable anchor point. This does not apply to climbing fixed hooped ladders which place the person 2 metres inside the roof perimeter which will not require additional controls.

Staff working on a roof must never do so alone they must work in pairs as a minimum, they must also have a means of communication if needed to call for help like a cellphone or radio.

Check the weather forecast before any roof access, do not attempt to access the roof when it is (or may become) wet/slippery or during high winds.

Good practice for accessing roof areas include:

- Fixed ladders.
- Portable ladders that are tied off or supported against tipping combined with fall arrest system.
- EWP combined with fall arrest system.
- EWP that is at least 4 metres wide placed hard against a roof providing edge protection.

12. Hazardous Substances

12.1 Definitions

Term	Definition
Hazardous Substance	For the purposes of this manual, a **hazardous substance** is any substance that has been classified as having one or more of the following properties: • Explosiveness • Flammability • A capacity to oxidise • Corrosiveness • Toxicity (including chronic toxicity) This definition comes from the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Safety Data Sheet (SDS)	A document providing detailed information about a hazardous substance, including its properties, hazards, and handling requirements.
Personal Protective Equipment (PPE)	Equipment worn to minimise exposure to hazards that cause workplace injuries or illnesses.
Lower Concentrated Chemicals	• Lower concentrate (≥1% - <30%) Corrosives (Class 8) • Lower concentrate (≥1% - <30%) Toxics (Class 6)
High Concentrated Chemical	• High concentrate (≥30%) Corrosives (Class 8) • High concentrate (≥30%) Toxics (Class 6)

12.2 Break Line Procedure

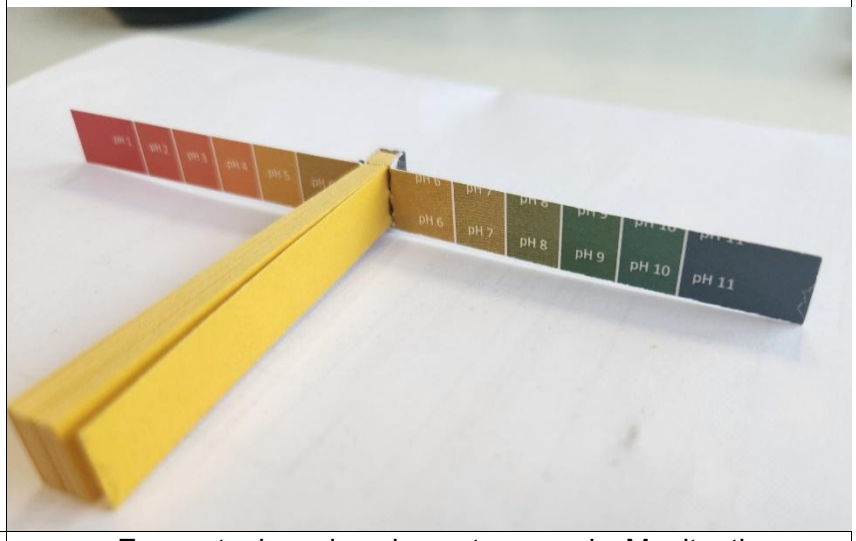
Scope: This procedure applies to all personnel involved in breaking process/chemical lines in the CIP kitchen and plant areas. It outlines the steps to ensure that the equipment is in a safe state to be worked on.

Purpose: To ensure the safe and controlled breaking of process/chemical lines for maintenance, protecting personnel and equipment.

Equipment: pH test strips, PPE equipment including face shield, chemical resistant jacket or apron, chemical resistant gloves, gumboots

Method:

STEP	ACTION	KEY POINTS
1	Ensure permit to work is completed prior to break line procedure commencing.	This process is always done as part of the hazard controls of a permit to work to ensure the equipment is safe to work on.
2	Flush the line using the relevant Flush Procedure for the plant.	Use the relevant flush procedure for the plant or identify safe way to flush the system. Ask your supervisor or manager if you are unsure. This may be an automated flush process or a manual process where valves etc are opened on an HMI. Drain line to reduce pressure build up.
3	Apply isolations as per PTW.	Ensure isolations are added to the equipment before commencing break line procedure.

STEP	ACTION	KEY POINTS
4	Wear the required PPE for the area. Refer to Section 12.3.	Refer to Section 12.3 for PPE requirements. Ensure PPE is in good condition before commencing work.
5	Slowly open line/valve/system to reveal some liquid to test	Release pressure gradually to avoid sudden releases of fluid. Monitor for unexpected leaks.
6	Test for residual chemical using pH test strips.	Use **Whatman pH 1-11 test strips**. These can be sourced from Stores. Refer to the colour chart on the test strips to check result. The target for safe handling is pH 7 which indicates neutral. ≤6 is increasing acid and ≥8 is increasing alkali. Ensure pH is neutral (7). Repeat step 2 if more flushing is necessary. 
7	Proceed with maintenance tasks.	Ensure tools and equipment are ready. Monitor the area for any signs of residual chemical leaks. Ensure isolation and permit to work is completed.

12.3 Personal Protective Equipment

This section details the PPE requirements when working with hazardous substances. It breaks down the requirements based on the task and location.

12.3.1 Dryer CIP Kitchen Non-Intrusive Controls

When:
Non-intrusive inspections in the D1 CIP kitchen.

Where:
Inside the D1 CIP Kitchen (Main mixing tank area and high concentrated chemical bund).

What PPE is required:
When conducting non-intrusive inspections the following PPE is required:

- Safety glasses
- Chemical resistant jacket with hood up
- Pants or overalls to cover legs
- Chemical gloves
- Steel cap work boots

12.3.2 External Redline Intrusive Controls

When: Any time that we are following the “Break line procedure” (Section 12.2).

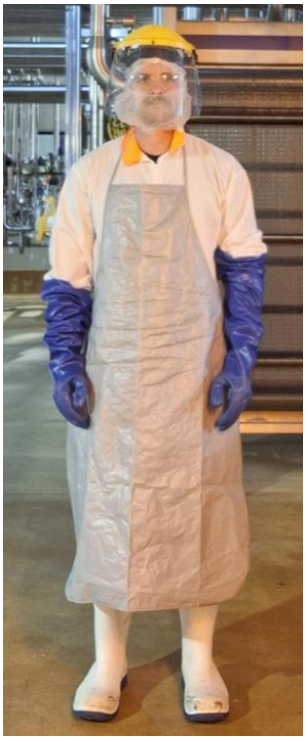
Where: Any area that is not within the redline.

What PPE is required: When dealing with **Lower Concentrated Chemicals/Water**, the following PPE is required:

- Face shield
- Chemical resistant jacket with hood up
- Pants or overalls to cover legs
- Chemical gloves
- Gumboots

Once line is proven safe following the “Break line procedure”, face shield can be removed and safety glasses worn instead.

12.3.3 Redline Area Intrusive Controls



When: Any time that we are following the “Break line procedure” (Section 12.2).

Where: Inside the plant (within processing plants). Eg: D1 Evaporator Hall, UHT wet process.

What PPE is required: When dealing with **Lower Concentrated Chemicals/Water**, within the plant.

- Face shield
- Apron
- Chemical gloves
- Gumboots

12.3.4 High Concentrate Chemical Controls

When:
Any time that we are following the “Break line procedure” (Section 12.2).

Where:
In an area where the chemical system cannot be effectively flushed.

What PPE is required:
When dealing with **High Concentrated Chemicals**, the following PPE is required.

- Face shield and goggles
- Chemical resistant suit
- Chemical gloves
- Gumboots

13. Excavations

An excavation certificate must be filled out for any work disturbing the ground where it is:

- Greater than 300mm deep, OR
- Greater than 30m^2 in surface area.

Examples:

- Trenching for a new pipe or cable deeper than 300mm
- Levelling ground for a building foundation greater than 30m2
- Digging holes to find existing services deeper than 300mm

Other considerations for excavations:

For practical advice on excavation safety, please refer to the WorkSafe excavation safety guideline found here: https://www.worksafe.govt.nz/topic-and-industry/excavation/excavation-safety-gpg/

13.1 Penetrations

The aim of the penetrations certificate is to prevent anyone from striking services when drilling into, or through a wall.

A penetration certificate is needed for any work penetrating into, or all the way through a surface that is:

- Blind in nature (i.e. you cannot physically check the other side of the surface you are penetrating), OR
- A wall lining with internal void spaces (i.e. domestic GIB linings, sandwich type polypanel).

Examples:

- Drilling through a portacom wall which may have an internal void space fitted with electrical cables.
- Drilling all the way through a concrete wall where you cannot check what is on the other side.

14. Lifts

ODL recognizes that in instances where external equipment or personnel are used for lifting, such as mobile cranes, much of the burden for safety practicably falls upon the operators of the equipment, as ODL does not internally have the skill set to undertake a full analysis to the standard expected of a certified operator of lifting equipment.

Resultantly, the focus for lifts at ODL is on controlling what elements of risk we can reasonably control as the operator of the site. However, the ODL lift certificate will also provide a few prompts that the issuer and receiver should review together.

"**Standard Lifts**" are managed via existing safety processes on site and are specifically excluded from needing a Lift Certificate

Standard lifts include the following:

- Fixed gantry cranes.
- Swing lift trucks.
- Work covered by an SOP.

"**Complex Lifts**" are lifts that fall outside of the above category as the work is either more complicated, or the operator of the lift device believes the lift should be classified as complex.

Complex lifts include:

- Non-routine work not covered by an SOP e.g. using a hiab truck to lift a pump into position.
- Any work using equipment in a different way than usual e.g. the telehandler fitted with lifting strops.
- Use of any mobile crane.
- Any lift where the operator believes it should be considered complex.

Use of the ODL Lift Certificate will normally accompany documentation provided by the external operator for mobile cranes, specifically the Safe Work Method Statement (SWMS) and Site-Specific Risk Assessment. For other lifting devices such as the ODL telehandler or a hiab truck the operator may not be able to provide an SWMS or risk assessment and the ODL Lift Certificate and permit will be used instead.

In instances where the operator of an external mobile crane is unable to, or has not provided this documentation, please approach the Health and Safety Team for advice.

15. Intrusive Work and Maintenance

This applies to all plant or equipment that has been commissioned and operated with product.

Definition: Intrusive work is any task or maintenance work that is carried out on any direct or indirect product contact surface or is carried out in the vicinity where product may be exposed that may result in foreign matter contamination.

All intrusive works require a hazard analysis of product safety, with the necessary controls in place to ensure product contamination does not occur after or during work completion.

General: All intrusive maintenance requires some form of cleaning to occur after works end. Ensuring all contaminants are removed before placing the machinery onto product. I.e. after entering a vessel, the vessel MUST be CIP after entry before product commences.

15.1 Hazard Control

The requirements of this procedure applies to any work or activity that:

- May cause contamination to product or product ingredients.
- May involve contamination of product contact surfaces by micro, biological, chemical /toxic or foreign matter.
- This includes but is not limited to all product contact surfaces, CIP systems and service systems such as air/water /steam, which comes in contact with product.

Intrusive work is defined as any task or maintenance work that:

- Is carried out on any direct or indirect product contact surface.
- Is carried out in the vicinity where product may be exposed that may result in foreign matter contamination.

Potential sources of contamination are PPE (e.g. earplugs, safety glasses, gloves) cleaning equipment, tools, cleaning chemicals, engineering chemicals, water, rags, loose equipment, body hair or sweat, pathogen transfer.

All chemicals and lubricants used in process hygiene zones should be approved for use in application.

15.2 General Rules

- If a permitted task involves intrusive work, the Intrusive Maintenance Certificate must be completed.
- If the work being carried out occurs post-pasteurisation, then the Intrusive Maintenance Cert must be signed by the Plant or Process Manager.
- Procedures must be carried out to protect plant, ingredients, product and personnel.
- Hygiene control procedures for hygiene zones must be strictly adhered to and hands sanitised with approved sanitiser prior to commencing work. This is to prevent foreign matter and microbiological contamination of plant (and risk to the product).
- All equipment and tools should be thoroughly sanitised before commencing work.

- At the completion of each job the permit issuer and the permit receiver complete the Intrusive Maintenance Certificate.
- The work site must be inspected by the permit issuer, prior to the form being signed off, to ensure the plant is in an appropriate condition to process food.
- Any completed jobs that do not have the Intrusive Maintenance Cert signed off are deemed to be unfinished and must be completed. The receiver may sign the permit as closed; however, the issuer cannot close the permit until the CIP is complete.
- Intrusive work carried out while plants are in winter shutdown also requires the Intrusive Maintenance Cert to be completed. However, the issuer will be able to close the Intrusive Cert by writing an additional note to indicate that the work was carried during the winter shut. The plant will then be required to make extensive use of pre-start CIPs and pre-start checklists referred to in SOPs to ensure the plant is free of foreign matter before manufacturing recommences.

15.3 Minimisation and Control of Risk

- Check with permit issuer as to the status of the plant.
- Check that the area being worked in is not on a pathogen trace back, as there may be additional specific hygiene requirements in place.
- Fill out work permit including hazard id and intrusive maintenance sections.
- If intrusive work is to be carried out in a pressurised system, both permit receiver and permit issuer are to ensure that the system is purged.
- When work has been completed, permit receiver is to notify permit issuer, but is NOT to close the system being worked in.
- Only after the permit issuer is satisfied that this system is free of foreign matter and micro contamination can the receiver close the system.
- The permit must not be closed until all equipment and chemicals are accounted for.
- Permit receiver and permit issuer to close the Permit to Work.
- All product contact surfaces must be CIPed and sanitised before the permit can be closed. The Receiver may sign the permit as closed; however, the issuer cannot close the permit until the CIP is complete.
- Any missing equipment or any equipment damage where all the fragments cannot be accounted for, or any other issues around product and plant safety must be reported to the permit issuer and Oceania Dairy management.
- In the event of this happening, a traceback will then be instigated and the Plant Manager notified prior to re-commissioning the plant/equipment.

16. Isolations

16.1 Scope

This isolation section only applies to work completed under a Permit to Work or as part of the Permit to Work system. This procedure does not cover other work requiring the isolation of equipment that is part of normal operations and covered under an SOP.

16.2 Objective

To eliminate the potential dangers from energy sources that may be present in the workplace.

Sources of harm may include:

- Inadvertent operation of equipment or process.
- Sudden release of pressure.
- Temperature.
- Hazardous substances.
- Electrical hazards.
- Mechanical energy.
- Engulfment.

16.3 Definitions

Equipment Isolation
Equipment isolation is where single or multiple pieces of equipment are isolated, e.g., isolating a single pump or motor or a series of valves. The sequence of isolation or de-isolation does not negatively affect people, plant or process. All isolations must be documented on the permit or Systems Isolation Certificate.

Systems Isolation
Where it is established that damage or an unsafe situation may be caused if the isolation or de-isolation of equipment is not done in a particular sequence, a system's isolation is required. Examples of this may be a boiler or ammonia plant isolation. These types of situations need a controlled shutdown and restart sequence. This must be documented on the Isolation Certificate, with the isolation steps numbered. For de-isolation, a de-isolation plan may need to be developed for restarting the plant.

16.4 General Rules

- Only the issuer (or designate) and receiver can install or remove isolations.
- The integrity of the isolation shall be checked prior to permit authorisation by issuer and receiver.
- If an isolation can be locked, a lock complete with tag must be used.
- If an isolation cannot be locked (i.e. airline removed), this isolation will require issuer and receiver tags to be placed in the field at that isolation point for the duration of the job.
- Nobody, other than the person named on the personal tag, can remove a personal tag/lock.
- If there is a risk of exposure to live electrical terminals in applying or de-isolating the isolation, it must be done by a registered electrician.
- Every time a permit is reissued, both the issuer and the receiver shall check the integrity of the isolations.

16.5 Isolations Procedure

1. Identification of risks:
The receiver and the issuer first need to identify all energy sources that will need to be managed. They should do the following where practical:

- Visit the work area.
- Check the drawings (if possible).
- Identify any processes potentially affected by isolations.
- Discuss with area supervisor or operator (if additional information is needed).

2. Isolate energy sources:
Ensure hazards are isolated and controlled, for example this may include:

- Purge/flush/drain lines.
- Remove or isolate electrical sources.
- De-pressurise/vent any systems (pneumatics etc.).
- Isolate any mechanical/stored energy (e.g. springs/weights).
- Close valves.

3. Fit equipment isolation clasp/locks/tags at all isolation points:
Record all lock numbers (and lockbox number, if used) on isolation certificate. Where unable to fit a lock, fit issuer/receiver tags and record on the isolation certificate. Both the issuer and receiver must place a lock at each isolation point and record this on the isolation certificate (unless using a lockbox as stated below), the entry on the certificate must make it clear which lock belongs to the issuer and receiver; this can be done by noting (I) or (R) beside the isolation.

If you are using a **lockbox,** then only one lock needs to be applied at each isolation point in the field, all keys are then placed into a secure lockbox. The issuer and receiver each then apply a final padlock to the lockbox, the issuer key may be kept with the permit or in a secure location and the receiver shall keep control of the receiver key.

Any other person may also fit their **personal lock/tag** to the isolation point or lockbox. The receiver may also instruct any other person to also fit his, or her, own personal lock/tag to the isolation point or lockbox.

4. Bump test:
Once all isolations have been completed the final step is to try and start, or bump, the equipment. This is to confirm that the isolations are effective, and it cannot be started. The issuer and receiver should jointly do this prior to signing the isolation certificate.

5. Commencement of work:
Once the isolations are confirmed effective, the issuer and receiver both sign the bottom of the isolation certificate and then may issue the permit.

6. Completion of work and de-isolation:
When work is complete, the issuer and receiver both check the job site to ensure the area and plant/equipment is safe to restart.

- Issuer and receiver remove their locks/tags.
- Record removal of lock/tag numbers on isolation certificate.
- Follow any specific de-isolation procedures where required.

Sign off de-isolation on the isolation certificate and the permit is ready for closure.

16.6 Issuer Lock and Tag (Yellow)

These are for the protection of the plant/equipment and should be a lock and a yellow issuers tag. The issuers lock is placed by the permit issuer and must be recorded on the permit.

An issuers' lock is placed at every isolation point, where possible. An issuers lock shall not be placed in the field without an accompanying issuers tag. Where it is not possible to place an issuers lock, an issuers tag is placed, and the isolation is recorded on the permit.

If using a lockbox, a lock and accompanying issuers tag must be placed on the isolation in the field.

The keys for the issuers' locks are placed in an envelope/bag with the permit number clearly written on it and then the bag is held securely by the issuer or may be placed with the permit.

Alternatively, for lockbox use, the keys shall be placed in a lockbox and the lockbox issuer key is placed in a bag with the permit number clearly written on it and then the bag is held securely by the issuer or may be placed with the permit.

16.7 Receiver Lock and Tag (White)

This is a lock with a white tag and is for the protection of the permit receiver and permit users. It must be placed by the permit receiver at every isolation point. If a lockbox is used, the permit receiver places one receiver lock/tag on the lockbox that covers the lockable isolations in the field (these will be locked with an issuer lock/tag).

For non-lockable isolation points, the isolation will require a receiver's tag to be placed in the field at that isolation point for the job.

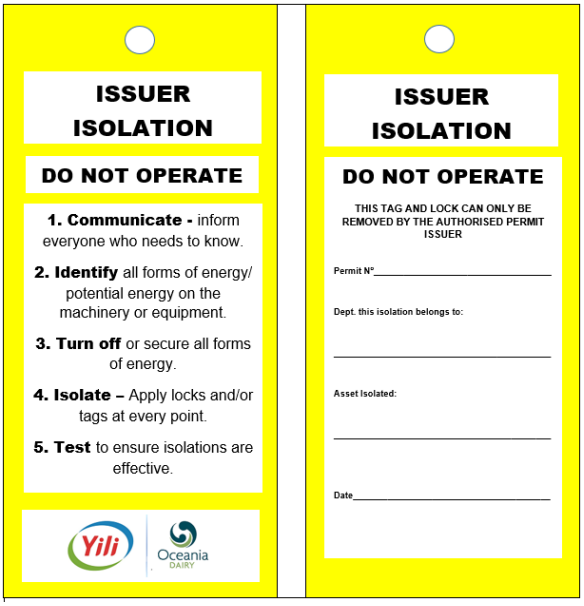
The permit receiver is responsible for verifying the isolations for those users working for them. Each receiver lock must be accompanied by a receiver tag.

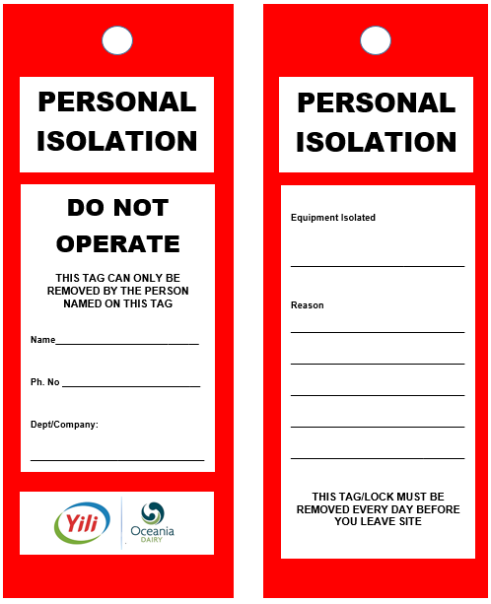
The receiver lock and tag stay on for the duration of the open permit and are under the control of the receiver. The keys for the receiver's lock(s) are to be held securely by the receiver.

When the permit is suspended, both copies of the permit and the issuer/receiver keys remain at the PTW station in the suspended slots. For de-isolation, only when the issuer and receiver agree, can the isolation(s) be removed.

16.8 Personal Lock and Tag (Red)

Personal locks/tags would not normally be applied but are optional for other workers under the permit. The personal lock/tag is normally removed when the user leaves the work area each day, unless it has been agreed with the issuer and receiver that they may stay in place for duration of the permit. The permit receiver is responsible for ensuring that all users remove their personal locks/tags prior to the permit being closed. Personal locks and tags may also be placed on the lock box.





16.9 Lock Box

The use of a lockbox is optional for any isolation but is recommended for isolations requiring numerous locks. When a lockbox is used, one issuer lock and tag is fitted to every field isolation point and all keys are placed into the lock box. The box is then secured with an issuer lock/tag and a receiver lock/tag. All lock numbers are recorded on the Isolation Certificate.

It is possible to have a **common lockbox between permits** e.g. during a shut period where a lot of equipment is isolated, but a separate isolation certificate must be filled out for each permit. It may be appropriate to photocopy the common lockbox isolations certificate and attach it to the new permit if

they require the same isolations, however it is expected that a new isolation certificate be filled out to show any additional isolations and the lockbox issuer/receiver locks.
Issuer and receiver locks must be applied to the lockbox i.e. a second issuer lock and a second receiver lock with issuer/receiver tags are fitted to the lockbox for the new permit.

16.10 Forced Removal of Permits

When a lock has been left isolated and the owner is not present to remove it, the **lock may only be removed** after all the following:

- Every endeavor is made to locate the person and have them return to site.
- If this is not possible then the Plant Manager (or their delegate), after ascertaining that no risk to people, plant, or process exists, shall authorise in writing the removal of that lock.

16.11 Minor Testing, Cleaning, Fault Finding or Adjusting

It is recognised that under some operational situations, carrying out minor testing/cleaning/fault finding/adjusting is required while equipment is live. To enable this to occur safely, and before the testing/cleaning/fault finding/minor adjustments are started, the issuer for the area must be consulted and the permit assessment and hazard identification process completed. All controls for hazards must be put in place.

This can only be done where the PAS score is 4 or less.

Example:

- Minor troubleshooting of issues on conveyors such as cleaning/adjusting (outside of high-risk areas such as palletiser enclosure).
- Minor cleaning adjusting of a sensor on a conveyor (outside of high-risk areas such as palletiser enclosure).

Procedure

- Single point isolation allows the receiver to start and stop equipment, access equipment to carry out minor cleaning, fault finding or making minor adjustments.
- For a “single point” of isolation associated with testing/cleaning/fault finding/adjusting, a personal tag/lock must be used. It shall be fitted and removed by the person doing the work, who is named on that tag.
- If it is ascertained by the fault finding that the equipment needs repair or major adjustment/repair, then a permit with the appropriate scope will be written and full equipment isolation will be performed with issuer/receiver locks and tags (and personal lock and tags, if desired).
- This applies only for low-risk activities where all safety systems are in place and functioning correctly. E.g. all machine guards/barriers/fences are in place and secure or all safety interlocks are in place and functioning correctly. Any defeat of a safety device is not considered MINOR.

16.12 Carrying Out Work on Live or Operational Equipment (MAJOR)

When carrying out maintenance work on live or operational machinery with a safety device overridden, all practical steps and controls must be considered and be in place to allow the task to be done safely. Alternatives to performing work on live or operating equipment should be considered first as this is a high-risk task.

Example:

- Work that requires the defeat of any safety system such as removal of fixed guarding or overriding of electrical interlocks.

A written permit is required for all work on live or operational equipment and any work of this nature requires department manager's approval.

Personnel will work in a manner that controls the risk of injury to themselves or others and controls the risk of damage to plant; these controls will be documented in the JSA.

All work of this type **requires a safety watch** to remain with the maintenance person during the whole course of the work. The safety watch must monitor the person continually and be in a safe position to intervene appropriately in the event of a problem occurring e.g. by pressing the e-stop button.

All other personnel in the area and those that are immediately responsible for the area are to be made aware of the work proceeding, whether verbally, using signs, or other notification.

Work on or around live electrical switchboards should not occur. If there is no practical alternative, then approval must be granted from the site electrical lead in addition to the department manager.

17. Electrical Work

Electrical work undertaken shall meet the requirements below:

- Electricians (both ODL employees and external contractors) shall provide ODL with Certificates of Compliance (CoCs) for changes and additions to electrical systems.
- Electrical contractors are required to supply a CoC for all new electrical work (whether or not a third-party inspection is required).
- The CoC must include the relevant work permit number in its description and a full and meaningful description of the work done.
- All CoCs shall be placed into the appropriate plant folder in the services area or the appropriate central location within one week of completing the work.
- Where further copies of the CoC are required (such as by project managers), copies of the original shall be provided. (The original shall be placed in the folder as above).
- An electrical contractor is required to supply an electrical inspection of electrical work that includes:
    - Install, upgrade or alter any electrical installation in a hazardous environment.
    - Install, upgrade or alter any High Voltage electrical installation.
    - Install, upgrade or alter the main earthing system or main earth cables.
    - Install, upgrade or alter mains cables from a power transformer to the first connected switchboard.
    - Install, upgrade or alter the main switchboard connected to a supply transformer.

Any other works are required to be inspected and/or certified as defined in legislation or electrical standards.

18. Worksite Barrier Tape

Whenever work is performed on site that presents potential risks to others in the area, we must ensure that access to the area of risk is controlled. Barrier tape and signs should be erected around work sites to warn others of the risk.

18.1 Danger Keep Out Area

This is an area that poses significant risk of injury or death if entered. No person can enter this area and entry is strictly controlled by a permit receiver/safety watch. The area will be fully taped off with danger tape and the sign below must be displayed in prominent locations on or near the tape.
E.g. Crane lift.

18.2 Restricted Access Area

A restricted access area is an area that only authorised personnel can enter. Entry within the restricted area is strictly controlled by the person who erected the “Restricted Area” tape and sign. An entrance way (gap in the tape) to the area would normally be erected and the sign below would be placed there.
E.g. Welding.

18.3 Caution Area

A caution area is used to warn personnel of an area or situation containing a hazard. It acts as a minor impediment to prevent accidental entrance to that area or situation.
The sign below would normally be placed in a prominent location along with caution tape.
E.g. Slips, trips, falls.

19. Training and Competency Requirements

Persons operating in Permit to Work roles (permit issuer, receiver etc.) must be trained in the Permit to Work system.

The following training has been identified as a minimum for the PTW positions:

Issuer – Unit Standard 17590

Receiver – Unit Standard 17588 and 17602 (or 17590)

Receiver for Working at Height – Unit Standard 23229

Receiver for Confined Space – Unit Standard 17599 and 3058

Receiver for Pendant Crane – Unit Standard 3800 and 30072

See section 11.9 for training requirements to operate an EWP.

At times exceptions may be made to the requirement for receiver or issuer training for short term work – this would normally be approved by one of the following: General Manager, Health and Safety Manager, People and Safety Manager or Capital Projects Maintenance and Services Manager.